

INFLAPRO

(2010)

AUTHOR

B N VENKATARAMAN

B.E.(Electrical and Electronics)

D-1/233 Sector F, Jankipuram, Lucknow

~~phone: 0522-2361968, 0522-4072761~~

web-site: www.bnv.bvraghav.com

(As of 2017)

Camp-address: E 4, SBRA, IIT Kanpur, 208016

phone: 7388270901, 9919167573, (LL) 0512-259-5444

additional web-site: www.bnvenkat.com

email id: bnvenkataraman@gmail.com

+

CONTENTS

1. Foreword	i
2. Introduction	1
3. Method of Calculation (Methodology)	7
4. Inflation	31
5. Calculator	33
6. Pension Scheme	37
7. Loan Scheme	45
8. Recurring Deposit (RD) Scheme	53
9. Fixed Deposit (FixDep) Scheme	61
10. SWOT- Strength, Weakness, Opportunities Threats and conclusion	69
11. Benefits (Who will be benefited)	73
12. Inflation Protected Bond in USA.	75

+

+

FOREWORD

As an anecdote, the author of this scheme [Shri. B N Venkataraman](#) had argued with Bank of Baroda loan officials in 1983 on a personal loan of Rs.25000/- to give facility on **Equal Monthly Instalments** giving full details of proposed repayment and calculation to show how the loan is repaid with interest. But they did not agree, and went on their usual method on diminishing Balance scheme only.

Now a days **EMI** is quite common and plenty of calculators are available on-line web as well as on a application softwares such as MS EXcel, Oracle Open Office Spread sheet, etc.

Similarly **Recurring Deposit** with equal instalment does not aim at increased saving on same account year by year to fight inflation, whereas purchasing capacity decreased on inflation.

Similar story is with fixed post office monthly income scheme / conventional pension schemes.

The suggested method is not increasing the interest percentage on **running balance** but increases only the percentage on the original principal amount in case of pension/ RD/ Loan repayment and Fixed Deposit

The scheme can be explained by way of simple 3 years term with 10%inflation protection in lieu of 10% return pa. The return on investment on first year would be around 9.1%pa, 10%pa on middle year and 11%pa on the third year.

This provides return at 10% increase year by year.

The total return will be more than the case of flat percentage.

So far with the limited contact by the author with advocates dealing with copyright and some chartered accountants, people are interested in

+

+

ii Foreword**INFLAPRO Schemes ii**

who will be benefited by this novelty. The answer is very simple. The benefits are identical to the investing community and financing company which where beneficiary on switching over from **diminishing balance to EMI**.

Also in the suggested system Government (meaning RBI) will also be benefited without raising prime lending rate at the instance of increased inflation.

In a typical case of return on investment
with interest rate of 10% pa
for a period of 20 years
and inflation protection of 10% pa.

In existing system of equls interst distribution of 10% gives an average yield of 10% pa only.

whereas

The return on investment in suggested scheme will vary from **4.87% to 28.64%, the average yield is 13.41%pa**

In the existing system of equal interest distribution, for a case of 10% interest, one gets the real value of 10% and the same 10% return next year is equivalent to 9.09% on inflation of 10%pa and the return on 20th year at 10% is just has a purchasing capacity of 1.63% only. The average purchasing capacity is equal to **4.87%**

In the proposed system on this typical case The interest in first year is 4.87% and in the final year the return of 28.64% the purchasing capacity remains at **4.87% pa throughout**.

There is a chapter on **benefits** as well as **special note on benefits to investing company**.

+

+

INTRODUCTION

It is time to think beyond equal monthly instalments in Post Office Monthly income scheme/Pension/ RD / Loan. EMI facility was not available at all in [Financial institutions](#) until late 80's / early 90's. Here is a new method to some protection to customers as well as the money lenders against inflation.

The **Inflapro Schemes** means Inflation Protected (financial) schemes viz. **Pension, Recurring Deposit, Loan and Fixed Deposits.**

Invention relates to calculations providing inflation protected return on investment for a given term at given rate of interest, given percentage of inflation protection per annum **without** any increase or decrease of return even a paise more or less in terms of rate of interest at the same rate on run balance.

Inflation protection means giving higher return on investment compared to previous year at a predefined inflation protection in percentage.

Inflation protection can be given at a fixed inflation protection rate (say 10%p.a) and for fixed term (say 10 years) for the same interest percentage on run balance (say 10% pa). In the process half of the term (i.e 5 years as the case may be) will have less return as percentage of face value of investment and the remaining half term will have higher return than the fixed EMI based return on investment.

Refer sample calculations elsewhere with schemes for Pension, Loan and Recurring deposit.

+

+

2 Introduction

INFLAPRO Schemes 2

B N Venkataraman, the author has prepared web based solution with a calculator for inflation protected schemes for monthly returns and yearly increase to **cover inflation protection**.

Basic Terms Explained

Simple Interest

Principal is returned back to investor after a period with some interest as percent of the principal amount for the entire term. Some one invented the method and formula for arriving at interest amount.

Compound Interest

At the end of every period interest calculated is added to the principal and the outstanding amount increases. The increased outstanding amount is considered as the principal for the next period and interest amount is calculated. Thus the interest gets accumulated in a compound manner. One pays more interest compared to simple interest and naturally the investor is benefited. The borrower gets convenience as he does not have to pay periodical interest immediately. Some one invented the method and mathematician invented the formula for calculating cumulative amount and hence the interest also.

Pay out Plan

In the case of Annuity/pension Interest is calculated periodically and the interest amount is paid out by the borrower. In this case the total interest is the same as that of Simple interest calculation. At the end of term the borrower returns back the principal.

Diminishing balance method

In case of loan scheme the borrower pays equal amount periodically towards principal and an additional amount of interest for the ending period. Now the outstanding loan amount diminishes **equally** during the entire term. The interest also diminishes equally but the net effect is that the borrower pays more instalment amount during the

+

+

3 Introduction

INFLAPRO Schemes 3

early periods compared to the later period. This is the simplest method that was followed for centuries. As an example please consider the case taken up in page 4 in this report for comparison chart in loan scheme. The annual repayment in case of diminishing balance method for the twenty years starts at 15.00% and diminishes equally by 0.50%. Amount wise the first year instalment is Rs. **15000** and last year instalment is 5500.

Equated Monthly Instalment

Rather this term EMI should be read as equated Periodical Instalment, the repayment period need not necessarily be monthly. It can be quarterly, Half yearly, annual, even otherwise be fortnightly, weekly or daily. The loan repayment towards the principal amount is less in early periods as compared to the diminishing balance method. The repayment instalment amount can never be less than the interest for the first period. As an example this instalment amount for the same case considered in above paragraph worked out to be Rs. **11745.96**. (refer page 4) The overall interest payment is more compared to the Diminishing balance method. Some one invented the scheme and mathematical formula is also made out based on the progression. The borrower gets **convenience** at the cost of increased interest payment. So is the story in the proposed method of Inflation protected schemes.

Inflation Protected Scheme (INFLAPRO)

The loan repayment towards the principal amount **as well as interest payment** is less compared in early periods as compared to the diminishing balance as well as EMI method. The repayment instalment amount is less than the interest for the first period even. As an example the first instalment amount for the same case considered in above paragraph worked out to be Rs. **5,500.00** only (refer page 4). The overall interest payment is more compared to the Diminishing balance and EMI method. **B N Venkataraman**, the author has invented the scheme and method of calculation is also made out based on the trial and error method.

+

Graphical Representation of INFLAPRO

The graphical representation of loan repayment for the following input parameters is shown in **next page**

Loan amount: Rs.100000.00

Term : 20 years

interest %: 10%pa

inflation %: 10% per year

freq.of.payment: yearly

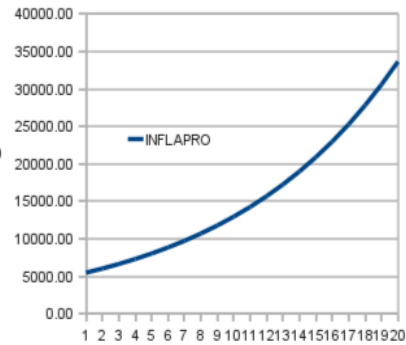
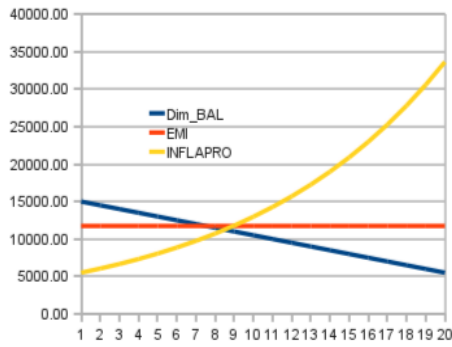
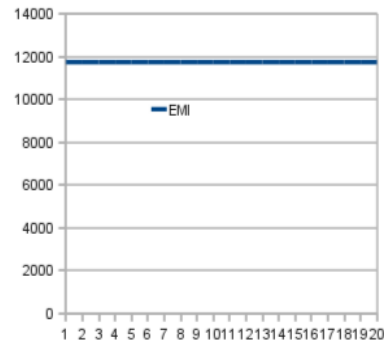
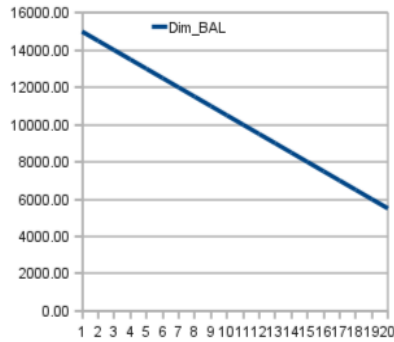
+

3b Introduction

INFLAPRO Schemes 3b

Diminishing Balance, EMI, INFLAPRO for TYPICAL VALUE term loan

Year	Dim_BAL	EMI	INFLAPRO
1	15000.00	11745.96	5500.00
2	14500.00	11745.96	6050.00
3	14000.00	11745.96	6655.00
4	13500.00	11745.96	7320.50
5	13000.00	11745.96	8052.55
6	12500.00	11745.96	8857.81
7	12000.00	11745.96	9743.59
8	11500.00	11745.96	10717.95
9	11000.00	11745.96	11789.75
10	10500.00	11745.96	12968.73
11	10000.00	11745.96	14265.60
12	9500.00	11745.96	15692.16
13	9000.00	11745.96	17261.38
14	8500.00	11745.96	18987.52
15	8000.00	11745.96	20886.27
16	7500.00	11745.96	22974.90
17	7000.00	11745.96	25272.39
18	6500.00	11745.96	27799.63
19	6000.00	11745.96	30579.59
20	5500.00	11745.96	33637.55



+

+

4 Introduction**INFLAPRO Schemes 4**

The borrower gets **convenience** at the cost of increased interest payment, the same sort of convenience in EMI method discussed above.

**Comparision of Diminishing Balance/EMI/Inflapro
Schemes
LOAN REPAYMENT**

Loan Amount: Rs.100000
Interest pa: 10.00%
Term: 20 Yrs
Inflation pa: 10.00%
Mode of repayment: Annual

Year	Dim balance method		EMI method		BNV's InflaPro method	
	return	%	return	%	return	%
1	15000.00	15.00%	11745.96	11.75%	5500.00	5.50%
2	14500.00	14.50%	11745.96	11.75%	6050.00	6.05%
3	14000.00	14.00%	11745.96	11.75%	6655.00	6.66%
4	13500.00	13.50%	11745.96	11.75%	7320.50	7.32%
5	13000.00	13.00%	11745.96	11.75%	8052.55	8.05%
6	12500.00	12.50%	11745.96	11.75%	8857.81	8.86%
7	12000.00	12.00%	11745.96	11.75%	9743.59	9.74%
8	11500.00	11.50%	11745.96	11.75%	10717.95	10.72%
9	11000.00	11.00%	11745.96	11.75%	11789.75	11.79%
10	10500.00	10.50%	11745.96	11.75%	12968.73	12.97%
11	10000.00	10.00%	11745.96	11.75%	14265.60	14.27%
12	9500.00	9.50%	11745.96	11.75%	15692.16	15.69%
13	9000.00	9.00%	11745.96	11.75%	17261.38	17.26%
14	8500.00	8.50%	11745.96	11.75%	18987.52	18.99%
15	8000.00	8.00%	11745.96	11.75%	20886.27	20.89%
16	7500.00	7.50%	11745.96	11.75%	22974.90	22.97%
17	7000.00	7.00%	11745.96	11.75%	25272.39	25.27%
18	6500.00	6.50%	11745.96	11.75%	27799.63	27.80%
19	6000.00	6.00%	11745.96	11.75%	30579.59	30.58%
20	5500.00	5.50%	11745.96	11.75%	33637.55	33.64%
Total	205000.00		234919.20		315012.87	
Yield	5.25%		6.75%		10.75%	

Yield % in InflaPro LOAN scheme is :10.75%

+

+

5 Introduction**INFLAPRO Schemes 5**

Following is the comparison table in case of Annuity/Pension. In this scheme the principal amount of Rs.100000 is returnable at maturity. Diminishing Balance Method is not applicable in this case.:

Comparison of Diminishing Balance/EMI/Inflapro Schemes
ANNUITY/PENSION

Principal: Rs.100000
Interest pa: 10.00%
Term: 20 Yrs
Inflation pa: 10.00%
Maturity Amt: Rs.100000
Mode of repayment: Annual

Year	Dim balance method		EMI method		BNV's InflaPro method	
	return	%	return	%	return	%
1			10000.00	10.00%	4682.45	4.68%
2			10000.00	10.00%	5150.70	5.15%
3			10000.00	10.00%	5665.77	5.67%
4			10000.00	10.00%	6232.35	6.23%
5			10000.00	10.00%	6855.59	6.86%
6			10000.00	10.00%	7541.15	7.54%
7			10000.00	10.00%	8295.27	8.30%
8			10000.00	10.00%	9124.80	9.12%
9			10000.00	10.00%	10037.28	10.04%
10			10000.00	10.00%	11041.01	11.04%
11			10000.00	10.00%	12145.11	12.15%
12			10000.00	10.00%	13359.62	13.36%
13			10000.00	10.00%	14695.58	14.70%
14			10000.00	10.00%	16165.14	16.17%
15			10000.00	10.00%	17781.65	17.78%
16			10000.00	10.00%	19559.82	19.56%
17			10000.00	10.00%	21515.80	21.52%
18			10000.00	10.00%	23667.38	23.67%
19			10000.00	10.00%	26034.12	26.03%
20			10000.00	10.00%	28637.53	28.64%
Total			200000.00		268188.12	
Yield			10.00%		13.41%	

Yield % in InflaPro ANNUITY/PENSION scheme is :13.41%

+

+

6 Introduction**INFLAPRO Schemes 6**

Following is the comparison table in case of Recurring Deposit. In this scheme the amount of Rs.100000 is payable at maturity. Diminishing Balance Method is not applicable in this case.:

**Comparison of Diminishing Balance/EMI/Inflapro Schemes
RECURRING DEPOSIT**

Interest pa: 10.00%
Term: 20 Yrs
Inflation pa: 10.00%
Maturity Amt: Rs.100000
Mode of repayment: Annual

Year	Dim balance method		EMI method		BNV's InflaPro method	
	return	%	return	%	return	%
1			1587.24	1.59%	743.22	0.74%
2			1587.24	1.59%	817.54	0.82%
3			1587.24	1.59%	899.29	0.90%
4			1587.24	1.59%	989.22	0.99%
5			1587.24	1.59%	1088.14	1.09%
6			1587.24	1.59%	1196.95	1.20%
7			1587.24	1.59%	1316.65	1.32%
8			1587.24	1.59%	1448.32	1.45%
9			1587.24	1.59%	1593.15	1.59%
10			1587.24	1.59%	1752.47	1.75%
11			1587.24	1.59%	1927.72	1.93%
12			1587.24	1.59%	2120.49	2.12%
13			1587.24	1.59%	2332.54	2.33%
14			1587.24	1.59%	2565.79	2.57%
15			1587.24	1.59%	2822.37	2.82%
16			1587.24	1.59%	3104.61	3.10%
17			1587.24	1.59%	3415.07	3.42%
18			1587.24	1.59%	3756.58	3.76%
19			1587.24	1.59%	4132.24	4.13%
20			1587.24	1.59%	4545.46	4.55%
Total			31744.80		42567.82	
Yield			3.41%		2.87%	

Yield % in InflaPro RECURRING DEPOSIT scheme is :2.87% In the case of RD the deposit amount is more in InflaPro scheme compared to the other.

