CASE OF FINANCIAL RATIO ANALYSIS: CONSTRUCTION & INFRASTRUCTURE INDUSTRY IN MEXICO (2012 – 2016)

(ARISTOS – ICA – GMD – IDEAL – OHL MEX - PINFRA)

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CONCLUSIONS

a) It is important for every manager or business owner to periodically do financial analysis of its business. One of these analysis can be a financial ratio analysis, to review both the performance of the company as well as its profitability.

b) A financial ratio analysis, as seen here, has certain advantages (and some disadvantages, too). It is possible to compare companies with different size. It is possible to compare companies from different countries. Changes in time because of size of the company or inflation can be minimized with a financial ratio analysis.

c) All six companies analyzed in this report have an average ROCE for five years above zero, but only two are above the average (2012-2016) ROCE ratio for the Mexican market: 9.0%. This could mean a good performance and therefore a good profitability for PINFRA: 15.9% and OHLMEX: 10.7%. IDEAL has had an average ROCE in the last five years of 5.3%, GMD of 5.0%, ARISTOS 2.6% and ICA of 1.2%. The areas to improve are very likely not the same for each of these companies. Trends should be analyzed in detail for each case.

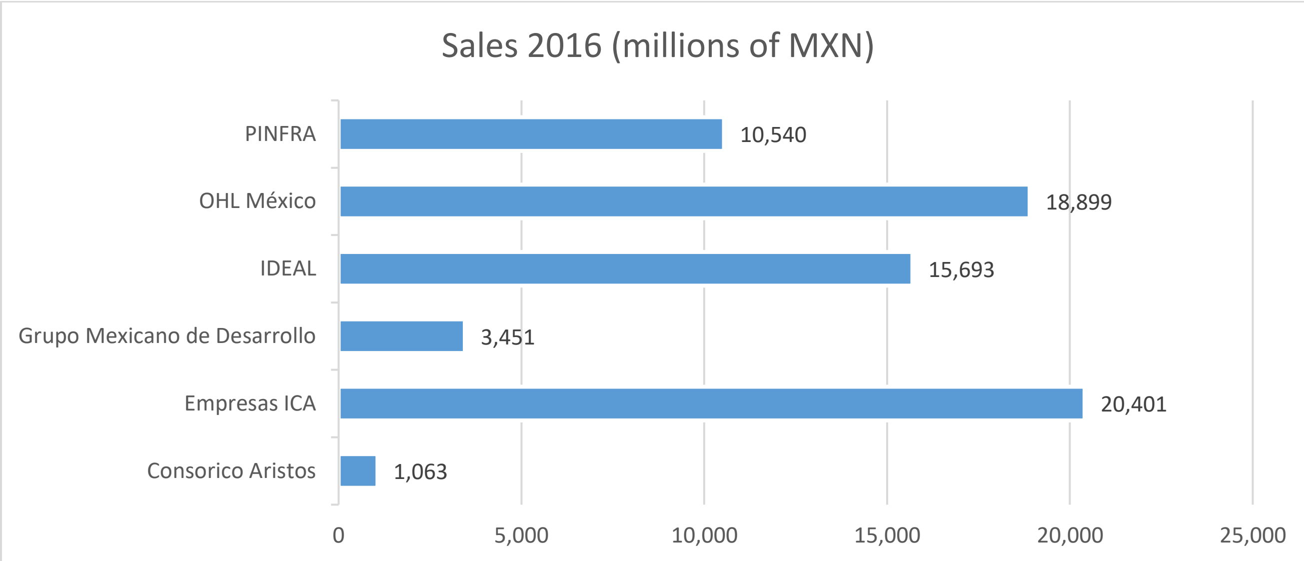
WHAT WE DO FOR THIS ANALYSIS

a) This is a more or less common analysis that we do at Acus Consulting Ltd.

b) Specifically for this analysis we selected the six public companies in the construction & infrastructure industry in Mexico. All of them are listed in the Mexican Stock Exchange (BMV).

c) The six companies analyzed are Consorcio Aristos (ARISTOS), Empresas ICA (ICA), Grupo Mexicano de Desarrollo (GMD), Impulsora del Desarrollo y el Empleo en América Latina (IDEAL), OHL México (OHLMEX) and Promotora y Operadora de Infraestructura (PINFRA).

