VALUATION SERIES

No. 35 / NOVEMBER 2019

PUBLIC CHOICE ALTERNATIVES

Ceiling Unlimited

A VALUATION & STRATEGIC APPRAISAL OF EDMONTON INTERNATIONAL AIRPORT (YEG)

BY IAN MADSEN

FRONTIER CENTRE FOR PUBLIC POLICY

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IAN MADSEN

Ian Madsen, B.A. (Alberta), M.B.A. (Toronto), CFA, is a Senior Policy Analyst at the Frontier Centre for Public Policy. He has extensive experience in portfolio and financial analyses, managing investment portfolios, and managing investment research operations (including overseas). He lives in Surrey, B.C.

FRONTIER CENTRE
FOR PUBLIC POLICY

203-2727 Portage Avenue, Winnipeg, Manitoba Canada R3J 0R2
Tel: 204-957-1567
Email: newideas@fcpp.org

Valuation Series No. 35 • Date of First Issue: November 2019.

ISSN 1491-78

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EXECUTIVE SUMMARY

Edmonton International Airport (EIA), symbol YEG, is the airport serving metropolitan Edmonton, domestically and internationally. Its market area is far larger, comprising central and northern Alberta, eastern British Columbia, and western Saskatchewan. It is a non-profit entity officially known as the independent Edmonton International Airport, which is managed autonomously, and ultimately owned by the federal government.

Using an **intrinsic value method,** with free cash flow taxed at statutory rates, the entity's value is estimated from a minimum of $0.43B to a maximum of $1.51B, with a tighter, more plausible range of a median (midpoint of all the relevant values) of $0.68B to a mean (simple average of all the relevant values) of $0.75B.

Under the **market-based valuation system,** using five standard valuation metrics (P/E, P/Sales, EV/EBITDA, P/CF: trailing Price/Earnings, Price/Sales; Price/Book Value; Enterprise Value to Revenue; Enterprise Value to Earnings Before Interest, Taxes & Depreciation & Amortization; Price/Operating Cash Flow), the current value ranges from $50M to $1.47B, with a mean of $0.88B and a median of $1.17B.

The company has positive free cash flow and positive returns on assets, equity and capital employed. Similar utility-like companies usually pay a dividend to investors. The company is showing sufficient income to pay a dividend; a plan to provide one would make its public market flotation more successful (several large airports around the world are already publicly listed and traded; others are owned by other investors, so divestment is quite normal).

Some scenario experiments indicate that YEG should have part of its debt extinguished to optimize total sale proceeds to the citizens of the city, region, province and nation. As the entity's debt level is a little high in relation to its cash generation capacity and its capital expenditure needs exceed operating cash flow, *much, if not all of the first sale proceeds of treasury shares in a partial divestiture might or should be used to lower EIA's debt* and *not* go to government coffers. The experiments indicate, albeit not definitively, that using proceeds to retire at least one quarter of its long-term debt is likely the optimal strategy. One nonsensical policy of the federal government is to charge EIA substantial rent on the land it occupies, raising the costs and lowering the margins of EIA. This increases costs to airlines and their passengers. As Ottawa also owns EIA, *it is effectively charging rent to itself,* serving only to make EIA and air travel less attractive and lower the potential value of the entity.

Caveat: This report is nothing approaching a prospectus. Only intensive, meticulously minute appraisal of all of EIA's assets, including its physical assets, all its accounts and hidden assets and liabilities, plus all its contractual, legal and regulatory obligations, would give an accurate valuation of the company; albeit still dependent on subjective reasoning and assumptions. Even then it would not necessarily indicate what magnitude of proceeds could or would be garnered in a divestment. The estimates, projections, observations or analyses herein are neither definitive nor authoritative. Other analysts may have valid, alternative ways of scrutinizing and valuing Edmonton International Airport.

INTRODUCTION

History of EIA, its Current State and Operating Status

EIA generates economic output of over $3.2B and supports 26,000 jobs across the region. It also controls a small airport for private aircraft at Villeneuve. Blatchford Field, built for a flying school in 1927, northwest of downtown Edmonton, became Canada's first licensed airfield in 1929. It became Edmonton Municipal Airport later on. As it was restricted in size and length of runways, Edmonton International Airport opened in 1960.[1]

Short-haul flights at the Municipal airport feeding into Calgary and Vancouver caused EIA to lose long-haul and international flights, so in 1995, citizens of Edmonton voted by a 77 percent majority to consolidate all airline travel at the International Airport. Air traffic volumes quickly overran capacity, leading EIA to spend $450M in terminal and other construction projects in the late 1990's and early 2000's. In 2012, an additional $700M was spent on more gates, a new passenger concourse and more parking. New initiatives include commercial and industrial facilities adjacent to the airport, Airport City, and Cargo Village for freight facilities. From 3.8 million passengers in 1999, EIA handled 6 million in 2018.[2]

Consolidation put new pressures on EIA. The main terminal was designed to accommodate 2.5 million passengers per year, but by 1999, 8.2 million passengers were using EIA annually, up 5 percent over 2017. EIA is Canada's largest airport in area; more than half its land area remains undeveloped.[3] The near-term outlook for Edmonton's economy and its airport may be a little cloudy, as the Alberta economy is subdued, owing to depressed Canadian oil and gas prices.[4] As at other airports elsewhere in Canada, federal land rental cost is an issue.[5] It faces little direct competition, but risks loss of long-haul passengers if its costs rise too fast.

INTRINSIC VALUE: VALUATION OF EIA AS A BUSINESS, IN ITS CURRENT STATE

For the intrinsic value, projecting future cash flow growth, and bringing it to a net present value, a relatively conservative approach was taken which could undervalue the company (please see Table 1). A simple capitalization perpetuity formula was used, which is appropriate for a mature company with no obvious potential mortality date forecastable. The company's free cash flow nominal (i.e., not adjusted for inflation) growth rate range was held within a restrained 2 to 4 percent range, and the required rate of return or cost of capital range was from 6 to 9 percent.