+

+

METHOD OF CALCULATION

The methodology is not of arriving at simple formula but is of tedious method of iteratively posting values for the entire term. Computer will be required to calculate at least by spreadsheet software. It may take about 30 minutes to set up a spread sheet by a trained person and about 10 minutes further to calculate for different parameters. On the otherhand, a web based solution may take about a minute to select and enter terms and takes few seconds only to view, thereafter and within minutes printouts of about 20 pages or even more depending of scheme and terms, tabulations can be taken if desired.

A **SWOT** (Strength,Weakness,Opportunity and Threats) analysis also given by inventor in later chapter to show the strength and weekness.

The method of calculation is simple trial and error method. Firstly a start interest percentage is arrived at and initial pension or RD or repayment is calculated based on the EMI method. Trial calculation is made for the entire term with inflation protection. The final balance amount will not tally. Now reduce or increase the start percentage and recalculate for the term. Now also it will not fit in. Then try with lower or higher percentage. Thus the initial percentage is arrived at by trial and error method. At present for this 10% inflation provision there are about 22 iterations by **binary search mehtod** in finding the starting percentage, which is very small given the present day computer environment. The accuracy of initial payment amount is taken up to nearest paise, say for example in the case of Loan repayment shown in page 4 is Rs. 5500.00. The arriving of this start initial payment is very crucial. Then the chart is prepared for the entire term with proper rounding off. The current software one can achieve rounding off to nearest paise on amounts involving million billions of rupees. A full set of iterations for the Loan repayment shown in page 4 is illustrated in the following 22 pages showing how the initial figure of Rs. **5500.00**.is arrived at.

+

+

8 Methodology**INFLAPRO Schemes 8****Sample Working Of Binary Search.**

Sample working of binary search method for finding out the first instalment amount for loan repayment

Iteration 1**LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=23492.00 median=11746.00 Lower=0.00

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	11746.00	10000.00	1746.00	98254.00
2	98254.00	12920.60	9825.40	3095.20	95158.80
3	95158.80	14212.66	9515.88	4696.78	90462.02
4	90462.02	15633.93	9046.20	6587.73	83874.29
5	83874.29	17197.32	8387.43	8809.89	75064.40
6	75064.40	18917.05	7506.44	11410.61	63653.79
7	63653.79	20808.76	6365.38	14443.38	49210.41
8	49210.41	22889.64	4921.04	17968.60	31241.81
9	31241.81	25178.60	3124.18	22054.42	9187.39
10	9187.39	27696.46	918.74	26777.72	-17590.33

The full term calculation is not necessary since the runbalance has fallen below the tally figure of Rs. 0.00 at year 10 itself

+

+

9 Methodology**INFLAPRO Schemes 9****Iteration 2****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=11746.00 median=5873.00 Lower=0.00

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5873.00	10000.00	-4127.00	104127.00
2	104127.00	6460.30	10412.70	-3952.40	108079.40
3	108079.40	7106.33	10807.94	-3701.61	111781.01
4	111781.01	7816.96	11178.10	-3361.14	115142.15
5	115142.15	8598.66	11514.22	-2915.56	118057.71
6	118057.71	9458.53	11805.77	-2347.24	120404.95
7	120404.95	10404.38	12040.50	-1636.12	122041.07
8	122041.07	11444.82	12204.11	-759.29	122800.36
9	122800.36	12589.30	12280.04	309.26	122491.10
10	122491.10	13848.23	12249.11	1599.12	120891.98
11	120891.98	15233.05	12089.20	3143.85	117748.13
12	117748.13	16756.36	11774.81	4981.55	112766.58
13	112766.58	18432.00	11276.66	7155.34	105611.24
14	105611.24	20275.20	10561.12	9714.08	95897.16
15	95897.16	22302.72	9589.72	12713.00	83184.16
16	83184.16	24532.99	8318.42	16214.57	66969.59
17	66969.59	26986.29	6696.96	20289.33	46680.26
18	46680.26	29684.92	4668.03	25016.89	21663.37
19	21663.37	32653.41	2166.34	30487.07	-8823.70

The full term calculation is not necessary since the runbalance has fallen below the tally figure of Rs. 0.00 at year 19 itself

+

+

10 Methodology**INFLAPRO Schemes 10****Iteration 3****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5873.00 median=2936.50 Lower=0.00
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	2936.50	10000.00	-7063.50	107063.50
2	107063.50	3230.15	10706.35	-7476.20	114539.70
3	114539.70	3553.17	11453.97	-7900.80	122440.50
4	122440.50	3908.49	12244.05	-8335.56	130776.06
5	130776.06	4299.34	13077.61	-8778.27	139554.33
6	139554.33	4729.27	13955.43	-9226.16	148780.49
7	148780.49	5202.20	14878.05	-9675.85	158456.34
8	158456.34	5722.42	15845.63	-10123.21	168579.55
9	168579.55	6294.66	16857.96	-10563.30	179142.85
10	179142.85	6924.13	17914.29	-10990.16	190133.01
11	190133.01	7616.54	19013.30	-11396.76	201529.77
12	201529.77	8378.19	20152.98	-11774.79	213304.56
13	213304.56	9216.01	21330.46	-12114.45	225419.01
14	225419.01	10137.61	22541.90	-12404.29	237823.30
15	237823.30	11151.37	23782.33	-12630.96	250454.26
16	250454.26	12266.51	25045.43	-12778.92	263233.18
17	263233.18	13493.16	26323.32	-12830.16	276063.34
18	276063.34	14842.48	27606.33	-12763.85	288827.19
19	288827.19	16326.73	28882.72	-12555.99	301383.18
20	301383.18	17959.40	30138.32	-12178.92	313562.10

+

+

11 Methodology INFLAPRO Schemes 11

Iteration 4

LOAN REPAYMENT SCHEME

Principal
 B/F=100000 Period=20yrs Upper=5873.00 median=4404.75 Lower=2936.50
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	4404.75	10000.00	-5595.25	105595.25
2	105595.25	4845.23	10559.53	-5714.30	111309.55
3	111309.55	5329.75	11130.96	-5801.21	117110.76
4	117110.76	5862.73	11711.08	-5848.35	122959.11
5	122959.11	6449.00	12295.91	-5846.91	128806.02
6	128806.02	7093.90	12880.60	-5786.70	134592.72
7	134592.72	7803.29	13459.27	-5655.98	140248.70
8	140248.70	8583.62	14024.87	-5441.25	145689.95
9	145689.95	9441.98	14569.00	-5127.02	150816.97
10	150816.97	10386.18	15081.70	-4695.52	155512.49
11	155512.49	11424.80	15551.25	-4126.45	159638.94
12	159638.94	12567.28	15963.89	-3396.61	163035.55
13	163035.55	13824.01	16303.56	-2479.55	165515.10
14	165515.10	15206.41	16551.51	-1345.10	166860.20
15	166860.20	16727.05	16686.02	41.03	166819.17
16	166819.17	18399.76	16681.92	1717.84	165101.33
17	165101.33	20239.74	16510.13	3729.61	161371.72
18	161371.72	22263.71	16137.17	6126.54	155245.18
19	155245.18	24490.08	15524.52	8965.56	146279.62
20	146279.62	26939.09	14627.96	12311.13	133968.49

+

+

12 Methodology**INFLAPRO Schemes 12****Iteration 5****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5873.00 median=5138.88 Lower=4404.75
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5138.88	10000.00	-4861.12	104861.12
2	104861.12	5652.77	10486.11	-4833.34	109694.46
3	109694.46	6218.05	10969.45	-4751.40	114445.86
4	114445.86	6839.86	11444.59	-4604.73	119050.59
5	119050.59	7523.85	11905.06	-4381.21	123431.80
6	123431.80	8276.24	12343.18	-4066.94	127498.74
7	127498.74	9103.86	12749.87	-3646.01	131144.75
8	131144.75	10014.25	13114.48	-3100.23	134244.98
9	134244.98	11015.68	13424.50	-2408.82	136653.80
10	136653.80	12117.25	13665.38	-1548.13	138201.93
11	138201.93	13328.98	13820.19	-491.21	138693.14
12	138693.14	14661.88	13869.31	792.57	137900.57
13	137900.57	16128.07	13790.06	2338.01	135562.56
14	135562.56	17740.88	13556.26	4184.62	131377.94
15	131377.94	19514.97	13137.79	6377.18	125000.76
16	125000.76	21466.47	12500.08	8966.39	116034.37
17	116034.37	23613.12	11603.44	12009.68	104024.69
18	104024.69	25974.43	10402.47	15571.96	88452.73
19	88452.73	28571.87	8845.27	19726.60	68726.13
20	68726.13	31429.06	6872.61	24556.45	44169.68

+

+

13 Methodology**INFLAPRO Schemes 13****Iteration 6****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5873.00 median=5505.94 Lower=5138.88
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5505.94	10000.00	-4494.06	104494.06
2	104494.06	6056.53	10449.41	-4392.88	108886.94
3	108886.94	6662.18	10888.69	-4226.51	113113.45
4	113113.45	7328.40	11311.35	-3982.95	117096.40
5	117096.40	8061.24	11709.64	-3648.40	120744.80
6	120744.80	8867.36	12074.48	-3207.12	123951.92
7	123951.92	9754.10	12395.19	-2641.09	126593.01
8	126593.01	10729.51	12659.30	-1929.79	128522.80
9	128522.80	11802.46	12852.28	-1049.82	129572.62
10	129572.62	12982.71	12957.26	25.45	129547.17
11	129547.17	14280.98	12954.72	1326.26	128220.91
12	128220.91	15709.08	12822.09	2886.99	125333.92
13	125333.92	17279.99	12533.39	4746.60	120587.32
14	120587.32	19007.99	12058.73	6949.26	113638.06
15	113638.06	20908.79	11363.81	9544.98	104093.08
16	104093.08	22999.67	10409.31	12590.36	91502.72
17	91502.72	25299.64	9150.27	16149.37	75353.35
18	75353.35	27829.60	7535.34	20294.26	55059.09
19	55059.09	30612.56	5505.91	25106.65	29952.44
20	29952.44	33673.82	2995.24	30678.58	-726.14

+

+

14 Methodology**INFLAPRO Schemes 14****Iteration 7****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5505.94 median=5322.41 Lower=5138.88

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5322.41	10000.00	-4677.59	104677.59
2	104677.59	5854.65	10467.76	-4613.11	109290.70
3	109290.70	6440.12	10929.07	-4488.95	113779.65
4	113779.65	7084.13	11377.97	-4293.84	118073.49
5	118073.49	7792.54	11807.35	-4014.81	122088.30
6	122088.30	8571.79	12208.83	-3637.04	125725.34
7	125725.34	9428.97	12572.53	-3143.56	128868.90
8	128868.90	10371.87	12886.89	-2515.02	131383.92
9	131383.92	11409.06	13138.39	-1729.33	133113.25
10	133113.25	12549.97	13311.33	-761.36	133874.61
11	133874.61	13804.97	13387.46	417.51	133457.10
12	133457.10	15185.47	13345.71	1839.76	131617.34
13	131617.34	16704.02	13161.73	3542.29	128075.05
14	128075.05	18374.42	12807.51	5566.91	122508.14
15	122508.14	20211.86	12250.81	7961.05	114547.09
16	114547.09	22233.05	11454.71	10778.34	103768.75
17	103768.75	24456.36	10376.88	14079.48	89689.27
18	89689.27	26902.00	8968.93	17933.07	71756.20
19	71756.20	29592.20	7175.62	22416.58	49339.62
20	49339.62	32551.42	4933.96	27617.46	21722.16

+

+

15 Methodology**INFLAPRO Schemes 15****Iteration 8****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5505.94 median=5414.18 Lower=5322.41
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5414.18	10000.00	-4585.82	104585.82
2	104585.82	5955.60	10458.58	-4502.98	109088.80
3	109088.80	6551.16	10908.88	-4357.72	113446.52
4	113446.52	7206.28	11344.65	-4138.37	117584.89
5	117584.89	7926.91	11758.49	-3831.58	121416.47
6	121416.47	8719.60	12141.65	-3422.05	124838.52
7	124838.52	9591.56	12483.85	-2892.29	127730.81
8	127730.81	10550.72	12773.08	-2222.36	129953.17
9	129953.17	11605.79	12995.32	-1389.53	131342.70
10	131342.70	12766.37	13134.27	-367.90	131710.60
11	131710.60	14043.01	13171.06	871.95	130838.65
12	130838.65	15447.31	13083.87	2363.44	128475.21
13	128475.21	16992.04	12847.52	4144.52	124330.69
14	124330.69	18691.24	12433.07	6258.17	118072.52
15	118072.52	20560.36	11807.25	8753.11	109319.41
16	109319.41	22616.40	10931.94	11684.46	97634.95
17	97634.95	24878.04	9763.50	15114.54	82520.41
18	82520.41	27365.84	8252.04	19113.80	63406.61
19	63406.61	30102.42	6340.66	23761.76	39644.85
20	39644.85	33112.66	3964.49	29148.17	10496.68

+

+

16 Methodology**INFLAPRO Schemes 16****Iteration 9****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5505.94 median=5460.06 Lower=5414.18
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5460.06	10000.00	-4539.94	104539.94
2	104539.94	6006.07	10453.99	-4447.92	108987.86
3	108987.86	6606.68	10898.79	-4292.11	113279.97
4	113279.97	7267.35	11328.00	-4060.65	117340.62
5	117340.62	7994.09	11734.06	-3739.97	121080.59
6	121080.59	8793.50	12108.06	-3314.56	124395.15
7	124395.15	9672.85	12439.52	-2766.67	127161.82
8	127161.82	10640.14	12716.18	-2076.04	129237.86
9	129237.86	11704.15	12923.79	-1219.64	130457.50
10	130457.50	12874.57	13045.75	-171.18	130628.68
11	130628.68	14162.03	13062.87	1099.16	129529.52
12	129529.52	15578.23	12952.95	2625.28	126904.24
13	126904.24	17136.05	12690.42	4445.63	122458.61
14	122458.61	18849.66	12245.86	6603.80	115854.81
15	115854.81	20734.63	11585.48	9149.15	106705.66
16	106705.66	22808.09	10670.57	12137.52	94568.14
17	94568.14	25088.90	9456.81	15632.09	78936.05
18	78936.05	27597.79	7893.61	19704.18	59231.87
19	59231.87	30357.57	5923.19	24434.38	34797.49
20	34797.49	33393.33	3479.75	29913.58	4883.91

+

+

17 Methodology**INFLAPRO Schemes 17****Iteration 10****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5505.94 median=5483.00 Lower=5460.06
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5483.00	10000.00	-4517.00	104517.00
2	104517.00	6031.30	10451.70	-4420.40	108937.40
3	108937.40	6634.43	10893.74	-4259.31	113196.71
4	113196.71	7297.87	11319.67	-4021.80	117218.51
5	117218.51	8027.66	11721.85	-3694.19	120912.70
6	120912.70	8830.43	12091.27	-3260.84	124173.54
7	124173.54	9713.47	12417.35	-2703.88	126877.42
8	126877.42	10684.82	12687.74	-2002.92	128880.34
9	128880.34	11753.30	12888.03	-1134.73	130015.07
10	130015.07	12928.63	13001.51	-72.88	130087.95
11	130087.95	14221.49	13008.80	1212.69	128875.26
12	128875.26	15643.64	12887.53	2756.11	126119.15
13	126119.15	17208.00	12611.92	4596.08	121523.07
14	121523.07	18928.80	12152.31	6776.49	114746.58
15	114746.58	20821.68	11474.66	9347.02	105399.56
16	105399.56	22903.85	10539.96	12363.89	93035.67
17	93035.67	25194.24	9303.57	15890.67	77145.00
18	77145.00	27713.66	7714.50	19999.16	57145.84
19	57145.84	30485.03	5714.58	24770.45	32375.39
20	32375.39	33533.53	3237.54	30295.99	2079.40

