

# **Assessment of Losses of Omega Engineering LLC and Mr. Oscar Rivera's Investments in Panama**

**ICSID CASE No. ARB/16/42**

## **Supplemental Report**

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## I. EXECUTIVE SUMMARY

1. We have been asked by Jones Day and Shook, Hardy & Bacon (jointly referred to as “**Counsel**”), counsel to Omega Engineering LLC (“**Omega U.S.**”) and Mr. Oscar Rivera (jointly referred to as “**Claimants**”), to provide our independent and objective opinion on the analysis and conclusions reached by Republic of Panama’s (“**RoP**”) expert witness Dr. Daniel Flores in his expert report dated January 7, 2019 (hereafter “**Flores Report**”), and to update our damage assessment presented in our expert report of June 25, 2018 (“**CL First Report**”).
  
2. In the CL First Report we assessed the losses suffered by Claimants as a result of certain actions (referred to as the “**Measures**”) implemented by RoP. We concluded that such losses amount to US\$ [REDACTED] as of December 23, 2014 (the “**Date of Valuation**”). This amount had two components:
  - a. Losses on existing contracts estimated at US\$ [REDACTED] as of December 23, 2014. These losses relate to unpaid billings and future payments that Omega Engineering Inc. (“**Omega Panama**”) and Omega U.S. (together the “**Omega Consortium**”) would have collected (but it will not) on eight contracts that were awarded by the Republic of Panama between 2010 and 2013.
  
  - b. Losses on new contracts estimated at US\$ [REDACTED] as of December 23, 2014. These losses relate to Omega Panama’s capacity to generate new contracts, based on the historical performance of the company, as well as on the observed and expected evolution of public sector investment in infrastructure in Panama.
  
3. In relation to the existing contracts, Dr. Flores accepts that Claimants have suffered losses on existing contracts, which he valued at US\$ [REDACTED] as of December 2014, lower than the US\$ [REDACTED] we estimated. We find that the corrections he proposes have no basis:

- a. Omega Panama received advance payments in relation to the outstanding construction projects. Dr. Flores argues that the financial benefit that Omega Panama would have accrued from those advance payments should not be accounted for. As such, Dr. Flores deducts the nominal amount of advance payments at the Date of Valuation instead of valuing them as of the date those payments were going to be credited against Omega Panama's future invoices. In that way, Dr. Flores applies a zero-financing cost on advance payments, ignoring the opportunity cost faced by Claimants. We value such advance payments as contemporary deductions to the payments due to Omega Panama.
  - b. Similarly, Dr. Flores ignores that unpaid invoices as of the Date of Valuation had imposed a financial burden on Claimants which ought to be compensated. As such, it is improper to consider unpaid balances at face value as Dr. Flores suggests, without accounting for the opportunity cost of such funds until the Date of Valuation.
  - c. Dr. Flores and we agree that future payments to Omega Panama should be valued as of the Date of Valuation by discounting such payments at a rate consistent with the cost of equity (“**CoE**”) of a construction company in Panama. Dr. Flores estimates such discount rate in the range between 18.4% and 23.3% by overstating the Country Risk Premium (“**CRP**”) and by duplicating it with the inclusion of a US-based size premium. We estimate a discount rate of 11.65%, properly reflecting the financing costs and profitability expected from a construction company in Panama.
4. In relation to new contracts, Dr. Flores first appears to disregard the existence of losses arguing that no buyer would be willing to pay any amount to acquire a company like Omega Panama, claiming that the value of Claimants' interest in Omega Panama was zero as of the Date of Valuation.
  5. According to his opinion, Omega Panama had no significant tangible or intangible assets (*i.e.*, brand value, business connections, etc.), and lacked any discernable competitive

advantage. Dr. Flores' argument is, however, contradicted by his own assessment of the losses on existing contracts. It is uncontested that Omega Panama was able to win 10 competitive public works bids in the five years leading to the Date of Valuation and that these contracts resulted in significant value, at least US\$ [REDACTED] according to Dr. Flores. As such, it is not credible to assert that Omega Panama's proved capacity to generate valuable businesses would just disappear as of the Date of Valuation.

