MSB Mediterranean School of Business

FIN701-Corporate Finance

Final Project: Investment Analysis Case Study

DUE DATE: Monday October 7, 2024

This case analysis an individual assignment. Working with a classmate or other people to solve the case is a breach of academic integrity and will be subject to MSB's policies.

Project Overview:

You are tasked with analyzing a project proposal and making a recommendation to the Board to assist the company in making an informed investment decision. Your goal is to assess the viability of the project, considering both financial and qualitative factors, and to recommend whether to proceed with the investment.

Submission Requirements:

Please submit two files: a brief report in PDF format with a cover page indicating your name; and an Excel file with your calculations using the template provided.

1. **Brief Report** (3 pages max excluding cover page): Summarize your key findings, analysis, and recommendations. Your report should include answers to the specific questions outlined at the end of the case. Include relevant summary tables or graphs to support your decision-making, and ensure the report is self-sufficient for your board members so they can understand your analysis without referring back to the Excel file.
2. **Excel Calculation File**: Provide your detailed calculations using the Excel template attached. This file should guide your analysis to ensure you follow all the steps. The file includes various tabs, and some values have already been pre-filled from the project data.

Report Structure: Please include the following in your report:

- **Introduction**: Briefly introduce the project and summarize the objective of your analysis.
- **Financial Analysis**: Present key results from the base scenario (your Cash flows, NPV, IRR, with and without accounting for side effects).
- **Risk and Sensitivity Analysis**: Highlight the critical risks and how variations in assumptions could impact the investment. Bones points for showing impact using some calculations.
- **Conclusion and Recommendation**: Summarize your recommendation, supported by both qualitative and quantitative analysis.

MegaMart Clinics – An Investment Proposal

Company Background

In the challenging world of U.S. retail, where many traditional stores have struggled against Amazon's dominance, MegaMart stands out as a rare success. With its large warehouse stores and strong membership model, the company has seen its market value soar in recent years.

The core of the company is built around retailing, but it does have significant service (auto, travel, home improvement) and pharmacy revenues. The company faces a challenge, insofar as growth in its biggest market, the United States, is weakening, as the market approaches saturation. Exhibit 1A summarizes MegaMart's income statement for the most recent financial years, Exhibit 1B summarizes its balance sheets for the last year and Exhibit 1C summarizes when the debt comes due (with a weighted average maturity).

The Clinic Investment

Looking to augment its revenues, without significantly adding to its real estate footprint, the company is considering carving out portions of its existing stores for medical clinics and labs, hoping to take a share of that lucrative market. This expansion, though, will require major investments in store renovation and lab equipment, and will affect retail sales in the stores where the clinics are located. You have been asked to collect the data to make the assessment and have come back with the following information:

1. Starting Investment: To get established in the medical testing business, MegaMart will **spend $ 1 billion immediately (year 0)** to acquire interests in a US company owning testing laboratories across the US. This investment will be depreciated over ten years, using straight line depreciation, starting in year 3.

2. Introductory Clinics: The first fifty (50) MegaMart Clinics are expected to be operational in year 3. To accommodate this schedule, MegaMart will spend $ 1 billion over the next two years - $ 500 million at the end of each year (year 1 and year 2) – adding clinics to fifty of its highest traffic stores. These stores will start delivering revenues in year 3, and the investments will be capitalized and depreciated over ten years, using straight line depreciation, starting in year 3.

3. New Clinics: Starting in year 4, MegaMart plans to open twenty (20) new clinics at the beginning of each year for ten years (Years 4-13)[1]. The cost of opening a clinic is expected to be $ 20 million at the beginning of year 4 (so in our time line, this investment will show at the end of year 3)[2], and will grow at the inflation rate each year beyond that. Like the other capital investments, these expenses will be depreciated using straight-line depreciation over ten years, starting the year of each investment[3]. MegaMart is planning to open 80% of these new clinics in the United States, but the remaining 20% will be in Latin America and Asia, with the following mix for the 200 clinics that will be opened between years 4-13.

Region	*Number of new clinics*
United States	160
Asia	20
Latin America	20
Total	**200**

For the rest of the case, the revenues and expenses at non-US stores will be converted into and presented in US dollar terms.

4. Market Testing: MegaMart has already spent $250 million, testing the market and getting the necessary approvals to be able to operate these clinics, and it will be unable to recoup the money, if MegaMart decides not to open the clinics.

