Arndt Industries **Suggested Time: Maximum 4 hours**

The CFE Day 1 (Capstone 1 individual certification case) will require students to draw upon their group work from the integrated case, Capstone 1 module. Candidates will need to have understood the rationale behind the group's analyses and conclusions to be able to respond to the individual case (considered "links"). The individual case will provide a change/twist to the initial Capstone 1 case situation that could require some high-level analysis and an assessment of the impact on previous strategic decisions. Since candidates are now at the Capstone part of the professional program, the case evaluation will focus moreso on the candidate's ability to apply their CPA professional skills, in a strategic manner. However, the technical aspects of the response will still be considered as part of the assessment.

A sample candidate response, a mapping and an outline of the expectations are provided in the solution. A detailed marking guide is not provided.

Update

It is now September 2017. Arndt Industries (Arndt) proceeded with the Peru expansion and new product development (environmentally friendly locomotive) through a joint venture.

Peru

Sales have been brisk and in the short time that Arndt has been in the market, they have built a very good reputation for quality. In particular, agriculture equipment has exceeded sales estimates; and, due to the demand for public infrastructure, in part fuelled by the mining sector, road and rail products are in demand and the Peruvian government is currently in discussions with the Road Rail Products division. The engineered equipment sales estimates have not been achieved to date. A positive factor has been interest from countries in close proximity. For example, Ecuador has contracted with Engineered Products to source some equipment for their oil and gas sector. As well, companies in both Bolivia and Columbia are expressing interest in products from all three divisions. See Appendix III for past results and a revised forecast for the next five years.

Environmentally Friendly Locomotive

The research and development have taken longer than anticipated; and, the sales forecast has been revised (see Appendix IV). Worse, EL, the joint venture partner, is in financial difficulty again and its owner is negotiating to sell the company to a major rail competitor, Ripper Rail (RR), for $10 million.

Other Updates

Catherine Arndt has finished her tenure as Chairman of the Board and Barry Arndt has stepped in as interim Chair of the Board and remains as CEO of Arndt Industries. CEOs of the divisions remain unchanged with Clare in Rail Road Products, David in Agriculture Products and Dominique in Engineered Products.

In 2015, the board decided on a 4,000:1 stock split resulting in 4 million total shares issued. Each share was valued at $40.00. Arndt now distributes dividends quarterly. Targeted dividend payout ratio remains at 40% of net income. There have been no changes to the Universal Shareholder Agreement.

New 25 year loans were taken for the joint venture and Peru expansions and the covenants with the bank are as follows:

1. A minimum return on assets of 10% (calculated using after-tax income and total assets);
2. A maximum ratio of debt to tangible net worth of 2:1; and
3. A minimum current ratio of 1.5:1.

Board Meeting – September 2017

Barry: I have asked Karam Mitchel to attend our meeting today in order to better understand the current issues we are facing with respect to the work he helped us with previously. I have given him the financials for the last 2 years and the latest half-year of 2017 results with some analysis already done by our financial analyst. (See Appendices I and II). I have asked him to assess the issues we are facing mostly from a strategic perspective. I suggested that he keep any detailed analysis for a later date. For now, I asked him to give us a sense of the key decision factors we should be considering, and to identify what additional information we should be gathering, so that we can finalize our decisions the next time we meet.

The most pressing issue, to me, is the fact that both our current ratio and return on assets ratios are not meeting the bank's covenant. The third requirement, debt to tangible net worth, is not a problem as we are well below the maximum of 2:1.

The bank has received the mid-year financial statements and is giving us 15 days to provide them with an updated business plan; specifically, one that ensures that all bank covenants will be met by December 31, 2017 or else they will demand immediate payment of 75% of all outstanding debt. The bank is evaluating the return on assets by doubling our mid-year return.

We have previously discussed going public, but opted against it because of the onerous additional work, and because of our resistance to having to divulge various operating information to the public; however, we need to re-visit this option in light of our situation. Rachel has been working with legal counsel and an investment banker over the past month and we could undergo an IPO by the end of December. Specifically:

- An underwriter has advised that we could price our shares in the market between $35 and $40 per share, with an attached dividend rate of about 5%.
- We could maintain control by issuing up to 3 million shares from treasury;
- Underwriting and management fees would be approximately $2 million for 1 to 1.5 million shares and $3 million for 1.5 to 3.0 million shares.

