2-1 Discussion: Time Value of Money Application

This discussion will focus on choosing between debt and investment.

Assume you have recently graduated with your business degree, and landed a new position at a company you had been researching during your senior year in college. You have been offered a lump-sum, sign-on bonus of $5,000. You also recently purchased a new condominium and vehicle. These items, in addition to your student loans, comprise your personal debt.

Consider your debt reduction and investment earnings potential, as well as any applicable taxes. Assume that tax rates are stable over the next 10 years, and inflation is low (<1% per year) and does not change. Would you personally choose to invest the $5,000 sign-on bonus, or use it to pay down your debt? Regardless of your decision to either invest or pay down debt, be specific regarding the type of investment or debt payment you would make. Provide specific rationale for your decision. You may develop a quantitative example to support your rationale.

In responding to your peers, comment on their decisions and rationale.

To complete this assignment, review the Discussion Rubric document.

Rubrics

Discussion Rubric: Undergraduate

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To pay or not to pay, that is the question

Peter Stevenson posted Nov 2, 2020 6:37 AM Subscribe

This scenario describes 3 personal liabilities – the mortgage on my condo, payments for my car and student loans of some undisclosed amount. Presumably I am able to meet these debt obligations with my current income and would not be financially insolvent without the $5000 bonus. In this scenario, inflation is likely to remain low which means that even if the loans are a variable rate, the payments will remain fairly consistent however it also means that money invested in a savings account will not grow either.

The first thing to understand is how much money a $5000 bonus actually is in real terms after the applicable taxes have been deducted. Bonuses are taxed by the federal government at 22%, plus 6.2% for social security, 1.45% for Medicare (Bell, 2020), and if like me you live in North Carolina, 5.25% for state income tax (NCDOR: Tax Rate for Tax Year 2019, 2019). This makes a total of 34.9% in taxes or $1,745 that I never get to see. The remaining $3,255 is mine to use as I see fit which is where the time value of money becomes important.

The earlier you start investing, the more money is likely to be available for you in retirement and the question I would have to answer is whether paying down the debts that I have right now creates more wealth in the long term than investing the money now and paying my debts over time. Perhaps the simplest way to look at investing is to eschew individual companies and look to something like the S&P 500 that has been around for a while. Since the S&P 500 started in 1929, its value has increased 10% per year on average albeit with highs and lows during this time (Maverick, 2020). Assuming the S&P continues to perform at historical rates and I invest $3,255 as a 22 year old fresh college grad, this money will be worth $196,081 by the time I retire in 2063. Naturally the dollar will be worth less in the future than it is right now, but this is where time continues to be important and should be considered. For example, if I used the $3,255 to pay down debts now and put that money in the S&P 500 when I turned 30, the end value at my retirement would only be $91,473, less than half the potential value for a mere 8 years of time.

My assumption in this scenario is that I am not financially under water with my current income and debt load, so while the benefit of investing the bonus money is delayed to future years, I would definitely invest rather than pay off current debt.

References:

Bell, K. (2020). How Bonuses Are Taxed | Bankrate. Retrieved 2 November 2020, from https://www.bankrate.com/taxes/how-bonuses-are-taxed/

Maverick, J. (2020). What is the average annual return for the S&P 500?. Retrieved 2 November 2020, from https://www.investopedia.com/ask/answers/042415/what-average-annual-return-sp-500.asp

NCDOR: Tax Rate for Tax Year 2019. (2019). Retrieved 2 November 2020, from https://www.ncdor.gov/taxes-forms/individual-income-tax/tax-rate-schedules/tax-rate-tax-year-2019

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2-1 Discussion

David Haun posted Nov 1, 2020 7:32 AM Subscribe

In 2016, I had a very similar situation. I received a very large bonus for a company I haven't been for barely a year. I was faced with the same question. Should I invest or should I pay off my debts? I chose to pay off my debts. In this situation, I would do the exact same thing. I think it is very important to invest, however, being that I am a senior in college I still have plenty of time to start investing. I think paying off debts as early as possible can set you up for a prosperous future that entails no debt. I paid for my entire car payment and saved me a lot of money each month to pay off even more debt. Which within that very next year I was completely debt-free and saved a ton of more money and was ready to purchase my first house. Over the course of 18 months, I paid off all my debt, got married, and bought a house. All of this happened without creating more debt (besides the house) by choosing to pay off debt instead of investing. Now that I am debt-free, I can be very aggressive with my investing.