5. Store Economics: Each of the clinics in the first year of operations (year 3) is expected to generate $ 50 million in revenue, and these per-clinic revenues are expected to grow at the inflation rate (which is 3%) annually. Thus, there will be 50 clinics generating $ 50 million in revenues each in year 3 (Total revenue = $ 2.5 billion), 70 stores generating $ 51.5 million in revenues each in year 4 (Total revenues = $3.605 billion), 90 stores

[1] Since there will be 50 new clinics in year 3, the number of clinics in year 4 will be 70; year 5 will be 90 and so on.
[2] so in year 3, an investment of $20M x 20 is needed to have the additional 20 stores operational in year 4. The next year, capex per store will be $20M x(1+ inflation rate) x an additional 20 stores, and so on.
[3] To avoid confusion, the depreciation schedule is provided in the Project template.

generating $ 53.05 million each in year 5… After year 13, the number of stores will be capped at 250 stores, but the growth in revenues per store will continue to track the inflation rate.

6. Profit Margins: The pre-tax gross profit margins (prior to depreciation, advertising expenses and allocations of corporate costs) are expected to be 25% of revenues on clinic revenues[4]. These gross margins are much higher than the 10-12% gross margins in MegaMart's traditional businesses.

7. Allocated costs: MegaMart will allocate 5% of its existing General and Administrative (G&A) costs to the new clinics division, starting in year 3. These G&A costs now total $12 billion for the entire firm and are expected to grow at 5% per year in the long term. In addition, because of this project, it is expected that MegaMart will see an increase of $ 150 million in general and administrative costs in year 3 when the new division starts generating revenues, and this amount will grow with the new clinics division's revenues after that.

8. Advertising: MegaMart spent $ 1 billion on advertising expenses in the most recent year (year 0) and expects these expenses to grow 3% a year for the next 15 years (starting in year 1), if it does not invest in the clinic business. If the clinic business is added to the company, the total advertising costs will be 15% higher than they would have been without the clinic business each year from year 3 (the first year of clinic operations) for as long as the clinics are in operation.[5]

9. Working Capital: The clinic division will create working capital needs, which you have estimated as follows:

    - Waiting for payments from insurance companies will create accounts receivable amounting to 10% of revenues each year.
    - Inventory (of health care materials and drugs) will be approximately 10% of the cost of goods sold (not including depreciation, allocations, or advertising expenses).
    - The credit offered by suppliers will be 5% of the cost of goods sold (not including depreciation, allocations, or advertising expenses).

    These working capital investments will have to be accounted for in each year in which goods are sold. Thus, the working capital investments will start in year 3. All investments in working capital will be recovered in the last year of the project's economic life (year 15).

10. Risk Measures: The raw beta for MegaMart is 0.977, calculated using weekly returns over the last 2 years and against the S&P 500 Index; you can assume that this is an adequate measure of MegaMart's current operating and financial risk exposure from its retail and service businesses. MegaMart currently is rated Aa3 (by Moody's), and Aa3

[4] Hint: this means that the direct costs associated with generating these revenues are 75% of the corresponding year's projected revenue.

[5] For instance, if you have $1.2 billion in year 3 and $1.25 billion in advertising expenses in year 4 without the clinic business, the advertising expenses will be $1.38 billion in year 3 (15% higher than $1.2 billion) and $1.4375 billion (15% higher than $1.25 billion) in year 4 if you take the clinic project. This is an illustrative example not the actual advertising expenses forecasted for years 3-4.

rated bonds trade at a spread of 1% over the long-term treasury bond rate (meaning their yield is 1% higher than the long-term US treasury bond yields).

11. Debt and Leases: MegaMart has $6,946 million in interest-bearing debt in its most recent balance sheet, with interest expenses of $164 million and a weighted average maturity of 4.41 years. (Exhibits 1B and 1C). While the accountants have capitalized lease commitments and shown a value of $2.401 billion on the balance sheet, you distrust the calculation and plan to capitalize leases yourself. The firm's lease commitments are summarized in the table below (next year is year 1, two years from now is year 2, etc.)

