GE 403
Engineering Economy

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Ex.

Two alternatives have the following net cash flow (NCF) and salvage value (SV) profiles:

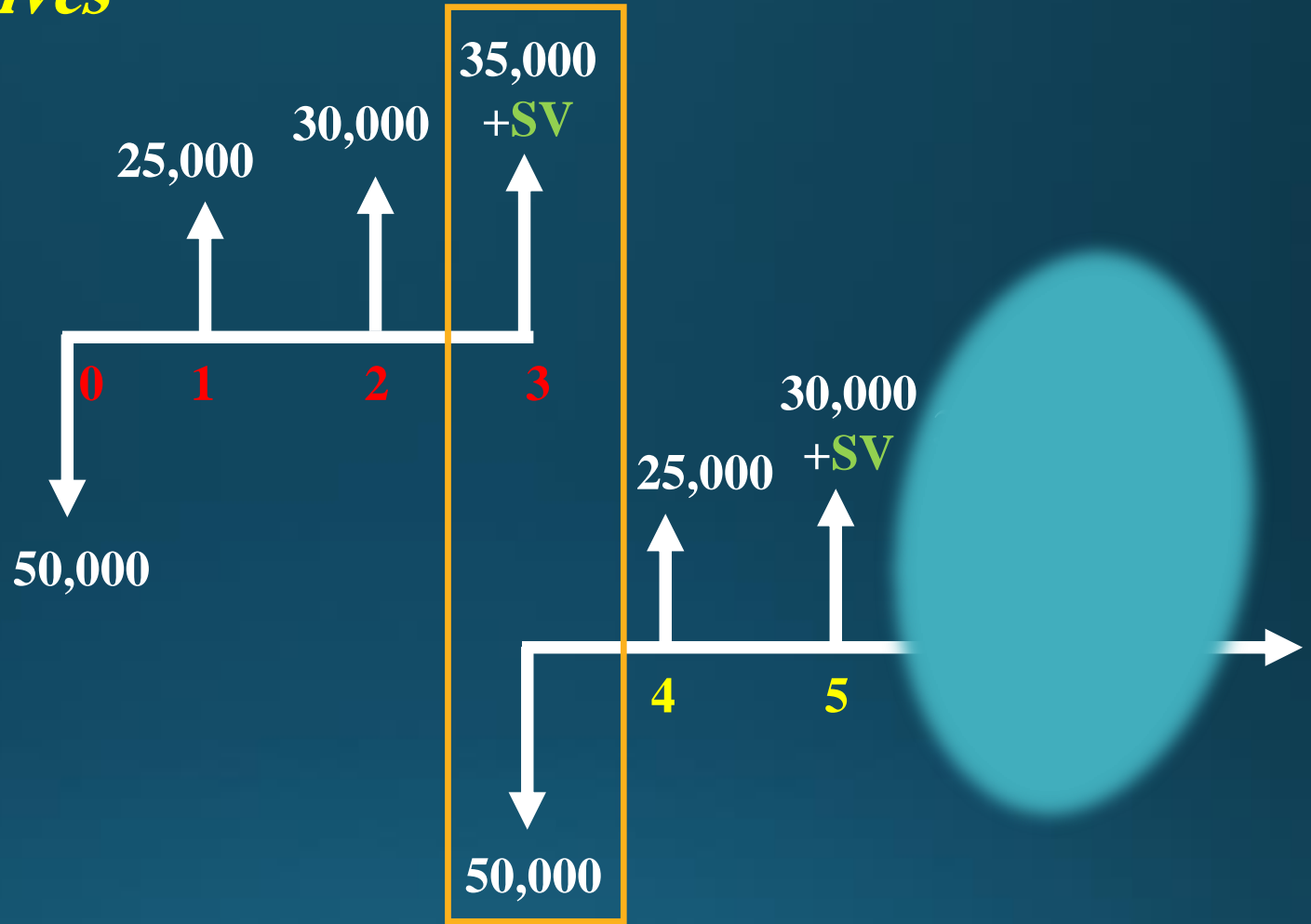| EOY	Alternative 1		Alternative 2	
	NCF (SR)	SV (SR)	NCF (SR)	SV (SR)
0	-50,000	50,000	-80,000	80,000
1	25,000	25,000	15,000	50,000
2	30,000	10,000	25,000	30,000
3	35,000	5,000	35,000	20,000
4			45,000	10,000
5			55,000	5,000

Ex.1 (Cont.)

