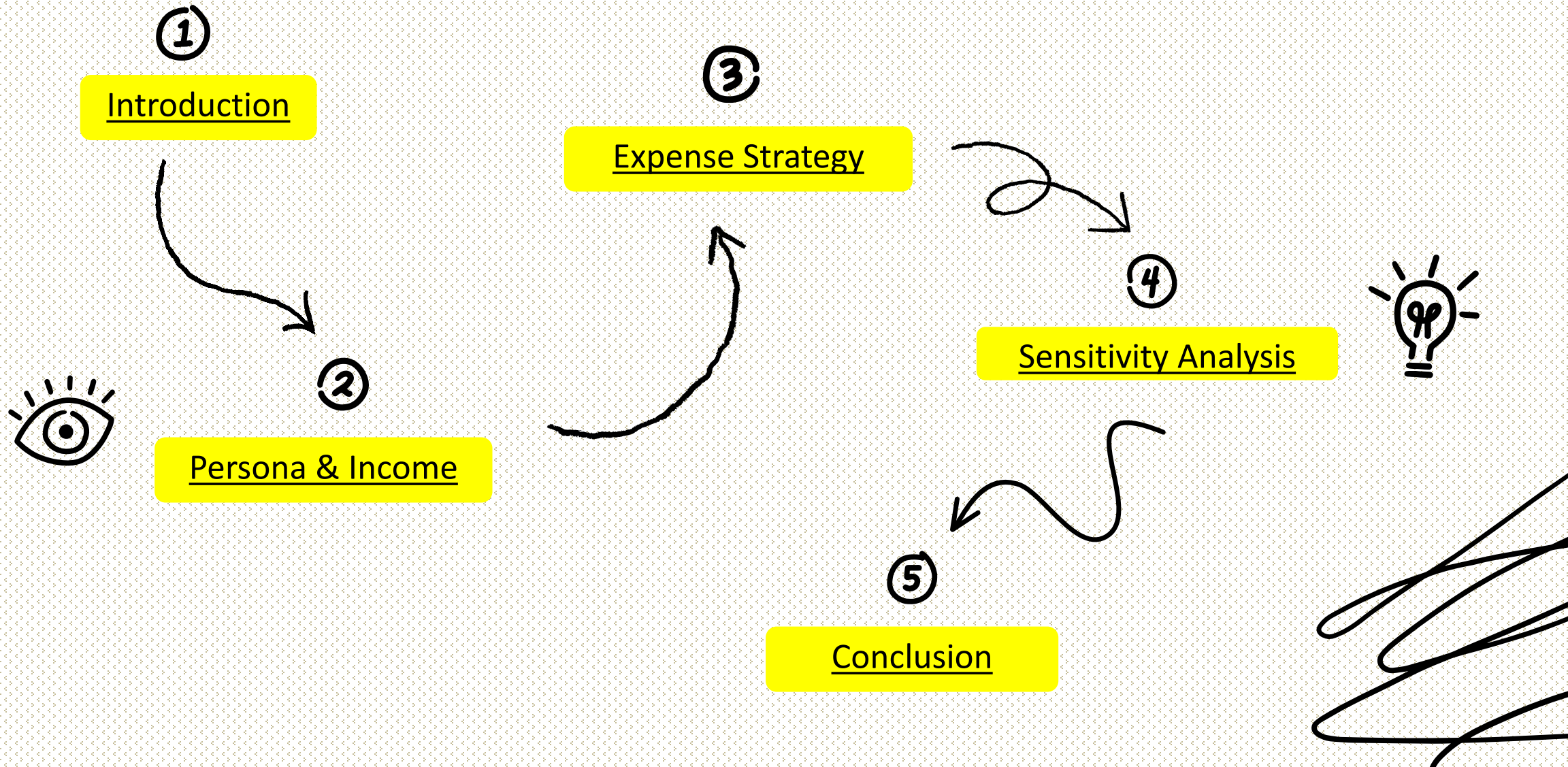




FINANCIAL PLAN FOR A YOUNG ENGINEER

Team 6

AGENDA TEAM 6

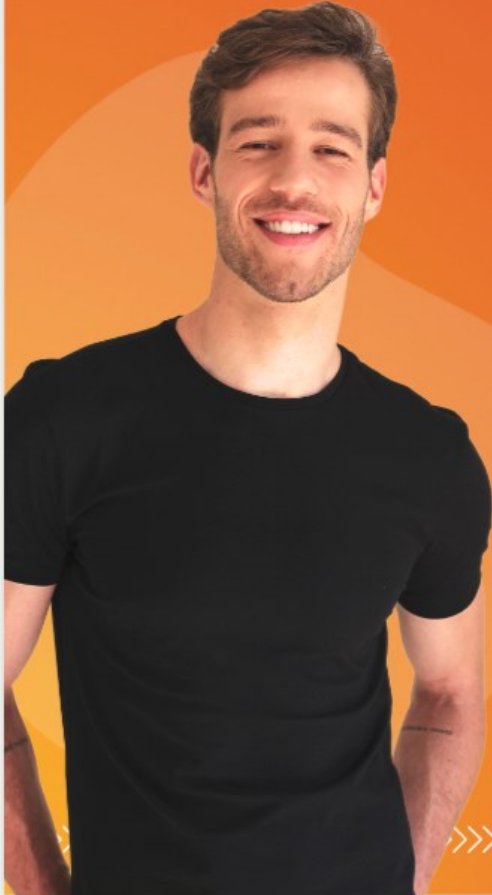




INTRODUCTION

- A finance strategy combines financial planning with strategic planning.
- A functional roadmap that assesses current resources, costs and budget and aligns them with a person's mission and goals.
- A finance strategy sets priorities, manages trade-off decisions and minimize the costs of change to effectively finance critical decisions.

"It is tough, but
I love what I do!"
- Jimmy K.



Personal Traits



Me Time

Browsing the internet, watching
YouTube tutorials on stock market,
reading and listening to e-books.

Jimmy
Kamal

Supply Chain Engineer