d) Their relative size is quite different. The largest in sales is ICA. If we set the 2016 annual sales of ICA as an index of 100, then sales index for OHLMEX is 93, IDEAL is 77, PINFRA 52, GMD 17 and ARISTOS 5. Sales of ICA were $20.4 billion MXN in 2016. (Average exchange rate in 2016 was 18.66 MXN for one USD and 14.15 MXN for one CAD. MXN Mexican Pesos, USD US Dollars and CAD Canadian Dollars).



e) We based our analysis in the financial statements that each company reported for the last five years in their annual reports. We gathered all the financial information in our computer in a standardized format. Then we did some calculations needed for the analysis (like EBIT, EBITDA, NOPAT and capital employed). After this we calculated financial ratios for each company and for each year. We synthesized the ratios in some summarized tables and we prepared some graphs. We included information from the Mexican market as a reference. At last, the analysis based on this information, our knowledge and experience took place.

f) For practical reasons, we work with the figures of the balance sheet at the end of the year. It is definitively better to work with the average figures of the year (average of the 4 quarters or average of the 12 months). Doing the calculation of the ratios this way may imply certain imperfection in the process, although working with averages is not a perfect process neither.

RETURN ON CAPITAL EMPLOYED (ROCE)

a) In Table I we are presenting the Return on Capital Employed (ROCE) for the last five years for each of these six companies. This is probably the most important measurement in financial ratios. At the end, profitability is the reason why we have a business running. ROCE is defined as NOPAT over capital employed. NOPAT (net operating profit after taxes) is EBIT minus adjusted taxes. EBIT is close to operating income. Capital employed is the total assets minus liabilities with non-financial cost minus cash and cash equivalents. ROCE gives us a measurement of wealth creation based on invested resources in the company. The larger this figure the better. The central idea behind this ratio is that we should intend to create wealth with the least invested resources. If we invest more in a company (or business unit) a larger profit should be expected to justify the additional investment.

Table I: Return on Capital Employed = NOPAT / Capital Employed

	2012	2013	2014	2015	2016	*Average*
Consorcio Aristos	3.2%	1.5%	2.7%	3.4%	2.4%	*2.6%*
Empresas ICA	1.4%	3.6%	5.7%	-7.3%	2.5%	*1.2%*
Grupo Mexicano de Desarrollo	3.5%	4.5%	3.9%	6.2%	7.1%	*5.0%*
IDEAL	6.5%	4.8%	5.2%	5.3%	4.6%	*5.3%*
OHL México	10.8%	13.5%	10.6%	9.1%	9.6%	*10.7%*
PINFRA	13.7%	15.6%	15.5%	17.7%	17.1%	*15.9%*
Mexican Market	11.3%	8.9%	9.0%	8.2%	7.8%	*9.0%*

b) As we can see in Table I, in average for the last 5 years, PINFRA has the largest ROCE with 15.9%. OHLMEX has an average ROCE for the 5 years of 10.7%, this is, a little bit less than 2/3 that of PINFRA. The two companies have an average ROCE above the average of the Mexican market. The other four companies are below the Mexican market average: IDEAL 5.3%, GMD 5.0%, ARISTOS 2.6% and ICA 1.2%.

c) How important is 1.0 percentage point for PINFRA? Well, it is a matter of size. The capital employed of PINFRA in 2016 is around $23.5 billion MXN. Therefore, 1.0 percentage point will mean close to $235 million MXN a year of additional profit. In the case of OHLMEX, its capital employed in 2016 is around $107.2 billion MXN. Therefore an extra 1.0 percentage point will mean close to $1,072 million MXN a year of additional profit. Not bad at all. Very likely, performance bonuses of the executive team should be based in these accomplishments.

d) It calls our attention the trend. For GMD and PINFRA is a growing trend (good for them!). Trend for ARISTOS, IDEAL and OHLMEX is quite stable. ICA has a significant decrease in 2015 and has not recovered to the levels of 2014 (uncertain future).

e) At this point, we are analyzing ROCE ratio but not economic value creation or EVA®. Economic value creation or EVA® is a dollar amount measurement and has to do with profitability but also with the size of the invested capital (or capital employed). We will analyze this measurement in a coming article.