Specify the planning horizon and complete set of cash flows for each alternative using each of the following:

1) Longest life among alternatives. 2) Shortest life among alternatives. 3) Least common multiple (LCM) of lives 4) A standard planning horizon of 4 years. 5) Assuming the two alternatives are one-shot investment.
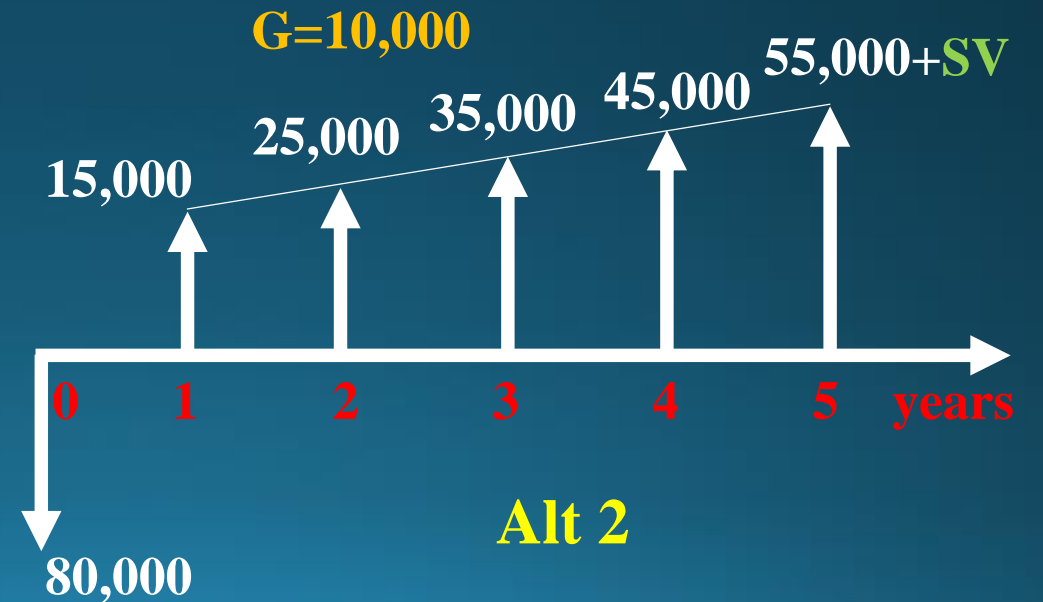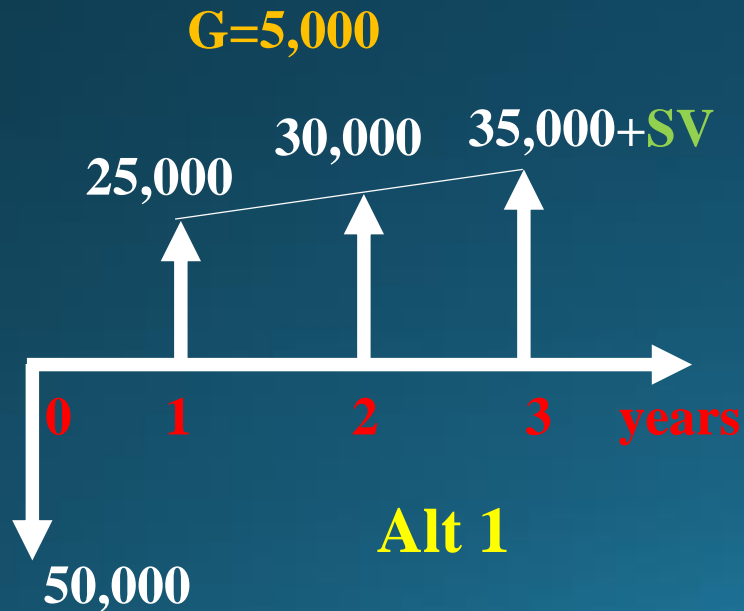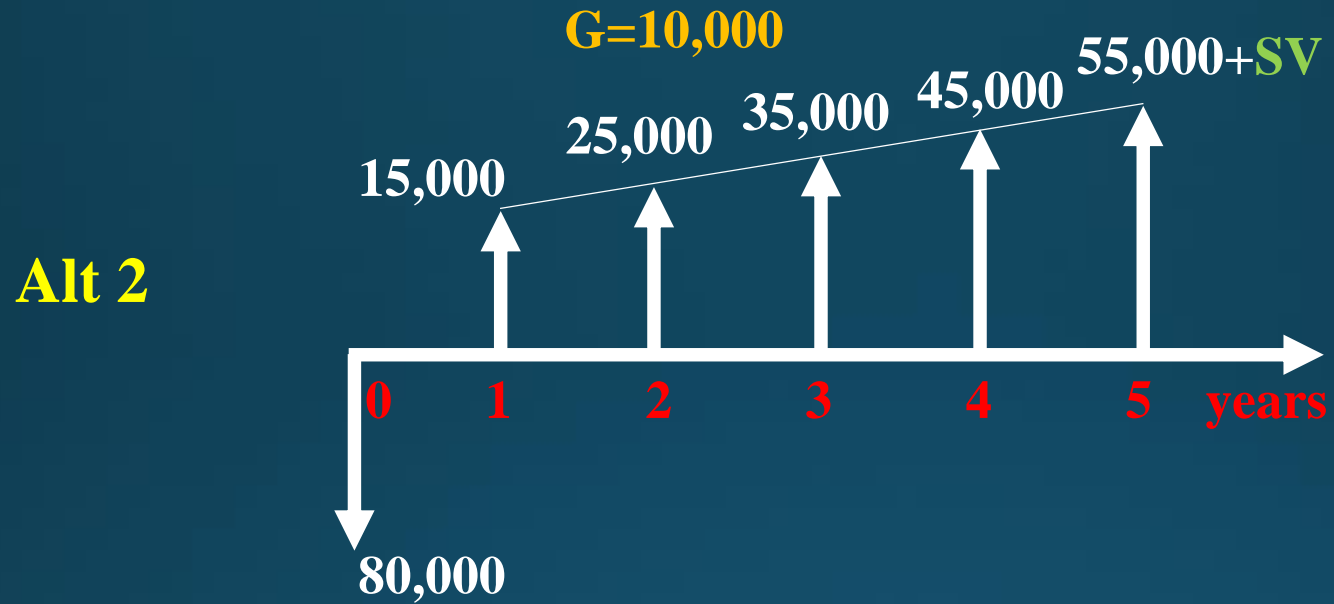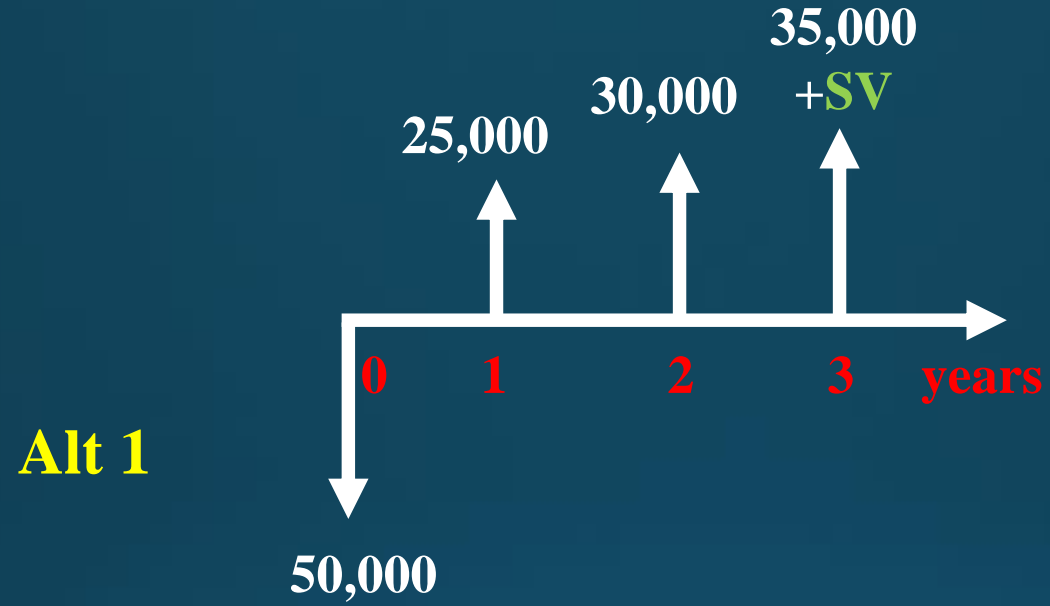
Longest life among alternatives

