ADM 2352 B Finance Theory

Assignment #1

For: Professor Saadi

October 7, 2015

Personal Ethics Statement Concerning Telfer School Assignments

Group Assignment:

By signing this Statement, I am attesting to the fact that I have reviewed not only my own work, but the work of my colleagues, in its entirety.

I attest to the fact that my own work in this project meets all of the rules of quotation and referencing in use at the Telfer School of Management at the University of Ottawa, as well as adheres to the fraud policies as outlined in the Academic Regulations in the University's Undergraduate Studies Calendar. I further attest that I have knowledge of and have respected the "Beware of Plagiarism"

To the best of my knowledge, I also believe that each of my group colleagues has also met the rules of quotation and referencing aforementioned in this Statement.

I understand that if my group assignment is submitted without a signed copy of this Personal Ethics Statement from each group member, it will be interpreted by the Telfer School that the missing student(s) signature is confirmation of non-participation of the aforementioned student(s) in the required work.

_____ _____

Signature Date

_____ _____

Last Name (print), First Name (print) Student Number

_____ _____

Signature Date

Chapter 3

19.

a) What is the NPV of each project? Which projects should Xia undertake and how much cash should it retain?

The net present value of a project is equal to present value (benefits) minus present value (costs).

1) NPV of project A: NPV= -\$20000+$\frac{\$30,000}{(1.1)}$=\$7,272.72

2) NPV of project B: NPV= -\$10000+$\frac{\$25,000}{(1.1)}$=\$12,727.27

3) NPV of project C: NPV= -\$60000+$\frac{\$80,000}{(1.1)}$=\$12,727.27

b) What is the total value of Xia's assets (projects and cash) today?

Total value today = cash + NPV of projects

=100,000+7,272.72+12,727.27+12,727.27

=\$132,727.26

c) What cash flows will the investors in Xia receive? Based on these cash flows, what is the value of Xia today?

CF= 30,000 + 25,000+80,000+(100,000-20,000-10,000-60,000*1.1)=146,000

PV=$\frac{146,000}{(1.1)}$= 132,727.27

Therefore, the cash flows that the investors will receive equals to \$146,000 and the value of Xia today is 132,727.27.

d) Suppose Xia pays any unused cash to investors today, rather than investing it. What are the cash flows to the investors in this case? What is the value of Xia now?

Cash flow today: CF_0=100,000-20,000-10,000-60,000=10,000

Cash flow in one year: CF_1=30,000+25,000+80,000=135,000

Present Value of Xia: PV=10,000+$\frac{135,000}{1.1}$=132,727.27

e) Explain the relationship in your answers to part b, c, and d.

As you can see in parts b, c, and d we get the same results. This is because the questions above are all valuing Xia's assets today. This also means that whether Xia's pays out cash now, or invest it as a risk-free-rate investors will be receiving the same value today. What we have learned from the previous questions is that a firm cannot increase its value by doing what investors can do by themselves.

Chapter 10

12.

Explain the difference between the types of risk each bank faces. Which bank faces less risk? Why?

From the questions given to us, we can see that the expected payouts are the same, but we are in favour of bank A.

The expected payoff for bank A is:

(100 x 1,000,000) x.95 = 950,000

The expected payoff for bank B is:

1,000,000 x .95 = 950,000

The above calculations is why we prefer bank A. Even though the payouts are the exact same, it is different because bank A has 100 individuals to collect from. This strengthens the chance of being paid; whereas bank B has a slimmer chance of being paid as for all the risk rests on one individual. Of course, with situations so drastically different, both banks would hold different risks. Bank A has independent risk, which Bank B has common risk.

18. Identify each of the following risks as either systematic or diversifiable:

a) The risk that the CEO is killed in a plane accident:

Diversifiable risk.

b) The risk that the economy slows, decreasing demand for your firm's products:

Systematic risk.

c) The risk that your best employee will be hired away:

Diversifiable risk.

d) The risk that the new products you expect your R&D division to produce will not materialize:

Diversifiable risk.

21. What does the beta of a stock measure?

Beta measures the amount of systematic risk in a stock.

24. Suppose the market risk premium is 6% and the risk-free interest rate is 4%. Using the data in table 10.6, calculate the expected return of investing in:

Industry Sector	Industry Beta	Ticker Symbol	Company Name	Market Cap (Billions)	Beta*
Energy	1.1823	SU	Suncor Energy Inc.	$51.3399	1.7268
Industrials	0.8354	BBD/B	Bombardier Inc.	$7.0065	1.2120
Financials	0.9724	MFC	Manulife Financial Corporation	$25.8278	1.4828

The expected return on an investment is as follows:

$r_s = r_f + \beta_s \times (E[R_{Mkt}] - r_f)$

I will use the above equation to respond to the 3 questions below.

a) Suncor Inc.

$r_s = r_f + \beta_s \times (E[R_{Mkt}] - r_f)$

$= 4\% + (1.7268 \times 6\%)$

$= 14.36\%$

b) Bombardier Inc.

$r_s = r_f + \beta_s \times (E[R_{Mkt}] - r_f)$

= 4% + (1.2102 x 6%)

= 11.26%

c) Manulife Financial Corporation

$r_s = r_f + \beta_s \times (E[R_{Mkt}] - r_f)$

= 4% + (1.4828 x 6%)

= 12.90%