Year	Lease Commitment
Most recent (year 0)	$425.00
1 (next year)	$406.00
2	$342.00
3	$290.00
4	$264.00
5	$250.00
Beyond year 5	$2140.00

You can assume that the lump-sum commitment after year 5 is spread out evenly over ten years (years 6-15). The current stock price for the firm is $ 750 per share and there are 443.70 million shares outstanding. MegaMart expects to finance its clinics using the same mix of debt (with leases & contractual commitments considered as debt) and equity (in market value terms) as it is using currently in the rest of its business.

12. Taxes: MegaMart's average effective tax rate over the last five years has been 25%, which is also its marginal tax rate

13. Macro Data on Rates and Equity Risk Premium (ERP): The current 3 month T.Bill yield is 5.0%, the 10-year US treasury bond yield is 4.25%, and the expected inflation rate in US dollars is 3%. The equity risk premium (ERP) for the US is 4.5% but you are provided with a breakdown of regional equity risk premiums in the table below:

Region	***Weighted Average: ERP***
Africa	13.76%
Asia	6.28%
Australia & New Zealand	4.60%
Caribbean	18.75%
Central and South America	10.36%
Eastern Europe & Russia	9.66%
Middle East	6.76%
North America	4.60%
Western Europe	5.89%
Global	6.41%

14. Peer group: You have collected information on other health care service companies in Exhibit 2. The data includes the betas of these companies, their market values for debt (including operating leases), equity, cash holdings, annual revenues, and operating

income. You can assume that the marginal tax rate for these companies is also 25%.

Case Questions

Part I:

1. Estimate the after-tax incremental free cash flows from the proposed investment to MegaMart over the next 15 years.
2. In your opinion, what is the appropriate cost of capital that MegaMart should apply to this project? Why?
3. Calculate the Net Present Value of this project at the appropriate discount rate (your answer to Q2) and estimate its internal rate of return (IRR).
4. Develop a net present value profile (graph of NPV for various discount rates) and plot this on a graph to include in your report.
5. What type of sensitivity analysis would you recommend performing before making a final decision?
6. If the clinic business is expected to have a life much longer than 15 years, what assumptions about investments and cash flows after year 15 will you make? Is there a way to compute the project NPV using an infinite life horizon?

Part II:

When presenting your results to the board and other executives at MegaMart, someone noted that you haven't accounted for any negative or positive side effects. They asked you to consult on this further and re-estimate the project NPV and IRR after accounting for any potential lost revenues or additional benefits to the stores where clinics are added. After consultation with your team, you came to the following conclusion on side costs and benefits:
If MegaMart opens the clinics, there is the potential for both side costs and side benefits to the stores in which these clinics are located.

- On the cost side, the clinics will replace the cosmetics sections of the stores in which they are placed; these cosmetics sections generated about $2 million in after-tax operating income per store in the most recent year (year 0), with those earnings expected to grow at the inflation rate in the future if the cosmetics sections are kept in business.
- On the benefit side, the customers who come into the MegaMart Clinics are expected to buy $50 million in additional merchandise at each store where a clinic is placed, in current dollars[6], growing at the inflation rate over time, and MegaMart expects to generate an operating margin on these sales that are approximately equal to what it earned as a pre- tax operating margin in its most recent twelve months. (See Exhibit 1A).

7. What is the project NPV with the above side effects? What is the corresponding project IRR? The Excel template provides some guidance on how to calculate these side costs and benefits.

The Decision

Based on your analysis, would you accept this project or reject it? Remember that this does not just have to be about the numbers but explain your decision (briefly).

[6] Current dollar means this is the equivalent value in year zero before accounting for inflation. Year 3 value needs to apply a higher number (growing at the rate of inflation).

Exhibit 1A: Historical Income Statements for MegaMart (in $ millions)