Alt 1

EOY	0	1	2	3	4	5
Cash Flow	-50,000	25,000	30,000	-10,000	25,000	40,000

Longest life among alternatives

G=10,000

55,000+SV

45,000

35,000

25,000

15,000

Alt 2

80,000

EOY	0	1	2	3	4	5
Cash Flow	-80,000	15,000	25,000	35,000	45,000	60,000

Shortest life among alternatives

Alt 1

EOY	0	1	2	3
Cash Flow	-50,000	25,000	30,000	40,000

Shortest life among alternatives

Alt 2

35,000
+SV

25,000
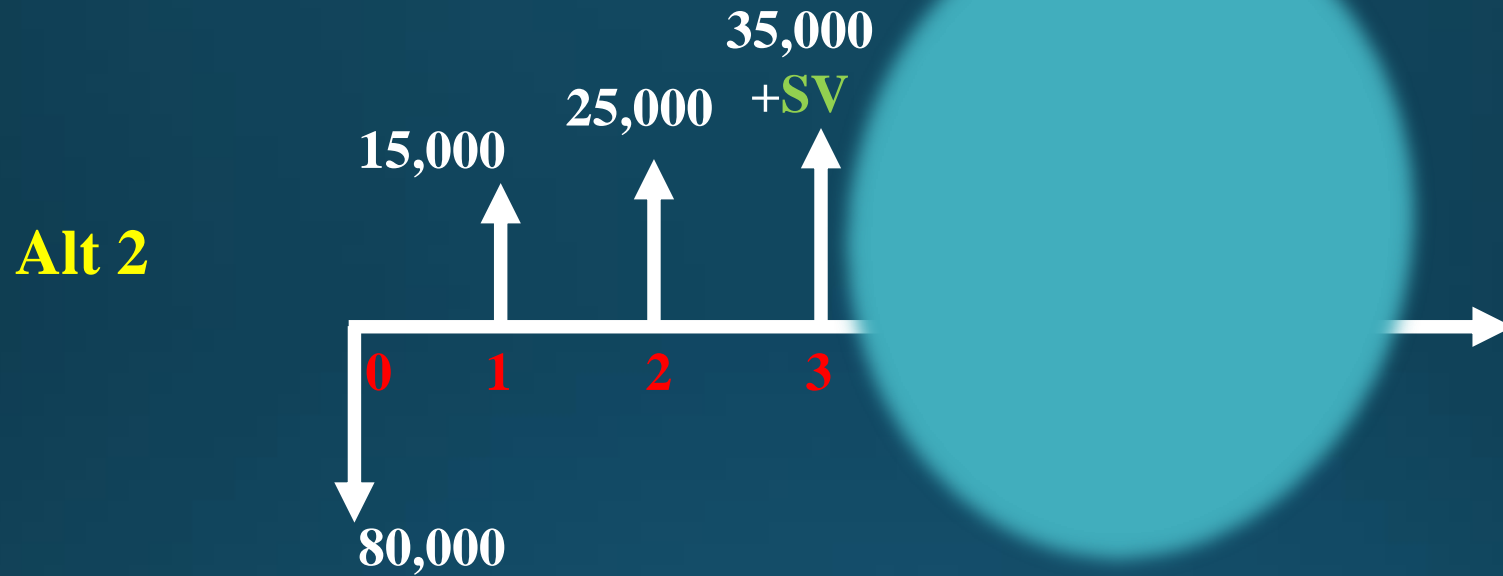
15,000

80,000

0   1   2   3