Another alternative has presented itself. A private equity firm is interested in purchasing part of our company; however, under their terms, they would hold 55% of Arndt and are looking for a 50% return on their investment over five years; as well as quarterly dividends. They would pay $95 million up front. Other important terms are:

i) In 5 years, Arndt will be permitted to buy back the shares at a cost of $142,500,000 (payable over five years starting in year 6); in the event that Arndt is not in a position to repurchase the shares, the private equity firm can take the company public

ii) Every quarter, they expect to receive a payment of $3,800,000; of which $1,900,000 represents a dividend, and the rest would be allocated as credit towards their final pay-out

Given the situation we are facing the shareholders have given the board approval to proceed with either the IPO or private equity offer if the board determines this is necessary.

I have asked Karam to assess the need for either one, as well as to identify the risks and opportunities related to each of the two options.

Now that we have an internal audit department that we can use to deal with any other issues that an IPO could create, perhaps Karam can identify at a high level what they should be considering?

In the meantime, I would like to hear everyone's thoughts.

Clare: I'm not in favour of giving control to someone else; these private equity firms can be very aggressive and I'm worried about how aggressive they may be and if they would affect our brand in the market. I don't mind the IPO option.

David: I'm not overly excited about a private equity firm, and even more so about losing some of our dividend payouts to this firm; however, at the same time, I also am very much against going public.

Dominique:

I have been involved with private equity before – sometimes it works out okay, and sometimes it doesn't. There are always risks. I'm undecided between an IPO and private equity. Is there some other way that we can meet the covenants?

Barry: I do not believe so. Even with the first 3 genset locomotives being delivered next month, I believe that we will still fall short of the required cash that we need.

Clare: This would be mostly straight cash coming in though (and straight revenue), since 80% of the production costs have been completed. Maybe there is a way that we can meet our covenant without having to go public or do a private placement.

As a side note, these production costs have not yet been transferred out to the joint venture and are still residing in our operating costs – once we transfer them out of our division, our revenue and cash will increase around $1,000,000 related to our portion of manufacturing. While we are discussing the current assets and what is reflected in the mid-year financial statements, our division had a $4.25 million receivable collected – this was also reflected in the mid-year statement sent to the bank.

Barry: Karam, please consider this in your assessment of the situation. Let's move onto an update of our strategy. To start, the Peru expansion has proven to be profitable; however, we now have to consider internal resource allocation. I'm not sure if Road Rail Products can fulfill the demands of the environmentally friendly locomotive project and the external demands from Peru and potentially other countries. I have heard that the Bolivian government is working on sourcing for their rail infrastructure and that Road Rail Products has been awarded a $500,000 contract with the potential to expand to approximately $3 to 5 million per year, for the next 2 to 4 years.

Clare: Yes, this is correct.

Barry: I also understand that the environmentally friendly locomotive project is having some problems.

Clare: Yes. EL is in financial difficulty and Ripper Rail (RR) is in negotiation to purchase EL for $10 million. The joint venture will be null and void if EL ceases to exist or is sold and RR has indicated that they are not in favour of the same terms for the joint venture. They either want to purchase the joint venture outright paying us approximately $12 million for our 80% of the JV; or, they would consider discussing a 50-50 ownership structure and pay us between $4 and $5million for 30% of the JV which will result in the 50/50 ownership. In the 50/50 situation, they would continue with the other terms of the original joint venture (i.e. frame price and expected sales fee).

Dominique: I wonder if we should just consider divesting. We've done a good job developing the product, and perhaps can spin this off now, given this update. Can we meet our covenants if we do this?

