Project Examples

You can work in a group of max 3 people. If you want partial credit, please indicate how you have done the calculations. If you come up with the wrong numbers I have to figure out where you went wrong. Each question is worth 5 points.

Project 1: Advising Amanda and Carlos.

You are the financial advisor of this couple, Amanda and Carlos Gonzales, who came to get advice from your financial advising firm. They have specific questions for you, but your method is to look at their financial situation first and you ask many questions about their assets and debt, their retirement plan at work, and much more.

Because of all of your questions, they tell you the following:

They graduated from college four years ago and they have good jobs, but none of them has paid any attention to their finances.

Amanda works for a marketing firm and is now making $82,000 a year in her new position. Because it is a small firm, she does not have a pension plan.

Carlos works in technology, got his master degree right after college, and is making $95,000 a year. He works for a mid-size firm which offers a good pension plan. For any contributions he makes to his retirement plan and up to 6% of his income, the firm provides a one to one match.

They have a total of $20,000 in their checking account at Citibank.

Amanda inherited $30,000 from her grand-mother a year ago, she has the check in her drawer in the home office, and she has not deposited it in the bank yet.

Amanda carries $6,000 on her credit card, which charges an APR of 22%. Carlos has a credit card that charges an APR of 15% and he carries a balance of $4,000. They pay the minimum payment each month on their credit cards, the amount specified on the credit card statements.

Both Amanda and Carlos have student loans. Amanda has $28,000 in student loans charging an APR of 7% but Carlos, who got his master from a private university, has $70,000 in student loans also charging an APR of 7%.

They came to see you because they have the following questions:

1) Amanda is pregnant and they would like to set aside right away money for their child' education. They want to know from you, how much should they set aside today to have $120,000 18 years from now and assuming they can earn 5% per year on their investment. They also want to know if they decide to put aside money each year for the next 18 years starting <u>now</u>, how much

should they put aside to have $120,000 in 18 years, assuming the same interest rate of 5%. What are the amounts to put aside in these two different scenarios?

Scenario 1 (what is required to save now to have $120,000 18 years from now) = _______________

Scenario 2 (saving each year starting now to have $120,000 in 18 years) = _______________

2) They would like to be student debt free in 5 years. Given they are charged an APR of 7% on their debt, how much should they pay each month (assume the payments are made at the end of the month) to be student debt free in 5 years?

Monthly payment to be student debt free in 5 years = _______________

3) They plan to buy a minivan, in anticipation of their bigger family and have found a car dealer who has offered them a used mini-van for $20,000. The dealer offered them two methods of payment: (i) They can pay $24,000 a year from now or (ii) pay in 12 convenient installments of 2,000 per month at the end of each month and in a year from now the car will be paid off. They asked you which is the cheaper method of payment between these two methods. Do you think that the car dealer offered them a good deal?

Cheaper method is ______________ Good deal? Yes / No Explain

4) In 5 years from now when they are debt free, they would like to buy a house in the suburb and get out of the small apartment they are renting now. By that time, they expect their combined income to be $216,000. Because the mortgage rates are going up, they expect that, by the time they buy, the interest rate on a mortgage will be at the historical average of 6% and this is the rate they will have to pay for a 30-year fixed rate mortgage with zero points and with a 20% down-payment. Because of the expenses with a small child, they do not want their mortgage to be more than 25% of their monthly income. If this is the case, what is the house they can afford to buy 5 years from now (and assuming that there is no inflation and all numbers are already incorporating taxes)? Because they need money for the down-payment, how much do they have to set aside today to have the money for the down-payment 5 years from now? Assume they can earn 5% per year on the money they set aside now for the down-payment.

Value of house they can afford to buy in 5 years _______________

What they have to put aside now for the down-payment _______________

5) They also would like to know how much they will have in 40 years if they leave their current savings (the money they have in the bank and Amanda's inheritance) in a checking account earning 1% per year versus investing in the stock market and getting an average return of 5% per year.

   Amount they will have in 2 different scenarios _______________

6) In addition to providing advice on the 5 questions listed above, you also have some advice on some changes they can make to their current financial situation in order to make it easier for them to make their money grow and manage debt better. What do you recommend? Please provide up to 3 recommendations.