EOY	0	1	2	3
Cash Flow	-80,000	15,000	25,000	55,000
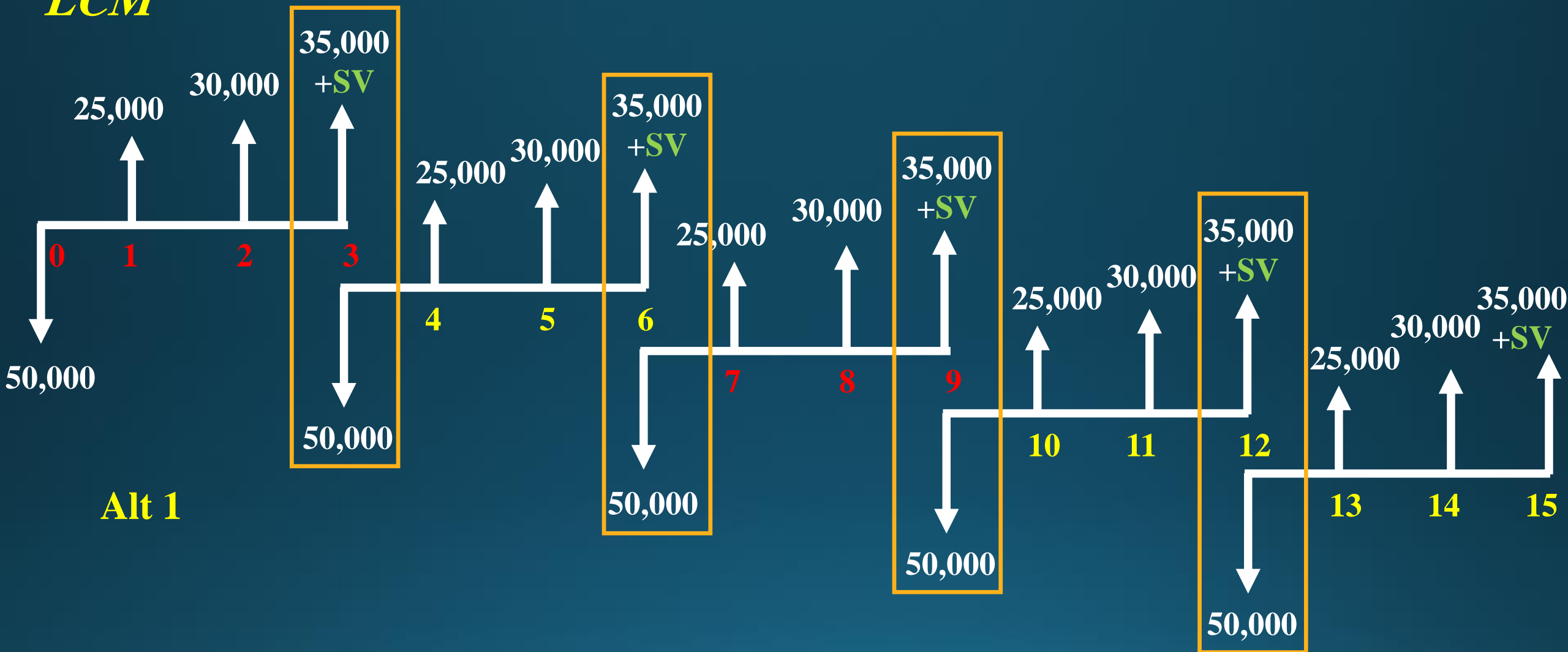
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
-50,000	25,000	30,000	-10,000	25,000	30,000	-10,000	25,000	30,000	-10,000	25,000	30,000	-10,000	25,000	30,000	40,000
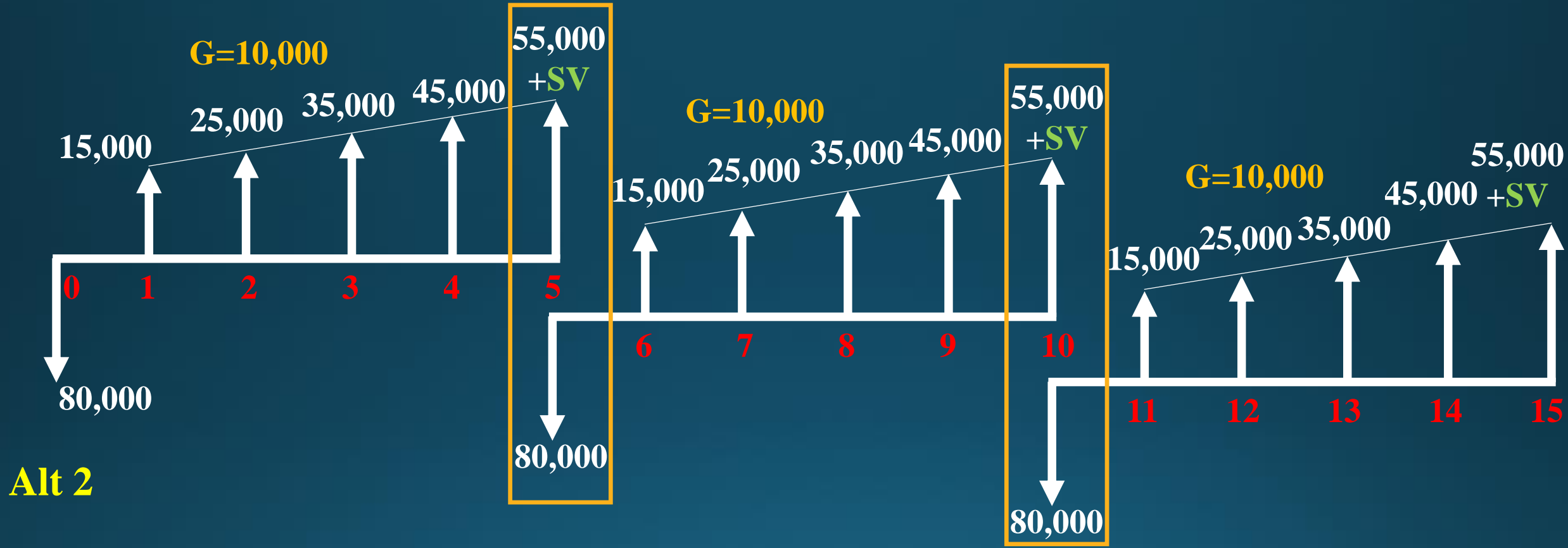
EOY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cash Flow	-80,000	15,000	25,000	35,000	45,000	-20,000	15,000	25,000	35,000	45,000	-20,000	15,000	25,000	35,000	45,000	60,000

