Midterm Exam – February 14th 2013

This is a closed book exam. Calculators are permissible. There are 100 points.

You should answer all questions.

The exam will go from 11am to 12:20pm.

Best of luck!

Question 1: 30 points

Critically discuss the following statement:

"While it is true that financial projections can be subjective and highly speculative, they are nonetheless of vital importance to the entrepreneurs and investors for three important reasons. First they explain how much money the entrepreneur needs to raise, and what for. Second, they determine the valuation that investors are willing to pay for the company. And third, thoughtful financial projections ensure that entrepreneurs never run out of cash."

Question 2: 30 points

Daniel Dechien was the owner of DinoDoggy, a start-up company that sold premium organic rubber dinosaur bones for dogs and/or their owners. He purchased his materials from a variety of suppliers, produced the product himself, and sold it mostly through upscale speciality retailers, such as the world famous "Bow Wow Haus" in Kitsilano. Daniel financed the business from his personal savings. As the demand for his product picked up he found himself short on cash. He considered two options for improving his cash flow situation:

Option A: He considered stretching his payments of credit card bills. Reading the fine print of his credit company he noticed that the effective annual interest rate (including compounding) amounted to 30%.

Option B: He considered stretching his supplier payments. So far he had always paid at the due date, which was typically 30 days after receiving the goods. Reading the fine print, he noted that he could get a 5% discount if he paid immediately upon delivery. Moreover, he would only have to pay a penalty of 10% if payment was received between 30 and 120 days of delivery. Waiting more than 120 days was considered a serious breach of contract that Daniel did not want to do.

Daniel looked up a formula that his finance professor had taught him a long time ago:

$$(1-d)\,p(1+r)^{\frac{y-x}{360}} = p \Leftrightarrow (1+r) = \left(\frac{1}{1-d}\right)^{\frac{360}{y-x}}$$

where p = price; d = price discount; r = interest rate; y = payment date; and x = delivery date.

That professor had also shown him the following table:

		Discount				
		1%	2%	3%	5%	10%
Extra Days	15	27.28%	62.40%	107.72%	242.48%	1153.66%
	30	12.82%	27.43%	44.12%	85.06%	254.07%
	45	8.37%	17.54%	27.59%	50.73%	132.31%
	60	6.22%	12.89%	20.05%	36.04%	88.17%
	90	4.10%	8.42%	12.96%	22.77%	52.42%
	120	3.06%	6.25%	9.57%	16.64%	37.17%

Part A (10 points): Do you recommend that Daniel choose option A of using his credit cards, or option B of delaying payment until 120 days after delivery?

Part B (10 points): Is there some creative combination of options A and B?

Part C (10 points): Daniel also considered asking his customers, the retail stores, to pay up front for the merchandise. Currently he calculated that the average payment came within 60 days of delivery. Focusing purely on the financial cost, he was debating what discount would be appropriate for retailers that paid him upon delivery. Should he offer discounts of 3%? What about 5%? And what is the maximum discount that he should offer?

Question 3: 40 points

Seamus Shannon, a rich and shrewd serial entrepreneur, was raising funding for his 13th start-up called iPaddy. The company planned to produce a mobile app that would help clients to find out whether they had any Irish ancestors, and if so help them reconnect with lost family members.

Seamus was not shy to ask anybody vaguely interested in the company whether they wanted to invest at the following standard non-negotiable terms:

1.) Seamus owned 2M founder shares in iPaddy.
2.) Anybody can buy shares at a price of £13 per share.
3.) If iPaddy didn't sell at least 1M shares by Saint Patrick day (March 17th) then the company would not take any of the money and simply fold the operations.
4.) If iPaddy sold at least 1M shares by Saint Patrick day (March 17th), then the company would take all the money and issue the shares. In addition, the company would continue to raise money at £13 per share until Saint Aidan day (August 31st). The maximum number of shares sold was 2M shares.

On Saint Valentine day (February 14th) Seamus asked his brother-in-law, Liam Limerick, to buy the first 1M shares before Saint Patrick day. Liam was a wealthy horse breeder and could easily afford the investment, but he didn't want to get tricked once again by his beloved brother-in-law. Liam held the following beliefs.

A.) The business has 50% chance of "making it big", and a 50% chance of losing everything.
B.) If the business "made it big" Seamus would sell it by Saint Stephen day (December 26th) to Connor Cork, a distant but very rich American cousin of Seamus. However, Liam wasn't sure how much Connor would pay.
C.) Most of the other investors that Seamus was talking to would make up their mind by Saint Thomas day (July 3rd). He thought that there was a 25% chance that they would buy the additional 1M shares.
D.) Seamus would know by Saint Anne's day (October 29th) whether the business would make it big or not.
E.) Liam didn't need a return on his investment, but he only wanted to invest if he would get his money back in terms of expected returns.

Part 1 (20 points): Liam was talking to his beloved wife, Sinead Limerick-Shannon. To his surprise she only asked him one simple question: "What is the minimum acquisition value that Connor Cork has to pay to make it worthwhile for us to invest?"

Part 2 (10 points): Later that day Sinead read the documents more carefully and noted an interesting clause that Liam had missed. The clause said that Seamus was not allowed to buy any of the shares offered at £13, but that he had the option of buying another 1M shares at £2. That option was valid until Saint Maura day (November 2nd). She was wondering how this clause would affect the answer to her earlier question about the minimum acquisition value.

Part 3 (10 points): Overall, would you say that Seamus is using a good structure for raising money? Are his rules "fair"? What problems could arise?