Goals

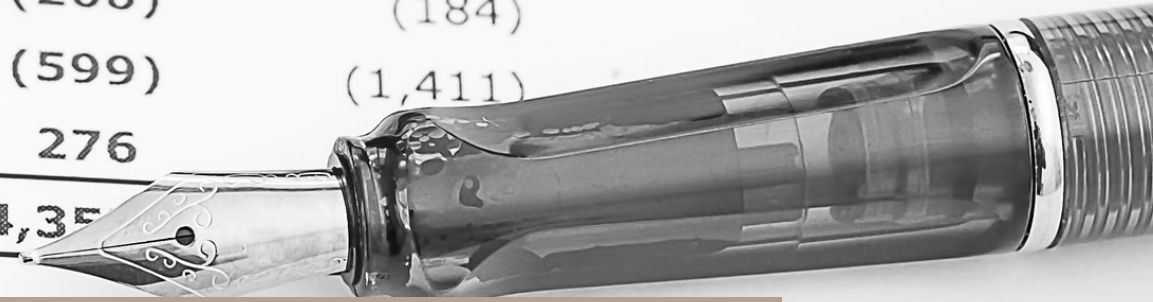
Jimmy is **ambitious** in terms of
his career strategy and wants to
be a financially stable and
independent

Challenges

- Jimmy has to work full time
during office hours, sometimes
has to work ahead for a
meeting or a conference call.
- Often have to work late to finish
a project.
- Jimmy has to be present
during company events that
usually are on weekends.

- 👤 Age: 25
- ❤️ Marital Status: Not married
- 📍 Location: Nashua, NH
- 💰 Annual Income: \$84,000
- 🎓 Education: Master in Science

PERSONA



	176	216	(266)	(184)
	394	(500)	(599)	(1,411)
	156	283	276	
es	5,862	4,186	14,35	
ons				

Income & Deductions

\$84,000

Monthly \$7000

(5% retirement fund)