The entity could theoretically have higher growth in the future, so a modest growth rate was considered reasonable. Its cost of capital, given low expectations, the quality of its assets, and high current valuations in the stock market, could well be lower than the range used (and thus raise its estimated value), although there is also a chance that interest rates and the rate of return investors demand on equity (share) investment could increase.

The statutory tax rate used in calculations may be lower in the future, as there is continued global pressure to lower corporate tax rates, exemplified by the recent drop in US corporation income tax rates, the slow decrease of rates in Quebec, new cuts in Australia, and a recent more ambitious schedule of decreases announced by the new government in Alberta.

The proprietary model used in projecting the line items that determine the various inputs into the intrinsic value employ calculations based on recent and historic trends in those line items. Then the model uses formulas to project the line item numbers for the following year. All main constituent line-item factors that determine net income, operating, and free cash flow were projected on the basis of historic behaviour and mathematical analysis.

Table 1

Intrinsic Value, 2019, Using Free Cash Flow

CASE 1: Present Value of Projected Fully Taxed Free Cash Flow for FY2019 ($B)

Present Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return ['r'] = Growth Rate ['g'])

Projected Fully Taxed Free Cash Flow Estimate for FY2025 ($B): $ 0.0301

Matrix Values ($B) g==v; r==>	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%
0.00%	$ 0.60	$ 0.50	$ 0.43	$ 0.38	$ 0.33	$ 0.30	$ 0.27
1.00%	$ 0.75	$ 0.60	$ 0.50	$ 0.43	$ 0.38	$ 0.33	$ 0.30
2.00%	$ 1.00	**$ 0.75**	**$ 0.60**	**$ 0.50**	**$ 0.43**	$ 0.38	$ 0.33
3.00%	$ 1.51	**$ 1.00**	**$ 0.75**	**$ 0.60**	**$ 0.50**	$ 0.43	$ 0.38
4.00%	$ 3.01	**$ 1.51**	**$ 1.00**	**$ 0.75**	**$ 0.60**	$ 0.50	$ 0.43
5.00%	$ --	$ 3.01	$ 1.51	$ 1.00	$ 0.75	$ 0.60	$ 0.50
6.00%	-$ 3.01	$ --	$ 3.01	$ 1.51	$ 1.00	$ 0.75	$ 0.60
7.00%	-$ 1.51	-$ 3.01	$ --	$ 3.01	$ 1.51	$ 1.00	$ 0.75

	Minimum	Maximum	Median	Mean (Average)
Total Market Value ($B)	$ 0.43	$ 1.51	$ 0.61	$ 0.75

Note: 'g' is Growth Rate in Free Cash Flow or Proxy, 'r' is the Required Rate of Return; Bold font figures are used in the Mean, Median, Minimum and Maximum determinations.

Source: Author's calculations based on reports made available by the company.

Using this method, the calculations estimate a minimum of $0.43B to a maximum of $1.51B, with a tighter, more plausible range of a median (midpoint of all relevant values) of $0.68B to a mean (simple average of all relevant values) of $0.75B.

MARKET-BASED VALUE: VALUATION OF EIA USING STOCK MARKET AND FINANCIAL METRICS

With respect to the market-peer comparison valuation, there are a few complications. Some of the publicly traded airport companies around the world have either inflated or depressed financial results, and the most extreme anomalies among them had to be deleted. There were still sufficient sample data for reasonable comparative purposes. As noted in the Executive Summary, using five standard valuation metrics (trailing Price/Earnings, Price/Sales; Price/Book Value; Enterprise Value to Revenue; Enterprise Value to Earnings Before Interest, Taxes & Depreciation & Amortization [EV/EBITDA]; Price/Operating Cash Flow), the current value ranges from $50M to $1.47B, with a mean of $0.88B and a median of $1.17B. Please see the details of the models' results in Table 2.

Table 2

Market Valuation Using Financial Metrics from Comparable Companies

Method 2: EIA Projections are for FY2019; Fully Taxed, Debt Free

Valuation metrics applied to EIA; ie, Market Value of Common Equity. Figures in $B.	**Trailing P/E (Market Value to Estimated Net Income)**	**Price to Sales**	**Enterprise Value/Revenue (subtracting net debt)**	**Enterprise Value/EBITDA (subtracting net debt)**	**Price to Operating Cash Flow**
Average Eleven Airport or Airport Terminal Operating or Holding Companies	$ 0.04	$ 0.50	$ 1.18	$ 1.18	$ 0.47
Average Nine Port or Port Terminal Operating or Holding Companies	$ 0.06	$ 0.73	$ 1.21	$ 2.89	$ 1.54
Average of All Nineteen Companies	$ 0.05	$ 1.18	$ 0.52	$ 1.47	$ 1.17

Source: Capital IQ via Yahoo!Finance, additional material from BMO-Investorline, Valuation model formulae.

Market Value Using Comparable Companies and Five Viable Valuation Ratios

	Minimum	Maximum	Median	Mean (Average)
Total Market Value ($B)	$ 0.05	$ 1.47	$ 1.17	$ 0.88

Source: Calculations based on Annual Report financial data, comparison company data from Capital IQ via Yahoo!Finance.

DEBT COSTS; FINANCIAL PERFORMANCE OF EIA, AND TRENDS IN SAME

EIA has negative equity at this time, although the accounting system it uses for non-profit entities awards it positive 'net assets'. The financial return ratios are also higher than the weighted average interest rates of 4.15 percent that the firm is paying on the debt it is borrowing. See below.

