

WESTERN UNIVERSITY CANADA

IVEY BUSINESS SCHOOL

**BUSINESS 1220E
FALL / WINTER TERM 2020**

FINANCIAL & ACCOUNTING MANAGEMENT
TAKE-HOME EXAM

ASSIGNED: Wednesday, October 21 at 4:00pm ET, 2020

(4 hours)

DUE: Saturday, October 24 at 11:59pm ET, 2020

Instructions:

- (1) Include your name, section, and student number.
- (2) This is an individual assignment. No communicating with others about this exam.
- (3) This is an open book exam. Study guide, textbook, and OWL resources are permitted.
- (4) Calculators are permitted.
- (5) Dictionaries are permitted.
- (6) **Read and follow the enclosed assignment rules and instructions carefully.**

**URBAN ROOTS LONDON:
A GROWING SEASON**

This document includes:

This Cover Page – 1 page
Rules – 1 page
Instructions – 1 page
The Study Sheet – 1 page
Case – 8 pages

**RULES FOR THE INDIVIDUAL FINANCE & ACCOUNTING
TAKE-HOME EXAM
FALL / WINTER TERM 2020**

1. Your entire exam, including text **and** exhibits, must be prepared **individually**, in your own words, without input or assistance from anyone else. This rule will be actively monitored and aggressively enforced. Serious and lasting penalties will be issued to any student that violates this rule.
2. **Maximum report length:** 10 pages in total, broken down the following way: 5 pages of text plus 5 pages of exhibits. All pages of text should be 8.5"x11", formatted with one-inch margins on all sides, double-spaced, Times New Roman, 12-pt font, in MS Word. The exam should be written in concise and complete sentences and include headings.
 - a. **Page Penalty: Ten (10) marks** (out of 100) will be deducted from the final exam grade for any pages exceeding the stated page limit. If the exam is not formatted according to the guidelines, instructors may choose to reformat the report and/or apply the appropriate deduction(s).
3. All exams must be typewritten. The document must be submitted in **.docx (MS Word) format** as **one** single document. Use the cut and paste function to merge content from other applications if needed. Do not copy screenshots or use images. When saving your document and submitting on OWL, ensure your submission follows the **required naming convention**: your last name and your first name, separated with an underscore, i.e. Burset_Sophia
4. A title page IS NOT required. The student name, section number, and student number must be clearly indicated within the exam, (i.e. as a header).
5. Exams must be submitted electronically on **OWL** via the Assignment Submissions (Turnitin) tab by 11:59 ET, Saturday, October 24, 2020. **The deadline applies to all students.**
 - a. **Late Penalty: Ten (10) marks** (out of 100) will be deducted from the final grade for any submissions received after 11:59pm ET. Another ten marks will be deducted for each additional 24-hour period after the deadline.
6. **Plagiarism** is the submission of work that is in whole or in part someone else's work, which you claim as your own. Students must write their exam in their own words and create their own exhibits. The exam must be authored from an original document using a Microsoft Word account registered to the student. Microsoft Word is available free to all students by visiting myoffice.uwo.ca. Plagiarism is a major academic offence (see Western Scholastic Offence Policy). **Collusion** is the collaboration with another or other individuals in the preparation of written work offered for credit. Collusion is regarded like plagiarism and is a major academic offence. The Business Foundations department takes this policy and its consequences very seriously. **Students may not seek, accept and/or pay for any consultation or advice in the preparation of this exam.**
7. This case contains the information required for you to complete the assignment and therefore external research is not required. **DO NOT CONTACT** any persons related to the case or involved with the organization for any reason. This will be considered an academic offence.

**ASSIGNMENT INSTRUCTIONS
FOR THE INDIVIDUAL FINANCE & ACCOUNTING TAKE-HOME EXAM
FALL/WINTER TERM 2020**

Assignment:

As Sidrah Khan, how will you respond to Richie Bloomfield's request for funds? Based on your qualitative and quantitative analysis, provide detailed rationale for your decision including all applicable components of the financial management study guide (see attached).

*This exam should take you **four hours** and is designed to be completed within one continuous four-hour sitting.*

While basic standards of spelling and grammar still apply, and adherence to the given formatting guidelines is required, your time is best spent strengthening the quality of your analysis rather than on the aesthetics of your submission. Grades will be allocated based on the persuasiveness of your decision and your ability to validate your recommendations with strong analysis.

Support your reasoning with solid analysis using the financial management study guide. Prepare your submission with a formally written essay-style response, concluding with a clear and concise decision (maximum 5 pages), and supporting quantitative exhibits (maximum 5 pages). Use headings to separate your work. Adhere to all assignment instructions and rules.