6. Dr. Flores then argues that if a hypothetical buyer would ascribe any economic value to Omega Panama, such value would have been no higher than US\$ [REDACTED] as of December 2014, much lower than our US\$ [REDACTED] assessment. Specifically, Dr. Flores argues that:

- a. While we compute the value of Omega Panama into perpetuity, Dr. Flores claims that a willing buyer would not ascribe any value to cash flows since 2020. He argues that this is because a new entrant could reach Omega Panama's projected cash flows by 2020, and therefore generate such cash flows on its own from that point forward. The argument is misguided for two reasons:
  - i. First, Dr. Flores fails to account for the difficulty in replicating Omega Panama's business, which would require several years in order to build the financial and technical backing required to win competitive bids. In fact, we show that a new company with no financial backing or expertise will not be able to win any competitive bid, even if it would offer the lowest price possible.
  - ii. Second, and more fundamentally, Dr. Flores admits his valuation only looks at a willing buyer, ignoring the willing seller's perspective. In order to assess the losses suffered by Claimants, Dr. Flores should have performed a Fair Market Value ("FMV") assessment of their interest in Omega Panama. Such FMV valuation consists in determining the value at which a "willing buyer"

and a “willing seller” would have agreed to enter into a voluntary transaction under normal market conditions. Dr. Flores however only takes account of the “willing buyer” perspective in his valuation. Dr. Flores ignores that, since the Measures, Claimants have been deprived of their ability to continue participating in the construction business in Panama, therefore loosing such value in perpetuity. The FMV standard, through the willing seller definition, requires compensation to be set at a level in which Claimants would have willingly relinquished all their future Panamanian business possibilities.

- b. Dr. Flores claims that our DCF’s assumptions are wrong. In particular, he incorrectly tries to modify four assumptions in our assessment: i) he reduces government capital expenditures below recent historical levels; ii) he manipulates the data to purport that winning 10 out of 42 bids is equivalent to a success rate of just 9.4% (equivalent to winning 4 out of 42 bids); iii) he diminishes Omega Panama’s profitability targets by ignoring the project costs estimates and the available evidence of profits in the construction sector; and iv) he, as explained, overstates CRP and includes a duplicative size premium.
7. Additionally, Dr. Flores claims that the interest rate applicable to an award of damages should be based on a risk-free rate, as the use of a financing cost rate such as the CoE we propose would compensate Claimants for risks they did not bear. We disagree with Dr. Flores’ opinion. The use of a short-term risk-free rate does not fully compensate Claimants for the losses they suffered as a result of the Measures, since the cost to Claimants of the deprivation of funds imposed by the Measures is higher than a risk-free rate. In that sense, the CoE is a reasonable commercial rate for equity funding of Omega Panama’s business.
8. Finally, we update our calculation of damages to Claimants as of May 15, 2019. For that purpose, [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Table I below summarizes our updated damages owed to Claimants.

**Table I. Summary of Losses as of May 15, 2019 (in US\$ million)**

Summary of Losses			
	As of December 23 2014 [a]	Update Factor [b]	As of May 15 2019 [a] x [b]
Total Losses (US\$ million)	51.22	1.62	83.13

Source: Compass Lexecon based on CL Revised Valuation Model (CLEX-32). See Figures and Tables (CLEX-33).

9. In Section II, we explain why Dr. Flores' corrections to the valuation on existing contracts are inappropriate. In Section III, we explain the conceptual deficiencies of Dr. Flores' approach to assess the value of new contracts. In Section IV, we discuss Dr. Flores' criticism of our DCF assessment. In Section V, we update our damages estimate as of May 15, 2019.