Table 3

Average Interest Rate on Interest-Bearing Debt (Cost of Debt Capital)

Year Ending 31 December ($K)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average Total Interest-Bearing Debt	$ 442,547	$ 555,275	$ 755,079	$ 909,671	$ 963,013	$ 975,121	$ 975,602	$ 964,479	$ 951,425	$ 1,013,975
Total Interest and Financing Charges Paid	$ 22,850	$ 30,116	$ 38,344	$ 44,257	$ 46,737	$ 46,451	$ 46,430	$ 45,500	$ 44,681	$ 42,129
Average Interest Rate on Interest-Bearing Debt	5.16%	5.42%	5.08%	4.87%	4.85%	4.76%	4.76%	4.72%	4.70%	4.15%

Source: Company Financial Statements.

As shown in Table 4, next page, EIA's returns on equity, and capital employed, have generally improved over the past nine years whether the numerator in the ratios is Earnings Before Interest, Taxes and Depreciation and Amortization (EBITDA); net income; operating cash flow; or free cash flow. However, its return on assets has not improved, which if it persists, could be a concern.

Table 4

Capital Efficiency Performance Metric

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1. RETURN ON ASSETS										
Return on Assets Using EBITDA (Earnings Before Interest, Taxes and Depreciation & Amortization)										
EBITDA ($M)	$ 64	$ 66	$ 71	$ 82	$ 85	$ 98	$ 105	$ 100	$ 108	$ 111
Average Assets ($M)	$ 118	$ 105	$ 115	$ 106	$ 74	$ 55	$ 60	$ 64	$ 64	$ 152
RoA, EBITDA	59.9%	69.1%	62.1%	77.5%	114.1%	176.5%	173.2%	157.1%	167.8%	79.1%
Return on Assets Using Fully Taxed Net Income										
Fully Taxed Net Income ($M)	$ 7.61	$ 7.14	$ 10.54	−$ 11.19	−$ 22.72	−$ 15.78	−$ 5.59	−$ 7.99	−$ 3.28	$ 1.20
Average Assets ($M)	$ 118	$ 105	$ 115	$ 106	$ 74	$ 55	$ 60	$ 64	$ 64	$ 152
RoA, NI	6.45%	6.80%	9.17%	−10.54%	−30.66%	−28.56%	−9.26%	−12.44%	−5.10%	0.79%
Return on Assets Using Fully Taxed Operating Cash Flow										
Fully Taxed Operating Cash Flow ($M)	$ 37.93	$ 44.72	$ 39.76	$ 44.05	$ 37.00	$ 44.11	$ 70.22	$ 48.87	$ 62.77	$ 78.88
Average Assets ($M)	$ 118	$ 105	$ 115	$ 106	$ 74	$ 55	$ 60	$ 64	$ 64	$ 152
RoA, OCF	32.16%	42.59%	34.57%	41.48%	49.93%	79.84%	116.31%	76.65%	97.51%	51.75%
Return on Assets Using Fully Taxed Free Cash Flow										
Fully Taxed Free Cash Flow ($M)	−$ 24.75	−$ 174.62	−$ 219.28	−$ 124.76	−$ 50.36	−$ 14.21	$ 24.29	$ 3.94	$ 23.28	$ 32.09
Average Assets ($M)	$ 118	$ 105	$ 115	$ 106	$ 74	$ 55	$ 60	$ 64	$ 64	$ 152
RoA, FCF	−20.98%	−166.29%	−190.70%	−117.48%	−67.96%	−25.73%	40.23%	6.17%	36.16%	21.06%
2. RETURN ON EQUITY										
Return on Equity Using EBITDA (Earnings Before Interest, Taxes and Depreciation & Amortization)										
EBITDA ($M)	$ 64	$ 66	$ 71	$ 82	$ 85	$ 98	$ 105	$ 100	$ 108	$ 111
Average Equity ($M)	$ 114	$ 110	$ 114	$ 108	$ 94	$ 76	$ 62	$ 53	$ 50	$ 52
RoE, EBITDA	55.7%	60.5%	62.4%	76.9%	90.4%	128.9%	170.0%	187.6%	215.3%	213.8%
Return on Equity Using Fully Taxed Net Income										
Fully Taxed Net Income ($M)	$ 7.61	$ 7.14	$ 10.54	−$ 11.19	−$ 22.72	−$ 15.78	−$ 5.59	−$ 7.99	−$ 3.28	$ 1.20
Average Equity ($M)	$ 114	$ 110	$ 114	$ 108	$ 94	$ 76	$ 62	$ 53	$ 50	$ 52
RoE, NI	6.67%	6.52%	9.22%	−10.38%	−24.30%	−20.87%	−9.09%	−14.86%	−6.54%	2.29%
Return on Equity Using Fully Taxed Operating Cash Flow										
Fully Taxed Operating Cash Flow ($M)	$ 37.93	$ 44.72	$ 39.76	$ 44.05	$ 37.00	$ 44.11	$ 70.22	$ 48.87	$ 62.77	$ 78.88
Average Equity ($M)	$ 114	$ 110	$ 114	$ 108	$ 94	$ 76	$ 62	$ 53	$ 50	$ 52
RoE, OCF	33.3%	40.8%	34.8%	40.9%	39.6%	58.3%	114.1%	91.5%	125.1%	151.4%
Return on Equity Using Fully Taxed Free Cash Flow										
Fully Taxed Free Cash Flow ($M)	−$ 24.75	−$ 174.62	−$ 219.28	−$ 124.76	−$ 50.36	−$ 14.21	$ 24.29	$ 3.94	$ 23.28	$ 32.09
Average Equity ($M)	$ 114	$ 110	$ 114	$ 108	$ 94	$ 76	$ 62	$ 53	$ 50	$ 52
RoE, FCF	−21.70%	−159.40%	−191.75%	−115.76%	−53.86%	−18.79%	39.48%	7.37%	46.38%	61.59%
3. RETURN ON CAPITAL EMPLOYED (Cash, Restricted Cash and Short Term Investments were Subtracted from Total Liabilities + Shareholders Equity)										
Return on Capital Employed Using EBITDA (Earnings Before Interest, Taxes and Depreciation & Amortization)										
EBITDA ($M)	$ 64	$ 66	$ 71	$ 82	$ 85	$ 98	$ 105	$ 100	$ 108	$ 111
Average Capital Employed ($M)	$ 593	$ 676	$ 855	$ 1,014	$ 1,064	$ 1,063	$ 1,048	$ 1,036	$ 1,034	$ 1,023
RoCE, EBITDA	10.72%	9.80%	8.35%	8.11%	7.94%	9.18%	9.98%	9.67%	10.45%	10.88%
Return on Capital Employed Using Fully Taxed Net Income										
Fully Taxed Net Income ($M)	$ 7.61	$ 7.14	$ 10.54	−$ 11.19	−$ 22.72	−$ 15.78	−$ 5.59	−$ 7.99	−$ 3.28	$ 1.20
Average Capital Employed ($M)	$ 593	$ 676	$ 855	$ 1,014	$ 1,064	$ 1,063	$ 1,048	$ 1,036	$ 1,034	$ 1,023
RoCE, NI	1.28%	1.06%	1.23%	−1.10%	−2.14%	−1.48%	−0.53%	−0.77%	−0.32%	0.12%
Return on Capital Employed Using Fully Taxed Operating Cash Flow										
Fully Taxed Operating Cash Flow ($M)	$ 37.93	$ 44.72	$ 39.76	$ 44.05	$ 37.00	$ 44.11	$ 70.22	$ 48.87	$ 62.77	$ 78.88
Average Capital Employed ($M)	$ 593	$ 676	$ 855	$ 1,014	$ 1,064	$ 1,063	$ 1,048	$ 1,036	$ 1,034	$ 1,023
RoCE, OCF	6.40%	6.62%	4.65%	4.34%	3.48%	4.15%	6.70%	4.72%	6.07%	7.71%
Return on Capital Employed Using Fully Taxed Free Cash Flow										
Fully Taxed Free Cash Flow ($M)	−$ 24.75	−$ 174.62	−$ 219.28	−$ 124.76	−$ 50.36	−$ 14.21	$ 24.29	$ 3.94	$ 23.28	$ 32.09
Average Capital Employed ($M)	$ 593	$ 676	$ 855	$ 1,014	$ 1,064	$ 1,063	$ 1,048	$ 1,036	$ 1,034	$ 1,023
RoCE, FCF	−4.18%	−25.84%	−25.65%	−12.30%	−4.73%	−1.34%	2.32%	0.38%	2.25%	3.14%