URBAN ROOTS LONDON: A GROWING SEASON

Natalie White wrote this case under the supervision of Julie Gosse solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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It was a clear, cold winter morning when Sidrah Khan, account manager at VERGE Capital (VERGE), walked across a barren field, the glistening snow crunching beneath her feet. She stopped and looked around. A small sign, half-covered in snow, told her that she was standing on land belonging to Urban Roots London (Urban Roots), a non-profit urban farm located in London, Ontario. Although the 2.5-acre¹ plot of land resembled a deserted field beside a busy road, she knew that only months earlier the land had been bursting with colourful and nourishing vegetables and herbs.

Khan had to make a decision within the next four hours. On behalf of Urban Roots' board of directors, co-founder Richie Bloomfield had requested a long-term loan of CA\$5,000² and a working capital loan with a \$25,000 limit from VERGE. The board members hoped to use the funds to continue scaling Urban Roots for its third growing season. It was January 2019, and they hoped to receive the financing as soon as possible.

VERGE CAPITAL

VERGE was a social finance program that aimed to redirect financing from non-local, traditional investment portfolios to organizations in southwestern Ontario that tackled important community issues. VERGE provided loans to early-stage, high-growth social enterprises that were both financially feasible and that had a significant impact on the community.³

Food Deserts in London⁴

A study published by Western University researchers Jason Gilliland and Kristian Larsen⁵ found that food deserts were a distinct problem in London, particularly in the eastern part of the city. The researchers

¹ One acre was approximately the size of a football field.

² All amounts are in Canadian dollars; US\$1 = CA\$1.3475 on January 1, 2019.

³ "About Us," VERGE, accessed June 3, 2019, www.vergecapital.ca/about.

⁴ CBC News, "Canadian Cities Have 'Food Deserts': Study," CBC News, April 22, 2008, accessed August 10, 2018, www.cbc.ca/news/canadian-cities-have-food-deserts-study-1.773896.

⁵ Kristian Larsen and Jason Gilliland, "Mapping the Evolution of 'Food Deserts' in a Canadian City: Supermarket Accessibility in London, Ontario, 1961–2005," *International Journal of Health Geographics* 7, no. 16 (2008), accessed June 3, 2019, <https://ij-healthgeographics.biomedcentral.com/articles/10.1186/1476-072X-7-16>.

defined a “food desert” as “a socially distressed neighbourhood with relatively low average household incomes and poor access to healthy and affordable food.” Food deserts created significant health and financial problems for residents, who were forced to shop for food at convenience stores. Food at convenience stores was on average 1.6 times more expensive than food at grocery stores and significantly less nutritious. The researchers explained that food deserts particularly affected “single mothers who may not have the time to drive across town, people with mobility restrictions, and people for whom it would be very difficult to get on a bus with eight bags of groceries.”

URBAN ROOTS LONDON

Urban Roots was founded in June 2017 as a non-profit urban farm that supplied high-quality organic vegetables and herbs to individuals who otherwise were not able to enjoy them. Urban Roots truly was an urban farm. It was located beside a residential neighbourhood on a 2.5-acre plot of land on Norlan Avenue in southeast London, nestled between two of London’s busiest roads, Highbury Road and Hamilton Road. The land had not been in use for a long period of time, and the owner had agreed to lease it to Urban Roots free of cost.

The Board of Directors

The board of directors consisted of six members: Richie Bloomfield, Heather Bracken, Graham Bracken, Jeremy Horrell, Wendy Russell, and Jacob Damstra. The members were all volunteers, each holding full-time jobs outside of Urban Roots. Each member devoted between five to 20 hours per week to working on the project.

Although each member brought a unique set of skills to the project, they all shared a passion for the community and fresh, local food. Bloomfield was a business instructor at Huron University College, having taught both Business 1220E and Business 2257. Due to his background, Bloomfield was largely in charge of the non-profit’s financials. Bracken was a criminal defence attorney concerned with community restoration. Bracken’s husband, Graham, was a writer whose work focused on problems related to ecology and climate change. Horrell had worked in social services for 15 years and founded the Forest City Family Project. Russell was a professor of Global Studies at Huron University College. Finally, Damstra was a civil litigation and dispute resolution lawyer for Lerner LLP.⁶

Although the board had many goals for Urban Roots, their overarching goal was to open people’s minds to the possibilities of urban agriculture. Co-founder Graham Bracken explained:

When people drive up Highbury and look out and see a small farm where there used to be just grass, we want them to go, “That’s something we can do everywhere in the city.” Following that, you can see container planting in unused parking lots. You can see people’s front yards, which are currently lawns, being turned into productive agriculture. You can see industrial rooftops turning into gardens.⁷

The Model of Thirds

Bloomfield explained that “a lot of urban agriculture projects in the past have done amazing things, but have struggled to stay afloat once city funding dried up.” During the initial brainstorming for the project,

⁶ “About Us,” Urban Roots, accessed June 3, 2019, <https://urbanrootslondon.ca/about-us/>.