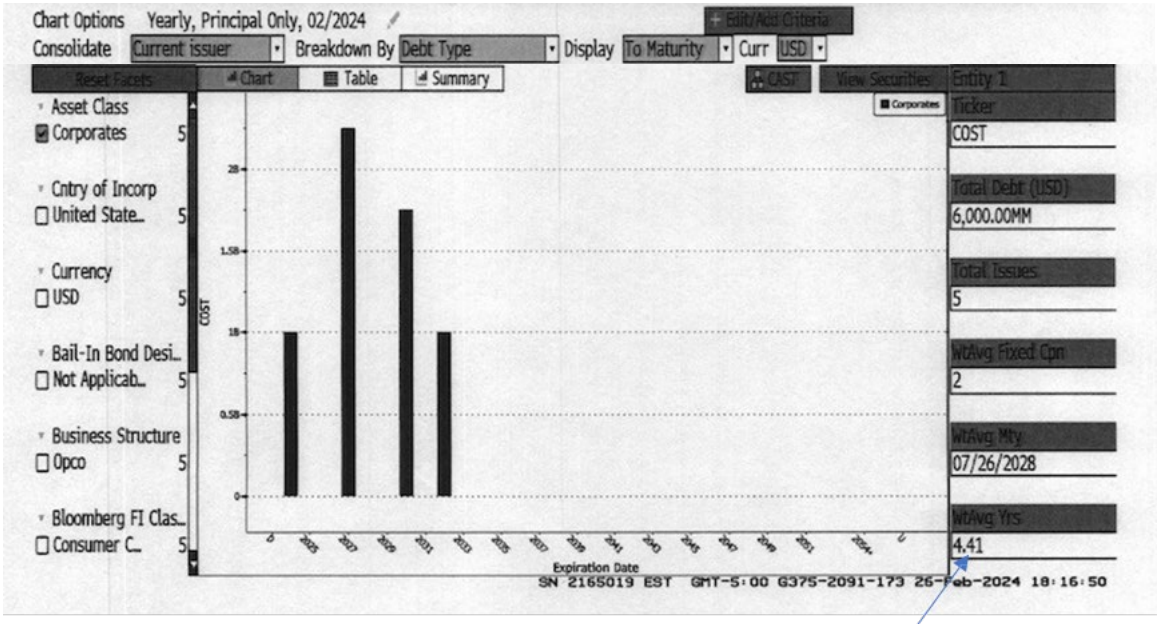
	Year Ended						
	Aug-18	***Aug-19***	***Aug-20***	***Aug-21***	***Aug-22***	***Aug-23***	***LTM***
Revenue	$141,576.00	$152,703.00	$166,761.00	$195,929.00	$226,954.00	$242,290.00	$245,652.00
Cost Of Goods Sold	$123,152.00	$132,886.00	$144,939.00	$170,684.00	$199,382.00	$212,195.00	$214,883.00
Gross Profit	$18,424.00	$19,817.00	$21,822.00	$25,245.00	$27,572.00	$30,095.00	$30,769.00
Selling General & Admin Exp.	$13,876.00	$14,994.00	$16,387.00	$18,453.00	$19,661.00	$21,590.00	$22,031.00
Pre-Opening Costs	$68.00	$86.00	-	-	-	-	-
Other Operating Exp., Total	$13,944.00	$15,080.00	$16,387.00	$18,453.00	$19,661.00	$21,590.00	$22,031.00
Operating Income	$4,480.00	$4,737.00	$5,435.00	$6,792.00	$7,911.00	$8,505.00	$8,738.00
Interest Expense	-$159.00	-$150.00	-$160.00	-$171.00	-$158.00	-$160.00	-$164.00
Interest and Invest. Income	$75.00	$126.00	$89.00	$41.00	$61.00	$470.00	$570.00
Net Interest Exp.	-$84.00	-$24.00	-$71.00	-$130.00	-$97.00	$310.00	$406.00
Currency Exchange Gains (Loss)	$23.00	$27.00	$7.00	$56.00	$106.00	$29.00	$41.00
Other Non-Operating Inc. (Exp.)	$23.00	$25.00	-$4.00	$46.00	$38.00	$34.00	$29.00
EBT Excl. Unusual Items	$4,442.00	$4,765.00	$5,367.00	$6,764.00	$7,958.00	$8,878.00	$9,214.00
Asset Writedown	-	-	-	-$84.00	-$118.00	-$391.00	-$391.00
EBT Incl. Unusual Items	$4,442.00	$4,765.00	$5,367.00	$6,680.00	$7,840.00	$8,487.00	$8,823.00
Income Tax Expense	$1,263.00	$1,061.00	$1,308.00	$1,601.00	$1,925.00	$2,195.00	$2,306.00
Net Income to Company	$3,179.00	$3,704.00	$4,059.00	$5,079.00	$5,915.00	$6,292.00	$6,517.00
Minority Int. in Earnings	-$45.00	-$45.00	-$57.00	-$72.00	-$71.00	-	-
Net Income	$3,134.00	$3,659.00	$4,002.00	$5,007.00	$5,844.00	$6,292.00	$6,517.00