RETURN ON EQUITY (ROE)

a) In Table II we are presenting the Return on Equity (ROE) for the last five years for each of these six companies. This financial ratio is important for shareholders. But, in spite of this, ROCE is still more important since there cannot be ROE in the medium and long range if the company previously does not have a ROCE. Shareholders are looking for a return to their investment. The largest the better. ROE is defined as net income over shareholders equity. Shareholders should analyze this ratio, among several other things, when deciding about investing more in a company.

Table II: Return on Equity = Net Income / Shareholders Equity

	2012	2013	2014	2015	2016	*Average*
Consorcio Aristos	3.4%	0.9%	1.9%	2.5%	1.1%	*2.0%*
Empresas ICA	7.5%	5.9%	-9.5%	-439.8%	-226.3%	*-132.4%*
Grupo Mexicano de Desarrollo	3.4%	3.5%	0.6%	4.2%	4.5%	*3.2%*
IDEAL	3.7%	9.9%	-15.2%	9.3%	64.5%	*14.4%*
OHL México	15.7%	13.9%	13.1%	10.9%	10.9%	*12.9%*
PINFRA	27.8%	25.1%	11.8%	20.3%	14.6%	*19.9%*
Mexican Market	14.1%	9.8%	8.5%	7.0%	8.6%	*9.6%*

b) As we can see in Table II, in average for the last five years, PINFRA has the largest ROE with 19.9%, followed by IDEAL with 14.4% and OHLMEX with 12.9%. All of these three companies are above the average for the Mexican market. GMD has had an average ROE in the last five years of 3.2% and ARISTOS of 2.0%. The ROE ratio for ICA is quite bad for the last years and is a significant negative average number for the last years.

c) GMD and IDEAL have better ratios in 2015 and 2016 than what they had in 2012 and 2013. PINFRA, OHLMEX and ARISTOS have lower ROE ratios in 2015 and 2016 than what they had in 2012 and 2013. No comments are needed for ICA.

THE DUPONT MODEL

a) The Dupont Model is a conceptual framework that Return on Capital Employed (ROCE), and profitability in general, can be explained and analyzed with two variable: NOPAT Sales Margin and Capital Employed Turnover. The first one is the margin that we get of NOPAT for every dollar of sales. The turnover is the sales over the capital employed. It will give us a measurement of efficiency in the use of resources invested. For example, a fancy restaurant has a low turnover (huge investment for every dollar of sales), but the margin is high (exotic prices for an exotic meal). On the contrary, a fast food has low margins but also a high turnover since investment is low and sales are relatively large for each dollar invested.

b) Usually this pattern is similar for companies in the same industry. In this case, average NOPAT Sales Margin is 10.5% for GMD and its average Capital Employed Turnover is 0.54. The simple average for these six companies is 22.5% of NOPAT Sales Margin and 0.36 for Capital Employed Turnover. Each of these companies probably have to work in improving margin and in improving turnover. Strategies very likely will be different for each one (just making sure they are not underinvesting in renewal of assets).

c) We use the framework of the Dupont Model to define strategies for a company, aimed to increase profitability.

FINANCIAL LEVERAGE

a) How is each company funding itself? In Table III we are presenting the Financial Leverage (usually known simply as "leverage") for the last five years for each of these two companies. This financial ratio is telling us how much of external sources are being used for the funding of the company. Financial leverage is defined as total liabilities over shareholders' equity. It is usually good to use external sources for funding the operation, but too much can increase the risks of not being able to pay financing on time. Cash inflows are usually seasonal and more unpredictable; payments to banks are fixed and monthly.

Table III: Financial Leverage = Total Liabilities / Shareholders Equity

	2012	2013	2014	2015	2016	*Average*
Consorcio Aristos	0.6	1.5	0.6	0.5	0.4	*0.7*
Empresas ICA	3.8	3.2	4.4	23.2	33.4	*13.6*
Grupo Mexicano de Desarrollo	1.2	1.1	1.4	1.4	1.2	*1.3*
IDEAL	5.8	6.9	11.5	12.0	2.8	*7.8*
OHL México	1.2	0.9	0.9	0.7	0.7	*0.9*
PINFRA	1.5	1.1	0.4	0.4	0.2	*0.7*
Mexican market	1.4	1.4	1.6	1.6	1.5	*1.5*

b) As we can see in Table III, in average for the last 5 years, ICA 13.6 and IDEAL 7.8 have a larger financial leverage and are above the Mexican market average that is 1.5. Therefore, GMD 1.3, OHLMEX 0.9, PINFRA 0.7 and ARISTOS 0.7 are below the average of the Mexican market.