A standard planning horizon of 4 years

Alt 1

25,000

30,000

35,000
+SV

50,000

0   1   2   3

25,000
+SV

4
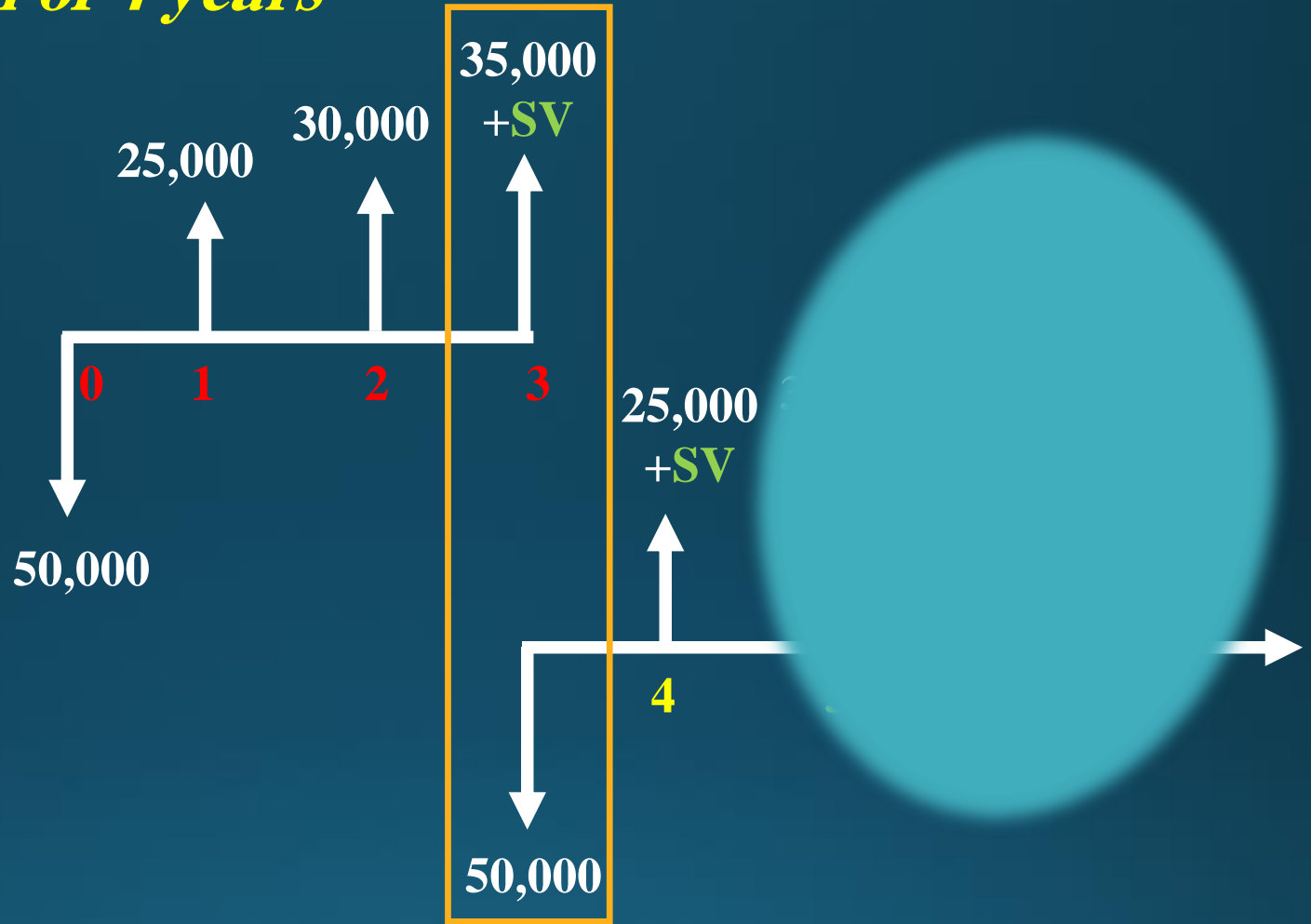
50,000

EOY	0	1	2	3	4
Cash Flow	-50,000	25,000	30,000	-10,000	50,000

A standard planning horizon of 4 years

Alt 2

G=10,000

