Annual Calculations

Interest in a savings account is the amount of money a financial institution pays a depositor for holding money in an account. Expressed in percentage terms, interest is calculated and added to the amount of money in an account. After adding interest to the initial amount deposited, customers can earn interest on their savings plus accumulate interest from previous periods. This process, called compounding, allows depositors to build their savings quicker.

Simple interest can be calculated using the following formula:

$$I = P \times R \times T$$

Where:

I = Interest

P = Principle, or the starting amount of money

R = Interest rate in decimal form

T = Amount of time the money is invested in years

Annual interest or compound interest can be calculated using the following equation:

$$A = P(1 + r/n)^{nt}$$

Where:

A = Amount

P = Principle, or the starting amount of money

r = Interest rate in decimal form

n = Number of times interest is compounded per unit ‘t’

t = Amount of time the money is invested in years

The amount of money earned if the interest rate is compounded is the Annual Percentage Yield (APY). The formula for calculating the rate of return on compounded accounts is:

$$APY = (1 + r/n)^{n} - 1$$

Where:

r = Interest rate

n = Number of compounding periods

Different styles of bank accounts offer different rates, allowing customers to choose the account best suited for their needs. Savings accounts, money market accounts, retirement accounts and 529 plans all serve unique purposes for different financial goals in a customer’s life. While accounts at various financial institutions vary in specific attributes, they can all be evaluated in advantages and disadvantages.

Annual Calculations

Savings Accounts

Savings Account- Pros:	Savings Account- Cons:
• Security– insurance at FDIC institutions • Interest– average interest rates are about 0.06 percent • Low startup costs • No limitations– no contracted or set time to keep the account	• Restrictions– must maintain a minimum account • Low interest– while some interest is better than none, savings accounts offer low rates • Inflation– When a low-interest account does not compete with inflation rates, money loses value

Money Market Accounts (MMA)

Money Market Accounts- Pros:	Money Market Accounts- Cons:
• Security– insurance at FDIC institutions • High interest rates– the recent highest MMA interest rate was 1.5 percent • Easy access– some accounts do not offer immediate access to your funds, while MMAs commonly do	• Restrictions– must maintain a minimum balance • High startup costs– need a high minimum deposit to open the account • Limited transactions– withdrawal and deposits are limited each month

Retirement Accounts

There are several retirement savings accounts available to customers, including 401 (k) plans, Individual Retirement Accounts (IRA), Roth IRA, Roth 401(k), Simple IRA and many more. Retirement accounts provide financial stability to older individuals, allowing them to quit their full-time jobs. Each of these accounts offers advantages and disadvantages to their terms and conditions for individuals seeking savings for retirement.

529 Plans

529 plans serve a similar purpose to retirement accounts. Additionally, 529 plans can be used to cover educational expenses from kindergarten to graduate school. Each state offers at least one type of 529 plan specific to the cost of tuition and attendance at certain schools within the state. The two most general types of 529 plans offer pros and cons, leaving the decision to the lifestyle of the contributor.