⁷ Paula Duhatschek, “Urban Farmers Hope You’ll Help Dig Up London’s Food Deserts,” CBC News, December 2, 2017, accessed June 3, 2019, www.cbc.ca/news/canada/london/urban-farming-vegetables-sounds-of-the-season-1.4427090.

the board members were all in agreement that they needed to rethink urban farming in order to be successful. For inspiration, some of the board members made trips to several successful urban farms in Detroit, Michigan. Graham Bracken explained that the board members took the best parts of these models “and mashed them together.” The result was what the board called the “model of thirds”—one-third of the harvest was sold at full price (primarily to wholesale buyers), one-third was sold at a discounted rate to community members, and one-third was donated.

The board’s mandate was to sell a *maximum* of one-third of its harvest at full price. Urban Roots sold most of this produce to wholesale buyers, but it also retailed a small portion. The wholesale buyers consisted largely of restaurants, including the Root Cellar, Black Trumpet, La Noisette Bakery, and Locomotive Espresso. The retail portion included selling directly to the end consumer at pop-up outdoor farmers’ markets around the city.

The “affordable” third was sold at a discounted price to both community members and social enterprises. The board called sales to community members “farm gate” sales because they took place every week from the gate of the farm. The organization’s social-enterprise partners included restaurants like Edgar and Joe’s and Growing Chefs. Urban Roots donated the remainder of its harvest to local organizations free of cost.

In its first season, Urban Roots donated 40 per cent of its harvest to the Men’s Mission and Youth Opportunities Unlimited. In its second season, 12 per cent of its harvest was sold to wholesale buyers at full price, 32 per cent was sold at a discounted price, and 56 per cent was donated to the Hamilton Road Crouch Resource Centre, My Sister’s Place, and two local food banks, delivering weekly shipments of fresh produce to these non-profit organizations.

The board members’ long-term financial objective was to become self-sustaining—they aimed to cover Urban Roots’ operating costs through crop sales. If they proved that this unique system worked, the board hoped that others could use the model to start urban farms in their own communities. The board also planned to help start at least two other urban farms in London.

The First Two Years of Operations

The board began planting the first seeds for Urban Roots in June 2017, which was late into the growing season by most farmers’ standards. Urban Roots’ first year of operations was a pilot year to see if the project could be feasible. The board harvested a quarter of an acre of land, generating approximately \$500 in revenue from crop sales (see Exhibits 1–5). Reassured by the farm’s success in 2017, the board members significantly expanded operations in 2018; this time, they began planting in May, planting and harvesting approximately one acre of land. The first harvest occurred shortly after planting, and harvesting continued until late October. From April to October 2018, Urban Roots required \$10,000 more to cover increased expenses.

The board was humbled by the amount of support that Urban Roots received from the community. The organization was featured in articles for both local and national news outlets, including the *London Free Press*, the *Western Gazette*, and CBC News.⁸ In addition, several local radio shows interviewed board members. During one of these radio interviews, Bloomfield shared that the power box for the farm’s solar-powered electric fence had been stolen twice. Following the interview, a kind-hearted listener donated a power box to Urban Roots.

⁸ “News,” Urban Roots, accessed June 3, 2019, <https://urbanrootslondon.ca/news/>.

Urban Roots had a large team of volunteers who gave their spare time to help plant rows of beets, prepare vegetable beds, or pull out what felt like endless amounts of thistles. The farm held three drop-in volunteer evenings per week and ad-hoc volunteer sessions for large groups of people (e.g., student field trips, groups of teachers, kids' summer camps). The board budgeted a small amount of money for refreshments for volunteers and held an annual Volunteer Appreciation Day.

Urban Roots was the grateful recipient of countless donations of both farm equipment and money.⁹ While Urban Roots collected monetary donations through several different methods, some individuals donated via the online donation platform GoFundMe.

In September of 2017 and 2018, Urban Roots held an annual fundraising event that the board called “the Harvest Dinner.”¹⁰ For \$100 per person, attendees were treated to a delicious meal featuring fresh Urban Roots produce prepared by the chefs behind the popular restaurants Wolfe of Wortley, Early Bird, and Los Lobos). The event sold out both years, with 75 attendees in 2017 and 150 attendees in 2018.