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Last post **yesterday at 7:52 AM** by Cole Stoker

week two: discussion

Maurice Drewry posted Nov 2, 2020 8:40 AM Subscribe

Bouns			
	bonus	**10-year return**	**Opportunity Cost**
Invest	$ 5,000.00	$13,425.32	$ -
Spend	$ 5,000.00	$ -	$13,425.32

I recently accepted a job as a finance manager at my local Honda dealership after graduating from school. I chose this job because they offer a $5000 sign-on bonus that I could use to pay down my school loan or purchase a new car. Also, I was considering an investment because of an annual return rate of 10% compounded quarterly. I understand that a $1 is not the same value tomorrow and really should consider investing the bonus. The future value (FV) is important to investors and financial planners as they use it to estimate how much an investment made today will be worth in the future(Chen, 2020).

First, let's say that I would use the money to pay down on school debt and purchase that new car. I would have $0 to invest and would not make any money off the bonus I would receive. Next, I choose to invest my bonus at that described rate in the paragraph above and pay my school debt with my job earnings. With the use of a calculator or excel, I could show the future value of $5000. By using the following equation, you can find the future value of the $5000: 5000(1+10%/4)(4*10) or =fv(.10/4,10*4,0,-5000). You would have a prospective investment amount of $13,425.32 and could purchase a new vehicle at this time, pay on school debt, and still have money left to reinvest for future gains.

references
Chen, J.(22 August 2020). Future Value (FV). Retrieved from:
https://www.investopedia.com/terms/f/futurevalue.asp

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2-1 Discussion

Brianne Downes posted Nov 2, 2020 3:57 PM Subscribe

When it comes to investing/saving my bonus or paying off debt, I always pay off debt. The debt will continue to grow due to interest and if it's a credit card- like it usually is for me when I'm debating between investing and paying debt- I know I'm going to need to use it even if there's debt on it because it is a life line at times. If I pay the debt off today, it opens up for more of my paycheck to be utilized for investing and saving in the future verses saving today and spending more on this debt later. When you don't pay off your debt it's a slippery slope to gaining a lot more debt and getting yourself into some trouble. I know when I pay off my debt I always feel so much better, and am able to continue with a digestible amount of debt each month on my card after that until there's another life event to prepare for.

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Time Value of Money Application

Cole Stoker posted Nov 2, 2020 7:50 AM Subscribe

In full-honesty I am inexperienced in the financial world, however I am always one to remove any and all debt whenever possible, I am financially fortunate enough that I have avoided loans. I would choose to pay down the debt rather than invest it, as it is best to remove any and all possible financial burdens as fast as possible. I would work to remove my smallest debts first and move up to the larger debts, so I can reduce clutter in the debts and not have the inflation growing on too many debts at once. Debts tend to sneak up on people and snowball, and I don't want to be caught by surprise-I'm the cautious type. Being debt-free also allows for more investment opportunities with less risk involved.

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Last post **yesterday at 4:08 PM** by Brianne Downes

2-1 Discussion

Molly Stapleton posted Nov 1, 2020 9:40 PM Subscribe

If I was offered a lump sum bonus from an employer, I would use those funds to pay down debt. I have student loans, some credit cards, and a car loan. I still rent a home and would love to own one someday, but right now, I need to finish school. I would look and see what has the highest percentage rate, then I would look at which one has the lowest balance. From there I would start with the smallest amount and pay off that one first, then work my way up until I have used the 5,000 into my debt. The reason for this is the less payments you are making out, the better off you are to put more money towards the other debts. It is a snowball method. It is a good way to get out from debt if you carry debt. Someday I hope to be debt free, but right now with how the country is, I don't know if that will happen anytime soon.