** LTM stands for "Last Twelve Months"*

Exhibit 1B: Historical Balance Sheets – MegaMart (in $ millions)

	Sep-03-2017	Sep-02-2018	Sep-01-2019	Aug-30-2020	Aug-29-2021	Aug-28-2022	Sep-03-2023	Nov-26-2023
ASSETS								
Cash And Equivalents	$4,546.00	$6,055.00	$8,384.00	$12,277.00	$11,258.00	$10,203.00	$13,700.00	$17,011.00
Short Term Investments	$1,233.00	$1,204.00	$1,060.00	$1,028.00	$917.00	$846.00	$1,534.00	$853.00
Trading Asset Securities	-	-	-	-	-	-	-	-
Total Cash & ST Investments	**$5,779.00**	**$7,259.00**	**$9,444.00**	**$13,305.00**	**$12,175.00**	**$11,049.00**	**$15,234.00**	**$17,864.00**
Accounts Receivable	$1,432.00	$1,669.00	$1,535.00	$1,550.00	$1,803.00	$2,241.00	$2,285.00	$2,542.00
Other Receivables	-	-	-	-	-	-	-	-
Total Receivables	**$1,432.00**	**$1,669.00**	**$1,535.00**	**$1,550.00**	**$1,803.00**	**$2,241.00**	**$2,285.00**	**$2,542.00**
Inventory	$9,834.00	$11,040.00	$11,395.00	$12,242.00	$14,215.00	$17,907.00	$16,651.00	$18,001.00
Deferred Tax Assets, Curr.	-	-	-	-	-	-	-	-
Other Current Assets	$272.00	$321.00	$1,111.00	$1,023.00	$1,312.00	$1,499.00	$1,709.00	$1,673.00
Total Current Assets	**$17,317.00**	**$20,289.00**	**$23,485.00**	**$28,120.00**	**$29,505.00**	**$32,696.00**	**$35,879.00**	**$40,080.00**
Gross Property, Plant & Equipment	$28,341.00	$30,714.00	$32,626.00	$38,083.00	$41,548.00	$44,326.00	$47,407.00	-
Accumulated Depreciation	-$10,180.00	-$11,033.00	-$11,736.00	-$12,896.00	-$14,166.00	-$15,286.00	-$16,685.00	-
Net Property, Plant & Equipment	**$18,161.00**	**$19,681.00**	**$20,890.00**	**$25,187.00**	**$27,382.00**	**$29,040.00**	**$30,722.00**	**$29,840.00**
Goodwill	-	-	$53.00	$988.00	$996.00	$993.00	$994.00	-
Deferred Tax Assets, LT	$254.00	$316.00	$398.00	$406.00	$444.00	$445.00	$491.00	-
Other Long-Term Assets	$615.00	$544.00	$574.00	$855.00	$941.00	$992.00	$908.00	$3,803.00
Total Assets	**$36,347.00**	**$40,830.00**	**$45,400.00**	**$55,556.00**	**$59,268.00**	**$64,166.00**	**$68,994.00**	**$73,723.00**
LIABILITIES								
Accounts Payable	9,608.0	11,237.0	11,679.0	14,172.0	16,278.0	17,848.0	17,483.0	20,357.0
Accrued Exp.	3,664.0	4,051.0	4,356.0	4,998.0	5,761.0	6,292.0	6,428.0	6,681.0
Short-term Borrowings	-	-	-	-	-	-	-	-
Curr. Port. of LT Debt	86.0	90.0	1,699.0	95.0	799.0	73.0	1,081.0	1,080.0
Curr. Port. of Leases	-	-	51.0	262.0	294.0	484.0	349.0	-
Curr. Income Taxes Payable	-	-	-	-	-	-	-	-
Unearned Revenue, Current	1,498.0	1,624.0	1,711.0	1,851.0	2,042.0	2,174.0	2,337.0	2,462.0
Def. Tax Liability, Curr.	-	-	-	-	-	-	-	-
Other Current Liabilities	2,639.0	2,924.0	3,741.0	3,466.0	4,267.0	5,127.0	5,905.0	6,188.0
Total Current Liabilities	**17,495.0**	**19,926.0**	**23,237.0**	**24,844.0**	**29,441.0**	**31,998.0**	**33,583.0**	**36,768.0**
Long-Term Debt	6,573.0	6,487.0	5,124.0	7,514.0	6,692.0	6,484.0	5,377.0	5,866.0
Long-Term Leases	-	-	370.0	3,215.0	3,622.0	3,865.0	3,729.0	2,401.0
Def. Tax Liability, Non-Curr.	312.0	317.0	543.0	665.0	754.0	724.0	795.0	-
Other Non-Current Liabilities	888.0	997.0	542.0	613.0	681.0	448.0	452.0	2,541.0
Total Liabilities	**25,268.0**	**27,727.0**	**29,816.0**	**36,851.0**	**41,190.0**	**43,519.0**	**43,936.0**	**47,576.0**
Common Stock	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Additional Paid In Capital	5,800.0	6,107.0	6,417.0	6,698.0	7,031.0	6,884.0	7,340.0	7,489.0
Retained Earnings	5,988.0	7,887.0	10,258.0	12,879.0	11,666.0	15,585.0	19,521.0	20,499.0
Treasury Stock	-	-	-	-	-	-	-	-
Comprehensive Inc. and Other	(1,014.0)	(1,199.0)	(1,436.0)	(1,297.0)	(1,137.0)	(1,829.0)	(1,805.0)	(1,843.0)
Total Common Equity	**10,778.0**	**12,799.0**	**15,243.0**	**18,284.0**	**17,564.0**	**20,642.0**	**25,058.0**	**26,147.0**
Minority Interest	301.0	304.0	341.0	421.0	514.0	5.0	-	-
Total Equity	11,079.0	13,103.0	15,584.0	18,705.0	18,078.0	20,647.0	25,058.0	26,147.0
Total Liabilities And Equity	**36,347.0**	**40,830.0**	**45,400.0**	**55,556.0**	**59,268.0**	**64,166.0**	**68,994.0**	**73,723.0**