15,000 25,000 35,000 45,000 +SV
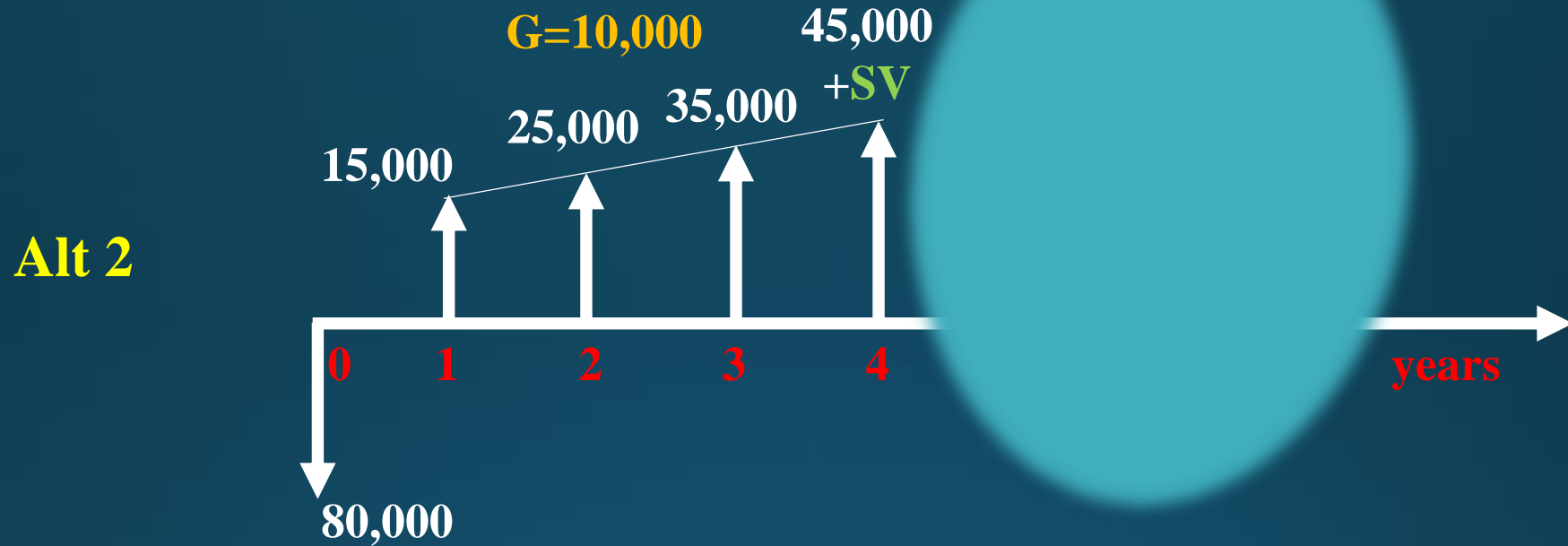
80,000

EOY	0	1	2	3	4
Cash Flow	-80,000	15,000	25,000	35,000	55,000

Two alternatives are one shot investment

Alt 1
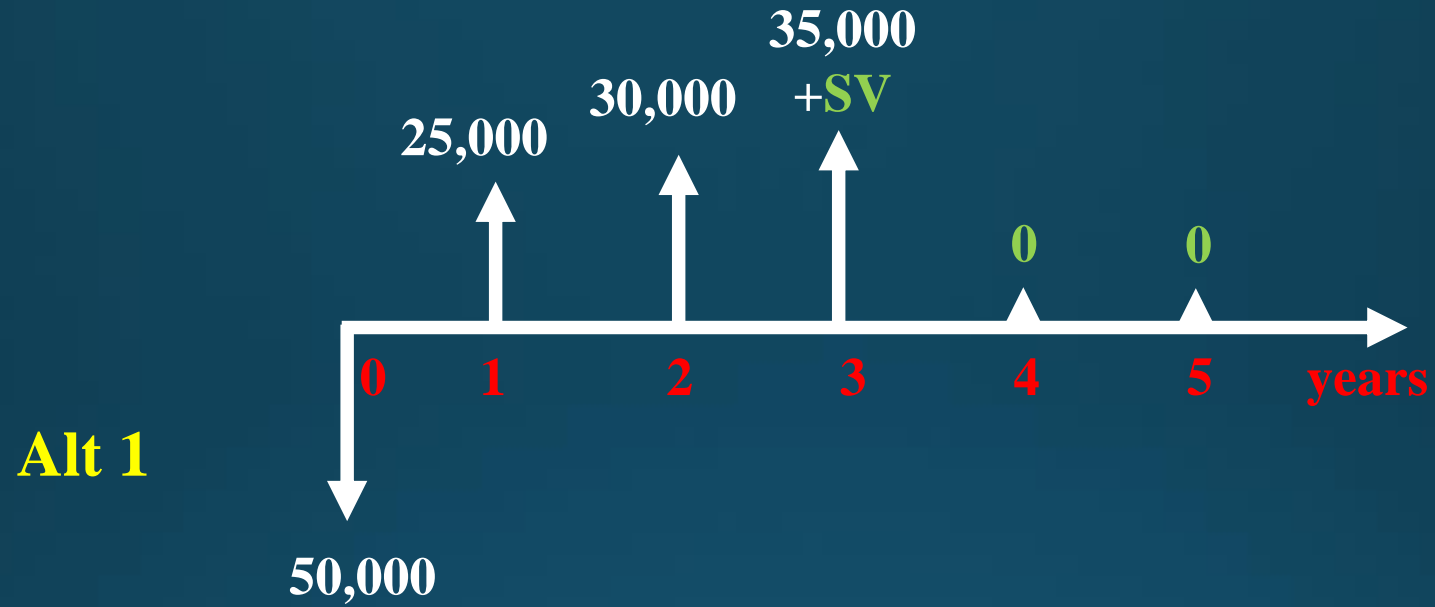
EOY	0	1	2	3	4	5
Cash Flow	-50,000	25,000	30,000	40,000	0	0