+

+

18 Methodology**INFLAPRO Schemes 18****Iteration 11****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5505.94 median=5494.47 Lower=5483.00
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5494.47	10000.00	-4505.53	104505.53
2	104505.53	6043.92	10450.55	-4406.63	108912.16
3	108912.16	6648.31	10891.22	-4242.91	113155.07
4	113155.07	7313.14	11315.51	-4002.37	117157.44
5	117157.44	8044.45	11715.74	-3671.29	120828.73
6	120828.73	8848.90	12082.87	-3233.97	124062.70
7	124062.70	9733.79	12406.27	-2672.48	126735.18
8	126735.18	10707.17	12673.52	-1966.35	128701.53
9	128701.53	11777.89	12870.15	-1092.26	129793.79
10	129793.79	12955.68	12979.38	-23.70	129817.49
11	129817.49	14251.25	12981.75	1269.50	128547.99
12	128547.99	15676.38	12854.80	2821.58	125726.41
13	125726.41	17244.02	12572.64	4671.38	121055.03
14	121055.03	18968.42	12105.50	6862.92	114192.11
15	114192.11	20865.26	11419.21	9446.05	104746.06
16	104746.06	22951.79	10474.61	12477.18	92268.88
17	92268.88	25246.97	9226.89	16020.08	76248.80
18	76248.80	27771.67	7624.88	20146.79	56102.01
19	56102.01	30548.84	5610.20	24938.64	31163.37
20	31163.37	33603.72	3116.34	30487.38	675.99

+

+

19 Methodology**INFLAPRO Schemes 19****Iteration 12****LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5505.94 median=5500.21 Lower=5494.47
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5500.21	10000.00	-4499.79	104499.79
2	104499.79	6050.23	10449.98	-4399.75	108899.54
3	108899.54	6655.25	10889.95	-4234.70	113134.24
4	113134.24	7320.78	11313.42	-3992.64	117126.88
5	117126.88	8052.86	11712.69	-3659.83	120786.71
6	120786.71	8858.15	12078.67	-3220.52	124007.23
7	124007.23	9743.97	12400.72	-2656.75	126663.98
8	126663.98	10718.37	12666.40	-1948.03	128612.01
9	128612.01	11790.21	12861.20	-1070.99	129683.00
10	129683.00	12969.23	12968.30	0.93	129682.07
11	129682.07	14266.15	12968.21	1297.94	128384.13
12	128384.13	15692.77	12838.41	2854.36	125529.77
13	125529.77	17262.05	12552.98	4709.07	120820.70
14	120820.70	18988.26	12082.07	6906.19	113914.51
15	113914.51	20887.09	11391.45	9495.64	104418.87
16	104418.87	22975.80	10441.89	12533.91	91884.96
17	91884.96	25273.38	9188.50	16084.88	75800.08
18	75800.08	27800.72	7580.01	20220.71	55579.37
19	55579.37	30580.79	5557.94	25022.85	30556.52
20	30556.52	33638.87	3055.65	30583.22	-26.70

+

+

20 Methodology**INFLAPRO Schemes 20****Iteration 13****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.21 median=5497.34 Lower=5494.47
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5497.34	10000.00	-4502.66	104502.66
2	104502.66	6047.07	10450.27	-4403.20	108905.86
3	108905.86	6651.78	10890.59	-4238.81	113144.67
4	113144.67	7316.96	11314.47	-3997.51	117142.18
5	117142.18	8048.66	11714.22	-3665.56	120807.74
6	120807.74	8853.53	12080.77	-3227.24	124034.98
7	124034.98	9738.88	12403.50	-2664.62	126699.60
8	126699.60	10712.77	12669.96	-1957.19	128656.79
9	128656.79	11784.05	12865.68	-1081.63	129738.42
10	129738.42	12962.46	12973.84	-11.38	129749.80
11	129749.80	14258.71	12974.98	1283.73	128466.07
12	128466.07	15684.58	12846.61	2837.97	125628.10
13	125628.10	17253.04	12562.81	4690.23	120937.87
14	120937.87	18978.34	12093.79	6884.55	114053.32
15	114053.32	20876.17	11405.33	9470.84	104582.48
16	104582.48	22963.79	10458.25	12505.54	92076.94
17	92076.94	25260.17	9207.69	16052.48	76024.46
18	76024.46	27786.19	7602.45	20183.74	55840.72
19	55840.72	30564.81	5584.07	24980.74	30859.98
20	30859.98	33621.29	3086.00	30535.29	324.69

+

+

21 Methodology**INFLAPRO Schemes 21****Iteration 14****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.21 median=5498.78 Lower=5497.34
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5498.78	10000.00	-4501.22	104501.22
2	104501.22	6048.66	10450.12	-4401.46	108902.68
3	108902.68	6653.53	10890.27	-4236.74	113139.42
4	113139.42	7318.88	11313.94	-3995.06	117134.48
5	117134.48	8050.77	11713.45	-3662.68	120797.16
6	120797.16	8855.85	12079.72	-3223.87	124021.03
7	124021.03	9741.44	12402.10	-2660.66	126681.69
8	126681.69	10715.58	12668.17	-1952.59	128634.28
9	128634.28	11787.14	12863.43	-1076.29	129710.57
10	129710.57	12965.85	12971.06	-5.21	129715.78
11	129715.78	14262.44	12971.58	1290.86	128424.92
12	128424.92	15688.68	12842.49	2846.19	125578.73
13	125578.73	17257.55	12557.87	4699.68	120879.05
14	120879.05	18983.31	12087.91	6895.40	113983.65
15	113983.65	20881.64	11398.37	9483.27	104500.38
16	104500.38	22969.80	10450.04	12519.76	91980.62
17	91980.62	25266.78	9198.06	16068.72	75911.90
18	75911.90	27793.46	7591.19	20202.27	55709.63
19	55709.63	30572.81	5570.96	25001.85	30707.78
20	30707.78	33630.09	3070.78	30559.31	148.47

+

+

22 Methodology**INFLAPRO Schemes 22****Iteration 15****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.21 median=5499.50 Lower=5498.78
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5499.50	10000.00	-4500.50	104500.50
2	104500.50	6049.45	10450.05	-4400.60	108901.10
3	108901.10	6654.40	10890.11	-4235.71	113136.81
4	113136.81	7319.84	11313.68	-3993.84	117130.65
5	117130.65	8051.82	11713.07	-3661.25	120791.90
6	120791.90	8857.00	12079.19	-3222.19	124014.09
7	124014.09	9742.70	12401.41	-2658.71	126672.80
8	126672.80	10716.97	12667.28	-1950.31	128623.11
9	128623.11	11788.67	12862.31	-1073.64	129696.75
10	129696.75	12967.54	12969.68	-2.14	129698.89
11	129698.89	14264.29	12969.89	1294.40	128404.49
12	128404.49	15690.72	12840.45	2850.27	125554.22
13	125554.22	17259.79	12555.42	4704.37	120849.85
14	120849.85	18985.77	12084.99	6900.78	113949.07
15	113949.07	20884.35	11394.91	9489.44	104459.63
16	104459.63	22972.79	10445.96	12526.83	91932.80
17	91932.80	25270.07	9193.28	16076.79	75856.01
18	75856.01	27797.08	7585.60	20211.48	55644.53
19	55644.53	30576.79	5564.45	25012.34	30632.19
20	30632.19	33634.47	3063.22	30571.25	60.94

+

+

23 Methodology**INFLAPRO Schemes 23****Iteration 16****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.21 median=5499.86 Lower=5499.50

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5499.86	10000.00	-4500.14	104500.14
2	104500.14	6049.85	10450.01	-4400.16	108900.30
3	108900.30	6654.84	10890.03	-4235.19	113135.49
4	113135.49	7320.32	11313.55	-3993.23	117128.72
5	117128.72	8052.35	11712.87	-3660.52	120789.24
6	120789.24	8857.59	12078.92	-3221.33	124010.57
7	124010.57	9743.35	12401.06	-2657.71	126668.28
8	126668.28	10717.69	12666.83	-1949.14	128617.42
9	128617.42	11789.46	12861.74	-1072.28	129689.70
10	129689.70	12968.41	12968.97	-0.56	129690.26
11	129690.26	14265.25	12969.03	1296.22	128394.04
12	128394.04	15691.78	12839.40	2852.38	125541.66
13	125541.66	17260.96	12554.17	4706.79	120834.87
14	120834.87	18987.06	12083.49	6903.57	113931.30
15	113931.30	20885.77	11393.13	9492.64	104438.66
16	104438.66	22974.35	10443.87	12530.48	91908.18
17	91908.18	25271.79	9190.82	16080.97	75827.21
18	75827.21	27798.97	7582.72	20216.25	55610.96
19	55610.96	30578.87	5561.10	25017.77	30593.19
20	30593.19	33636.76	3059.32	30577.44	15.75

+

+

24 Methodology INFLAPRO Schemes 24

Iteration 17

LOAN REPAYMENT SCHEME

Principal
 B/F=100000 Period=20yrs Upper=5500.21 median=5500.04 Lower=5499.86
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5500.04	10000.00	-4499.96	104499.96
2	104499.96	6050.04	10450.00	-4399.96	108899.92
3	108899.92	6655.04	10889.99	-4234.95	113134.87
4	113134.87	7320.54	11313.49	-3992.95	117127.82
5	117127.82	8052.59	11712.78	-3660.19	120788.01
6	120788.01	8857.85	12078.80	-3220.95	124008.96
7	124008.96	9743.64	12400.90	-2657.26	126666.22
8	126666.22	10718.00	12666.62	-1948.62	128614.84
9	128614.84	11789.80	12861.48	-1071.68	129686.52
10	129686.52	12968.78	12968.65	0.13	129686.39
11	129686.39	14265.66	12968.64	1297.02	128389.37
12	128389.37	15692.23	12838.94	2853.29	125536.08
13	125536.08	17261.45	12553.61	4707.84	120828.24
14	120828.24	18987.60	12082.82	6904.78	113923.46
15	113923.46	20886.36	11392.35	9494.01	104429.45
16	104429.45	22975.00	10442.95	12532.05	91897.40
17	91897.40	25272.50	9189.74	16082.76	75814.64
18	75814.64	27799.75	7581.46	20218.29	55596.35
19	55596.35	30579.73	5559.64	25020.09	30576.26
20	30576.26	33637.70	3057.63	30580.07	-3.81

+

+

25 Methodology**INFLAPRO Schemes 25****Iteration 18****LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.04 median=5499.95 Lower=5499.86

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5499.95	10000.00	-4500.05	104500.05
2	104500.05	6049.95	10450.01	-4400.06	108900.11
3	108900.11	6654.95	10890.01	-4235.06	113135.17
4	113135.17	7320.45	11313.52	-3993.07	117128.24
5	117128.24	8052.50	11712.82	-3660.32	120788.56
6	120788.56	8857.75	12078.86	-3221.11	124009.67
7	124009.67	9743.53	12400.97	-2657.44	126667.11
8	126667.11	10717.88	12666.71	-1948.83	128615.94
9	128615.94	11789.67	12861.59	-1071.92	129687.86
10	129687.86	12968.64	12968.79	-0.15	129688.01
11	129688.01	14265.50	12968.80	1296.70	128391.31
12	128391.31	15692.05	12839.13	2852.92	125538.39
13	125538.39	17261.26	12553.84	4707.42	120830.97
14	120830.97	18987.39	12083.10	6904.29	113926.68
15	113926.68	20886.13	11392.67	9493.46	104433.22
16	104433.22	22974.74	10443.32	12531.42	91901.80
17	91901.80	25272.21	9190.18	16082.03	75819.77
18	75819.77	27799.43	7581.98	20217.45	55602.32
19	55602.32	30579.37	5560.23	25019.14	30583.18
20	30583.18	33637.31	3058.32	30578.99	4.19

+

+

Iteration 19**LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.04 median=5500.00 Lower=5499.95
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5500.00	10000.00	-4500.00	104500.00
2	104500.00	6050.00	10450.00	-4400.00	108900.00
3	108900.00	6655.00	10890.00	-4235.00	113135.00
4	113135.00	7320.50	11313.50	-3993.00	117128.00
5	117128.00	8052.55	11712.80	-3660.25	120788.25
6	120788.25	8857.81	12078.83	-3221.02	124009.27
7	124009.27	9743.59	12400.93	-2657.34	126666.61
8	126666.61	10717.95	12666.66	-1948.71	128615.32
9	128615.32	11789.75	12861.53	-1071.78	129687.10
10	129687.10	12968.73	12968.71	0.02	129687.08
11	129687.08	14265.60	12968.71	1296.89	128390.19
12	128390.19	15692.16	12839.02	2853.14	125537.05
13	125537.05	17261.38	12553.71	4707.67	120829.38
14	120829.38	18987.52	12082.94	6904.58	113924.80
15	113924.80	20886.27	11392.48	9493.79	104431.01
16	104431.01	22974.90	10443.10	12531.80	91899.21
17	91899.21	25272.39	9189.92	16082.47	75816.74
18	75816.74	27799.63	7581.67	20217.96	55598.78
19	55598.78	30579.59	5559.88	25019.71	30579.07
20	30579.07	33637.55	3057.91	30579.64	-0.57

+

+

27 Methodology INFLAPRO Schemes 27

Iteration 20

LOAN REPAYMENT SCHEME

Principal
 B/F=100000 Period=20yrs Upper=5500.00 median=5499.98 Lower=5499.95
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5499.98	10000.00	-4500.02	104500.02
2	104500.02	6049.98	10450.00	-4400.02	108900.04
3	108900.04	6654.98	10890.00	-4235.02	113135.06
4	113135.06	7320.48	11313.51	-3993.03	117128.09
5	117128.09	8052.53	11712.81	-3660.28	120788.37
6	120788.37	8857.78	12078.84	-3221.06	124009.43
7	124009.43	9743.56	12400.94	-2657.38	126666.81
8	126666.81	10717.92	12666.68	-1948.76	128615.57
9	128615.57	11789.71	12861.56	-1071.85	129687.42
10	129687.42	12968.68	12968.74	-0.06	129687.48
11	129687.48	14265.55	12968.75	1296.80	128390.68
12	128390.68	15692.11	12839.07	2853.04	125537.64
13	125537.64	17261.32	12553.76	4707.56	120830.08
14	120830.08	18987.45	12083.01	6904.44	113925.64
15	113925.64	20886.20	11392.56	9493.64	104432.00
16	104432.00	22974.82	10443.20	12531.62	91900.38
17	91900.38	25272.30	9190.04	16082.26	75818.12
18	75818.12	27799.53	7581.81	20217.72	55600.40
19	55600.40	30579.48	5560.04	25019.44	30580.96
20	30580.96	33637.43	3058.10	30579.33	1.63

+

+

Iteration 21**LOAN REPAYMENT SCHEME**

Principal

B/F=100000 Period=20yrs Upper=5500.00 median=5499.99 Lower=5499.98

The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5499.99	10000.00	-4500.01	104500.01
2	104500.01	6049.99	10450.00	-4400.01	108900.02
3	108900.02	6654.99	10890.00	-4235.01	113135.03
4	113135.03	7320.49	11313.50	-3993.01	117128.04
5	117128.04	8052.54	11712.80	-3660.26	120788.30
6	120788.30	8857.79	12078.83	-3221.04	124009.34
7	124009.34	9743.57	12400.93	-2657.36	126666.70
8	126666.70	10717.93	12666.67	-1948.74	128615.44
9	128615.44	11789.72	12861.54	-1071.82	129687.26
10	129687.26	12968.69	12968.73	-0.04	129687.30
11	129687.30	14265.56	12968.73	1296.83	128390.47
12	128390.47	15692.12	12839.05	2853.07	125537.40
13	125537.40	17261.33	12553.74	4707.59	120829.81
14	120829.81	18987.46	12082.98	6904.48	113925.33
15	113925.33	20886.21	11392.53	9493.68	104431.65
16	104431.65	22974.83	10443.17	12531.66	91899.99
17	91899.99	25272.31	9190.00	16082.31	75817.68
18	75817.68	27799.54	7581.77	20217.77	55599.91
19	55599.91	30579.49	5559.99	25019.50	30580.41
20	30580.41	33637.44	3058.04	30579.40	1.01

The iteration is stopped since the difference in upper and lower limit is less than 2 paise

+

+

Iteration 22**LOAN REPAYMENT SCHEME**

Principal
 B/F=100000 Period=20yrs Upper=5500.00 median=5500.00 Lower=5499.99
 The first instalment amount is the median itself

year	Principal B/F	instalment	Towd Interest	towd repayment	RunBal C/o
1	100000.00	5500.00	10000.00	-4500.00	104500.00
2	104500.00	6050.00	10450.00	-4400.00	108900.00
3	108900.00	6655.00	10890.00	-4235.00	113135.00
4	113135.00	7320.50	11313.50	-3993.00	117128.00
5	117128.00	8052.55	11712.80	-3660.25	120788.25
6	120788.25	8857.81	12078.83	-3221.02	124009.27
7	124009.27	9743.59	12400.93	-2657.34	126666.61
8	126666.61	10717.95	12666.66	-1948.71	128615.32
9	128615.32	11789.75	12861.53	-1071.78	129687.10
10	129687.10	12968.73	12968.71	0.02	129687.08
11	129687.08	14265.60	12968.71	1296.89	128390.19
12	128390.19	15692.16	12839.02	2853.14	125537.05
13	125537.05	17261.38	12553.71	4707.67	120829.38
14	120829.38	18987.52	12082.94	6904.58	113924.80
15	113924.80	20886.27	11392.48	9493.79	104431.01
16	104431.01	22974.90	10443.10	12531.80	91899.21
17	91899.21	25272.39	9189.92	16082.47	75816.74
18	75816.74	27799.63	7581.67	20217.96	55598.78
19	55598.78	30579.59	5559.88	25019.71	30579.07
20	30579.07	33637.55	3057.91	30579.64	-0.57

The iteration is stopped since the difference in upper and lower limit is less than 2 paise

+

Explanation of iterations

The iterations are self explanatory.

