## Inflation \& Savings Scenarios

Intro: Show students a slide titled "Basket of Goods 1999" with pictures of the items below and the question asking: "What do you think the following items cost in 1999?"

- Car $(\$ 20,686)$
- Gallon of Gas (\$1.17)
- Movie Ticket (\$5.08)
- Postage Stamp (\$.33)
- Grand Total $(\$ 20,692.58)$

Next, show students a slide titled "Basket of Goods 2019" with pictures of the same items and the same question asking: "What do you think the same items cost in 2019?"

- Car $(\$ 36,718)$
- Gallon of Gas (\$2.59)
- Movie Ticket (\$9.26)
- Postage Stamp (\$.55)
- Grand Total ( $\$ 36,730.40$ )

Can anyone tell me what this illustration is representing? The answer is inflation which is defined as a general increase in prices and fall in the purchasing value of money. The prices grew by $78 \%$ over 20 years which is a $3.88 \%$ average annual inflation increase.

What do you think these same items will cost in 2039? (If the current rate of inflation stays the same, the prices will approximately double.)

If this can happen with the price of goods, what do you think can happen when it comes to saving money for the future?

Let's find out...
Let's suppose that right out of college you are making an average salary of $\$ 47,000$ (according to inc.com). While that might seem like a lot of money today, you are going to need even more than that in the future with inflation.

Let's take a closer look at the potential growth of your savings to show how it might change over time.

## Saving Scenarios



You make $\$ 47,000$ a year annual salary. Go to the Future Value Calculator to calculate the future value of your savings.

## Scenario \#1:

If you save 5\% of your income, your contribution would equal $\qquad$ per year.

If you wanted to make safe investments, you might put your savings into Certificates of Deposits that yield an average of 2\%. Using the above calculator and the following information, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest= 2\% (low risk CD)
- Periodic Deposit= $\$ 2,350$ (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take some moderate risk in your investment approach, you might invest in bonds. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=5\% (bonds)
- Periodic Deposit= \$2,350 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take higher risk in your investment approach, you might invest only in stocks. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=10\% (stock)
- Periodic Deposit= \$2,350 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.


## Scenario \#2:

If you save 10\% of your income, your contribution would equal $\qquad$ per year.

If you wanted to make safe investments, you might put your savings into Certificates of Deposits that yield an average of 2\%. Using the above calculator and the following information, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest= 2\% (low risk CD)
- Periodic Deposit= $\$ 4,700$ (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take some moderate risk in your investment approach, you might invest in bonds. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=5\% (bonds)
- Periodic Deposit= $\$ 4,700$ (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take higher risk in your investment approach, you might invest only in stocks. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=10\% (stock)
- Periodic Deposit= \$4,700 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.


## Scenario \#3:

If you save 15\% of your income, your contribution would equal $\qquad$ per year.

If you wanted to make safe investments, you might put your savings into Certificates of Deposits that yield an average of 2\%. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest= $2 \%$ (low risk CD)
- Periodic Deposit= \$7,050 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take some moderate risk in your investment approach, you might invest in bonds. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=5\% (bonds)
- Periodic Deposit= \$7,050 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.

If you wanted to take higher risk in your investment approach, you might invest only in stocks. Using the above calculator and the following info, determine the future value.

- Number of Periods= 20 (years)
- Starting Amount= 0
- Interest=10\% (stock)
- Periodic Deposit= \$7,050 (lump sum yearly investment for simplicity)
- Payment at the BEGINNING of each compound period.
- Hit the "CALCULATE" button for results and add the figure to the chart.


## Savings Scenario Chart



Plug the scenario calculations into the below chart and then answer the questions that follow in complete sentences.

|  | $2 \%$ <br> Return | $5 \%$ <br> Return | $10 \%$ <br> Return |
| :---: | :---: | :---: | :---: |
| Saving <br> $5 \%$ of Income |  |  |  |
| Saving <br> $10 \%$ of Income |  |  |  |
| Saving <br> $15 \%$ of Income |  |  |  |

1. Describe the relationship between savings and risk with your return.
2. Looking at the trade-off between savings and return, which combination of savings and investment returns would you feel most comfortable with? Why?
3. If you spend everything you make and never save for the future, how might that impact retirement? Provide a minimum of 3 predictions.