-26%

Federal & State Tax

Retirement fund is tax free

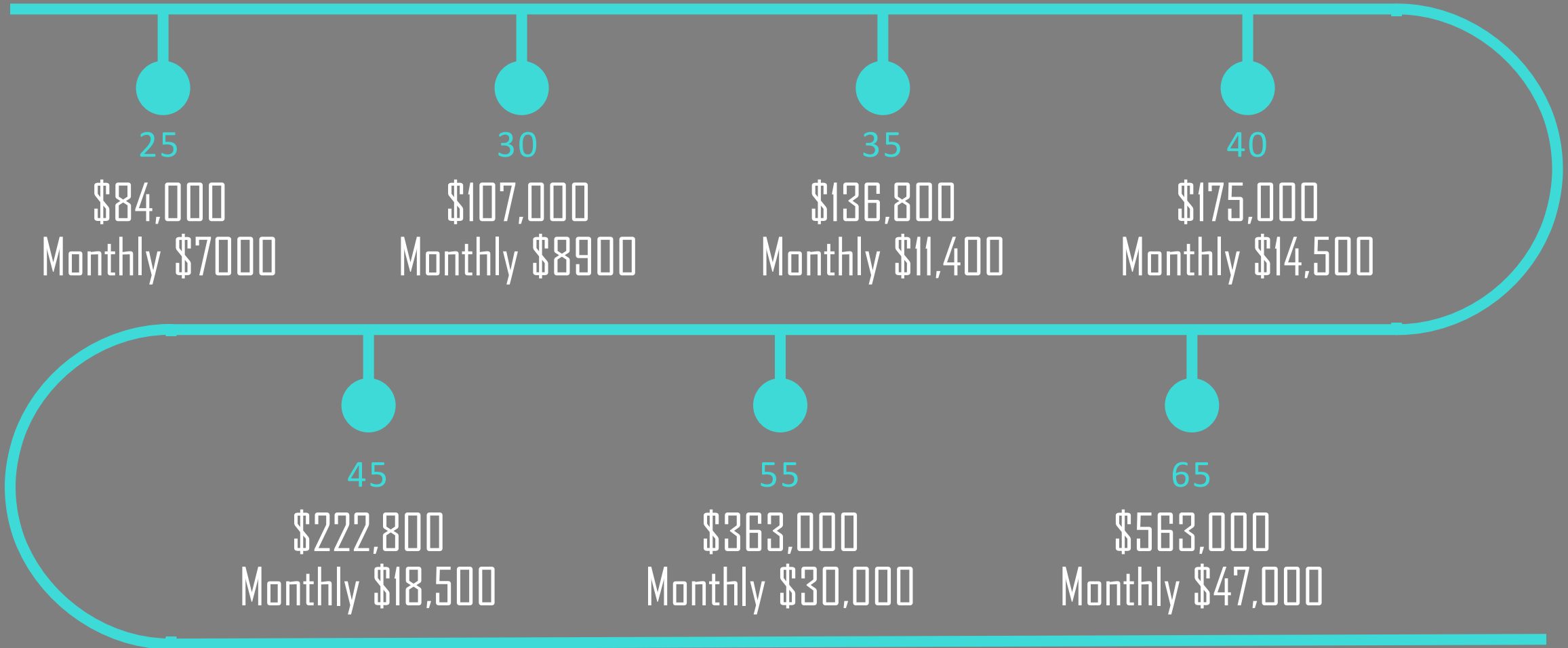
+5%

Annual Increment

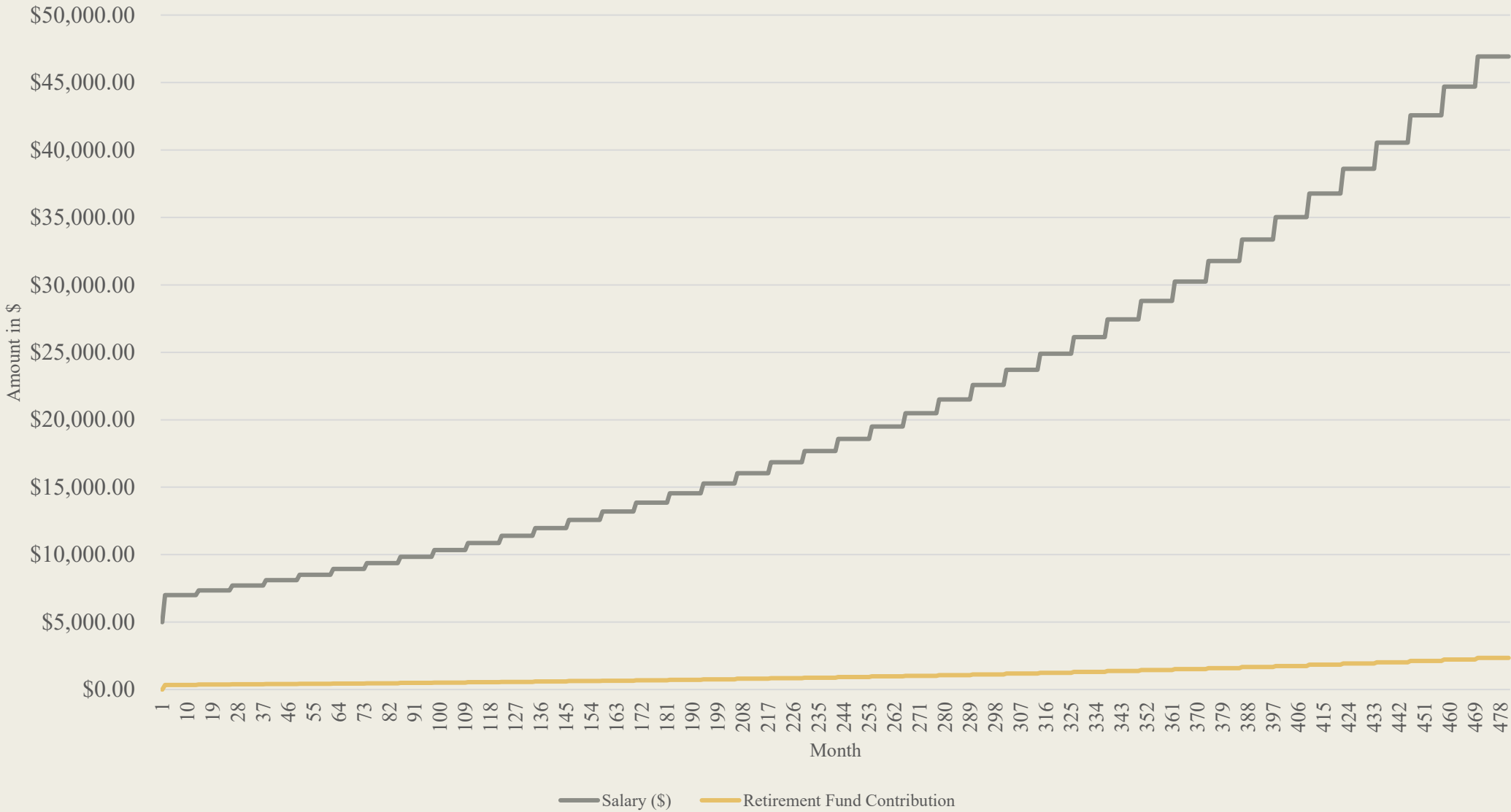
+5% from previous year

Salary Timeline

+10% increment every year



Salary vs Retirement Fund Contribution





Education loan

- Undergraduate Degree

Loan Amount: \$200,000

Interest Rate: 4.45%

Tenure Period: 15 years (180
Payments)

Monthly EMI Amount: \$1990.57

- Graduate Degree

Loan Amount: \$50,000

Interest Rate: 5.28%

Tenure Period: 15 years (180
Payments)

Monthly EMI Amount: \$447.48

Transportation



1st Car		2nd car	3rd car
Condition:	Used	New	New
Will Own for:	5 years (from age 25)	20 years	15 years
Cost:	\$15500	\$50000	\$60000
Loan period:	2 years	3 years	5 years
Monthly Interest rate:	0% (graduation gift)	5.99%/12	8%/12
O&M Cost (Monthly):	\$150 \$2 monthly increase	\$200 \$3 increase every 3 months	\$300 \$5 increase every 3 months
Salvage value:	\$0 (handed down to sibling)	\$5000	\$7000

Case 1:

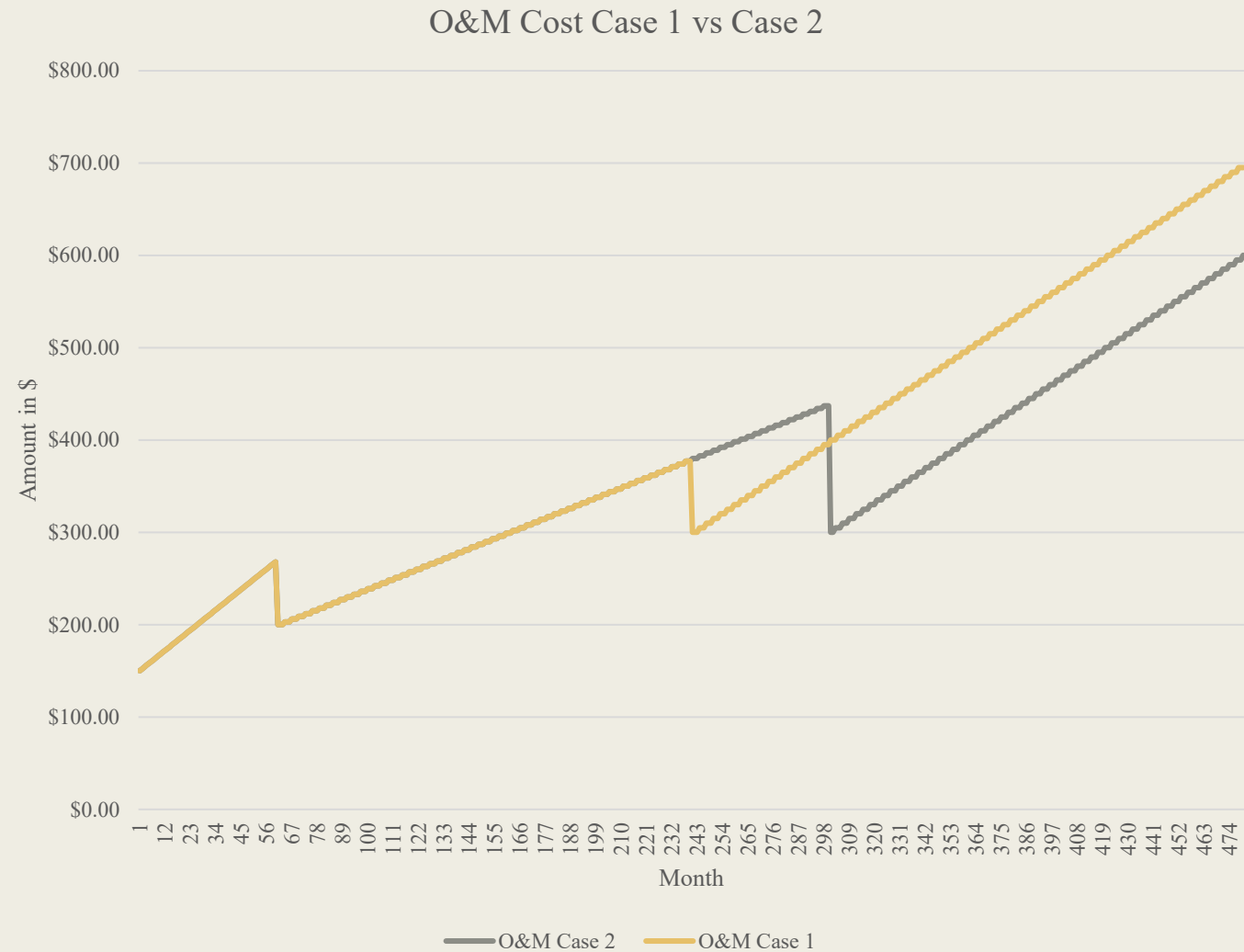
- Car 1 for 5 years. Purchase at 25, sell at 30.
- **Car 2 for 15 years.** Purchase at 30, sell at 45.
- Car 3 for 20 years. Purchase at 45, sell at 65 (retirement).

Case 2:

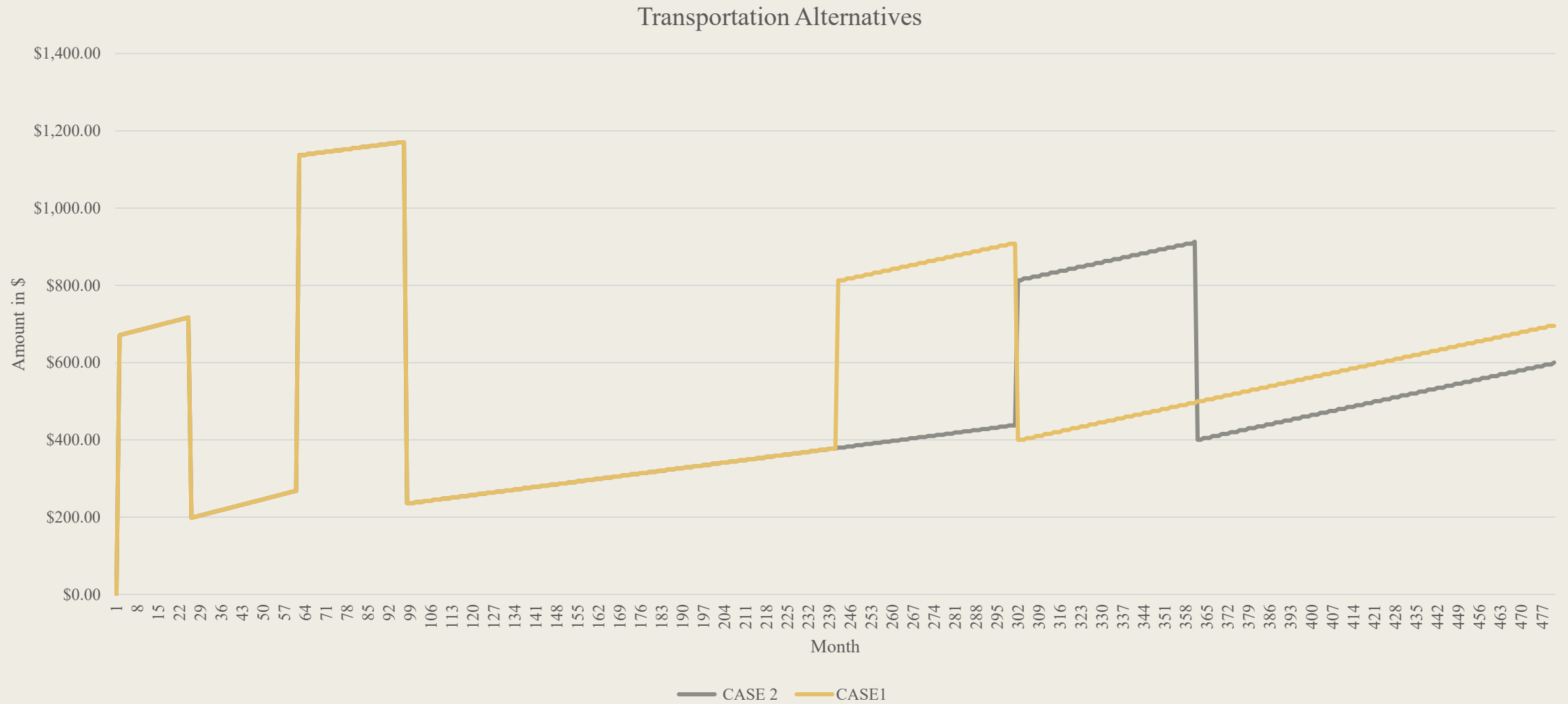
Keep the second car for 20 years (5 more years than in the previous case), then purchase the third car.

- Car 1 for 5 years. Purchase at 25, sell at 30.
- **Car 2 for 20 years.** Purchase at 30, sell at 50.
- Car 3 for 15 years. Purchase at 50, sell at 65 (retirement).

Note: In both cases, it is assumed that the same cars will be purchased at the same price and the same loan plans will be followed for the respective cars.