SOME OTHER RATIOS AND SOME GRAPHS

We do calculate around 20 financial ratios per company per year. Here below are some tables with some financial ratios for each company as well as some graphs. We hope you can better understand more of the financial analysis with financial ratios for these companies:

Table IV: Relevant Figures for 2016 (in million MXN)

	Sales	NOPAT	Capital employed
Consorcio Aristos	1,063	121	5,111
Empresas ICA	20,401	1,535	61,727
Grupo Mexicano de Desarrollo	3,451	518	7,286
IDEAL	15,693	4,220	91,216
OHL México	18,899	10,249	107,175
PINFRA	10,540	4,024	23,510

Table V: Some Financial Ratios for Consorcio Aristos (ARISTOS)

	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	2.9%	1.0%	2.9%	4.0%	2.7%
ROCE Return on capital employed	3.2%	1.5%	2.7%	3.4%	2.4%
ROE Return on equity from continuing operations	3.4%	0.9%	1.9%	2.5%	1.1%
EBIT / Sales	13.4%	17.9%	16.2%	15.9%	16.3%
EBITDA / Sales	15.1%	23.2%	28.3%	26.0%	35.8%
NOPAT / Sales	9.3%	12.5%	11.3%	11.2%	11.4%
Sales / Total assets	0.22	0.06	0.18	0.25	0.18
Sales / Capital employed	0.34	0.12	0.24	0.31	0.21
Sales / Net PPE	0.60	0.20	0.50	0.65	0.53
Cash / Total assets	3.6%	3.7%	4.8%	5.7%	5.6%
Current assets / current liabilities	0.42	31.43	34.74	17.88	18.99
Total liabilities / equity	0.6	1.5	0.6	0.5	0.4
Depreciation / sales	1.7%	5.3%	12.1%	10.1%	19.6%
Days sales	64	146	198	105	137
Days inventory	22	96	27	37	161
Days payable	512	17	11	10	45
Accounts receivable / Accounts payable	0.15	11.13	22.89	14.13	4.31

Table VI: Some Financial Ratios for Empresas ICA (ICA)

	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	1.7%	3.1%	5.1%	-5.8%	0.8%
ROCE Return on capital employed	1.4%	3.6%	5.7%	-7.3%	2.5%
ROE Return on equity from continuing operations	7.5%	5.9%	-9.5%	-439.8%	-226.3%
EBIT / Sales	3.2%	10.4%	17.1%	-23.6%	10.7%
EBITDA / Sales	5.7%	13.8%	19.8%	-19.3%	15.7%
NOPAT / Sales	2.3%	7.3%	11.9%	-16.5%	7.5%
Sales / Total assets	0.39	0.29	0.31	0.26	0.18
Sales / Capital employed	0.62	0.50	0.48	0.45	0.33
Sales / Net PPE	7.18	5.52	5.81	3.70	3.88
Cash / Total assets	6.2%	5.3%	7.1%	8.5%	7.4%
Current assets / current liabilities	1.19	1.11	1.37	0.56	0.49
Total liabilities / equity	3.8	3.2	4.4	23.2	33.4
Depreciation / sales	2.4%	3.5%	2.8%	4.2%	5.0%
Days sales	156	196	181	172	184
Days inventory	48	46	32	16	48
Days payable	68	99	99	82	116
Account receivables / Account payables	2.65	2.49	2.43	1.84	1.99

Table VII: Some Financial Ratios for Grupo Mexicano de Desarrollo (GMD)