Clare: We should keep the business, as it differentiates us from the competition; as well, the trend of environmentally friendly is not going to end anytime soon. We could counter RR's proposal and purchase EL for $10 million– this would give us access to EL's facilities and we could move all of the production there. This would require about a $2 – 3 million investment over the next 1-3 years to expand the facility and update some equipment. I did ask EL's owner to wait for at least two weeks before he sells to RR; he has agreed and provided me with his most recent financial summary (see Appendix V). Although, he will expect that any purchase of his company will be finalized three weeks from now, with 50% of the purchase price paid then and the remaining 50% one month later as the most pressing issue for him right now is paying his staff.

This issue also impacts us, because we could potentially face a problem with sourcing our locomotive frames. Also, if RR purchases this company and we do not pursue a joint venture with them, the input components for locomotive frames will be sold to us at market again – roughly $950,000 per frame versus the $800,000 per frame that we were receiving under the current joint venture.

Barry: Karam, please review this item for us. David, I understand that you have an immediate capital expenditure request; one that you would prefer to do now rather than waiting for our next capital expenditure cycle. Please tell us about this.

David: I would like to implement an in-house powder-coating system so that we can control quality and improve lead times. We are having increasing problems with our current suppliers and I am concerned about quality issues. The other divisions could benefit from this as well; I have summarized the details (See Appendix VI). Overall, this initiative would improve quality and lead times and I can realize about a $1 million savings per year.

Clare: David has shared some information with us and I believe that this would benefit us, since currently we still use conventional paint methods.

Dominique: I haven't seen any information yet; if this is a feasible alternative and as long as the price to us is comparable to what we would pay to our external supplier I'd be willing to accept it because our current supplier is starting to fall behind in turnaround time.

Barry: Okay. I like to see everyone working together. This is positive. My understanding is that the capital cost is around $1.8-$2.4 million; Karam can provide us with the pros and cons of the decision. The only problem I see is finding cash to finance it.

We have an update from our internal audit department on their findings with respect to the dealers in Asia that were handling Agricultural Products sales. Arndt began legal action against these companies in 2015. In summary:

1. Breach of Contract – Arndt has demanded $2 million in damages for breach of contract. Per discussion with legal counsel expectation of receiving $2 million is extremely high – greater than 80%. This will be settled in court early in 2018; however, the dealership has advised that they are willing to pay $1.2 million now in order to settle this out of court. If we settle now, our legal and administration fees will be only $150,000 instead of approximately $350,000.

2. Excess Warranty – Arndt has demanded payment equal to $1.5 million in excess warranty billings. Legal counsel indicates that the chance of payment is 50/50 and to proceed with this will result in approximately $500,000 of additional legal costs.

We need to decide how to proceed on each of these matters.

One final issue that I am concerned about is the decrease in inter-company transfers. I'm afraid that our consolidated gross margin is deteriorating because divisions are opting to go outside for comparable products. Is this true?

David: Yes, we are. Engineered Products provides quality supplies, and usually does so in a timely manner, but some of the pieces can be sourced cheaper at comparable quality.

Dominique: We are starting to face capacity issues and may have to start running a third shift two days a week. The price that we have been charging is taking this into account. For example, we sometimes have to apply overtime in order to meet our deadlines for our external customers as well as inter-company transfers. We expect to be requesting in next year's budget an additional investment in plant and equipment of $3 million in order to accommodate our expected growth, and when we are able to better manage our capacity and operations, we should be able to provide a more comparable price to Agriculture Products. Engineered Products remains committed to quality products, excellent customer service and on-time delivery. However, at the same time, Agriculture Products is charging us more than in the past, such that we have started to look for other suppliers.

Barry: Karam, please take this information into account in your assessment of the options. Appendix II has the details of internal transfers. For your information I am also giving you this year's performance metrics in case they might help you (Appendix VII); I know that you had previously suggested some ideas. In light of the current issues, we would appreciate any new insights that you could provide.

We will meet again 10 days from now to review Karam's report and make our decisions going forward. Karam, please consider that our goal of breaking $500 million in revenue by 2019 is still important to us and we remain committed to our mission of manufacturing innovative and quality products.