Source: Company Financial Statements. Taxes were calculated using current federal and provincial rates applied retroactively for comparability.

As the following table shows, the ratios of debt to equity, total debt to EBITDA, and the growth rate of debt divided by the growth in EBITDA have generally all shown negative trends. However, its debt servicing capacity, denoted by EBITDA divided by finance charges plus capital expenditures; and by pre-tax operating cash flow divided by net finance charges, is generally improving.

Table 5

Solvency, Interest Coverage, Capital Expenditure Coverage

Financial Strength and Solvency	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Debt/Equity	422%	524%	735%	899%	1,113%	1,223%	1,690%	1,822%	2,290%	2,080%
Debt/Total Assets	86%	87%	98%	98%	98%	97%	99%	100%	102%	102%
Debt/Total Capital Employed	91%	112%	107%	105%	100%	102%	103%	106%	106%	124%
EBITDA/Finance Charges	278%	288%	317%	216%	190%	217%	233%	222%	242%	264%
EBITDA/Finance Charges+Capex	46%	29%	27%	43%	63%	96%	118%	112%	129%	126%
Quick Ratio ({Current Assets – Inventories}/Current Liabilities)	209%	122%	127%	130%	89%	109%	111%	97%	88%	313%
Quick Ratio Excluding "Restricted Cash"	209%	122%	127%	130%	89%	109%	111%	97%	88%	313%
EBITDA/Net Interest Paid	278%	288%	317%	216%	190%	217%	233%	222%	242%	264%
Pre-Tax Operating Cash Flow/Net Interest Paid	178%	205%	193%	115%	83%	98%	157%	108%	140%	188%
Total Debt/EBITDA	874%	1,255%	1,455%	1,352%	1,260%	1,112%	1,026%	1,095%	1,010%	1,132%
Growth in Debt/Growth in EBITDA	–378%	1,168%	321%	47%	–158%	12%	–15%	-53%	-6%	500%

Source: Company Financial Statements. Debt and Equity are the averages for the year. Taxes were calculated using current federal and provincial rates applied retroactively for comparability. Note: The enterprise has negative equity (Book Value). It uses 'Net Assets' as a surrogate for equity.

STRATEGIES AND ALTERNATIVES FOR COMMERCIALIZATION, DIVESTITURE OR PRIVATIZATION

1. Partial divestment

Quite often when a state-owned enterprise is divested, it is not done entirely at once. This is because it may not be possible to sell the whole company into the stock market and get the maximum price for the seller, especially if the firm has assets in the billions of dollars, or if there are unusual aspects to the nature of the company, or problematic circumstances in which it operates. Hence, an initial, small minority allotment of shares are sold to help establish at least a crude market valuation of the company's shares as they become openly traded.

However, having a majority stake retained by a government introduces some doubt about the true independence and commercial status of the partially divested firm. There could be fear on the part of investors that politicians may interfere with the strategy or operations of the firm. This could result in there being a discount that the firm's shares suffer in the market. While there are no current signs of government meddling or public controversies, various 'stakeholders' may intervene, which potentially or theoretically can complicate partial or total sale of the operation.