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Last post **yesterday at 4:24 PM** by Brianne Downes

2-1 Discussion: Time Value of Money Application

Rebecca Bonnar posted Nov 3, 2020 1:46 PM Subscribe

If I were to personally receive a bonus from my employer, I would use this extra cash to pay off debt. If you have a few different debt options to pay down, say a personal loan or a credit card, you always want to aim for paying off the debt that carries the higher interest rate. For example, if you have a personal loan in your name that had an interest rate of 7% and a line of credit that had an interest rate of 15%, you should use the money to pay off the credit care because of the high 15% rate. Making minimal payments with a rate like that will lead you to tread water and could take years to pay off, all while spending hundreds or even thousands more towards interest. For me personally, I believe that paying off debt with the money would be more financially beneficial to me instead of investing, because of my age and current retirement set up. I am young enough to where the $5,000 would not largely benefit me in an investment period because the return time. It would take a few years to earn on this, whereas paying off debt helps me right now. I also have other sets ups that will help me later on in life like my pension and my 401K. I also believe that making investments is a bit more risky during an election year. If I were older, and only had a small amount of debt, then I would likely take the money and invest it somewhere. But for now, I would absolutely use the money to pay off loans or cards.

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Last post **3 hours ago** by Ryan White

Week 2

Ryan White posted Nov 3, 2020 7:21 PM Subscribe

Personally I would pay the debt off start fresh and invest later when I have more options. The thing about investing is that their are always opportunities to invest into something. Plus five grand is not a lot of money, after working and budgeting you can get that back real fast. I would pay off the debt so that would not be over my head and wait to invest later and if I miss out on a great opportunity in the moment so be it. Because if the investment does not pay off then I have debt over my head which brings stress which may make me make another bad investment. Patients is the key when dealing with your personal funds

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2-1 Discussion

Terence Mattera posted Nov 2, 2020 12:39 PM Subscribe

Honestly, with the idea of student loans looming over my head, I would probably take the 5,000 and put it toward paying those loans off. Lets just assume that the loan in question is 38,000 dollars (an average price for a bachelors) and no payments have been made on any of the loans. Over the five years, unsubsidized loans have gained substantial interest, and subsidized loans are now starting to collect interest. Generally, each group will have a different interest rate slapped on to it depinning on the type of loan, the amount, when exactly the loan was handed out, etc.. It's what makes keeping track of how much you actually owe a bit difficult. We'll just assume this is a strange world where there is a flat interest rate (4.235 as an example; this is my average interest on my loans). Student loans from what I can tell are usually compounded monthly, so we'll assume it's a four year degree, with each new loan coming up every two months/terms (so one loan for each class), the interest is calculated on the initial loan, and each loan is of an identical amount that all add up to 38,000 total (1,583.33). The very first loan would have an accrued interest of well over double it's initial balance (1,609.30). Keeping in mind the accrued interest from all the other loans, and that would be a hefty amount to pay before the base balance is even reached. Now, if both the condo and the car had payments on them, I would split the money accordingly amongst all loan payments depending on the cost and interest of each. Most likely, the most would probably go to either the condo or the student loans, and the least going to the car. Basically, all extra money, including the 5,000, would go immediately to paying debt.

Assuming that there was prior action taken on the student loans, and both the interest and principle balance were lower, I would split the money 50/50. 2,500 would be distributed amongst loans, while the other 2,500 would be placed in to a savings account. Assuming the financial situation is bad, and I'm living paycheck to paycheck, the savings would be a short-term savings for something such as a surprise bill/emergency. If the financial situation is good, and there is a bit of spare money from each check, the 2,500 would be saved for the long-term, such as retirement (I don't plan on ever retiring, but you never know) or taking care of aging family members. Loose money from each check would be utilized for short-term payments.

This is all coming off my initial knowledge, as I haven't read the chapters yet, so I might edit this with some better ideas if they happen to crop up when reading the chapters.

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Last post **3 hours ago** by Ryan White

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Reflect in ePortfolio

Activity Details

- Task: Reply to this topic

Starts Oct 31, 2020 11:59 PM

Assessment

Discussion Rubric: Undergraduate