APPENDIX I
Arndt Industries Consolidated Statements Operating Results
Years ended December 31, [Note: June 30th, 2017 is mid-year]
(in thousands of dollars)

	Projected Dec 12 months		June 6 months				
	2017		2017		2016		2015
		% of sales		% of sales		% of sales	
Sales	447,756		223,878		427,218		407,045
Cost of Goods Sold							
Direct materials	225,878	50%	112,939	49%	208,531	48%	194,810
Salaries and benefits	91,552	20%	45,776	20%	84,759	19%	78,767
Utilities	5,750	1%	2,875	1%	5,750	1%	5,358
Engineering	6,584	1%	3,292	1%	5,985	1%	5,475
Travel	3,050	1%	1,525	1%	3,812	1%	3,564
Loss (gain) on foreign currency exchange	10	0%	5	0%	16	0%	21
Depreciation and amortization	5,224	1%	2,612	2%	6,530	2%	6,456
Total Cost of Goods Sold	338,048	75%	169,024	74%	315,383	72%	294,451
Gross margin	109,708	25%	54,854	26%	111,835	28%	112,594
Selling, General and Administration							
Wages and benefits	35,450	8%	17,725	8%	34,471	8%	31,250
Office and miscellaneous	5,850	1%	2,925	1%	6,254	2%	6,785
Marketing	9,454	2%	4,727	2%	9,253	2%	8,356
Professional fees	4,610	1%	2,305	1%	4,995	1%	3,145
Interest and bank charges	3,114	1%	1,557	1%	2,252	1%	2,542
Research and development	6,346	1%	3,173	1%	5,945	2%	6,425
Depreciation and amortization	970	0%	485	0%	875	0%	802
Bad debts	4,764	1%	2,382	1%	6,009	1%	5,785
Warranty and after-sales service	6,312	1%	3,156	2%	7,312	2%	7,024
Total Selling, General and Administration	76,870	17%	38,435	18%	77,366	18%	72,114
SG&A as % of sales	17.2%	0%	17.2%	0%	18.1%	0%	17.7%
Corporate Charges	8,956	2%	4,478	2%	8,350	2%	8,245
Corporate charges as % of sales	2.0%	0%	2.0%	0%	2.0%	0%	2.0%
Profit Sharing	1,070	0%	535	0%	1,071	0%	1,845
Income Taxes	9,250	2%	4,625	2%	8,266	2%	9,725
Net Income	13,562	4%	6,781	4%	$ 16,782	5%	$ 20,665
Return on assets	8.33%		8.33%		10.79%		

Dividends Paid 3400 8400

APPENDIX I

Arndt Industries Consolidated Statements of Financial Position
Years ended December 31, [Note: June 30th, 2017 is mid-year]
(in thousands of dollars)

	June 2017	December 2016	December 2015
Assets			
Cash	$ -	$ 858	$ -
Accounts Receivable	38,707	36,639	35,876
Inventory	39,512	36,399	36,852
Other current assets	7,405	6,950	5,852
Total current assets	85,624	80,846	78,580
Investment in Joint venture	7,250	6,250	5,000
Intangible Assets	711	759	808
Property, building and equipment (net)	73,099	71,064	67,772
Total Assets	$166,684	$158,919	$ 152,160
Liabilities			
Line of credit	$ 4,856	$ 2,690	$ 105
Accounts payable and accrued liabilities	52,449	45,699	49,264
Current portion of long-term debt	2,532	2,532	2,532
Total current liabilities	59,837	50,921	51,901
Long-term debt	28,478	33,010	33,653
Total Liabilities	88,315	83,931	85,554
Equity			
Common Shares	100	100	100
Retained earnings	78,269	74,888	66,506
Total Liabilities and Equity	$166,684	$158,919	$ 152,160

	2016	2015	2014
Current ratio	**1.43**	**1.59**	**1.51**

APPENDIX II
SELECTED OPERATING RESULTS

Operating Results
Years ended December 31, [Note: June 30th, 2016 is mid-year]
(in thousands of dollars)

Agricultural Products			
	2017	2016	2015
Sales	$96,310	$179,718	$169,367
Material	46,798	87,156	80,156
DL	20,495	34,600	30,767
Other	3,270	6,959	6,552
Gross Profit	$25,747	$51,003	$51,892
S, G & A	16,779	33,514	31,427
Income before corporate charges, taxes and profit sharing	$8,968	$17,489	$20,465
Capacity	61%	59%	54%