## II. LOSSES RELATED TO EXISTING CONTRACTS

10. In our CL First Report, we estimated damages related to the interruption of the existing contracts of Omega Panama at US\$ [REDACTED] as of December 23, 2014.<sup>1</sup> Dr. Flores' estimate of damages generally follows the same methodology we proposed but arrives at a value 18.4% lower, at US\$ [REDACTED].<sup>2</sup>
11. Dr. Flores claims that the following corrections should be applied to our estimation:
  - a. Advance payments to Omega Panama should be accounted for at their full nominal value as of December 2014, instead of being discounted, because they occurred prior to the Date of Valuation and therefore they were not subject to business risks.<sup>3</sup>
  - b. Future payments to Omega Panama should be valued using a discount at a rate consistent with the risks faced by a construction company in Panama such as Omega Panama, which he estimated to be between 18.4% and 23.3%, and not the 11.65% rate as used in our assessment.<sup>4</sup>
  - c. Unpaid progress billing to Omega Panama should be valued as of December 2014 using a risk-free interest rate, as the use of a cost of equity rate (as we did) would compensate Claimants for risks to which they were not exposed.<sup>5</sup>
12. Table II below compares our estimate and Dr. Flores' proposed corrections.

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<sup>1</sup> See CL First Report, Table I.

<sup>2</sup> This figure is obtained as follows: [REDACTED] See Flores Report, Figure 1. See also, Expert Witness Statement of Mr. Greg McKinnon ("McKinnon Report"), dated June 25, 2018. In addition, Dr. Flores accepted the information provided in the McKinnon Report as the basis for his calculation, which is the same source we were instructed to consider. We note that we have reviewed Dr. Flores' Appendix B questioning some evidentiary issues in the McKinnon Report which we understand are being explained in the second McKinnon Report and do not require any changes in the estimates we were instructed to consider.

<sup>3</sup> See Flores Report, ¶¶ 98-99.

<sup>4</sup> See Flores Report, ¶ 100. See also, CL First Report, ¶ 106.

<sup>5</sup> See Flores Report, ¶ 101 and ¶ 112.

**Table II. Claimants' Losses on Existing Contracts as of December 23, 2014  
(in US\$ million)**

10. The following table summarizes the results of the study. The first column lists the variables, the second column lists the estimated coefficients, and the third column lists the standard errors.

Source: *Compass Lexecon* based on *CL First Report* and *Flores Report*. See Figures and Tables (CLEX-33).

## II.1 DR. FLORES' ANALYSIS IS CONCEPTUALLY FLAWED

13. Dr. Flores' criticism is flawed because it is rooted in an improper consideration of the financial costs integral to Omega Panama's operations.
  14. The financing cost of Omega Panama is represented by the CoE, which is the financing cost economically linked to Claimants' investment, and thus should be applied to all financing considerations, both when they increase the amount of harm suffered by Claimants and when they reduce it. Given that the market-based financing cost of being deprived of US\$ 1 for a year is at a minimum commensurate to the financing gain of receiving US\$ 1 one year in advance, the same rate should be used to discount and update past and future cash flow deprivations.
  15. Dr. Flores appears to agree with this premise (albeit calculating an excessive CoE),<sup>6</sup> but applies the concept in a selective fashion and only to future profits. In particular, Dr. Flores' approach is contradictory as it:
    - a. Correctly discounts the value of future payments from Panama using a CoE, but he overestimates that rate (see Section II.2).<sup>7</sup>

<sup>6</sup> See Flores Report, ¶ 83.

<sup>7</sup> See Flores Report, ¶ 100. See also, Flores' Valuation Model (QE-0002).