Case 2 has a lower overall O&M Cost



Higher payments occur later in Case 2, making it more preferable

Stocks



INVESTMENT BREAKDOWN

\$100 monthly until 30 years

\$200 monthly until 50 years

\$300 monthly until 65 Years

PROFIT

For the first 9 years 12%/year/monthly

From 11 to 14 years 12%/year/monthly

From 16 to 19 years 24%/year/monthly

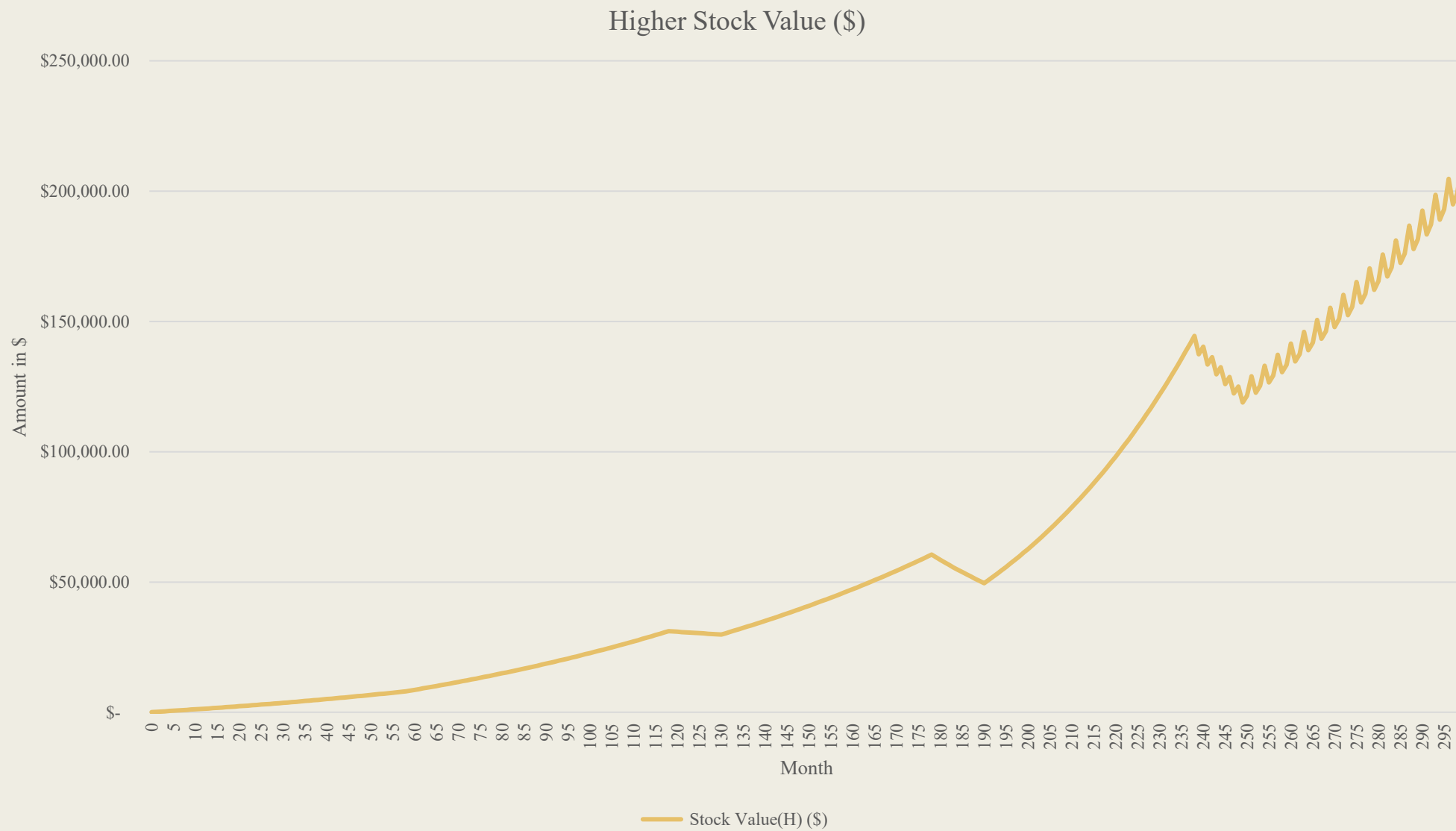
From 21 to 40 years 36%/year/monthly

INVESTED : \$108000

WORTH : \$1293986

PROFIT : \$1283186

Stock appreciation value



Living Expenses

House Rent – \$750 monthly
Increases yearly – 6%



Food & Utilities – \$600 monthly
Increases yearly – 3.06%





BUY A HOUSE

Cost - \$500,000

Down payment – \$50,000

Loan amount – \$450,000

Loan tenure – 20 yrs.