Engineered Products			
	2017	2016	2015
Sales	$64,454	$137,415	$131,773
Material	30,937	66,950	62,765
DL	14,085	31,960	29,685
Other	2,985	5,619	5,485
Gross Profit	$16,447	$32,886	$33,838
S, G & A	12,002	24,382	22,353
Income before corporate charges, taxes and profit sharing	$4,445	$8,504	$11,485
Capacity	62%	61%	58%

Transfers	2017	2016	2015
To Engineered	$ 552	$ 1,886	$ 1,224
Mark-up	*12%*	*12%*	*12%*
To Road Rail	$ 952	$ 1,427	$ 1,355
Mark-up	*10%*	*10%*	*10%*

Transfers	2017	2016	2015
To Agricultural	$ 873	$ 2,134	$ 2,796
Mark-up	*14%*	*14%*	*13%*
To Road Rail	$ 1,105	$ 2,455	$ 2,632
Mark-up	*12%*	*12%*	*13%*

Road Rail			
	2017	2016	2015
Sales	$63,114	$110,085	$105,905
Material	35,204	54,425	51,889
DL	11,196	18,199	18,315
Other	4,054	9,515	8,837
Gross Profit	$12,660	$27,946	$26,864
S, G & A	9,654	19,470	18,334
Income before corporate charges, taxes and profit sharing	$3,006	$8,476	$8,530
Capacity	68%	67%	64%

Transfers	2017	2016	2015
To Joint Venture	$ 500	$ 1,750	$ -

APPENDIX III
FIVE YEAR FORECAST FOR PERU AND SOUTH AMERICAN OPERATIONS

	2016 Actual	2017 to June 30	2017Budget to Dec 31	2018	2019	2020	2021
Sales							
Agriculture machinery & Equipment	$ 1,053	$ 2,178	$ 2,600	$ 9,000	$ 16,000	$ 17,500	$ 22,500
Engineering (Material Handling & Other)	698	1,753	2,200	11,500	15,000	16,000	17,500
Road Rail Products	105	143	175	2,000	4,500	7,000	12,000
	$ 1,856	$ 4,074	$ 4,975	$ 22,500	$ 35,500	$ 40,500	$ 52,000
Less Cost of Goods Sold:							
Transfers							
Agriculture	$ 790	$ 1,634	$ 1,950	$ 6,750	$ 12,000	$ 13,125	$ 16,875
Engineered	510	1,280	1,606	8,395	10,950	11,680	12,775
Road Rail	74	100	123	1,400	3,150	4,900	8,400
Direct Materials	46	102	124	563	875	1,000	1,500
Direct Labour (Salaries)	22	49	60	338	533	750	1,000
	$ 1,441	$ 3,164	$ 3,863	$ 17,445	$ 27,508	$ 31,455	$ 40,550
Selling, General & Admin	$ 542	$ 750	$ 750	$ 3,500	$ 4,500	$ 5,500	-$ 6,750
Income (Losss) before taxes	$ (127)	$ 160	$ 362	$ 1,555	$ 3,493	$ 3,545	$ 4,700

APPENDIX IV
FIVE YEAR FORECAST FOR LOCOMOTIVE JOINT VENTURE (100%)

The forecast was completed in May 2017 and reflects the confirmed orders for 2017 and 2018; about 50% of forecasted sales for 2018 are confirmed.