Selling part or all of EIA, with much of the proceeds used to reduce the debt, would make it healthier, but not necessarily, according to the projections, allow it to fetch a higher price upon its sale. A few different scenarios were explored. For reference, the three scenarios are laid out in the simple table below.

Table 6

Cases: Debt Level As Is; One Quarter of Long-Term Debt Gone; Half of Long-Term Debt Retired

Retirement of Debt Scenarios Assumed to Occur in Fiscal Year 2019. All figures $B	Current: No Debt Retirement	Case 1 One Quarter Long-Term Debt/Retired	Case 2 Half Long-Term Debt/Retired
Total Liabilities	$ 1.2605	$ 0.9884	$ 0.7162
Total Assets	$ 1.2346	$ 1.2346	$ 1.2346
Shareholders Equity	–$ 0.0259	$ 0.2565	$ 0.5364
Total Interest-Bearing Debt	$ 1.0887	$ 0.8165	$ 0.5443
Total Interest Expenses	$ 0.0421	$ 0.0316	$ 0.0211
EBITDA	$ 0.1114	$ 0.1187	$ 0.1187
EBIT	$ 0.0438	$ 0.0455	$ 0.0455
Interest Income	$ 0	$ 0	$ 0
Interest Expense	$ 0.0421	$ 0.0316	–$ 0.0211
Pre-tax Income	$ 0.0017	$ 0.0139	$ 0.0244
Income Tax (Combined 26.5%)	$ 0.0004	$ 0.0037	$ 0.0065
Net Income	$ 0.0012	$ 0.0102	$ 0.0180
Operating Cash Flow	$ 0.0789	$ 0.0834	$ 0.0912
Capital Expenditures	–$ 0.0468	–$ 0.0436	–$ 0.0436
Free Cash Flow	$ 0.0821	$ 0.0398	$ 0.0475

Note: The assumption was made that no other net addition or redemption would occurr in 2019.

Alternative Scenario One:
One Quarter Long-term Debt Retired; Proceeds Net of Debt Paid Back

Table 7

Intrinsic Value, One Quarter of Long-Term Debt Extinguished

CASE 1: Present Value of Projected Fully Taxed Free Cash Flow for FY2019 ($B); One Quarter of Long-Term Debt Retired

Present Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return ['r'] = Growth Rate ['g'])

Projected Fully Taxed Net Income as a Proxy for FCF for FY2019 ($B): $ 0.0398

Matrix Values ($B) g==v; r==>	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%
0.00%	$ 1.00	$ 0.80	$ 0.66	$ 0.57	$ 0.50	$ 0.44	$ 0.40
1.00%	$ 1.33	$ 1.00	$ 0.80	$ 0.66	$ 0.57	$ 0.50	$ 0.44
2.00%	$ 1.99	**$ 1.33**	**$ 1.00**	**$ 0.80**	**$ 0.66**	**$ 0.57**	$ 0.50
3.00%	$ 3.98	**$ 1.99**	**$ 1.33**	**$ 1.00**	**$ 0.80**	**$ 0.66**	$ 0.57
4.00%	--	**$ 3.98**	**$ 1.99**	**$ 1.33**	**$ 1.00**	**$ 0.80**	$ 0.66
5.00%	–$ 3.98	--	$ 3.98	$ 1.99	$ 1.33	$ 1.00	$ 0.80
6.00%	–$ 1.99	–$ 3.98	$ --	$ 3.98	$ 1.99	$ 1.33	$ 1.00
7.00%	–$ 1.33	–$ 1.99	–$ 3.98	$ --	$ 3.98	$ 1.99	$ 1.33

	Minimum	Maximum	Median	Mean (Average)
Gross Value ($B)	$ 0.57	$ 1.99	$ 0.90	$ 0.99
Minus Sale Proceeds Used to Retire One Quarter Long-Term Debt	$ 0.27	$ 0.27	$ 0.27	$ 0.27
Net Value ($B)	$ 0.30	$ 1.72	$ 0.62	$ 0.72

Source: Calculations from model derived from Company Annual Reports.

This Scenario One for the intrinsic value yields (net of the amount of proceeds used to extinguish one quarter of the firm's long-term debt) a minimum of $30M to a maximum of $1.72B, with a more plausible range of a median (midpoint of the array of projected values) of $0.62B to a mean (simple average) of $0.72B.

Table 8

Market Value, One Quarter of Long-Term Debt Extinguished; Net Proceeds

CASE 2: EIA Projections are for FY2019; Fully Taxed, Debt Free

Valuation metrics applied to EIA; ie, Market Value of Common Equity. Figures in $B.	Trailing P/E (Market Value to Estimated Net Income)	Forward P/E (Market Value to Estimated net debt)	Price to Sales	Price to Book Value	Enterprise Value/Revenue (subtracting Net Debt)	Enterprise Value/EBITDA (subtracting Net Debt)
Average Eleven Airport or Airport Terminal Operating or Holding Companies	$ 0.33	$ 0.19	$ 1.25	$ 1.25	$ 6.59	$ 0.88
Average Nine Port or Port Terminal Operating or Holding Companies	$ 0.50	$ 0.24	$ 1.29	$ 1.29	$ 0.68	$ 1.13
Average of All Above	$ 0.41	$ 0.20	$ 1.27	$ 1.27	$ 3.79	$ 0.71

Source: Capital IQ via Yahoo!Finance, additional material from BMO-Investorline, Valuation model formulae.