	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	4.0%	5.1%	4.3%	7.2%	8.6%
ROCE Return on capital employed	3.5%	4.5%	3.9%	6.2%	7.1%
ROE Return on equity from continuing operations	3.4%	3.5%	0.6%	4.2%	4.5%
EBIT / Sales	5.7%	13.3%	14.2%	20.4%	21.4%
EBITDA / Sales	14.1%	22.8%	24.7%	26.6%	28.6%
NOPAT / Sales	4.0%	9.3%	9.9%	14.3%	15.0%
Sales / Total assets	0.57	0.34	0.29	0.36	0.40
Sales / Capital employed	0.89	0.49	0.39	0.43	0.47
Sales / Net PPE	5.24	1.49	1.42	1.78	1.97
Cash / Total assets	5.5%	3.7%	4.6%	3.3%	4.0%
Current assets / current liabilities	1.12	0.72	0.91	0.96	1.12
Total liabilities / equity	1.2	1.1	1.4	1.4	1.2
Depreciation / sales	8.4%	9.5%	10.5%	6.2%	7.1%
Days sales	123	106	91	110	94
Days inventory	3	5	7	4	3
Days payable	106	145	96	96	74
Account receivables / Account payables	1.42	0.98	1.38	1.70	1.91

Table VIII: Some Financial Ratios for Impulsora del Desarrollo y el Empleo en América Latina (IDEAL)

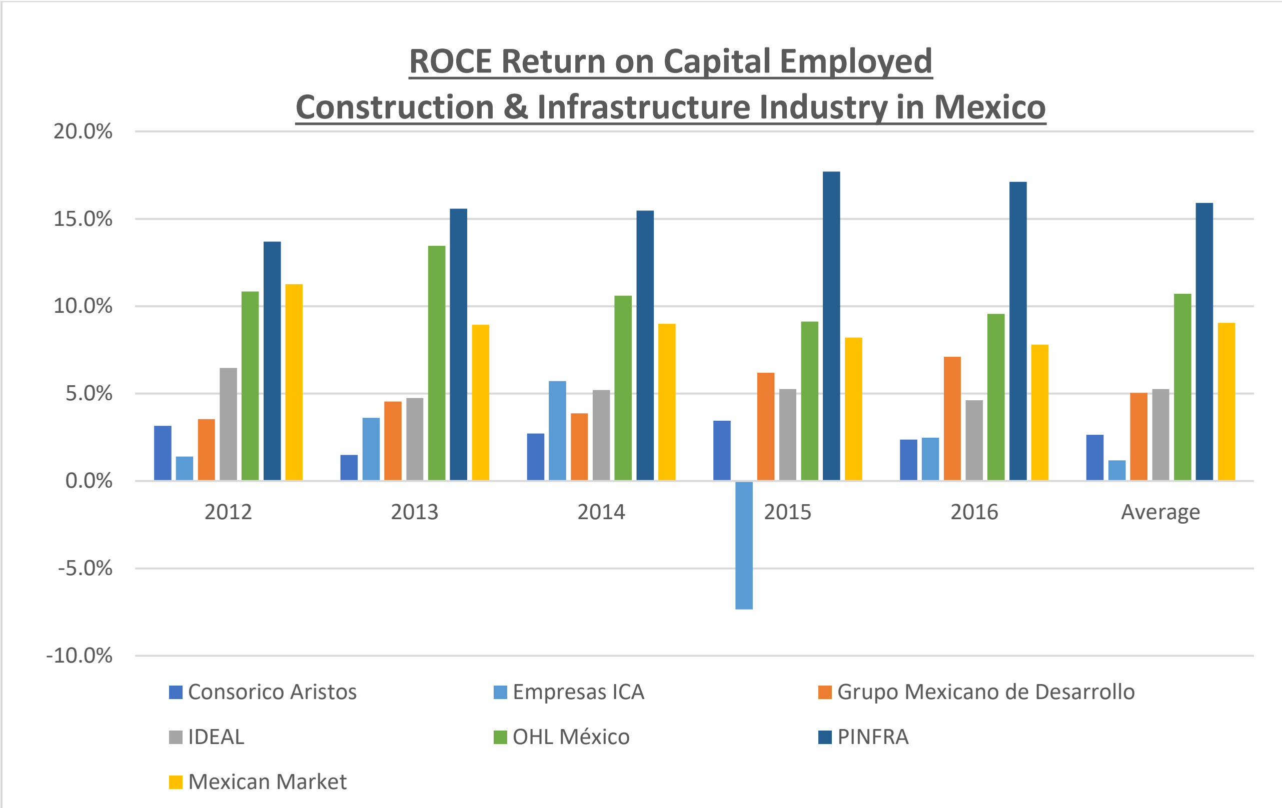
	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	6.7%	5.4%	6.0%	5.9%	5.3%
ROCE Return on capital employed	6.5%	4.8%	5.2%	5.3%	4.6%
ROE Return on equity from continuing operations	3.7%	9.9%	-15.2%	9.3%	64.5%
EBIT / Sales	26.6%	27.3%	34.3%	32.6%	38.4%
EBITDA / Sales	33.6%	37.1%	43.8%	41.5%	49.1%
NOPAT / Sales	18.6%	19.1%	24.0%	22.8%	26.9%
Sales / Total assets	0.25	0.20	0.18	0.19	0.14
Sales / Capital employed	0.35	0.25	0.22	0.23	0.17
Sales / Net PPE	1.58	1.75	1.49	1.59	1.17
Cash / Total assets	12.3%	11.5%	7.0%	7.7%	9.5%
Current assets / current liabilities	0.84	1.23	0.62	0.98	2.80
Total liabilities / equity	5.8	6.9	11.5	12.0	2.8
Depreciation / sales	6.9%	9.8%	9.6%	8.9%	10.7%
Days sales	20	20	32	56	71
Days inventory	0	0	0	0	0
Days payable	65	57	77	91	138
Account receivables / Account payables	0.48	0.57	0.76	1.06	1.03