	2017	2018	2019	2020	2021
Sales - Units	3	8	18	22	25
Sales Price (unit)	$ 1,650,000	$ 1,650,000	$ 1,750,000	$ 1,850,000	$ 1,900,000
Total Sales	$ 4,950,000	$ 13,200,000	$ 31,500,000	$ 40,700,000	$ 47,500,000
Cost of Goods					
Locomotive frames	$ 2,400,000	$ 6,560,000	$ 15,129,000	$ 18,953,275	$ 21,800,000
SGA	990,000	2,178,000	3,780,000	5,550,000	5,550,003
Materials, Labour and Overhead (COGS)	1,050,000	2,952,000	6,808,050	9,692,016	9,692,016
2.5% Sales fee to EL	123,750	330,000	787,500	1,156,250	1,156,251
	$ 4,563,750	$ 12,020,000	$ 26,504,550	$ 35,351,541	$ 38,198,269
Income before taxes	$ 386,250	$ 1,180,000	$ 4,995,450	$ 5,348,459	$ 9,301,731

APPENDIX V
EXCERPT FROM EL'S MOST RECENT FINANCIALS

Assets		
Building - FMV		1,650,000
Land - FMV		2,750,000
Equipment -FMV		1,000,000
Inventory - NRV		475,000
A/R NRV		150,000
	$	6,025,000
Liabilities		
Line of Credit	$	850,000
Accounts Payable		1,200,000
Long-term Loan		900,000
	$	2,950,000

Last Year's Sales*	$	3,200,000
Cost of Sales		2,500,000
Selling and Administration		1,250,000
Net Loss	$	550,000

*Last year's sales included the three locomotive frames to the joint venture; the remainder of sales related to service and parts sales.

APPENDIX VI
POWDER-COATING

The benefits of powder coating include: the elimination of airborne emissions and other hazardous waste; a decrease in direct material and direct labour costs; and shorter turnaround times (powder paint cures faster than solvent-based paint).

A nearby company could provide us with powder-coating services for 5.75% of our direct material costs. Turnaround times would be between two and five days. Engineered Products has used this company's services for the last two years; the work has been satisfactory for the most part and turnaround times have been longer than three days only 25% of the time.

Alternatively, we could do powder coating in house. The equipment would cost between $1.8 and $2.4 million, including installation, and would have a useful life of 15 years. Facility reorganization would cost approximately $20,000, and training, approximately $15,000.

For comparison purposes, historical average costs for conventional coating and estimated costs for the powder coating alternatives are summarized below. These costs are expressed as percentages of total direct material and direct labour costs as applicable.

	Conventional Coating (in house)	**Powder Coating (in house)**	**Powder Coating (outsourced)**
Direct material	2.75%	2.20%	5.75%
Direct labour	9.50%	7.80%	0.00%

For example, in the Agriculture division, a net annual savings of $1.1 million dollars (or 19%) by adopting in-house powder coating is estimated (see below). The in-house powder coating is also better than outsourced powder coating by $ 552,000 (or 10%).

Agriculture 2016 results	**Conventional Coating**	**Powder Coating**	**Outsource Powder Coating**
Direct Material: $87156	$2,397	$1,917	$5,011
Direct Labour: $34,600	$3,287	$2,659	
	$5,683	$4,576	$5,011
Annual Savings for in-house powder coating	$1,107 19%		
Estimated Payback (years): *$2.1 million(average cost) / $1.10 million*	1.9		

Given our current level of operations, it is estimated that the equipment would be operating at 45% capacity, which would allow us to serve Engineered Products and Road Rail Products as well. Engineered Products currently spends approximately 3% of its direct material budget on outsourced powder coating. Road Rail Products still uses conventional coating, like us, and has reported a cost structure similar to our own: i.e. 2.75% of direct material costs and 9.5% of direct labour costs are attributable to coating operations.

The Agriculture Division would be more than happy to share the service and apply our normal transfer mark-up (10%).

APPENDIX VII
2017 PERFORMANCE METRICS

Division	Metric	Target	Overall Impact on Bonus
Agricultural Products	Gross margin	30%	30%
	Profit margin (before taxes and corporate allocation)	10%	40%
	Current ratio	1.35:1	15%
	Debt-to-equity ratio	1.50:1	15%
Engineered Products	Gross margin	25%	30%
	Profit margin (before taxes and corporate allocation)	8%	40%
	Current ratio	1.35:1	15%
	Debt-to-equity ratio	1.50:1	15%
Road Rail Products	Gross margin	23%	30%
	Profit margin (before taxes and corporate allocation)	8%	40%
	Current ratio	1.35:1	15%
	Debt-to-equity ratio	1.50:1	15%