   Your recommendations are: _______________

   ____

   ____

Project 2: Advising Derrick.

Derrick Gaboul is a 35-year old rugby player, who decided to retire this year after his third injury took him out of the games for half the season. Even though rugby is not as popular in the US as football, he was able to get multi-million dollar contracts playing in New Zealand and then Australia.

Derrick used a variety of advisors in the past, who were all promising him high returns on exceptional investments. He invested in a new real estate development in Arizona, supported three start-ups, and plunged some money into hedge funds. What the advisors forgot to tell him is that the high-return investments meant they were risky investments; two of the start-ups he supported went bust after the first year and the hedge funds did not provide on net the high returns he had hoped for.

Tired of paying high fees for these types of advice, he turned to you because he learned you have an MBA from a good university and are paid a fixed commission.

{For all of the calculations below, assume inflation in the future is zero.}

Derrick does not know whether he can retire right away or he needs another job before he can retire fully. He asks you the following questions:

1) Because he has a good standard of living in Florida where he moved because of low taxes, he wants to have $90,000 a year throughout his retirement. Because he is only 35, he expects he will live to 80 and has to support himself for 45 years.

   a) How much should he have today to retire and support himself for 45 years assuming his investments will return 7% a year?

      Amount he should have to support 45 years in retirement _______________

   b) Since longevity is hard to predict and athletes take good care of their health, you recommend him to plan to have some cushion later in life both because one can live longer than 80 or have high health costs later in life. If money is left over, he can donate that money or start a foundation in his name. Derrick decides to have $2,000,000 when he is 80, not zero as in the previous scenario. How much should he have now in order to spend 45 years in retirement, with $90,000 per year and have $2,000,000 when he is 80 year-old?

      New amount given he wants to have a cushion later in life _______________

c) You also tell him that it is unlikely to get 7% on his investment, as the projections with the large wave of retiring Baby Boomers is that returns will be low and also he will have to eventually shift to fixed income securities, such as bonds. If the return is 5% and he wants to have $90,000 a year for 45 years and leave $2,000,000 at the end, how much should he have now?

New amount given expected lower rate of return _______________

2) After asking about his assets and debt, you find out that Derrick does not have much left. Derrick has been offered to work as a coach, but he does not want to work for more than 10 years in that job. Here are his questions to you:

a) If his retirement period now is 35 rather than 45 years, he can get 5% on his investments and reduces his cushion to $1,000,000 when he is 80, how much should he have by the time he retires?

Amount he should have to support a 35-year retirement _______________

b) If he works for another 10 years and gets a return of 6% on his investments, how much should he put aside each year to have the amount he needs for his retirement?

Amount each year _______________

3) You discovered that Derrick kept charging his credit cards and did not pay much attention to them. Because of that, he has reached the maximum limit on his credit cards. On one card charging an APR of 12%, he carries a balance of $18,000. On a second card charging an APR of 18%, he carries a balance of $12,000. On a third card charging an APR of 24%, he carries a balance of $8,000.

a) You show to him how much he is paying in interest payments each month because of these credit cards. How much is it?

Interest payment on his credit cards monthly _______________

b) You are able to consolidate his debt and set him up with a credit union, which offers a plan to pay off his credit cards in 2 years at an APR of 10%. How much does he have to pay monthly to be credit card-free in 2 years?

Amount to pay monthly _______________

4) Hoping to get lucky in the stock market, Derrick thought of investing in well-known stocks. His advisor argued he could never go wrong with Apple, since everybody uses a computer. He bought Apple's shares some years ago, when they were trading at $702, but when he checked the price last week, Apple shares were trading below $400. You have talked to Derrick about investments and different returns on his investments but his returns so far were not at all the 5-6% you had indicated. He asks you which stocks he should invest into or where he should put the money that he will save in the new job as a coach.

   a) What do you recommend and why?

      Your recommendations and why ______________

   b) Derrick tells you that he is very interested in real estate and still wants to invest in real estate. What do you recommend to him in this case and why?

      Your recommendations and why ______________

   c) You have to explain to Derrick how hedge funds charge investors and why it is not always a good idea to invest with them. Provide below your explanation.

      Your explanation ______________