The median of the first iteration is the figure derived from higher rupee of EMI figure. That is **11746.00** which is next higher rupee of Rs.11745.96. The lower limit of first iteration is zero and naturally the upper limit is twice the median ie. Rs. 23492.00.

In actual practice the first iteration result is a forgone conclusion, it is avoided and also there is saving on last few iterations because, for any difference of upper and lower limit by 3 paise, the results are already worked out and the tally figures are saved for lower, upper and median and that tally figures are compared and the iteration stops there itself. So effectively there are 18 or 19 iterations only.

In binary search method which is being followed, the range between upper and lower limit is halved. This is achieved in the selected case by taking the upper limit for next iteration is the median in case the last row runbalance carry over amount in the table is greater than the tally amount (0.00). Or in case the runbalance amount is less than the tally amount of 0.00 the median will be the lower limit for next iteration and new median is calculated thereafter and next iteration carried out.

If the final runbalance incidentally equal to tally amount of 0.00 then it is an excellent case to stop the iteration which may be anywhere between 1 to 19 iterations. In this case one need not continue iteration upto even 3 paise difference between limits.

+

INFLATION

The inflation rate is not less than 6% per annum on any item since the time known to the author. It is time to think of having return on investment with some degree of inflation protection.

The following table shows the degree of inflation since 1957.

1957 is the time when naye paise was introduced in place of anna paise and the memory is green as we converted prices in annas to naye paise on each commodity.

Annual inflation of commodities from the experience of middle class common man from the memory lane			
commodity	1957	2010	inflation pa
Paddy	50.00	1200.00	6.18%
Til oil	3.00	180.00	8.03%
Soap	0.30	20.00	8.25%
Gold (8gm soverin)	75.00	14780.00	10.48%
Rural House rent	20.00	3500.00	10.24%
Urban House rent	200.00	20000.00	9.08%
One time a day monthly meal in Lunch home	20.00	900.00	7.45%
Petrol/litre	0.90	55.00	8.07%
clerical salary	30.00	12000.00	11.97%
Officer salary	180.00	50000.00	11.20%
Part time sevant maid	5.00	700.00	9.77%
monthly veg budget	3.00	600.00	10.51%
milk	0.18	32.00	10.27%
Ghee	4.00	240.00	8.03%
Enter your known commodity / yr / prices here	PreYr <input type="text" value="1965"/>	CurYr <input type="text" value="2010"/>	See % for your eyes
<input type="text" value="small car"/>	5000.00	125000.00	7.41%

+

32 Inflation**INFLAPRO Schemes 32**

It is interesting to note that inflation is not less than 6% p.a. ever since!! This base rate of 6% is considered in this report as the requisite degree of inflation protection.

The low percentage on the item like paddy can be attributed to the green revolution, thanks to world famous agriculture scientist, Dr. M.S. Swaminathan, mass cultivation through co-operative movement and also due to popularity of tractors/agricultural engineering.

+

CALCULATOR

Typical form for calculator input parameters:

Select Scheme:	
<input type="radio"/> Pension <input type="radio"/> RD <input type="radio"/> Loan <input type="radio"/> FixDep	
Selected inflation constant	
<input type="text" value="10% const 1.10"/>	
Select Interest % per annum	
<input type="text" value="10.00%"/>	Other(say 8.333): <input type="text" value="10.00%"/>
Select mode of compounding interest & payment option:	
<input type="radio"/> Yrly <input type="radio"/> H.Yr <input type="radio"/> Qr <input type="radio"/> Month <input type="radio"/> Fortnight <input type="radio"/> Weekly	
DESIRED BREAK EVEN TERMS	
Select time period	
<input type="text" value="10"/> years	<input type="text" value="0"/> months
Select option for further pension on vesting date	
<input type="radio"/> Full pension as last <input type="radio"/> Half that of last pension <input type="radio"/> default percentage	
Enter the amount (in Rs.)	
Rs. <input type="text" value="100000.00"/>	
Reenter password	
<input type="text" value="."/>	
<hr/>	
Actual term for FDs	Select time period
<input type="checkbox"/> check for term default same as above	<input type="text" value=""/> years
FD start date dd-mm-yyyy or dd-AAA-yyyy	<input type="text" value=""/> months
<input type="text" value="00-00-000"/>	<input type="text" value=""/> days
FD Maturity date will be calculated and	<input type="text" value=""/> weeks

+

+

34 Calculator**INFLAPRO Schemes 34****Calculator how-to:**

1. Select the scheme FD say Inflated Fixed deposit Scheme
2. Select the percent return per annum say 10%
3. Select modo of compounding/payment (mean frequency) such as yearly/Half yearly/ Monthly/ Fortnightly/Weekly
4. Select the years (0 for 1 to 11 months)
5. Select the additional months in the terms if not full year
6. Enter the amount
7. In case of Pension Enter additional particulars such as continue the full/half last pension amount after vesting date or at default rate of interest.
8. In case of Fixed Deposit Enter additional particulars such as start date of FD, Term of deposit may default year and months of the break even term or as per your selection.
9. Click submit

Notes on Calculator menu:

Important: One requires authorised login as registered to this site to successfully use Calculator.

Following are notes on various input fields in Calculator menu:

Scheme

The scheme that can be selected are Pension, RD, Loan, Fixed Deposit.

Selected inflation constant

This field is set by another form in same calculator page preceding the calculator. The valid values considered for this setting is from 0% to 10.9% that is inflation multiplying constant applicable per year is 1.00 to 1.109 (which is less than 11%). This is done at present because the higher the inflation constant, higher will be the variation in return on investment from first year to final year.

+

+

35 Calculator**INFLAPRO Schemes 35****Interest percentage**

Select the interest percentage to be applied on accruals (a flat %). The selection in this field can be from 6% to 20% in interval of 0.25%.

For other interest percentage such as 6.3% or say 8.333%, use the input field discussed next.

Other interest percentage

For other interest percentage such as 6.3% or say 8.333%, use this input field. You can specify with 3 decimal accuracy.

Desired breakeven term Year and months

Select the year and months of term for the scheme. In case of Fixed deposits it is the number of years and months in which cumulative percentage of the return will be equal to the cumulative percentage of the flat rate (Equal pay out) scheme. Present software at this site provides for the year is in the range of 0-20 and months in the range of 0-11. With this one can select term like three and half year as 3 yrs 6 months. The limit is subject to 20 years or 240 months only.

Further pension (applicable to pension Scheme)

This field is applicable and will be displayed if 'pension' was selected in the scheme selection. The provision is for options of further pension after vesting date at the full rate or half rate as per the last pension. That is for example of 20 year InflaPro pension scheme if the last pension at 240th month was Rs. 10000, he will continue to get the same 10000 under full pension option or Rs.5000/- under half pension until death and on death to the spouse.

Amount

This field is for inputting principal amount of deposit or initial loan amount in case of loan or Maturity amount in case of Recurring Deposit.

+

+

36 Calculator**INFLAPRO Schemes 36****Reenter Password**

This field is provided to enter your current password. This is just simple protection to use the calculator by you or your authorised person only in case of leaving the system without log out.

Start Date (Applicable to InflaPro FD Scheme)

In case of Fixed Deposit scheme please provide the start date of FD and maturity date will be calculated and displayed as per other terms.

FD Term

If the term of FD is the same as the breakeven term already provided, simply check the checkbox provided for such option otherwise select the years, months, days and or weeks of the term desired.

The year selectable between 0 and 20 years, the months between 0-240 months, days in 0 to 999 days, and weeks from 0 to 51.

For maturity purposes one year is considered as 365 days or 366 days as per calendar year and not 52 weeks even if the compounding period is weekly.

General

In case of weekly compounding/payment option for FDs '7/365*inflation constant' is considered as factor for calculating interest for the period and not '1/52', but for maturity purposes one year is considered as 365 days calendar year and not 52 weeks.

Therefore if you are particular of say 53 weeks and not calendar year please provide the term as 1 year 6 days and not 1 year 1 week.

For fortnightly option the first fortnight of any month will be of 15 days and second fortnight of the month will vary to 14/15/16 days. Effectively there are two fortnights in a month and 24 fortnights for the calendar year.

For Pension/RD/Loan the inflation increment is applied at beginning of every year only not on the frequency of the period selected such as monthly/weekly/etc.

+

+

PENSION (Monthly Income) **Scheme**

Sample calculations on following input parameters of Pension Scheme is shown in subsequent pages (38 to 44)

Input parameters

Scheme :	Pension
Rate of Interest :	10.00%
Term :	10 years (120 months)
Inflation % :	10.00% pa (inflation constant: 1.1)
mode of payment (frequency) :	monthly
Amount (Principal) :	Rs. 100000.00
Maturity Amount :	Rs. 100000.00

The calculation presented are audit proof and can be checked with MSExcel or Open Office spread sheet software

+

+

38 Pension**INFLAPRO Schemes 38****Notes on calculation table:**

- All resultant figures in each column is rounded off to nearest paise.
- column (2) is brought-forward (B/F) figure which is same as carry over of previous row. To startwith first month B/F is the principal amount.
- column (3) is the calculated interest at the rate of 10% of which all are need not be due within the period. The monthly interest is calculated as (Brought forward)BF*interest rate pa/12/100, that is $BF \times 10 / 1200$. The interest calculated is rounded off to nearest paise, that $intt = \text{round}(intt, 2)$.
- column (4) is net Amount which is sum of column 2 and column 3.
- column (5) is pension **periodical pay out**, First year's pension starts at Rs.565.12 p.m and on final year the Monthly pension works out to be Rs.1,332.52 with annual increment towards inflation protection at 10%. In later part of the term period the payout amount is greater than the interest for the period which means that the payout includes the return of interest accruals.
- column (6) is the **Carry over amount** to next period (month). This is the Net Amount (col.4) minus payout (col.5).
There is an adjustment of Rs. +0.16p during the final payout (120th month).

Enjoy reading the presented table

+

+

39 Pension**INFLAPRO Schemes 39**

Table - Pension (1 to 24months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	Pmt (5)	C/o (6)=(4)-(5)
0Y 1M	100000.00	833.33	100833.33	565.12	100268.21
0Y 2M	100268.21	835.57	101103.78	565.12	100538.66
0Y 3M	100538.66	837.82	101376.48	565.12	100811.36
0Y 4M	100811.36	840.09	101651.45	565.12	101086.33
0Y 5M	101086.33	842.39	101928.72	565.12	101363.60
0Y 6M	101363.60	844.70	102208.30	565.12	101643.18
0Y 7M	101643.18	847.03	102490.21	565.12	101925.09
0Y 8M	101925.09	849.38	102774.47	565.12	102209.35
0Y 9M	102209.35	851.74	103061.09	565.12	102495.97
0Y 10M	102495.97	854.13	103350.10	565.12	102784.98
0Y 11M	102784.98	856.54	103641.52	565.12	103076.40
0Y 12M	103076.40	858.97	103935.37	565.12	103370.25
1Y 1M	103370.25	861.42	104231.67	621.63	103610.04
1Y 2M	103610.04	863.42	104473.46	621.63	103851.83
1Y 3M	103851.83	865.43	104717.26	621.63	104095.63
1Y 4M	104095.63	867.46	104963.09	621.63	104341.46
1Y 5M	104341.46	869.51	105210.97	621.63	104589.34
1Y 6M	104589.34	871.58	105460.92	621.63	104839.29
1Y 7M	104839.29	873.66	105712.95	621.63	105091.32
1Y 8M	105091.32	875.76	105967.08	621.63	105345.45
1Y 9M	105345.45	877.88	106223.33	621.63	105601.70
1Y 10M	105601.70	880.01	106481.71	621.63	105860.08
1Y 11M	105860.08	882.17	106742.25	621.63	106120.62
1Y 12M	106120.62	884.34	107004.96	621.63	106383.33

+

+

40 Pension**INFLAPRO Schemes 40**

Table - Pension (25 to 48months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	Pmt (5)	C/o (6)=(4)-(5)
2Y 1M	106383.33	886.53	107269.86	683.79	106586.07
2Y 2M	106586.07	888.22	107474.29	683.79	106790.50
2Y 3M	106790.50	889.92	107680.42	683.79	106996.63
2Y 4M	106996.63	891.64	107888.27	683.79	107204.48
2Y 5M	107204.48	893.37	108097.85	683.79	107414.06
2Y 6M	107414.06	895.12	108309.18	683.79	107625.39
2Y 7M	107625.39	896.88	108522.27	683.79	107838.48
2Y 8M	107838.48	898.65	108737.13	683.79	108053.34
2Y 9M	108053.34	900.44	108953.78	683.79	108269.99
2Y 10M	108269.99	902.25	109172.24	683.79	108488.45
2Y 11M	108488.45	904.07	109392.52	683.79	108708.73
2Y 12M	108708.73	905.91	109614.64	683.79	108930.85
3Y 1M	108930.85	907.76	109838.61	752.17	109086.44
3Y 2M	109086.44	909.05	109995.49	752.17	109243.32
3Y 3M	109243.32	910.36	110153.68	752.17	109401.51
3Y 4M	109401.51	911.68	110313.19	752.17	109561.02
3Y 5M	109561.02	913.01	110474.03	752.17	109721.86
3Y 6M	109721.86	914.35	110636.21	752.17	109884.04
3Y 7M	109884.04	915.70	110799.74	752.17	110047.57
3Y 8M	110047.57	917.06	110964.63	752.17	110212.46
3Y 9M	110212.46	918.44	111130.90	752.17	110378.73
3Y 10M	110378.73	919.82	111298.55	752.17	110546.38
3Y 11M	110546.38	921.22	111467.60	752.17	110715.43
3Y 12M	110715.43	922.63	111638.06	752.17	110885.89

+

+

41 Pension**INFLAPRO Schemes 41**

Table - Pension (49 to 72months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	Pmt (5)	C/o (6)=(4)-(5)
4Y 1M	110885.89	924.05	111809.94	827.39	110982.55
4Y 2M	110982.55	924.85	111907.40	827.39	111080.01
4Y 3M	111080.01	925.67	112005.68	827.39	111178.29
4Y 4M	111178.29	926.49	112104.78	827.39	111277.39
4Y 5M	111277.39	927.31	112204.70	827.39	111377.31
4Y 6M	111377.31	928.14	112305.45	827.39	111478.06
4Y 7M	111478.06	928.98	112407.04	827.39	111579.65
4Y 8M	111579.65	929.83	112509.48	827.39	111682.09
4Y 9M	111682.09	930.68	112612.77	827.39	111785.38
4Y 10M	111785.38	931.54	112716.92	827.39	111889.53
4Y 11M	111889.53	932.41	112821.94	827.39	111994.55
4Y 12M	111994.55	933.29	112927.84	827.39	112100.45
5Y 1M	112100.45	934.17	113034.62	910.13	112124.49
5Y 2M	112124.49	934.37	113058.86	910.13	112148.73
5Y 3M	112148.73	934.57	113083.30	910.13	112173.17
5Y 4M	112173.17	934.78	113107.95	910.13	112197.82
5Y 5M	112197.82	934.98	113132.80	910.13	112222.67
5Y 6M	112222.67	935.19	113157.86	910.13	112247.73
5Y 7M	112247.73	935.40	113183.13	910.13	112273.00
5Y 8M	112273.00	935.61	113208.61	910.13	112298.48
5Y 9M	112298.48	935.82	113234.30	910.13	112324.17
5Y 10M	112324.17	936.03	113260.20	910.13	112350.07
5Y 11M	112350.07	936.25	113286.32	910.13	112376.19
5Y 12M	112376.19	936.47	113312.66	910.13	112402.53

