Dear Cousin Timmy,

I know that you have been having trouble trying to figure out how to invest for your future, but you cannot put it off any longer. You are 22 years old and now is the perfect time to start investing. If you wait until your mid-forties when you are getting old and gray, then you will never have enough money saved up to provide for yourself and your potential family. I understand that you are uncomfortable talking about yourself in these financial situations so we will not use your name when discussing these investment plans. We will refer to you as “the investor” or “a person” so that you feel comfortable discussing such matters.

Generally, when saving money for retirement one wants to find a way to invest that provides them with at least 3% annual interest rates, but preferably higher. Any account with an interest rate less than 3% will not earn enough interest to exceed the personal payment of an investor. However, a 3% interest rate is not exceedingly high in itself. A 3% interest rate would only earn $212886.01 in interest alone over a 46-year period if the investor is putting $1000 into the account every quarter whereas larger interest rates would turn out much larger profits for the investor. The difference between one percent is the difference between a couple thousand dollars if the money is in the account for a long period of time. If someone was to invest the same amount of money for the same duration of time but the interest rate was at 4% annually that person would have an account worth $529,164.81 and $345164.81 would come directly from interest. A 7% annual interest rate would yield an account with the value of $ 1,357,094.43 with $1173094.43 dollars earned directly through interest. Lastly, an account with a 10% annual interest rate would be valued at $3,813,562.47 with $3629562.47 earned from interest alone. 46 years is the amount of time that would pass if someone were to begin investing on their 22nd birthday and continue to do so every quarter until they were 68 years old. Therefore, 46 years of interest is feasible for smart investors.

If one can find a way to double the amount of money that they directly contribute to the account, then the amount of interest earned would double as well. If we stay with the same situation where an investor begins investing $1000 dollars every 3 months starting on his 22nd birthday and continues this course of action until he turns 68, turning $1000 to $2000 dollars would produce amazing results. If this investor puts in $2000 quarterly in opposed to $1000 quarterly into an account that earns 7% interest annually, the account would be worth $2714188.86 with a majority of the money, specifically $2346188.86 coming from interest alone. An account earning 4% interest would be worth $1058329.63 with total interest of $690329.63 and an account earning 10% would be worth $7627124.94 with $7259124.94 earned in interest. By comparing the accounts when the payments are doubled, one can see that the interest doubles as well, creating an account that is exactly two times larger than the previous accounts.

Doubling the interest rates of the accounts is a vastly different story, however. When the interest rates are doubled the growth is exponential instead of linear which is the type of growth observed when payment is doubled. This means that the accounts will do much more than double, they will grow to be exponentially bigger than the accounts with interest rates staying steadily at 4%, 7%, and 10%. If the 4% interest rate is doubled to 8% annually, the account would be worth $1898852.59. This number is 3.59 times larger than the ending balance of the account with a 4% interest rate. A 14% interest rate, which is twice as large as the 7% interest rate, would yield a final balance of $16562349.42, 12.2 times larger than the account earning 7% interest. Finally, an account earning 20% annual interest would be worth $166339540.80 which is 43.6 times larger than an account earning 10% annual interest. The higher the interest rate, the more money the account can potentially make. When investing always seek out the highest interest rates that are available if risk is not a contributing factor.

If the investor who is putting in $1000 every 3 months starting on his 22nd birthday cannot make the payments after his 42nd birthday, his account will still be worth a significant amount of money on his 68th birthday if the account were earning 4%, 7%, or 10% interest. If the account earned 4% annually, $340703.92 would be the ending balance on his 68th birthday. In an account earning 7% interest the investor would have an account worth $1015126.55 by his 68th birthday and in an account earning 10% he would have $3034275.74. The investor continues to make a fair amount of money in interest because the investments that are made when the account is just starting out gain a great deal more interest than more recent payments. Since the payments that he made between his 22nd birthday and his 42nd birthday are still gaining interest until the investor is 68 years old, the account is still worth a good deal of money.

If this investor does not have his finances in order on his 22nd birthday and instead opens up an account when he is 45 years old, the results are very different than if he were to make the payments earlier in his life. If he invests 1000 every quarter until his 68th birthday an account with a 4% interest rate would have an ending balance of $151282.87 with $59282.87 coming from interest alone. An account with a 7% annual interest rate would be worth $228712.40 and $136712.40 of that money would come directly from interest. If the account had a 10% interest rate the ending balance would be $356538.75 with $264538.75 coming from interest. These numbers are obviously significantly smaller than the accounts started on his 22nd birthday where he continued investing until he was 68 and they are still smaller than the accounts where he stopped investing altogether when he turned 42. Time is the most important element to successful investments so it is always best to start investing as early as possible. One thing that a person can never get back is time, and if investments are accumulating interest for a long period of time then they will be worth far more money than younger accounts that were started later in life. If someone invests $1,000 four times per year, by the fifteenth year the interest becomes fairly sizeable. By the first quarter of the fifteenth year in an account earning 7% interest, $1881.37 is earned solely in interest. This number is almost double the size of the $1000 dollars that is being entered into the account quarterly. If the person investing into this account continues to invest $1000 quarterly into this account, the amount of money made in interest will be far greater than the amount that the investor personally contributed.

If an investor starts investing at age 45 then there is going to be a lot of catching up to do as it is the first payments that one makes that earn the most amount of interest. If he wanted to get his finances in order and start investing at the age of 45, then in order him to have the amount of money that he would have if he started investing at age 22, with a 4% interest rate, an investor would need to pay approximately $3498 every quarter. Even if a person stopped investing at age 42, and just let the money sit in the bank until he turned 68, that person would need to pay approximately $2252 to have the same amount of money at the age of 68. At higher interest rates, this payment increases even further. If an account had a 7% interest rate then in order for the account to have the same amount of money as an account started when an investor was 22, one would need to pay approximately $5934 every quarter. Again, to have the same amount of money as if one stopped investing at age 42 and just let the money sit in the bank, a person would still need to pay approximately $4438 every quarter. These figures increase even more if the interest rate is 10%. To match the figure that one gets when they start investing at age 22, a person would need to pay approximately $10696 every quarter, which is over 10 times the amount than if the account was started when the investor was 22. If a person stopped investing at age 42, then to match the balance at age 68, that person would still need to pay approximately $8510 per quarter. As one can see from this, one cannot make up for lost time which is why it is much better to pay small regular amounts when someone is young so that they earn a lot of interest. If a person started investing at age 45 and didn’t want to change their payments from $1000 every quarter, that person would need to find a bank that offered an interest rate of roughly 18.2%. This is unrealistic and, again, shows that one can’t make up for lost time when investing your money.

So cousin Timmy, I hope you learned something from all of this. If you start investing at a young age then by the time you reach the age of retirement, you shouldn’t be living off of the money that you have personally contributed into the account, but the money that you have earned in interest. If you start investing at a young age and make regular payments, then there should be a good amount of money in the account for you to live off of. I know investing is scary and often times it is daunting; however, I know that you will do great things while saving money for retirement. There is no need to be frightened about viewing yourself making financial decisions. With the right set of tools and proper knowledge of investing, anything is possible.

From

Cousin Tommy