Exhibit 1C: Debt Maturity



Weighted average maturity of debt

Exhibit 2: Comparable Company Data

Company Name	*Beta*	*Total Debt*	*Market Cap*	*Cash*	*Revenue*	*Operating Income*
HCA Healthcare, Inc	1.05	$41,859.00	$83,052.60	$1,022.00	$64,968.00	$9,627.00
Universal Health Services, Inc.	1.03	$5,383.80	$11,316.60	$80.80	$14,025.40	$1,163.10
Tenet Healthcare Corporation	1.30	$16,213.00	$9,022.50	$1,228.00	$20,548.00	$2,789.00
Acadia Healthcare Company	0.62	$1,498.80	$8,057.90	$100.10	$2,861.20	$489.20
Encompass Health Corp	0.74	$2,932.80	$7,552.10	$69.10	$4,801.20	$731.80
The Ensign Group, Inc.	0.64	$1,871.30	$6,965.80	$526.90	$3,729.40	$255.40
Surgery Partners, Inc.	1.85	$2,775.10	$4,007.90	$195.90	$2,743.30	$416.00
Select Medical Holdings Corp	0.97	$4,959.50	$3,583.90	$143.00	$6,664.10	$554.90
U.S. Physical Therapy	0.67	$260.40	$1,540.20	$151.20	$585.20	$68.80
National HealthCare Corp	1.45	$93.40	$1,504.50	$223.60	$1,135.30	$51.20
Brookdale Senior Living	1.19	$4,725.70	$1,119.00	$307.70	$2,867.40	$26.60
Sienna Senior Living	0.90	$762.20	$718.40	$19.70	$594.70	$49.80
Extendicare Inc.	0.66	$250.80	$424.50	$71.20	$935.30	-$19.00
Community Health Systems	1.89	$12,174.00	$360.70	$38.00	$12,490.00	$870.00
Medical Facilities Corp	1.16	$127.40	$184.40	$27.00	$442.80	$63.90
The Joint Corp.	1.64	$24.70	$145.20	$16.10	$114.80	$0.70
The Oncology Institute	1.12	$117.50	$140.90	$87.40	$309.90	-$57.60
Sonida Senior Living	0.53	$629.50	$131.00	$3.56	$228.20	-$17.70
SunLink Health Systems	0.65	$0.66	$5.64	$2.06	$46.90	-$4.86