+

+

42 Pension**INFLAPRO Schemes 42**

Table - Pension (73 to 96months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	Pmt (5)	C/o (6)=(4)-(5)
6Y 1M	112402.53	936.69	113339.22	1001.14	112338.08
6Y 2M	112338.08	936.15	113274.23	1001.14	112273.09
6Y 3M	112273.09	935.61	113208.70	1001.14	112207.56
6Y 4M	112207.56	935.06	113142.62	1001.14	112141.48
6Y 5M	112141.48	934.51	113075.99	1001.14	112074.85
6Y 6M	112074.85	933.96	113008.81	1001.14	112007.67
6Y 7M	112007.67	933.40	112941.07	1001.14	111939.93
6Y 8M	111939.93	932.83	112872.76	1001.14	111871.62
6Y 9M	111871.62	932.26	112803.88	1001.14	111802.74
6Y 10M	111802.74	931.69	112734.43	1001.14	111733.29
6Y 11M	111733.29	931.11	112664.40	1001.14	111663.26
6Y 12M	111663.26	930.53	112593.79	1001.14	111592.65
7Y 1M	111592.65	929.94	112522.59	1101.25	111421.34
7Y 2M	111421.34	928.51	112349.85	1101.25	111248.60
7Y 3M	111248.60	927.07	112175.67	1101.25	111074.42
7Y 4M	111074.42	925.62	112000.04	1101.25	110898.79
7Y 5M	110898.79	924.16	111822.95	1101.25	110721.70
7Y 6M	110721.70	922.68	111644.38	1101.25	110543.13
7Y 7M	110543.13	921.19	111464.32	1101.25	110363.07
7Y 8M	110363.07	919.69	111282.76	1101.25	110181.51
7Y 9M	110181.51	918.18	111099.69	1101.25	109998.44
7Y 10M	109998.44	916.65	110915.09	1101.25	109813.84
7Y 11M	109813.84	915.12	110728.96	1101.25	109627.71
7Y 12M	109627.71	913.56	110541.27	1101.25	109440.02

+

+

43 Pension**INFLAPRO Schemes 43**

Table - Pension (97 to 120months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	Pmt (5)	C/o (6)=(4)-(5)
8Y 1M	109440.02	912.00	110352.02	1211.38	109140.64
8Y 2M	109140.64	909.51	110050.15	1211.38	108838.77
8Y 3M	108838.77	906.99	109745.76	1211.38	108534.38
8Y 4M	108534.38	904.45	109438.83	1211.38	108227.45
8Y 5M	108227.45	901.90	109129.35	1211.38	107917.97
8Y 6M	107917.97	899.32	108817.29	1211.38	107605.91
8Y 7M	107605.91	896.72	108502.63	1211.38	107291.25
8Y 8M	107291.25	894.09	108185.34	1211.38	106973.96
8Y 9M	106973.96	891.45	107865.41	1211.38	106654.03
8Y 10M	106654.03	888.78	107542.81	1211.38	106331.43
8Y 11M	106331.43	886.10	107217.53	1211.38	106006.15
8Y 12M	106006.15	883.38	106889.53	1211.38	105678.15
9Y 1M	105678.15	880.65	106558.80	1332.52	105226.28
9Y 2M	105226.28	876.89	106103.17	1332.52	104770.65
9Y 3M	104770.65	873.09	105643.74	1332.52	104311.22
9Y 4M	104311.22	869.26	105180.48	1332.52	103847.96
9Y 5M	103847.96	865.40	104713.36	1332.52	103380.84
9Y 6M	103380.84	861.51	104242.35	1332.52	102909.83
9Y 7M	102909.83	857.58	103767.41	1332.52	102434.89
9Y 8M	102434.89	853.62	103288.51	1332.52	101955.99
9Y 9M	101955.99	849.63	102805.62	1332.52	101473.10
9Y 10M	101473.10	845.61	102318.71	1332.52	100986.19
9Y 11M	100986.19	841.55	101827.74	1332.52	100495.22
9Y 12M	100495.22	837.46	101332.68	1332.52} adj.+0.16}	100000.00

+

+

44 Pension**INFLAPRO Schemes 44**

Comparison Table - Pension

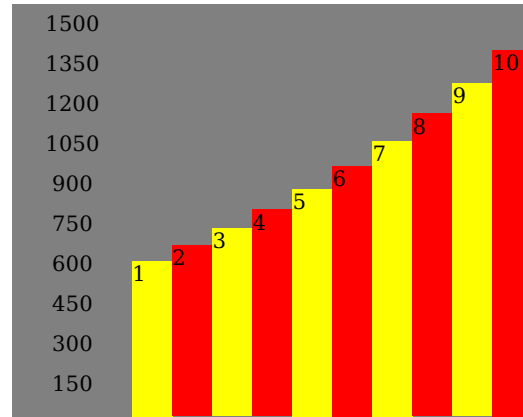
year	conventional	InflaPro	
	Eq.instlment pm	Instalment pm	%return
1	833.33	565.12	6.78%
2	833.33	621.63	7.46%
3	833.33	683.79	8.21%
4	833.33	752.17	9.03%
5	833.33	827.39	9.93%
6	833.33	910.13	10.92%
7	833.33	1001.14	12.01%
8	833.33	1101.25	13.22%
9	833.33	1211.38	14.54%
10	833.33	1332.52	15.99%
Adjustment	+0.40	+0.16	
Pension	100000.00	108078.40	
Yield pa	10.00%	10.81%	

Yield to the investor in Inflapro Pension scheme is 10.81%

+

44a Pension**INFLAPRO Schemes 44a**

Graph Inflapro - Pension



X-axis: years

Y-axis: Pension payout in rupees

Pension payout instalment varies from Rs.565.12 to Rs.1332.52

-

44b Pension

INFLAPRO Schemes 44b

+

Blank page intentional

-

+

LOAN (Term Loan) Scheme

Sample calculations on following input parameters of Loan Scheme is shown in subsequent pages (46 to 52)

Input parameters

Scheme : Loan
Rate of Interest : 14.00%
Term : 10 years (120 months)
Inflation % : 10.00% pa
(inflation constant: 1.1)
mode of payment monthly
(frequency) :
Amount (inital loan) : Rs. 100000.00

The calculation presented are audit proof and can be checked with MSExcel or Open Office spread sheet software

+

46 Loan**INFLAPRO Schemes 46****Notes on calculation table:**

- All resultant figures in each column is rounded off to nearest paise.
- column (2) is brought-forward (B/F) figure which is same as carry over of previous row. To startwith first month B/F is the loan amount.
- column (3) is the calculated interest at the rate of 14% of which all are need not be due within the period. The monthly interest is calculated as (Brought forward)BF*interest rate pa/12/100, that is $BF \times 14 / 1200$. The interest calculated is rounded off to nearest paise, that $intt = \text{round}(intt, 2)$.
- column (4) is net Amount which is sum of column 2 and column 3.
- column (5) is loan **periodical repayment**, First year's repayment starts at Rs.1,085.24 and on final year the Monthly repayment will work out to be Rs.2,558.94. with annual increment towards inflation protection at 10%. In later part of the term period the repayment amount is greater than the interest for the period which means that the repayment includes the addition of interest accruals.
- column (6) is the **Carry over amount** to next period (month). This is the Net Amount (col.4) minus repayment (col.5). There is an adjustment of Rs. -0.50p during the final instalment of repayment (120th month).

Enjoy reading the presented table

+

+

47 Loan**INFLAPRO Schemes 47**

Table - Loan (1 to 24months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	rePmt (5)	C/o (6)=(4)-(5)
0Y 1M	100000.00	1166.67	101166.67	1085.24	100081.43
0Y 2M	100081.43	1167.62	101249.05	1085.24	100163.81
0Y 3M	100163.81	1168.58	101332.39	1085.24	100247.15
0Y 4M	100247.15	1169.55	101416.70	1085.24	100331.46
0Y 5M	100331.46	1170.53	101501.99	1085.24	100416.75
0Y 6M	100416.75	1171.53	101588.28	1085.24	100503.04
0Y 7M	100503.04	1172.54	101675.58	1085.24	100590.34
0Y 8M	100590.34	1173.55	101763.89	1085.24	100678.65
0Y 9M	100678.65	1174.58	101853.23	1085.24	100767.99
0Y 10M	100767.99	1175.63	101943.62	1085.24	100858.38
0Y 11M	100858.38	1176.68	102035.06	1085.24	100949.82
0Y 12M	100949.82	1177.75	102127.57	1085.24	101042.33
1Y 1M	101042.33	1178.83	102221.16	1193.76	101027.40
1Y 2M	101027.40	1178.65	102206.05	1193.76	101012.29
1Y 3M	101012.29	1178.48	102190.77	1193.76	100997.01
1Y 4M	100997.01	1178.30	102175.31	1193.76	100981.55
1Y 5M	100981.55	1178.12	102159.67	1193.76	100965.91
1Y 6M	100965.91	1177.94	102143.85	1193.76	100950.09
1Y 7M	100950.09	1177.75	102127.84	1193.76	100934.08
1Y 8M	100934.08	1177.56	102111.64	1193.76	100917.88
1Y 9M	100917.88	1177.38	102095.26	1193.76	100901.50
1Y 10M	100901.50	1177.18	102078.68	1193.76	100884.92
1Y 11M	100884.92	1176.99	102061.91	1193.76	100868.15
1Y 12M	100868.15	1176.80	102044.95	1193.76	100851.19

+

+

48 Loan**INFLAPRO Schemes 48**

Table - Loan (25 to 48months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	rePmt (5)	C/o (6)=(4)-(5)
2Y 1M	100851.19	1176.60	102027.79	1313.14	100714.65
2Y 2M	100714.65	1175.00	101889.65	1313.14	100576.51
2Y 3M	100576.51	1173.39	101749.90	1313.14	100436.76
2Y 4M	100436.76	1171.76	101608.52	1313.14	100295.38
2Y 5M	100295.38	1170.11	101465.49	1313.14	100152.35
2Y 6M	100152.35	1168.44	101320.79	1313.14	100007.65
2Y 7M	100007.65	1166.76	101174.41	1313.14	99861.27
2Y 8M	99861.27	1165.05	101026.32	1313.14	99713.18
2Y 9M	99713.18	1163.32	100876.50	1313.14	99563.36
2Y 10M	99563.36	1161.57	100724.93	1313.14	99411.79
2Y 11M	99411.79	1159.80	100571.59	1313.14	99258.45
2Y 12M	99258.45	1158.02	100416.47	1313.14	99103.33
3Y 1M	99103.33	1156.21	100259.54	1444.45	98815.09
3Y 2M	98815.09	1152.84	99967.93	1444.45	98523.48
3Y 3M	98523.48	1149.44	99672.92	1444.45	98228.47
3Y 4M	98228.47	1146.00	99374.47	1444.45	97930.02
3Y 5M	97930.02	1142.52	99072.54	1444.45	97628.09
3Y 6M	97628.09	1138.99	98767.08	1444.45	97322.63
3Y 7M	97322.63	1135.43	98458.06	1444.45	97013.61
3Y 8M	97013.61	1131.83	98145.44	1444.45	96700.99
3Y 9M	96700.99	1128.18	97829.17	1444.45	96384.72
3Y 10M	96384.72	1124.49	97509.21	1444.45	96064.76
3Y 11M	96064.76	1120.76	97185.52	1444.45	95741.07
3Y 12M	95741.07	1116.98	96858.05	1444.45	95413.60

+

+

49 Loan**INFLAPRO Schemes 49**

Table - Loan (49 to 72months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	rePmt (5)	C/o (6)=(4)-(5)
4Y 1M	95413.60	1113.16	96526.76	1588.90	94937.86
4Y 2M	94937.86	1107.61	96045.47	1588.90	94456.57
4Y 3M	94456.57	1101.99	95558.56	1588.90	93969.66
4Y 4M	93969.66	1096.31	95065.97	1588.90	93477.07
4Y 5M	93477.07	1090.57	94567.64	1588.90	92978.74
4Y 6M	92978.74	1084.75	94063.49	1588.90	92474.59
4Y 7M	92474.59	1078.87	93553.46	1588.90	91964.56
4Y 8M	91964.56	1072.92	93037.48	1588.90	91448.58
4Y 9M	91448.58	1066.90	92515.48	1588.90	90926.58
4Y 10M	90926.58	1060.81	91987.39	1588.90	90398.49
4Y 11M	90398.49	1054.65	91453.14	1588.90	89864.24
4Y 12M	89864.24	1048.42	90912.66	1588.90	89323.76
5Y 1M	89323.76	1042.11	90365.87	1747.79	88618.08
5Y 2M	88618.08	1033.88	89651.96	1747.79	87904.17
5Y 3M	87904.17	1025.55	88929.72	1747.79	87181.93
5Y 4M	87181.93	1017.12	88199.05	1747.79	86451.26
5Y 5M	86451.26	1008.60	87459.86	1747.79	85712.07
5Y 6M	85712.07	999.97	86712.04	1747.79	84964.25
5Y 7M	84964.25	991.25	85955.50	1747.79	84207.71
5Y 8M	84207.71	982.42	85190.13	1747.79	83442.34
5Y 9M	83442.34	973.49	84415.83	1747.79	82668.04
5Y 10M	82668.04	964.46	83632.50	1747.79	81884.71
5Y 11M	81884.71	955.32	82840.03	1747.79	81092.24
5Y 12M	81092.24	946.08	82038.32	1747.79	80290.53

+

+

50 Loan**INFLAPRO Schemes 50**

Table - Loan (73 to 96months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	rePmt (5)	C/o (6)=(4)-(5)
6Y 1M	80290.53	936.72	81227.25	1922.57	79304.68
6Y 2M	79304.68	925.22	80229.90	1922.57	78307.33
6Y 3M	78307.33	913.59	79220.92	1922.57	77298.35
6Y 4M	77298.35	901.81	78200.16	1922.57	76277.59
6Y 5M	76277.59	889.91	77167.50	1922.57	75244.93
6Y 6M	75244.93	877.86	76122.79	1922.57	74200.22
6Y 7M	74200.22	865.67	75065.89	1922.57	73143.32
6Y 8M	73143.32	853.34	73996.66	1922.57	72074.09
6Y 9M	72074.09	840.86	72914.95	1922.57	70992.38
6Y 10M	70992.38	828.24	71820.62	1922.57	69898.05
6Y 11M	69898.05	815.48	70713.53	1922.57	68790.96
6Y 12M	68790.96	802.56	69593.52	1922.57	67670.95
7Y 1M	67670.95	789.49	68460.44	2114.83	66345.61
7Y 2M	66345.61	774.03	67119.64	2114.83	65004.81
7Y 3M	65004.81	758.39	65763.20	2114.83	63648.37
7Y 4M	63648.37	742.56	64390.93	2114.83	62276.10
7Y 5M	62276.10	726.55	63002.65	2114.83	60887.82
7Y 6M	60887.82	710.36	61598.18	2114.83	59483.35
7Y 7M	59483.35	693.97	60177.32	2114.83	58062.49
7Y 8M	58062.49	677.40	58739.89	2114.83	56625.06
7Y 9M	56625.06	660.63	57285.69	2114.83	55170.86
7Y 10M	55170.86	643.66	55814.52	2114.83	53699.69
7Y 11M	53699.69	626.50	54326.19	2114.83	52211.36
7Y 12M	52211.36	609.13	52820.49	2114.83	50705.66

+

+

51 Loan**INFLAPRO Schemes 51**

Table - Loan (97 to 120months)