Two alternatives are one shot investment

G=10,000

55,000+SV

45,000

35,000

25,000

15,000

Alt 2

0   1   2   3   4   5   years
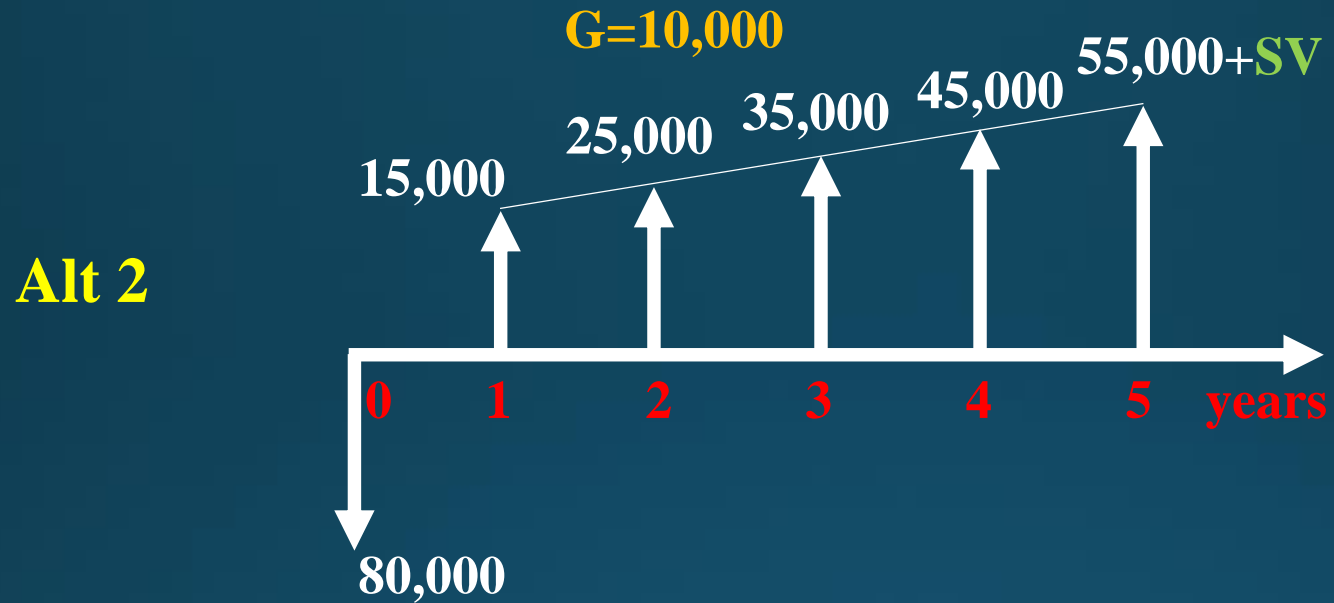
80,000

EOY	0	1	2	3	4	5
Cash Flow	-80,000	15,000	25,000	35,000	45,000	60,000

The End