Urban Roots engaged with the community through holding various other events, including a community barbeque and a summer solstice party. In April 2018, Urban Roots received the “Food Champion” award from the Middlesex London Food Policy Council in recognition for its contributions toward improving London’s food system.

THE 2019 SEASON

Having enjoyed great success in 2018, the board wished to further scale operations in 2019 and explore different funding options. The board was requesting a \$5,000 long-term loan and a working capital loan with a \$25,000 limit from VERGE. The long-term loan would be repaid over five years at an annual interest rate of two per cent. The board planned to use the long-term loan to purchase water tanks and fixtures. The board was also in the process of applying for several grants from the federal and provincial governments. The members were confident that at least some of these applications would be successful and that Urban Roots would receive between \$50,000 and \$75,000 in grants for 2019. The board would use this funding to purchase \$50,000 in fixed assets, including a tractor, an irrigation system, fencing, cold storage for food, and more farm tools.¹¹ Urban Roots would begin to use the new assets when the planting season began.

To help with her decision, Khan decided to create financial projections for the 2019 season. She wished to create her projected statement of earnings using four revenue streams—the crop sales, the Harvest Dinner, corporate sponsorships, and potential grant revenues. Khan intended to exclude the personal donations stream because it was harder to predict.

In 2019, the board members planned to harvest one acre of land again, as they did in 2018. Nonetheless, Bloomfield anticipated crop revenue growth to be high. He predicted that crop sales would grow by 200 per cent in a low scenario and 400 per cent in a high scenario. He explained to Khan that this revenue growth would be driven by increasing the crop yield. This increase would be achieved through optimizing land use and extending the growing season (starting earlier and ending later, as the board members planned to begin planting at the beginning of April in 2019). He also communicated the board’s wish to grow revenues by increasing the percentage of the produce sold at wholesale.

⁹ Among these donations was a shipping container (a large container used to store farm equipment) from Trojan Technologies.

¹⁰ “3rd Annual Harvest Dinner Fundraiser,” Urban Roots, accessed June 3, 2019, <https://urbanrootslondon.ca/harvestdinner/>.

¹¹ All new fixed assets would have the same useful life as the existing fixed assets.

For these reasons, Bloomfield estimated that the Harvest Dinner fundraising would grow by 25 per cent in a low scenario. In a high scenario, he forecasted that it would grow by 107 per cent, the same growth rate as 2017 to 2018. In the low scenario, Bloomfield believed that the board could maintain expenses associated with the Harvest Dinner at the same dollar amount as 2018. In the high scenario, Bloomfield anticipated spending \$1,000 more than last year. He also believed that the 2018 corporate sponsorship dollar amount would double in both the low and high scenarios.

Because clean-up and maintenance expenses were tied to crop operations, Bloomfield estimated that they would be the same per cent of crop revenues as in 2018. He expected to spend \$3,000 on equipment and market rental in a low scenario and \$4,000 in a high scenario. Fuel costs were related to equipment and market rental. Bloomfield projected fuel costs to be the same per cent of equipment and market rental costs as it was in 2018. He anticipated general and administrative expenses to be \$1,000.

Expanding the business's asset base would increase its liability exposure. As a result, Urban Roots' insurance broker predicted an additional premium of \$200 per annum. Naturally, an increase in the crop volume would require a rise in both the seeds-and-seedlings expense and the supplies-and-small-tools expense. In the low scenario, Bloomfield projected the seeds-and-seedlings expense to be \$4,000 and the supplies-and-small-tools expense to be \$2,600. In the high scenario, Bloomfield expected each expense to increase by an additional \$1,000 from the low scenario's forecasts. The board agreed to increase the volunteer budget to \$1,500 in 2019. In addition, the board planned to hire several student interns in 2019 to help with a variety of tasks involving both farm work and administrative work. The board agreed to budget a maximum of \$40,000 for these students' wages. Bloomfield predicted that interest expenses would total \$200. He expected the rest of the expenses to remain the same dollar amounts as in 2018.

Sensitivity

After completing her financial projections, Khan wished to perform a sensitivity analysis on a select revenue stream. The revenue stream that was of most interest to Khan was crop revenue, largely because of the board's long-term objective to cover its operating costs with the farm's crop revenue.

Bloomfield had projected that crop revenue would grow by 200 per cent in the low scenario. Wishing to test an even lower scenario, Khan decided to test a growth rate of 100 per cent, with all other factors remaining the same.