Period	B/F (2)	Interest (3)	Net (4)=(2)+(3)	rePmt (5)	C/o (6)=(4)-(5)
8Y 1M	50705.66	591.57	51297.23	2326.31	48970.92
8Y 2M	48970.92	571.33	49542.25	2326.31	47215.94
8Y 3M	47215.94	550.85	47766.79	2326.31	45440.48
8Y 4M	45440.48	530.14	45970.62	2326.31	43644.31
8Y 5M	43644.31	509.18	44153.49	2326.31	41827.18
8Y 6M	41827.18	487.98	42315.16	2326.31	39988.85
8Y 7M	39988.85	466.54	40455.39	2326.31	38129.08
8Y 8M	38129.08	444.84	38573.92	2326.31	36247.61
8Y 9M	36247.61	422.89	36670.50	2326.31	34344.19
8Y 10M	34344.19	400.68	34744.87	2326.31	32418.56
8Y 11M	32418.56	378.22	32796.78	2326.31	30470.47
8Y 12M	30470.47	355.49	30825.96	2326.31	28499.65
9Y 1M	28499.65	332.50	28832.15	2558.94	26273.21
9Y 2M	26273.21	306.52	26579.73	2558.94	24020.79
9Y 3M	24020.79	280.24	24301.03	2558.94	21742.09
9Y 4M	21742.09	253.66	21995.75	2558.94	19436.81
9Y 5M	19436.81	226.76	19663.57	2558.94	17104.63
9Y 6M	17104.63	199.55	17304.18	2558.94	14745.24
9Y 7M	14745.24	172.03	14917.27	2558.94	12358.33
9Y 8M	12358.33	144.18	12502.51	2558.94	9943.57
9Y 9M	9943.57	116.01	10059.58	2558.94	7500.64
9Y 10M	7500.64	87.51	7588.15	2558.94	5029.21
9Y 11M	5029.21	58.67	5087.88	2558.94	2528.94
9Y 12M	2528.94	29.50	2558.44	2558.94 adj.-0.50}	0.00

+

+

52 Loan**INFLAPRO Schemes 52**

Comparison Table - Loan

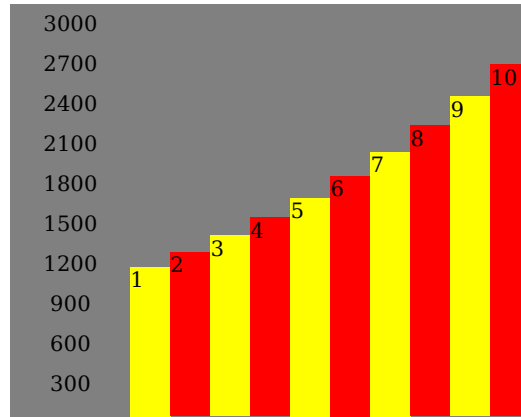
year	conventional	InflaPro	
	Eq.instlment pm	Instalment pm	repmt as%
1	1552.66(18.63%)	1085.24	13.02%
2	1552.66(18.63%)	1193.76	14.33%
3	1552.66(18.63%)	1313.14	15.76%
4	1552.66(18.63%)	1444.45	17.33%
5	1552.66(18.63%)	1588.90	19.07%
6	1552.66(18.63%)	1747.79	20.97%
7	1552.66(18.63%)	1922.57	23.07%
8	1552.66(18.63%)	2114.83	25.38%
9	1552.66(18.63%)	2326.31	27.92%
10	1552.66(18.63%)	2558.94	30.71%
Adjustment	+1.18	-0.50	
Total-repmt	186320.38	207550.66	
Yield pa	8.63%	10.76%	

Yield to the money lender in Inflapro loan scheme is 10.76%

+

52a Loan**INFLAPRO Schemes 52a**

Graph Inflapro - Loan



X-axis: years

Y-axis: Loan rePayment instalment in rupees

Loan repayment instalment varies from Rs.1085.24 to Rs.2558.94

-

52b Loan

INFLAPRO Schemes 52b

+

Blank page intentional

-

+

Recurring Deposit (RD) Scheme

Sample calculations on following input parameters of Recurring Deposit Scheme is shown in subsequent pages (54 to 60)

Input parameters

Scheme : RD
Rate of Interest : 10.00%
Term : 10 years (120 months)
Inflation % : 10.00% pa (inflation constant: 1.1)
mode of deposit (frequency) : monthly (at the beginning of month)
Maturity Amount : Rs. 100000.00
The calculation presented are audit proof and can be checked with MSExcel or Open Office spread sheet software

+

Notes on calculation table:

- All resultant figures in each column is rounded off to nearest paise.
- column (2) is brought-forward (B/F) figure which is same as carry over of previous row. To startwith first month B/F is 0.00.
- column (3) is **periodical deposit(RD)**.First year's Monthly instalment starts at Rs.328.31 and on final year the Monthly instalment will work out to be Rs.774.15, with annual increment towards inflation protection at 10%.
- column (4) is net Amount which is sum of column 2 and column 3.
- column (5) is the **calculated interest** at the rate of 10% which is accrued till the end of the term. The monthly interest is calculated as $\text{Net_Amount} \times \text{interest rate pa}/12/100$, that is $\text{Net} \times 10/1200$. The interest calculated is rounded off to nearest paise, that $\text{intt}=\text{round}(\text{intt},2)$.
- column (6) is the **Carry over amount** to next period (month). This is the sum of Net Amount (col.4) and Interest (col.5).
There is an adjustment of Rs. +1.14p during the final instalment of RD (120th month).

Enjoy reading the presented table

+

+

55 RD**INFLAPRO Schemes 55**

Table - RD (1 to 24months)

Period	B/F (2)	Rec.Dep (3)	Net (4)=(2)+(3)	Interest (5)	C/o (6)=(4)+(5)
0Y 1M	0.00	328.31	328.31	2.74	331.05
0Y 2M	331.05	328.31	659.36	5.49	664.85
0Y 3M	664.85	328.31	993.16	8.28	1001.44
0Y 4M	1001.44	328.31	1329.75	11.08	1340.83
0Y 5M	1340.83	328.31	1669.14	13.91	1683.05
0Y 6M	1683.05	328.31	2011.36	16.76	2028.12
0Y 7M	2028.12	328.31	2356.43	19.64	2376.07
0Y 8M	2376.07	328.31	2704.38	22.54	2726.92
0Y 9M	2726.92	328.31	3055.23	25.46	3080.69
0Y 10M	3080.69	328.31	3409.00	28.41	3437.41
0Y 11M	3437.41	328.31	3765.72	31.38	3797.10
0Y 12M	3797.10	328.31	4125.41	34.38	4159.79
1Y 1M	4159.79	361.14	4520.93	37.67	4558.60
1Y 2M	4558.60	361.14	4919.74	41.00	4960.74
1Y 3M	4960.74	361.14	5321.88	44.35	5366.23
1Y 4M	5366.23	361.14	5727.37	47.73	5775.10
1Y 5M	5775.10	361.14	6136.24	51.14	6187.38
1Y 6M	6187.38	361.14	6548.52	54.57	6603.09
1Y 7M	6603.09	361.14	6964.23	58.04	7022.27
1Y 8M	7022.27	361.14	7383.41	61.53	7444.94
1Y 9M	7444.94	361.14	7806.08	65.05	7871.13
1Y 10M	7871.13	361.14	8232.27	68.60	8300.87
1Y 11M	8300.87	361.14	8662.01	72.18	8734.19
1Y 12M	8734.19	361.14	9095.33	75.79	9171.12

+

+

56 RD**INFLAPRO Schemes 56**

Table - RD (25 to 48months)

Period	B/F (2)	Rec.Dep (3)	Net (4)=(2)+(3)	Interest (5)	C/o (6)=(4)+(5)
2Y 1M	9171.12	397.25	9568.37	79.74	9648.11
2Y 2M	9648.11	397.25	10045.36	83.71	10129.07
2Y 3M	10129.07	397.25	10526.32	87.72	10614.04
2Y 4M	10614.04	397.25	11011.29	91.76	11103.05
2Y 5M	11103.05	397.25	11500.30	95.84	11596.14
2Y 6M	11596.14	397.25	11993.39	99.94	12093.33
2Y 7M	12093.33	397.25	12490.58	104.09	12594.67
2Y 8M	12594.67	397.25	12991.92	108.27	13100.19
2Y 9M	13100.19	397.25	13497.44	112.48	13609.92
2Y 10M	13609.92	397.25	14007.17	116.73	14123.90
2Y 11M	14123.90	397.25	14521.15	121.01	14642.16
2Y 12M	14642.16	397.25	15039.41	125.33	15164.74
3Y 1M	15164.74	436.98	15601.72	130.01	15731.73
3Y 2M	15731.73	436.98	16168.71	134.74	16303.45
3Y 3M	16303.45	436.98	16740.43	139.50	16879.93
3Y 4M	16879.93	436.98	17316.91	144.31	17461.22
3Y 5M	17461.22	436.98	17898.20	149.15	18047.35
3Y 6M	18047.35	436.98	18484.33	154.04	18638.37
3Y 7M	18638.37	436.98	19075.35	158.96	19234.31
3Y 8M	19234.31	436.98	19671.29	163.93	19835.22
3Y 9M	19835.22	436.98	20272.20	168.94	20441.14
3Y 10M	20441.14	436.98	20878.12	173.98	21052.10
3Y 11M	21052.10	436.98	21489.08	179.08	21668.16
3Y 12M	21668.16	436.98	22105.14	184.21	22289.35

+

+

57 RD**INFLAPRO Schemes 57**

Table - RD (49 to 72months)

Period	B/F (2)	Rec.Dep (3)	Net (4)=(2)+(3)	Interest (5)	C/o (6)=(4)+(5)
4Y 1M	22289.35	480.68	22770.03	189.75	22959.78
4Y 2M	22959.78	480.68	23440.46	195.34	23635.80
4Y 3M	23635.80	480.68	24116.48	200.97	24317.45
4Y 4M	24317.45	480.68	24798.13	206.65	25004.78
4Y 5M	25004.78	480.68	25485.46	212.38	25697.84
4Y 6M	25697.84	480.68	26178.52	218.15	26396.67
4Y 7M	26396.67	480.68	26877.35	223.98	27101.33
4Y 8M	27101.33	480.68	27582.01	229.85	27811.86
4Y 9M	27811.86	480.68	28292.54	235.77	28528.31
4Y 10M	28528.31	480.68	29008.99	241.74	29250.73
4Y 11M	29250.73	480.68	29731.41	247.76	29979.17
4Y 12M	29979.17	480.68	30459.85	253.83	30713.68
5Y 1M	30713.68	528.75	31242.43	260.35	31502.78
5Y 2M	31502.78	528.75	32031.53	266.93	32298.46
5Y 3M	32298.46	528.75	32827.21	273.56	33100.77
5Y 4M	33100.77	528.75	33629.52	280.25	33909.77
5Y 5M	33909.77	528.75	34438.52	286.99	34725.51
5Y 6M	34725.51	528.75	35254.26	293.79	35548.05
5Y 7M	35548.05	528.75	36076.80	300.64	36377.44
5Y 8M	36377.44	528.75	36906.19	307.55	37213.74
5Y 9M	37213.74	528.75	37742.49	314.52	38057.01
5Y 10M	38057.01	528.75	38585.76	321.55	38907.31
5Y 11M	38907.31	528.75	39436.06	328.63	39764.69
5Y 12M	39764.69	528.75	40293.44	335.78	40629.22

+

+

58 RD**INFLAPRO Schemes 58**

Table - RD (73 to 96months)

Period	B/F (2)	Rec.Dep (3)	Net (4)=(2)+(3)	Interest (5)	C/o (6)=(4)+(5)
6Y 1M	40629.22	581.63	41210.85	343.42	41554.27
6Y 2M	41554.27	581.63	42135.90	351.13	42487.03
6Y 3M	42487.03	581.63	43068.66	358.91	43427.57
6Y 4M	43427.57	581.63	44009.20	366.74	44375.94
6Y 5M	44375.94	581.63	44957.57	374.65	45332.22
6Y 6M	45332.22	581.63	45913.85	382.62	46296.47
6Y 7M	46296.47	581.63	46878.10	390.65	47268.75
6Y 8M	47268.75	581.63	47850.38	398.75	48249.13
6Y 9M	48249.13	581.63	48830.76	406.92	49237.68
6Y 10M	49237.68	581.63	49819.31	415.16	50234.47
6Y 11M	50234.47	581.63	50816.10	423.47	51239.57
6Y 12M	51239.57	581.63	51821.20	431.84	52253.04
7Y 1M	52253.04	639.79	52892.83	440.77	53333.60
7Y 2M	53333.60	639.79	53973.39	449.78	54423.17
7Y 3M	54423.17	639.79	55062.96	458.86	55521.82
7Y 4M	55521.82	639.79	56161.61	468.01	56629.62
7Y 5M	56629.62	639.79	57269.41	477.25	57746.66
7Y 6M	57746.66	639.79	58386.45	486.55	58873.00
7Y 7M	58873.00	639.79	59512.79	495.94	60008.73
7Y 8M	60008.73	639.79	60648.52	505.40	61153.92
7Y 9M	61153.92	639.79	61793.71	514.95	62308.66
7Y 10M	62308.66	639.79	62948.45	524.57	63473.02
7Y 11M	63473.02	639.79	64112.81	534.27	64647.08
7Y 12M	64647.08	639.79	65286.87	544.06	65830.93

+

+

59 RD**INFLAPRO Schemes 59**

Table - RD (97 to 120months)

Period	B/F (2)	Rec.Dep (3)	Net (4)=(2)+(3)	Interest (5)	C/o (6)=(4)+(5)
8Y 1M	65830.93	703.77	66534.70	554.46	67089.16
8Y 2M	67089.16	703.77	67792.93	564.94	68357.87
8Y 3M	68357.87	703.77	69061.64	575.51	69637.15
8Y 4M	69637.15	703.77	70340.92	586.17	70927.09
8Y 5M	70927.09	703.77	71630.86	596.92	72227.78
8Y 6M	72227.78	703.77	72931.55	607.76	73539.31
8Y 7M	73539.31	703.77	74243.08	618.69	74861.77
8Y 8M	74861.77	703.77	75565.54	629.71	76195.25
8Y 9M	76195.25	703.77	76899.02	640.83	77539.85
8Y 10M	77539.85	703.77	78243.62	652.03	78895.65
8Y 11M	78895.65	703.77	79599.42	663.33	80262.75
8Y 12M	80262.75	703.77	80966.52	674.72	81641.24
9Y 1M	81641.24	774.15	82415.39	686.79	83102.18
9Y 2M	83102.18	774.15	83876.33	698.97	84575.30
9Y 3M	84575.30	774.15	85349.45	711.25	86060.70
9Y 4M	86060.70	774.15	86834.85	723.62	87558.47
9Y 5M	87558.47	774.15	88332.62	736.11	89068.73
9Y 6M	89068.73	774.15	89842.88	748.69	90591.57
9Y 7M	90591.57	774.15	91365.72	761.38	92127.10
9Y 8M	92127.10	774.15	92901.25	774.18	93675.43
9Y 9M	93675.43	774.15	94449.58	787.08	95236.66
9Y 10M	95236.66	774.15	96010.81	800.09	96810.90
9Y 11M	96810.90	774.15	97585.05	813.21	98398.26
9Y 12M	98398.26	774.15} adj.+1.14}	99173.55	826.45	100000.00

+

+

60 RD**INFLAPRO Schemes 60**

Comparison Table - RD

year	conventional	InflaPro	
	Eq.instlment pm	Instalment pm	repmt as%
1	484.14	328.31	3.94%
2	484.14	361.14	4.33%
3	484.14	397.25	4.77%
4	484.14	436.98	5.24%
5	484.14	480.68	5.77%
6	484.14	528.75	6.35%
7	484.14	581.63	6.98%
8	484.14	639.79	7.68%
9	484.14	703.77	8.45%
10	484.14	774.15	9.29%
Adjustment	-0.05	+1.14	
Total-repmt	58096.75	62790.54	
Yield pa	7.21%	5.93%	

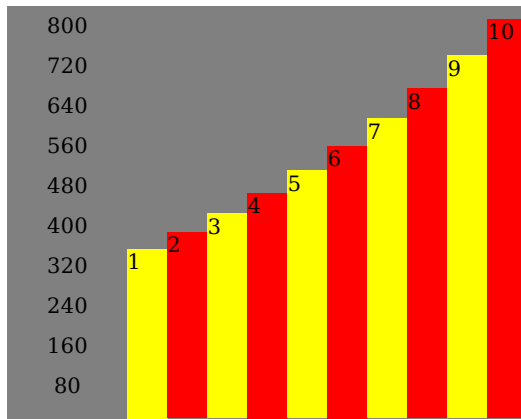
Yield to the investor in Inflapro RD scheme is 5.93%

+

60a RD

INFLAPRO Schemes 60a

Graph Inflapro - Rec.Deposit



X-axis: years

Y-axis: RD instalment in rupees

RD instalment varies from Rs.328.31 to Rs.774.15

-

60b RD

INFLAPRO Schemes 60b

+

Blank page intentional

-

+

+

Fixed Deposit (FixDep) Scheme

Sample calculations on following input parameters of Fixed Deposit Scheme is shown in subsequent pages (62 to 68)

Input parameters

Scheme : FixDep
Breakeven Details
Rate of Interest : 8.25%
Break even Term : 5 years (20 Qrs)
Inflation % : 10.00% pa
mode of compounding Quarterly (frequency) :
Deposit Amount : Rs. 100000.00
Deposit Term particulars
FD start date : 10-11-2011
Deposit Term : 3 years 6 months
calculated Maturity date 10-05-2015
:
The Ledger posting calculation presented are audit proof and can be checked with MSExcel or Open Office spread sheet software

+

Important Notes on Fixed deposit Scheme

The system for Fixed Deposit is quite complicated simply because the investment date or quarter will not begin at the start day of the quarter

It requires some method of interest calculation to be introduced for that investment quarter which will have the partial days of the quarter.