Market Value Using Comparable Companies and Five Viable Valuation Ratios

	Minimum	Maximum	Median	Mean (Average)
Gross Value ($B)	$ 0.20	$ 3.79	$ 0.99	$ 1.27
Minus Proceeds of Sale Used to Extinguish 1/4 Long-Term Debt ($B)	$ 0.27	$ 0.27	$ 0.27	$ 0.27
Total Market Value ($B)	–$ 0.08	$ 3.52	$ 0.72	$ 1.00

Source: Calculations based on Company Annual Report financial data, comparison company data from Capital IQ via Yahoo!Finance.

This Scenario One for the market value method yields (net of the amount of proceeds used to extinguish one quarter of the firm's long-term debt) a minimum of negative $80M to a maximum of $3.52B, with a more plausible range of a median (midpoint of the array of projected values) of $0.72B to a mean (simple average) of $1.00B.

Alternative Scenario Two:
One Half Long-term Debt Retired; Proceeds Net of Debt Paid Back

Table 9

Intrinsic Value, One Half of Long-Term Debt Extinguished; Net Proceeds

CASE 1: Present Value of Projected Fully Taxed Free Cash Flow for FY2019 ($B); Half of Long-Term Debt Retired

Present Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return ['r'] = Growth Rate ['g'])

Projected Fully Taxed Free Cash Flow for FY2019 ($B): $ 0.0475

Matrix Values ($B) g==v; r==>	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%
0.00%	$ 1.19	$ 0.95	$ 0.79	$ 0.68	$ 0.59	$ 0.53	$ 0.48
1.00%	$ 1.58	$ 1.19	$ 0.95	$ 0.79	$ 0.68	$ 0.59	$ 0.53
2.00%	$ 2.38	**$ 1.58**	**$ 1.19**	**$ 0.95**	**$ 0.79**	**$ 0.68**	$ 0.59
3.00%	$ 4.75	**$ 2.38**	**$ 1.58**	**$ 1.19**	**$ 0.95**	**$ 0.79**	$ 0.68
4.00%	--	**$ 4.75**	**$ 2.38**	**$ 1.58**	**$ 1.19**	**$ 0.95**	$ 0.79
5.00%	–$ 4.75	--	$ 4.75	$ 2.38	$ 1.58	$ 1.19	$ 0.95
6.00%	–$ 2.38	–$ 4.75	$ --	$ 4.75	$ 2.38	$ 1.58	$ 1.19
7.00%	–$ 5.65	–$ 2.38	–$ 4.75	$ --	$ 4.75	$ 2.38	$ 1.58

	Minimum	Maximum	Median	Mean (Average)
Gross Value ($B)	$ 0.68	$ 2.38	$ 1.07	$ 1.19
Minus Sale Proceeds Used to Retire Half Long-Term Debt	$ 0.54	$ 0.54	$ 0.54	$ 0.54
Net Value ($B)	–$ 0.13	$ 1.83	$ 0.53	$ 0.64

Source: Calculations from model derived from Company Annual Reports.

This Scenario Two yields (net of the amount of proceeds used to extinguish one quarter of the firm's long-term debt) a minimum of $130M to a maximum of $1.83B, with a more plausible range of a median (midpoint of the array of projected values) of $0.53B to a mean (simple average) of $0.64B.

Table 10

Market Value, One Half of Long-Term Debt Extinguished; Net Proceeds

CASE 2: EIA Projections are for FY2019; Fully Taxed, Debt Free

Valuation metrics applied to EIA; ie, Market Value of Common Equity. Figures in $B.	Trailing P/E (Market Value to Estimated Net Income)	Forward P/E (Market Value to Estimated Net Debt)	Price to Sales	Price to Book Value	Enterprise Value/Revenue (subtracting Net Debt)	Enterprise Value/EBITDA (subtracting Net Debt)
Average Eleven Airport or Airport Terminal Operating or Holding Companies	$ 0.58	$ 0.31	$ 1.25	$ 1.25	$ 13.79	$ 0.92
Average Nine Port or Port Terminal Operating or Holding Companies	$ 0.87	$ 0.40	$ 1.29	$ 1.29	$ 1.42	$ 1.17
Average of All Above	$ 0.72	$ 0.32	$ 1.27	$ 1.27	$ 7.93	$ 1.03

Source: Capital IQ via Yahoo!Finance, additional material from BMO-Investorline, Valuation model formulae.

Market Value Using Comparable Companies and Five Viable Valuation Ratios

	Minimum	Maximum	Median	Mean (Average)
Gross Value ($B)	$ 0.32	$ 7.93	$ 1.15	$ 2.09
Minus Proceeds of Sale Used to Extinguish 1/2 Long-Term Debt ($B)	$ 0.54	$ 0.54	$ 0.54	$ 0.54
Total Market Value ($B)	–$ 0.22	$ 7.39	$ 0.61	$ 1.55

Source: Calculations based on Company Annual Report financial data, comparison company data from Capital IQ via Yahoo!Finance.

This Scenario Two for the market value method yields (net of the amount of proceeds used to extinguish one half of the firm's long-term debt) a minimum of negative $220M to a maximum of $7.39B, with a more plausible range of a median (midpoint of the array of projected values) of $0.61B to a mean (simple average) of $1.55B. For easier comparison, the three cases are presented together in the following table.

Table 11

Comparison of Different Scenarios Applied to Intrinsic Value and Market Value of the Company in 2019

	Intrinsic Value (Average of Mean & Median)			Market Value (Average of Mean & Median)		
	2019 Valuation=v	2019 Valuation=v	2019 Valuation=v	2019 Valuation=v	2019 Valuation=v	2019 Valuation=v
Figures in $B.	No Extinguishing of L-T Debt	Extinguishing of 1/4 of L-T Debt	Extinguishing of 1/2 of L-T Debt	No Extinguishing of L-T Debt	Extinguishing of 1/4 of L-T Debt	Extinguishing of 1/2 of L-T Debt
Gross Value (Average of Mean & Median)	$ 0.86	$ 0.94	$ 1.13	$ 1.02	$ 1.13	$ 1.67
Minus Sale of Proceeds Used to Retire Debt	$ 0.00	$ 0.27	$ 0.54	$ 0.00	$ 0.27	$ 0.54
Net Value	$ 0.86	$ 0.67	$ 0.58	$ 1.02	$ 0.86	$ 1.12

Calculations used models incorporating financial results from Company Annual Reports, key financial statistics from peer companies.