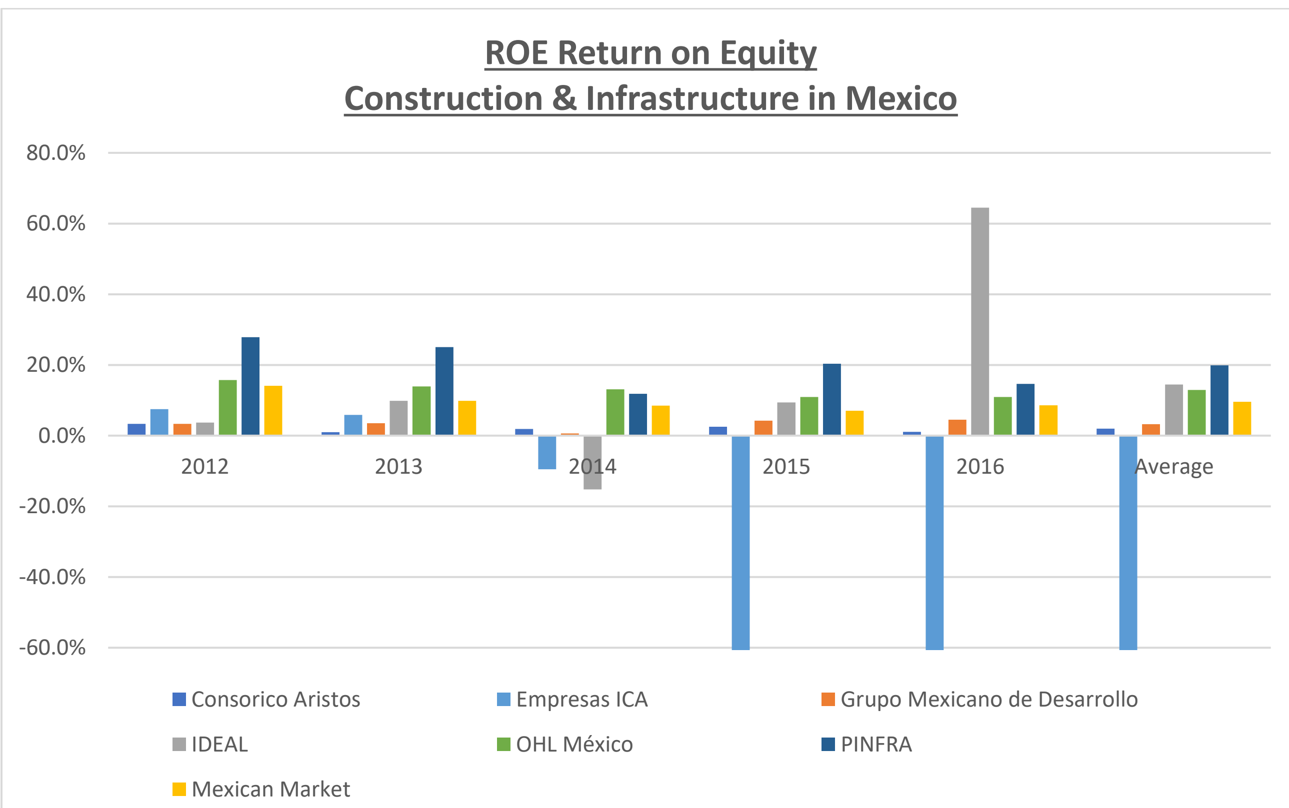
Table IX: Some Financial Ratios for OHL México (OHLMEX)