In our case the investment quarter is started on 01-10-2011 and the number of days of fixed deposit in this quarter left out from the start date 10-11-2011 upto end of quarter 31-12-2011 is **52 days**.

The above investment quarter in which it is not a full quarter but partial is called **PreQr**.

The interest rate to be applied during the PreQr is tabulated in **page No. 64**. The interest rate during this period is **6.452%pa** for 52 days as per the table.

If the investment start date is the first day of a starting quarter then there is no PreQr.

Similarly there exists PostQr. and The interest rate to be applied during the PostQr is tabulated in **page No. 65**. The Post Quarter is the similar period of days of the partial quarter lying in the maturity date. In our case for the given input parameters the number of days during the investment period in that quarter starting from 01-04-2015 upto 10-05-2015 (exclusive of the maturity date) is 39 days. The interest rate during this period is **8.976%pa for 39 days as per the table**.

If the maturity date is falling on the first day of a starting quarter then there is no PostQr.

+

Important Notes on Fixed deposit Scheme continued

The following table shows how and inflation 10%pa is reduced to 9.645%pa if compounded quarterly. You can see that the rounding off to 3 decimal places loses terribly on higher amount.

With 5 decimal accuracy of 9.64548% fares better than accuracy of 9.645%pa. Both are explained by means of following tables.

As an universal practice all percentages are rounded off to 3 decimal places and amounts to two decimal places that is to nearest paise.

The correct amount of cumulative amount for 4 quarters for a principal of Rs. 100000.00 is Rs.110000.00

Table 1

Qr	Principal/BF	inflation%	added value	Cum.Amount
1	100000.00	9.64548%	2411.37	102411.37
2	102411.37	9.64548%	2469.52	104880.89
3	104880.89	9.64548%	2529.07	107409.96
4	107409.96	9.64548%	2590.05	110000.01

Table 2

Qr	Principal/BF	inflation%	added value	Cum.Amount
1	100000.00	9.645%	2411.25	102411.25
2	102411.25	9.645%	2469.39	104880.64
3	104880.64	9.645%	2528.93	107409.57
4	107409.57	9.645%	2589.91	109999.48

+

+

64 FixedDeposit**INFLAPRO Schemes 64****Interest rates applicable during Pre Qr period**

days	Rate of intt%pa
base%	6.365%
1	6.367%
2	6.368%
3	6.37%
4	6.372%
5	6.373%
6	6.375%
7	6.377%
8	6.378%
9	6.38%
10	6.382%
<hr/>	
11	6.383%
12	6.385%
13	6.387%
14	6.388%
15	6.39%
16	6.392%
17	6.393%
18	6.395%
19	6.397%
20	6.398%
<hr/>	
21	6.4%
22	6.402%
23	6.403%
24	6.405%
25	6.407%
26	6.408%
27	6.41%
28	6.412%
29	6.413%
30	6.415%
<hr/>	

days	Rate of intt%pa
31	6.417%
32	6.418%
33	6.42%
34	6.422%
35	6.423%
36	6.425%
37	6.427%
38	6.428%
39	6.43%
40	6.432%
<hr/>	
41	6.434%
42	6.435%
43	6.437%
44	6.439%
45	6.44%
46	6.442%
47	6.444%
48	6.445%
49	6.447%
50	6.449%
<hr/>	
51	6.45%
52	6.452%
53	6.454%
54	6.455%
55	6.457%
56	6.459%
57	6.46%
58	6.462%
59	6.464%
60	6.466%
<hr/>	

days	Rate of intt%pa
61	6.467%
62	6.469%
63	6.471%
64	6.472%
65	6.474%
66	6.476%
67	6.477%
68	6.479%
69	6.481%
70	6.482%
<hr/>	
71	6.484%
72	6.486%
73	6.487%
74	6.489%
75	6.491%
76	6.493%
77	6.494%
78	6.496%
79	6.498%
80	6.499%
<hr/>	
81	6.501%
82	6.503%
83	6.504%
84	6.506%
85	6.508%
86	6.51%
87	6.511%
88	6.513%
89	6.515%
90	6.516%
<hr/>	
91	6.518%

+

+

65 FixedDeposit**INFLAPRO Schemes 65****Interest rates applicable during Post Qr period**

days	Rate of intt%pa
base%	8.885%
1	8.887%
2	8.89%
3	8.892%
4	8.894%
5	8.897%
6	8.899%
7	8.901%
8	8.904%
9	8.906%
10	8.908%
<hr/>	
11	8.911%
12	8.913%
13	8.915%
14	8.918%
15	8.92%
16	8.922%
17	8.925%
18	8.927%
19	8.929%
20	8.932%
<hr/>	
21	8.934%
22	8.936%
23	8.939%
24	8.941%
25	8.943%
26	8.946%
27	8.948%
28	8.95%
29	8.953%
30	8.955%
<hr/>	

days	Rate of intt%pa
31	8.957%
32	8.96%
33	8.962%
34	8.964%
35	8.967%
36	8.969%
37	8.971%
38	8.974%
39	8.976%
40	8.978%
<hr/>	
41	8.981%
42	8.983%
43	8.985%
44	8.988%
45	8.99%
46	8.992%
47	8.995%
48	8.997%
49	8.999%
50	9.002%
<hr/>	
51	9.004%
52	9.006%
53	9.009%
54	9.011%
55	9.014%
56	9.016%
57	9.018%
58	9.021%
59	9.023%
60	9.025%
<hr/>	

days	Rate of intt%pa
61	9.028%
62	9.03%
63	9.032%
64	9.035%
65	9.037%
66	9.039%
67	9.042%
68	9.044%
69	9.047%
70	9.049%
<hr/>	
71	9.051%
72	9.054%
73	9.056%
74	9.058%
75	9.061%
76	9.063%
77	9.065%
78	9.068%
79	9.07%
80	9.073%
<hr/>	
81	9.075%
82	9.077%
83	9.08%
84	9.082%
85	9.084%
86	9.087%
87	9.089%
88	9.092%
89	9.094%
90	9.096%
<hr/>	
91	9.099%

+

+

66 FixedDeposit**INFLAPRO Schemes 66**

Interest rates applicable for FULL Qr period
used for interest postings shown in next page.

	Qr	Periodic Rate of intt%pa	cumulative %
0yr	1	6.518%	6.518%
0yr	2	6.675%	6.596%
0yr	3	6.836%	6.676%
0yr	4	7.001%	6.757%
<hr/>			
1yr	1	7.17%	6.84%
1yr	2	7.343%	6.924%
1yr	3	7.52%	7.009%
1yr	4	7.701%	7.095%
<hr/>			
2yr	1	7.887%	7.183%
2yr	2	8.077%	7.272%
2yr	3	8.272%	7.363%
2yr	4	8.471%	7.455%
<hr/>			
3yr	1	8.675%	7.549%
3yr	2	8.885%	7.644%
3yr	3	9.099%	7.741%
3yr	4	9.318%	7.84%
<hr/>			
4yr	1	9.543%	7.94%
4yr	2	9.773%	8.041%
4yr	3	10.009%	8.145%
4yr	4	10.25%	8.25%
<hr/>			

+

+

67 FixedDeposit**INFLAPRO Schemes 67****Ledger posting from 10-11-2011 to 10-05-2015**

for interest rates refer previous three pages.

Date	days	Rate of intt%pa	Debit	credit	Run Balance %
10-11-2011	0	By Deposit		100000.00	100000.00CR
31-12-2011	52	6.452%		919.19	100919.19CR
31-03-2012	4 Q	6.518%		1644.48	102563.67CR
30-06-2012	1 Q	6.675%		1711.53	104275.20CR
30-09-2012	2 Q	6.836%		1782.06	106057.26CR
31-12-2012	3 Q	7.001%		1856.27	107913.53CR
31-03-2013	4 Q	7.17%		1934.35	109847.88CR
30-06-2013	1 Q	7.343%		2016.53	111864.41CR
30-09-2013	2 Q	7.52%		2103.05	113967.46CR
31-12-2013	3 Q	7.701%		2194.16	116161.62CR
31-03-2014	4 Q	7.887%		2290.42	118452.04CR
30-06-2014	1 Q	8.077%		2391.84	120843.88CR
30-09-2014	2 Q	8.272%		2499.05	123342.93CR
31-12-2014	3 Q	8.471%		2612.09	125955.02CR
31-03-2015	4 Q	8.675%		2731.65	128686.67CR
09-05-2015	39	8.976%		1234.21	129920.88CR
10-05-2015	0	By Adjustment		+424.27	130345.15CR
Yield	8.67%		Effective	cumulative%	7.644%

The run balance of the postings with Pre Qr and Post Qr as well as for full quarters as per this software supplied array of rate of interest will always be less than the cumulative percentage if the date of investment is not same as the beginning of respective Quarter year. So there will be adjustment so that the desired effective cumulative percentage of rate of interest is obtained. In this case the adjustment worked out to be Rs. 424.27.

+

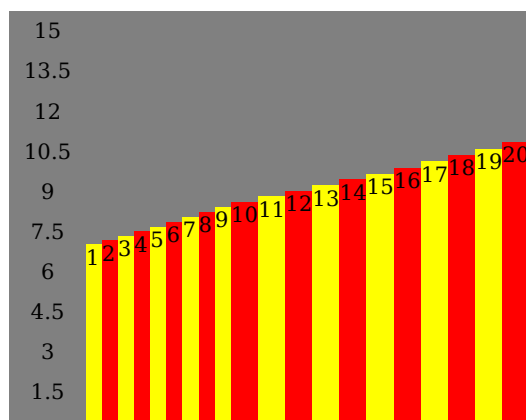
+

68 FixedDeposit**INFLAPRO Schem 68****Additional information on FD Inflapro and GraphInflapro:**

If the investor wants to close the FD prematurely, then he may not be entitled for adjustments and will get the amount as per the closing balance of the previous quarter ended plus any interest for the post quarter with the **base** rate of interest posted on previous quarter only.

For example in the example considered if the investor wants to break the FD by 16-10-2013 his last posting upto 30-09-2013 is 113967.46 last posted interest is 7.52%. He will continue to get the interest as per new PostQr rate 7.55% on the run balacne for the remaining 15 days which works out to be 353.61 and the total payable amount is 114321.07.

In case of the same breakeven term of 5 years and 8.25% interest rate, for deposit period of 1 year 11 months and 6 days, with starting date as 10-11-2011 and maturity date of 16-10-2013 the maturity value works out to 114526.07 and he will lose a sum of **205.00** because of premature closure and there need not be any special penal interest of 1% as of present conventional practice.



X-axis: Quarters

Y-axis: Periodical interest %pa for the Qr
intt% varies from 6.518% to 10.25% pa

+

+

SWOT (Strength, Weakness, Opportunities and Threats

Strength:

After arriving at start percentage/ payment amount, **a simple calculator is sufficient** to maintain book of accounts. However the computer supported book maintenance is order of the day for voluminous number of accounts.

The proposed schemes are more investor friendly than EMI schemes. There is always increased return year by year whether there is inflation or deflation. Therefore in case of inflation, there is protection to investors. In case of loan repayment there is already provision of increased repayment because of increased outstanding loan. Therefore there is **no need to increase prime lending rates** as being done at present to curb inflation.

In case of deflation, the investor is not deprived of interest due to deflation. On the other hand due to increase in return, he will have more income during the deflation. In such a scenario, the government can **tax the investor more or banks can increase prime lending rate** which is very much contrary to the present system and should be welcome step.

Weakness:

The method of calculation arriving at the start percentage/payment amount is not simple algebraic formula. It is quite tedious with existing computer software. At least one has to spend about half an hour in arriving at start percentage/payment with spreadsheet software.

+

+

The trial and error method of arriving at it is close the chest of the author.

However, this report being out and available free of cost and also downloadable from website by public without any password, should make others to develop the equivalent schemes without any hindrance in just matter of a few days.

Opportunities:

The first implementing company will have first move advantage. The present day inflation in India is of the order of two digits and hence there is scope for considering more than 6% inflation rate in MIS/ RD/ Loan in increasing pension/ deposit/ repayment accordingly. On getting popularity for this present 6% inflation provision, the author can provide calculator on website for other flexible percentages. However Government may put on restrictions not to provide for more than say 10%. on such calculations, so that over enthusiastic organizations will not give unrealistic higher projections to attract customers. In some insurance returns calculations, Regulation authorities have fixed such conditions to show sample calculations based on 6% return only. Hence they may put a brake on these sort of new calculations also.

Annuity and insurance schemes also can adopt these calculations. Annuity schemes are nothing but combination of RD and loan repayment schemes only. For insurance schemes, the premium, the death/maturity benefits can vary at 6% for every surviving year instead of present fixed values. After going through this report and on popularity of the scheme, software companies providing spreadsheet can give new function to generate start interest percentage/ payment amount given the necessary parameters, both mandatory and optional.

+

+

Opportunities contd.:

They can develop and implement such function in just a matter of days if not a week.

Other software providers can give the function to return an object of array to give the payment details for the full term. Accounting Software developers can provide full working to the investment companies along with their standard software or a special software. They can develop such software in just a matter of weeks if not a month.

The calculation is based on trial and error method. In order to reduce burden on computer to give iterations working of full term, the period may be restricted to 99x12. Otherwise, even the fastest computer of the day will take few minutes or even hours if large/unrealistic values are given. 99x12 means that in case of periodicity in months, maximum value is for 99 years and in case of the same in days. It is 1188 days or approximately 40 months and the inflation protection will be for months and not years. With the existing spreadsheet calculation it may take about ½ hour to find initial percentage/amount for given parameters on a pre-planned worksheet and with new function to be provided by software giants, it may take just a few seconds.

Threats:

The calculator is available on the web site and can be accessed with an arrangement with the author. Being an unsecured normal web site, it is not impregnable for hackers. However, the author is ready to share the source code with Government of India free of cost, if desired by them. To overcome the threat, the author is ready to provide free guidance in developing functionality, in C++/core Java to any student/organisation at Lucknow.

+

+

Conclusion:

The policy adopted in the proposed schemes is to hold part of interest accrued during initial periods and pay them with added interest in later periods.

On implementation of the inflation protected schemes (InflaPro) by powerful financial institutions and Government then there need not be periodical unsystematic increase in Government pension as at present. There may not be periodical increase in prime lending rates to curb inflation as there is already a provision in the new scheme to increase the repayment of loan. This can also lead to overall check on inflation because one will assume that people are entitled to get increased pension at 6% annual increase only.

EMI (Equal Monthly Instalment) method of calculation is convenient compared to erstwhile diminishing balance method. It took about a century for people to switch over to EMI after its invention.

InflaPro (Inflation Protected) Schemes are much more convenient compared to EMI method. It should not take such a long time to switch over to this new schemes given the present level of think tank and computing facility.

The investor/lender gains in terms of increased money value and borrower gets **convenience**.