It is apparent that the optimum amount of debt to be extinguished would be one half of long-term debt, but only using the Market Value method. Otherwise, it may not make sense. However, a more sophisticated sensitivity analysis could determine a different proportion. Generally, the lower the debt, the more attractive and salable the company will be, which may not be something that can be shown in any of the analyses above. It seems to intuitively be reasonable to eliminate the airport's negative book value, and, perhaps, as much as one quarter of its long-term debt.

2. Disruptions from evolving competitive and technological forces

There is a relatively rosy outlook for global air traffic growth. The International Air Transport Association, 'IATA', projects average annual global compound passenger growth over the next twenty years of 3.5 percent, or a doubling from 2018 levels by 2037, although the North American growth rate is estimated at 2.4 percent.[6]

While the International Air Transport Association, Transport Canada, and YEG itself are optimistic about the future of air travel and for EIA itself, there are some things that could make its future less bright. There could be regional or other wars that make air travel less safe or attractive, and even stop it in some parts of the world. Even an uptick in terrorism could do this. So could exacerbated trade hostilities, or a 'New Cold War' between the West and China. Improved fast rail travel could dent growth, as could self-driving automobiles, which would make long-distance travel by car less aggravating. Augmented reality, 'AR', and virtual reality, 'VR', could be enhanced to the point where much business, family, and vacation travel could be substituted by those technologies. If one could have a realistic, immersive experience in an exotic or culturally significant place without having to pack luggage or deal with airports or security, AR and VR could be attractive major competitors to many such travel experiences. Already, many personal and professional meetings are avoided by using internet audio-visual meeting services. Air cargo may face threats from not just rail, ship, and trucks, but 3-D printing or automated assembly at the point of, or near, the end-user of products, eliminating any need for freight transportation. Draconian 'Green' Climate Change legislation or regulations could restrict air travel, which is CO_2-emission-intensive. There could be suborbital passenger rocket flights.

Finally, we may not be able to discern, at this point, what could make air travel less attractive in the future, any more than railway executives and investors in the 1940's could foresee that widespread automobile ownership, highways, and airlines would devastate their passenger business within thirty years' time. These factors are just more reasons why governments should remove themselves from the ownership risks of such assets as airports.

3. Readying EIA for Sale

The first thing that needs to be resolved regarding YEG and other Canadian airports is the high rental charges they pay on the land they occupy, which is owned by the federal government. This rental charge adds to their costs, narrowing their margins, and increasing costs to airlines and their passengers. It is also a cost that American airports, their main competitors, do not have. This rental policy also makes little sense, *as the government is, effectively, charging it to itself, since the government also owns the airports,* EIA included.[7] While Edmonton is a relatively long distance away from most US airports, they are potential competitors, since Alberta passengers could decide to take a short-haul flight to a US airport, and then take an American flight for a long-haul journey, depriving EIA of potential revenue. Again, this is less likely for EIA than Vancouver or Toronto, which are much closer to direct competitors in the United States, but it still limits the full potential of YEG. The ownership or 'stakeholdership' of YEG is less ambiguous: it is federal government-owned, ultimately; the City of Edmonton and the nearby communities of Leduc and Nisku do not have substantial input into its direction or strategy, aside from noise and traffic issues, nor does the Province of Alberta.

Infrastructure investments usually pay a dividend to their investors. The airport is showing sufficient income statement accounting-based net income to pay a small dividend, but given its current modest cash generation, investors may not consider the dividend sustainable. So, some investors that like a substantial and growing dividend may not find YEG attractive once it is floated, if its Board decides that it cannot currently afford such a dividend. The company does have positive free cash flow and satisfactory returns on assets, equity and capital employed. There may need to be operational improvement to expand margins before the company issues any equity to the public so that higher value can be realized in any such sale.

The company shows an accounting negative book value; its liabilities exceed its assets. It is not crucial that the negative book value be transformed into a positive one prior to sale, but it will be encouraging to prospective investors that YEG does not intend to remain 'underwater'. Its long-term interests would be served by improving its solvency in any case.

CONCLUSION

In general, entirely private sector companies tend to perform better than those within the government orbit or ownership. Crown ownership of a company exposes taxpayers, citizens, and even customers and suppliers to the risks of business, economic, and technological trends that are unnecessary to experience; that is what private investors — institutional, individual or corporate — undertake in nearly every sector of the economy. It may not have occurred to anyone in the past that an airport, seaport, or other infrastructure would or should be in the hands of private investors, or be ensconced in a publicly listed company. That is not true anymore; there are many such infrastructure companies now, and much more infrastructure that is owned by private equity funds and pension, endowment and sovereign wealth funds. There is a keen appetite for infrastructure investments of all kinds among these private and institutional investors.

Airports have a number of public controversies that make them contentious assets to own. They are expensive to build or expand. They occupy a lot of land, so there are land use and zoning disputes, and it can be hard to expand their operations by, for instance, building a new runway. They generate a lot of noise and vehicular traffic, so there are arguments over their operations and expansion of them.