	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	13.3%	16.2%	12.7%	10.3%	11.2%
ROCE Return on capital employed	10.8%	13.5%	10.6%	9.1%	9.6%
ROE Return on equity from continuing operations	15.7%	13.9%	13.1%	10.9%	10.9%
EBIT / Sales	48.9%	74.5%	78.1%	82.0%	77.5%
EBITDA / Sales	54.3%	78.2%	82.6%	87.2%	77.9%
NOPAT / Sales	34.3%	52.1%	54.7%	57.4%	54.2%
Sales / Total assets	0.27	0.22	0.16	0.13	0.14
Sales / Capital employed	0.32	0.26	0.19	0.16	0.18
Sales / Net PPE	365.15	437.60	469.75	543.39	609.65
Cash / Total assets	1.7%	4.0%	2.9%	5.8%	2.5%
Current assets / current liabilities	0.62	2.17	0.41	1.91	1.40
Total liabilities / equity	1.2	0.9	0.9	0.7	0.7
Depreciation / sales	5.4%	3.7%	4.5%	5.2%	0.4%
Days sales	0	0	0	0	0
Days inventory	0	0	0	0	0
Days payable	23	49	84	135	119
Account receivables / Account payables	0.00	0.00	0.00	0.00	0.00

Table X: Some Financial Ratios for Promotora y Operadora de Infraestructura (PINFRA)

	2012 Dec 2012	2013 Dec 2013	2014 Dec 2014	2015 Dec 2015	2016 Dec 2016
ROI Return on investment	16.7%	18.0%	14.1%	15.7%	14.6%
ROCE Return on capital employed	13.7%	15.6%	15.5%	17.7%	17.1%
ROE Return on equity from continuing operations	27.8%	25.1%	11.8%	20.3%	14.6%
EBIT / Sales	60.2%	56.5%	53.4%	46.8%	54.5%
EBITDA / Sales	66.9%	62.4%	57.6%	49.5%	58.1%
NOPAT / Sales	42.2%	39.5%	37.4%	32.8%	38.2%
Sales / Total assets	0.28	0.31	0.25	0.33	0.26
Sales / Capital employed	0.33	0.39	0.41	0.54	0.45
Sales / Net PPE	7.73	10.09	10.16	12.59	10.49
Cash / Total assets	11.0%	16.5%	34.7%	30.4%	36.4%
Current assets / current liabilities	1.99	2.30	7.15	3.48	6.55
Total liabilities / equity	1.5	1.1	0.4	0.4	0.2
Depreciation / sales	6.6%	5.9%	4.2%	2.7%	3.5%
Days sales	65	22	14	13	51
Days inventory	17	12	11	6	8
Days payable	12	10	11	9	20
Account receivables / Account payables	13.52	4.96	2.71	2.78	5.70


ROCE Return on Capital Employed
Construction & Infrastructure Industry in Mexico
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
2012
2013
2014
2015
2016
Average
Consorico Aristos
Empresas ICA
Grupo Mexicano de Desarrollo
IDEAL
OHL México
PINFRA
Mexican Market


ROE Return on Equity
Construction & Infrastructure in Mexico
80.0%
60.0%
40.0%
20.0%
0.0%
-20.0%
-40.0%
-60.0%
2012
2013
2014
2015
2016
Average
Consorico Aristos
Empresas ICA
Grupo Mexicano de Desarrollo
IDEAL
OHL México
PINFRA
Mexican Market

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About Alberto Calva. His expertise field is finance and economy. He has been a business consultant for more than 20 years. He has given seminars and workshops in 8 different countries having trained with this around 10,000 executives and entrepreneurs from 20 different countries. He has a unique mix of academic, practical, entrepreneurial, hands on experience and board member background. He holds a Bachelor degree of Industrial Engineering, a Master degree of Economics and an MBA with a major of Finance.

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