The aim of full term calculations given in this report is to prove that there is gain to investors, which is a matter of convenience and there is no loss or gain in real terms to the borrower or lender. The increase in return of investment also provide increase in accrued balance/outstanding loan as compared to conventional methods, which proves the theory of no loss/no gain. The theory of no loss/ no gain is the same as that when we switched over from diminishing balance method to EMI method. Time has proved that EMI method is the matter of convenience and same will be for the Inflation Protected Schemes, presented in this report.

+

Benefits (Who will be benefited)

1. Investor

Benefit to Investor is by means of getting inflation protection. One gets in a sample case of 20 years pension scheme with 10% pa rate of interest and with 10% inflation protection the order of 6.7% return in first year and over 25% in twentieth year.

2. Investment Company

Investment company is benefited with increased holding amount, that is run balance of principal and unpaid interest amounts. For example in the case mentioned in previous paragraph, the investment company has accrual of Rs.154184.75 in 13th year which is more than 150% of the present method of Equal instalment.

3. Investment Company as a financier

Even if one assumes the investor is more benefited, the investment company becomes an investor when it comes to money lending/financing. It gets increased return of income from the amount financed.

4. Borrower

Borrower gets the convenience of low repayment as compared to Equated Monthly Instalment of the present day situation. Of course he sheds down more interest in later years for this convenience. It is essential to note that borrower's income/repayment capacity increases because of inflation. The situation is **very much identical to the situation changed from diminishing balance method to the present day EMI method.**

+

5. Government/RBI

RBI will not need to increase the prime lending rate to curb inflation as there is increased repayment of loan by the borrower. (refer para 4 above.)

Special note on benefit to investment company**Assured increase**

There is assured increase in balance which means assured increase in Business/Turnover during the first half of the period (say 10 or 20 years). To explain this in a typical case of 100000 rupees investment in case of pension payout with 10% inflation and 10% rate of interest, the run balance (worked out for the case considered in page 5) increases to 105317 and so on upto Rs. 154184 in 13th year of the 20 year plan which means average business increase is at 5% without having the need of fresh customer/deposit. For any investment company 10 years is a quite a long and comfortable time to increase their business activity to nullify the decrease in holding in subsequent years of the term.

The **ultimate beneficiary is the investor**. The investment company also become the investor when it comes to the business of money lending. The investment company becomes the investor in this case. The investment company will not keep the customer deposit money idle. It has to lend/invest in short term/long term projects. The lending rate is always higher compared to deposit rate. Therefore the investment company gets much more benefit compared to simple depositor.

Investor is motivated to go in for long term deposits as it attracts more return. This aspect is extremely beneficial to the investment company.

In case of deposits/pension plan if the investor prematurely closes the account, the investor will be the heavy loser of future returns. The investor will be the heavy loser. Here again investment company is benefited.

+

Inflation Protected Bond **in USA**

In United States of America, A scheme called inflation protected bond was launched by the Government.

In that scheme it offered change of interest rate as the inflation figure. If the inflation increased there was increase in interest rate and in case of deflation the rate decreased.

There subsequently was inflation as well as deflation in that country. The overall interest percent was within the limit of 6.5% over the period of years. Government can launch such schemes.

InflaPro Scheme invented by the author is not like this bond. The InflaPro Scheme is manipulating the interest accruals and there is no extra bail out towards inflation. Moreover the level of inflation protection is fixed throughout the scheme. There is only increase in return on investment systematically.

In case of INFLAPRO Scheme of this report

The yield to investor is more compared to the conventional schemes. In case of cumulative option to get the principal back along with total interest for the entire term, there is no difference in maturity amount compared to the conventional schemes.

If someone thinks that he is getting a better yield, why not reinvest the payouts into growth fund, then also one gets the same maturity amount as in the case of conventional schemes.

+

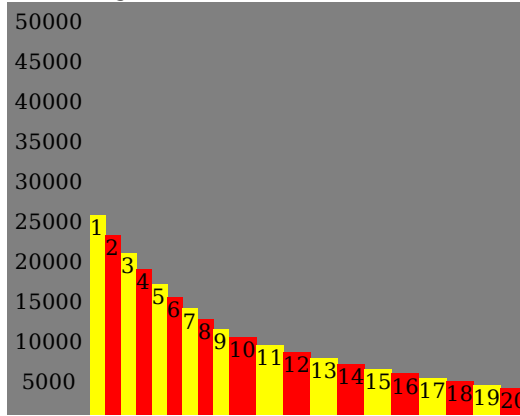
76 ADDENDA_GRAPH

INFLAPRO 76

ADDENDA_GRAPH

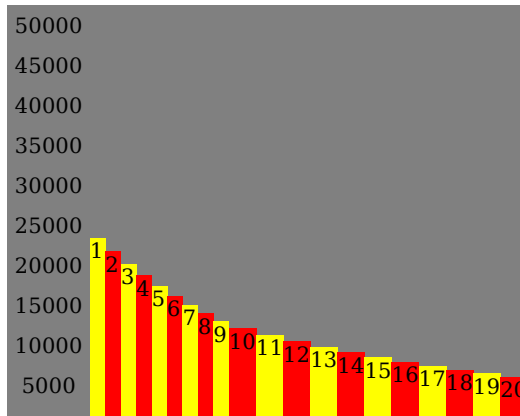
Customer gets various repayment options depending on different inflation protection say from -10% through 0%(EMI) through 10%

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= **-10.00%**
Yield: 5.635%



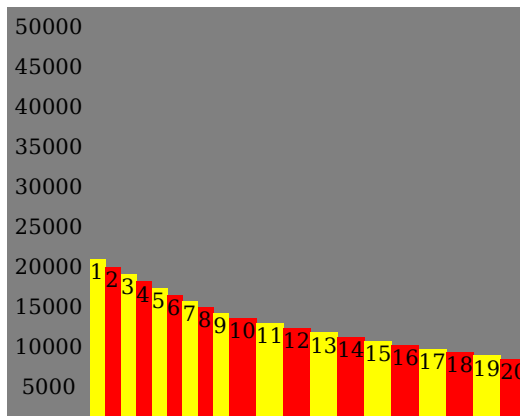
Repayment amount varies from Rs.24214.2 to 3270.61

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= **-7.50%**
Yield: 6.490%



Repayment amount varies from Rs.21834.1 to 4963.64

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= **-5.00%**
Yield: 7.515%



Repayment amount varies from Rs.19508.86 to 7362.18

+

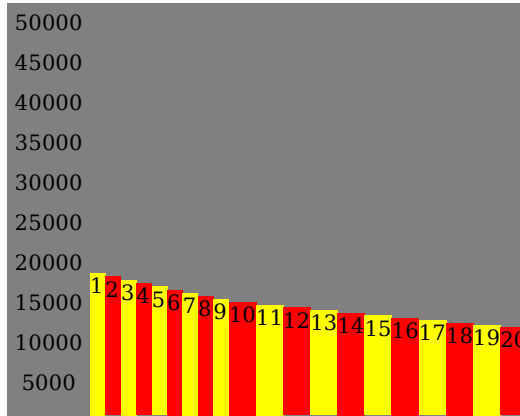
+

77 ADDENDA_GRAPH

INFLAPRO 77

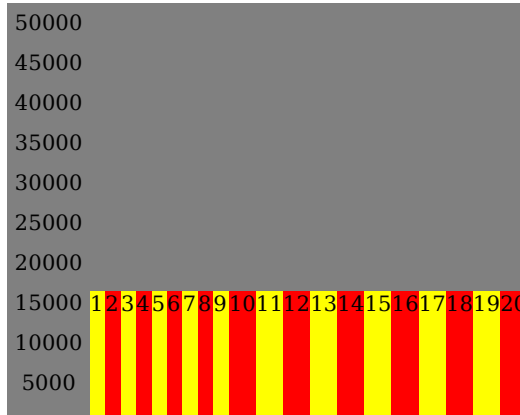
ADDENDA_GRAPH

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= -2.50%
Yield: 8.713%



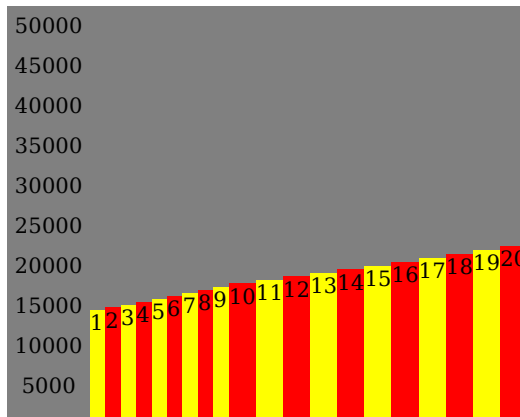
Repayment amount varies from Rs.17256.75 to 10667.29

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= 0%
Yield: 10.099%



Repayment amount varies from Rs.15098.6 to 15098.64

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= +2.50%
Yield: 11.677%



Repayment amount varies from Rs.13056.73 to 20873.69

+

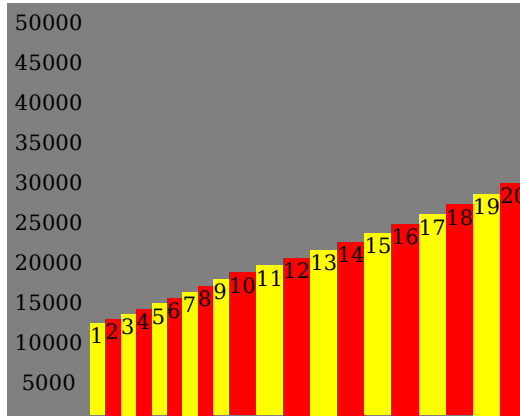
+

78 ADDENDA_GRAPH

INFLAPRO 78

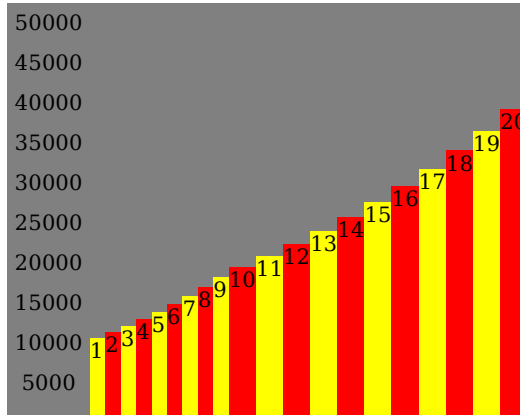
ADDENDA_GRAPH

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= 5.00%
Yield: 13.440%



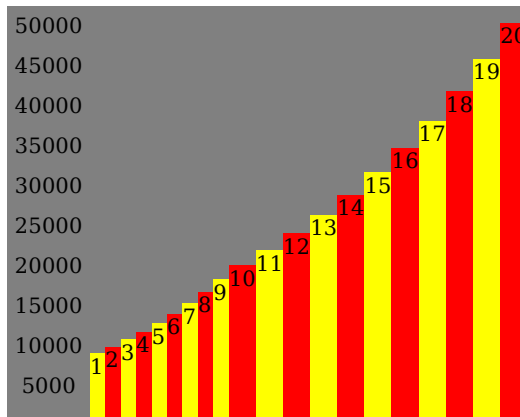
Repayment amount varies from Rs.11153.23 to 28183.7

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= 7.50%
Yield: 15.370%



Repayment amount varies from Rs.9407.76 to 37175.05

Y-axis: Repayment inst.amt
 X-axis: Years
 Loan repayment
 Interest %=14% per annum
 Term: 20 years
 Mode: Annual
 inflation/deflation%= +10.00%
Yield: 17.439%



Repayment amount varies from Rs.7835.52 to 47921.69

+

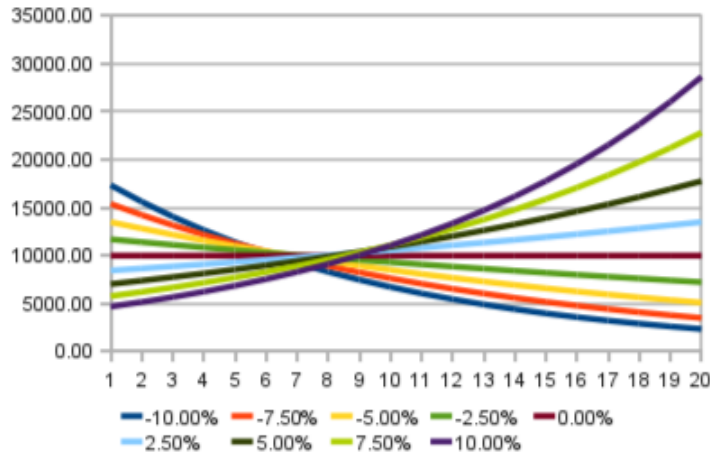
+

79 ADDENDA_GRAPH

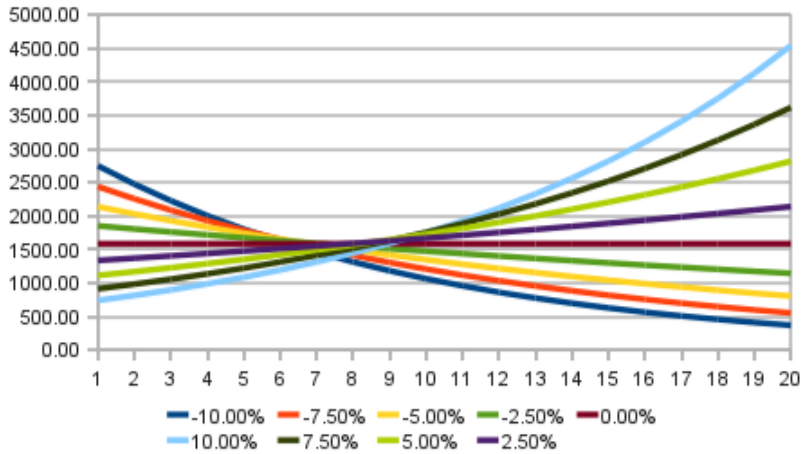
INFLAPRO 79

ADDENDA_GRAPH

Customer gets various pension options depending on different inflation protection say from -10% through 0%(EMI) through 10%
 Inflation/deflation at -10% is one extreme wherin the payout varies from 17340.49 to 2342.52 with an yield of 7.616% EMI(annual) being Rs.10000
 Inflation/deflation at +10% is one extreme wherin the payout varies from 4682.45 to 28637.30 with an yield of 13.409%



Customer gets various Recurring Deposit options depending on different inflation protection from -10% through 0%(EMI) through 10%
 Inflation/deflation at -10% is one extreme wherin the RD varies from 2752.34 to 371.96 with an yield of 15.680% EMI(annual) being 1587.19
 Inflation/deflation at +10% is one extreme wherin the RD varies from 743.22 to 4546.01 with an yield of 6.746%



+

+

About the Author and his team

B N Venkataraman - the Author

Brahmadesam Narasimha Iyer Venkataraman, a native of Tamil Nadu, holds a degree in Electrical and Electronics Engineering (1971) from Annamalai University, had formal education in computers from Annamalai University in 1970, erstwhile IBM Delhi in 1972 and from IIT Madras in 1973. After serving Consultancy organizations, Sugar Industry, Chartered Accountants, Schools, at the age of 62 is a tutor and instructor and associate of Educational Society of Information Technology, D1/199, Sector F, Jankipuram Lucknow. He is teaching C++, Core Java, MS office etc. to students. The devising of new InflaPro scheme is the fallout of exercise examples in Spread Sheet (MS Excel/Oracle's Open Office org 3.2) given to students of class 8.

Shanti Venkataraman - second-in-command

Shanti Venkataraman is wife of B N Venkataraman holds a degree in Arts from the Lucknow Vishwavidyalaya. She is also associated with a prominent Educationalist Institute as a systems executive at Lucknow. She is the woman behind this devising of InflaPro Scheme.

B V Raghav - lieutenant

B V Raghav is son of B N Venkataraman and Shanti Venkataraman is an architect and web designer. He is gold medalist in B.Arch from IIT Roorkee, founder of Ezinx Web Solutions He is an apprentice to bnv and contributes to this project with his designing skills Visit www.ezinx.com, www.bvraghav.com.

B V mahesh - lieutenant

B V Mahesh is son of B N Venkataraman and Shanti Venkataraman is a B.Tech(MME) from IIT Kanpur He is presently pursuing Phd at Monash University, Melbourne He is one of the potential investors to proposed attractive scheme of Recurring Deposit given under this project.

+