Independence and removal of the risk of bad governance can only be guaranteed if YEG is totally removed from politicians' clutches; i.e., if it is fully divested to other, private sector investors. There are not a lot of infrastructure investment choices available to individual investors, or even many that pop up for institutional ones. There are only a few airports that are publicly listed, but some of them are quite large or important to their regions, such as Tel Aviv, Beijing, Auckland, Sydney, Bangkok, Tokyo, and Frankfurt. Should EIA become one such independent company, whether publicly listed or not, it could be very attractive and successful, with fewer political complications that confront it today. To truly soar, it must be free. For governments to shed this risk, it is essential.

APPENDIX 1:

RATIONALE FOR DIVESTITURE OR PRIVATIZATION

While it is up to the people through their elected representatives to decide if a Crown corporation or other government agency or entity should be sold or otherwise privatized and the proceeds used for the benefit of all citizens and taxpayers, there are some established reasons to embark on such a path, some or all of which are cited for divestiture of such enterprises but may not be applicable in any single, specific case.

1. The government has no mandate to own or run a commercial enterprise. The provision of citizens' safety, security and justice is the government's primary role, and its involvement in the economy should generally not extend beyond this.

2. Regulation can usually accomplish any public policy reason for direct involvement in an industry. If regulation is not easily feasible, then a direct contract or subsidy to any affected individuals, entity or entities may be more efficient or effective and less economically disruptive or costly.

3. If a government-controlled or sponsored enterprise has a monopoly position, near-monopoly, or effective monopoly in a line or lines of business or businesses, then opportunities are lost in one or more commercial or potentially commercial sectors for entrepreneurs and investors to try to create and grow businesses to enrich and sustain themselves, employees, suppliers, and others.

4. A monopoly, near-monopoly, or effective monopoly market position by a government-owned or sponsored entity could result in far higher prices for customers, the general public, or a section of the public, than would be the case in a fully competitive marketplace for the industry involved.

5. A government-owned or -sponsored enterprise may compete directly against private sector firms, which are owned by or employ citizens, or against individual citizens, all of whom the government is supposed to serve, not disadvantage.

6. The government-owned or -sponsored enterprise may compete unfairly against its private sector rivals in that it had or has access to lower-cost government-sourced and -guaranteed capital (debt). It may have a much larger debt component in its capital versus that which would be tolerated in the private sector. Thus, it may not have to meet high standards for profit and cost control, allowing it to offer lower than true free market-based competitive pricing.

7. Government-owned firms may not need to pay provincial or federal income taxes. This can allow such firms to supply goods or services more cheaply than the private sector companies they are competing with.

8. Government-owned or -sponsored enterprises may not have any kind of profit orientation or target, may be used as public policy vehicles and may be given preference in their activities or even in their transgressions, such as labour or environmental abuses.

9. Government-owned or -sponsored enterprises, by virtue of being public sector vehicles overseen by bureaucrats and politicians, may be places where favoured individuals find employment, particularly at management levels.

10. Since profit is a secondary goal of a government-owned or -sponsored enterprise, it is difficult to evaluate the effectiveness, efficiency or productivity of the enterprise or its employees. Consequently, these employees and assets may not be very productive or effective.

11. Government-owned or -sponsored enterprises are often creations of certain time-fixed circumstances and outlive whatever use or public policy role their creators may have conceived. Often, advances in technology; the modernization of transport, telecommunication or information technology; the evolution of the economy and available products and services and the increasing standard of living make these enterprises potentially obsolete. In the private sector, firms and individuals must adapt and evolve, or decline.

12. Government-owned or -sponsored enterprises perpetuate their possibly obsolete existences by virtue of the constituencies that build up around them: employees, managers, directors and bureaucrats, customers, suppliers and associated advocates or consultants. They can lobby to keep the enterprise going, despite dysfunction or losses. They are far more motivated to do so than are the taxpayers, whose average cost is much less per person and may be indirect, hidden or difficult to calculate.

13. Because they are not profit-oriented, government-owned or -sponsored enterprises are usually less efficient, and thus they lower the overall efficiency of the entire economy. This can make a whole nation less competitive than its global rivals are, whether nations or individual companies. The effects are worse the greater the government involvement in the economy. When taken to its most extreme, as happened in 20th-century communist nations, the countries were unable to compete against capitalist companies, despite their immense direct and indirect subsidies, government support and the lack of profit requirement.

14. Funds tied up in the capital of government-owned or -sponsored enterprises could be used to reduce government debt or lower taxes on individuals or corporations, which they could then spend or invest as they freely choose, and thus they could inject money back into the economy in more-lucrative and -constructive ways.

15. Governments, generally, have a poor record of picking winners, or creating or owning enterprises that have market-competitive profitability, or attractive returns on assets, equity, or even returns that exceed governments' own cost of debt service. If, rarely, they actually do, it generally turns out that they have been provided unusually good market, operational, regulatory, or other conditions not available to other, investor-owned firms.

16. The greater the number and size of government owned or government sponsored enterprises in an economy, the greater the size and power of the government, which is usually the largest single entity in society, increasing the dangers of abuse of power, including injuring individual citizens, companies, or groups. Effective capacity of opposition or recourse against this power diminishes as the portion of the economy the government occupies increases.

ENDNOTES

1. See https://flyeia.com/corporate/about-eia/history/.
2. See https://flyeia.com/corporate/about-eia/history/.
3. See https://flyeia.com/corporate/about-eia/history/.
4. See https://www.edmonton.ca/business_economy/economic_data/quarterly-economic-update.aspx.
5. See https://www.tc.gc.ca/eng/ctareview2014/pdf/Aeroports_de_Montreal_Submission_Engl.pdf , p 6.
6. See https://www.iata.org/pressroom/facts_figures/fact_sheets/Documents/fact-sheet-industry-facts.pdf.
7. See https://business.financialpost.com/transportation/antiquated-system-clips-the-wings-of-canadian-airports-and-makes-passengers-pay.


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