DECISION

As Khan continued her winter walk, she mulled over the analysis that had to be done within the next four hours. She knew that she needed to consider both Urban Roots' financial feasibility and its social impact in her decision.

This was work that could not be completed on an empty stomach. She quickened her pace as she walked toward home. A short while later, sitting in front of a steaming bowl of vegetable soup, Khan pulled out the Urban Roots file and began her final analysis.

EXHIBIT 1: STATEMENT OF EARNINGS FOR THE YEARS ENDING DECEMBER 31 (CA\$)

	2018		2017	
Revenue				
Crop	5,250	10.6%	524	3.6%
Harvest Dinner	16,091	32.4%	7,781	53.0%
Personal donations	22,868	46.0%	3,876	26.4%
Corporate sponsorship	5,500	11.1%	2,500	17.0%
Total revenue	49,709	100.0%	14,681	100.0%
Operating expenses¹				
Clean-up & maintenance	580	1.2%	441	3.0%
Depreciation	1,470	3.0%	566	3.9%
Equipment & market rental	2,000	4.0%	700	4.8%
Fuel	745	1.5%	237	1.6%
General & administrative	635	1.3%	121	0.8%
Harvest Dinner	8,890	17.9%	6,651	45.3%
Insurance	1,000	2.0%	800	5.4%
Legal fees	450	0.9%	335	2.3%
Media & advertising	825	1.7%	731	5.0%
Seeds & seedlings	2,750	5.5%	592	4.0%
Supplies & small tools	1,345	2.7%		0.0%
Volunteers	455	0.9%	133	0.9%
Total operating expenses	21,145	42.5%	11,307	77.0%
Net earnings	28,564	57.5%	3,374	23.0%
¹All expense ratios were calculated as a per cent of total revenue.				

Source: Company files.

EXHIBIT 2: STATEMENT OF RETAINED EARNINGS FOR THE YEARS ENDING DECEMBER 31 (CA\$)

	2018	2017
Beginning retained earnings	3,374	
Net income	28,564	3,374
Ending retained earnings	31,938	3,374

Source: Company files.

EXHIBIT 3: BALANCE SHEET AS AT DECEMBER 31 (CA\$)

	2018	2017
Assets		
Current assets		
Cash	22,334	1,354
Accounts receivable	325	
Libro Credit Union membership share	50	50
Total current assets	22,709	1,404
Fixed assets¹		
Shipping container	3,000	3,000
Water tanks & fixtures	2,900	327
Fencing	2,500	579
Farm tools and implements	6,300	1,755
Total fixed assets	14,700	5,661
Less: Accumulated depreciation	2,036	566
Net fixed assets	12,664	5,095
Total assets	35,373	6,499
Liabilities		
Accounts payable	435	125
Total liabilities	435	125
Equity		
Donated capital, Trojan Technologies	3,000	3,000
Retained earnings	31,938	3,374
Total equity	34,938	6,374
Total liabilities & equity	35,373	6,499
¹ All fixed assets were expected to last ten years.		

Source: Company files.

EXHIBIT 4: FINANCIAL RATIOS

	2018	2017
Profitability		
Return on equity	82%	53%
Liquidity		
Current ratio	52.2:1	11.2:1
Efficiency		
Age of receivables ¹	22.6 days	
Age of payables ²	17.9 days	6.9 days
Stability		
Net worth to total assets	99%	98%
	2017–2018	
Growth		
Revenue		
Crop	902%	
Harvest Dinner	107%	
Personal donations	490%	
Corporate sponsorship	120%	
Total sales	239%	
Net income	747%	
Total assets	444%	
Equity	448%	
¹ Calculated using crop sales.		
² Calculated using Harvest Dinner expense.		

Source: Company files.

EXHIBIT 5: STATEMENT OF CASH FLOWS FOR THE YEARS ENDING DECEMBER 31 (CA\$)

	2018	2017
Operations		
Net income	28,564	3,374
Adjustments to cash basis		
Depreciation	1,470	566
Accounts receivable	(325)	–
Libro Credit Union membership share	–	(50)
Accounts payable	310	125
Net cash flow from operations	30,019	4,015
Financing		
Donated capital, Trojan Technologies	–	3,000
Net cash flow from financing	–	3,000
Investing		
Shipping container	–	(3,000)
Water tanks and fixtures	(2,573)	(327)
Fencing	(1,921)	(579)
Farm tools and implements	(4,545)	(1,755)
Net cash flow from investing	(9,039)	(5,661)
Net cash flow	20,980	1,354
Plus: Beginning cash	1,354	–
Ending cash	22,334	1,354

Source: Company files.