Interest rate – 6.282%

Mortgage EMI – 450000 (A | P, 6.282%/12, 240) – \$941.825

Future Worth

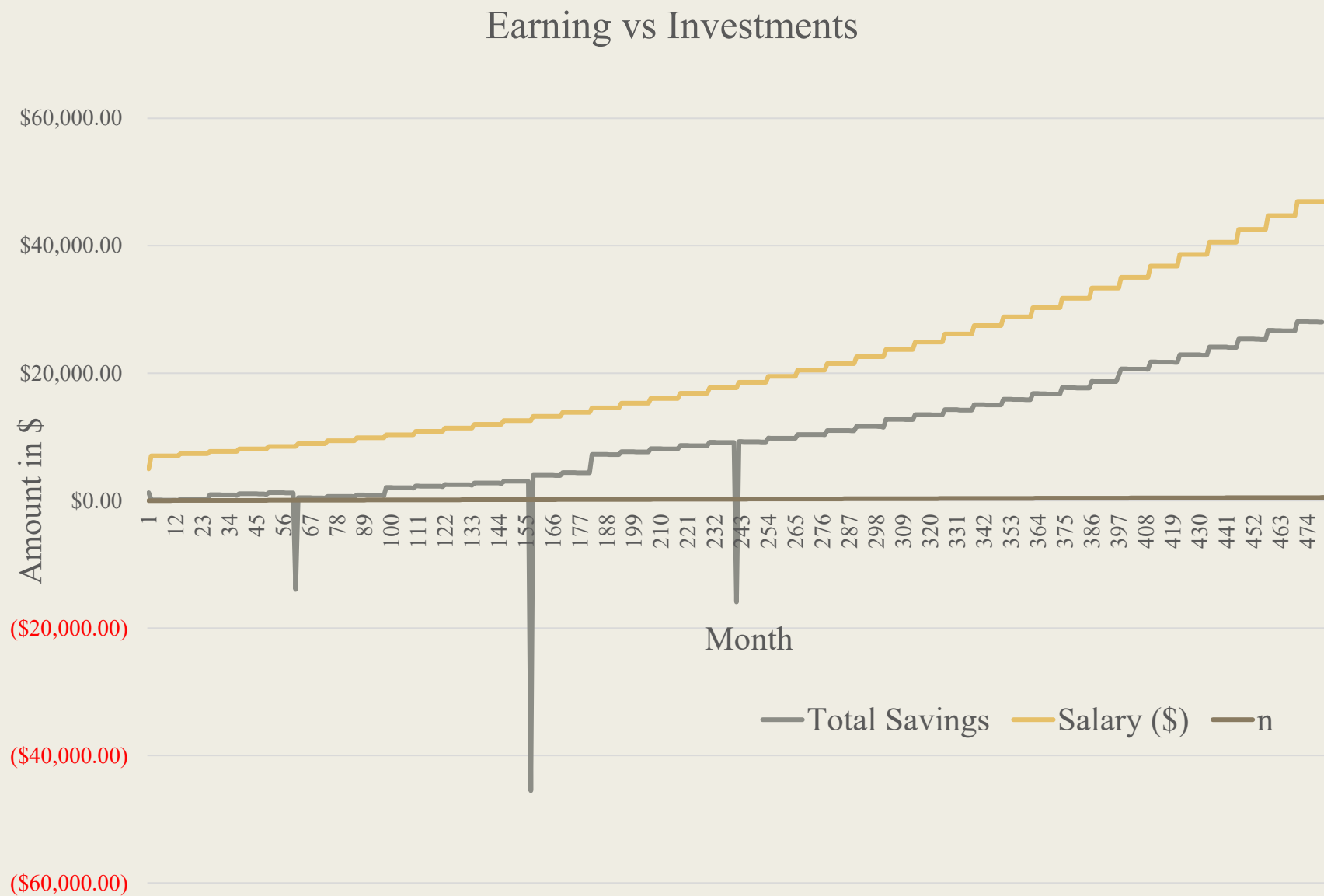
Household prices increase
at an average rate of 4.4%
per year

Book Value after 27 yrs.
 $500,000(F|P, 4.4\%, 27)$

\$1,599,130



Total Savings



Sensitivity Analysis

Plan	Stock Investment	Cost of Living	Means of Transport: Life for car 2
1	Yes (High return)	Buying	Shorter Period
2	Yes (High return)	Buying	Longer Period
3	Yes (High return)	Renting	Shorter Period
4	Yes (High return)	Renting	Longer Period
5	No	Buying	Shorter Period
6	No	Buying	Longer Period
7	No	Renting	Shorter Period
8	No	Renting	Longer Period

Sensitivity Analysis

Plan	Future Worth (FW)						
	MARR = 0%	MARR = 0.5%	MARR = 2%	MARR = 5%	MARR = 10%	MARR = 20%	MARR = 30%
1	\$8,738,948.56	\$9,006,631.61	\$9,962,768.00	\$12,881,934.90	\$24,345,249.50	\$208,059,904.13	\$3,986,660,115.07
2	\$8,752,688.56	\$9,022,196.91	\$9,985,462.85	\$12,929,954.29	\$24,504,320.00	\$209,509,989.30	\$3,998,034,935.39
3	\$6,170,522.02	\$6,400,421.70	\$7,229,204.81	\$9,815,470.56	\$20,384,121.77	\$200,781,906.21	\$4,008,305,326.28
4	\$6,184,262.02	\$6,415,987.00	\$7,251,899.66	\$9,863,489.96	\$20,543,192.27	\$202,231,991.38	\$4,019,680,146.59
5	\$7,553,162.20	\$7,830,573.43	\$8,824,287.49	\$11,881,673.43	\$24,108,491.19	\$229,926,383.03	\$4,678,277,624.78
6	\$7,566,902.20	\$7,846,138.74	\$8,846,982.35	\$11,929,692.82	\$24,267,561.69	\$231,376,468.20	\$4,689,652,445.10
7	\$4,984,735.66	\$5,224,363.52	\$6,090,724.30	\$8,815,209.09	\$20,147,363.46	\$222,648,385.11	\$4,699,922,835.98
8	\$4,998,475.66	\$5,239,928.83	\$6,113,419.16	\$8,863,228.49	\$20,306,433.96	\$224,098,470.28	\$4,711,297,656.30

Sensitivity Analysis

Future Worth vs MARR