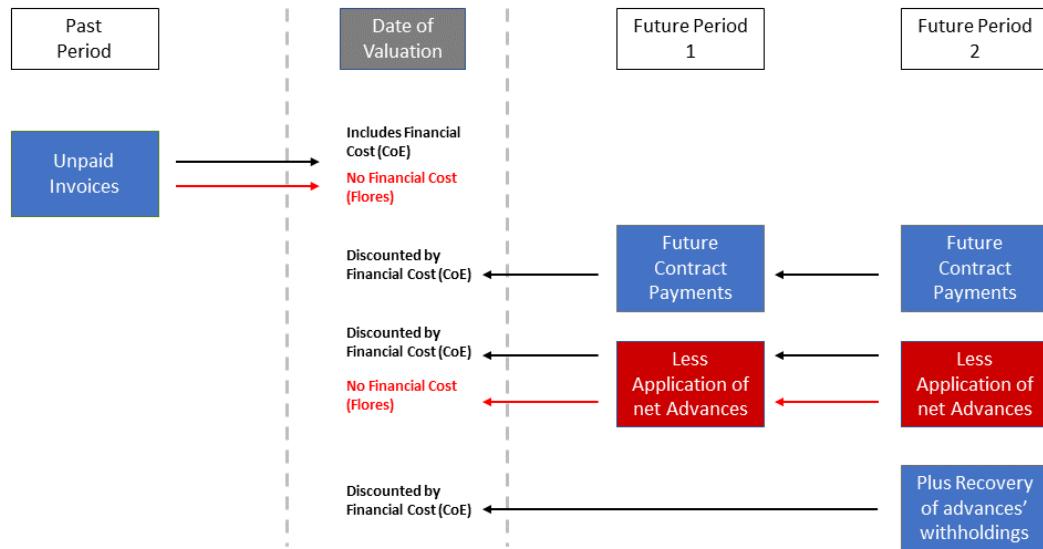
- b. Assumes that advance payments to Omega Panama that were going to be credited against those future payments should be accounted for at their nominal value as of December 2014. This ignores that according to the advance payment mechanism, the balances advanced were to be used to finance the work completion and were therefore not due for repayment as of the Date of Valuation.<sup>8</sup> Consequently, advance payments are not different from any other future cash-flows which need to be affected by the time value of money for valuation purposes.
  - c. Considers the past due invoices payable to Omega Panama at their nominal value, without applying any type of update factor that recognizes the time value of money. Therefore, Flores' approach implicitly assumes that Omega Panama suffered no harm, or finance cost, due to the delay in payment.<sup>9</sup>
16. Figure I shows a schematic of but-for stream of cash flows to which Omega Panama was entitled and the financial costs we and Dr. Flores apply. In particular, it shows that the unpaid billings need to be updated to the Date of Valuation while the future contract payments netted of advance payments need to be discounted.

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<sup>8</sup> See Flores Report, ¶ 98.

<sup>9</sup> See Flores Report, ¶ 101.

**Figure I. Financing Costs affecting the Valuation of Existing Contracts' Damages**



*Source: Compass Lexecon based on CL First Report and Flores Report. See Figures and Tables (CLEX-33).*

17. As shown in Figure I, our method is consistent and treats all cash flows alike, applying the same financing cost to all components of the existing contracts. Contrary, Dr. Flores' methodology ignores the financing costs in the two instances when those accrue additional damages to Claimants while he applies his overestimated CoE to the future contract payments.
18. We explain below the flaws in Dr. Flores' CoE estimate and the rationale for applying financing costs to the advance payments and unpaid billings.

## II.2 DR. FLORES' COST OF EQUITY IS OVERSTATED

19. In our CL First Report, we estimate the cost of equity of Omega Panama at 11.65% using a “building blocks” structure that includes the following financial cost components:

- a. The risk-free rate, which acts as a risk-less baseline for financing costs. We assume a value of 2.54% based on the average yield of 10-year Treasury bonds for 2014.<sup>10</sup>
  - b. The US-based industry risk, which is measured as the product of the industry-specific beta and the Market Risk Premium, reflecting industry risk. We estimate an industry risk of 7.23%, which results from the product of the industry beta of 1.25 and a Market Risk Premium of 5.78% based on Prof. Damodaran.<sup>11</sup>
  - c. The Country Risk Premium, which accounts for the incremental risk to which Omega Panama is subjected for being located in Panama as opposed to the U.S. We assume a value of 1.89% based on average Emerging Markets Bond Index (“EMBI”) spread for 2014.<sup>12</sup>
20. While Dr. Flores reaches a very similar estimate for the risk-free rate, he claims that the other two components were underestimated, and that a fourth component should be added to the computation (a size premium, which is duplicative of the Country Risk Premium). The Figure II below compares Dr. Flores’ estimates with ours. We explain below the reasons why Dr. Flores’ criticisms are flawed.

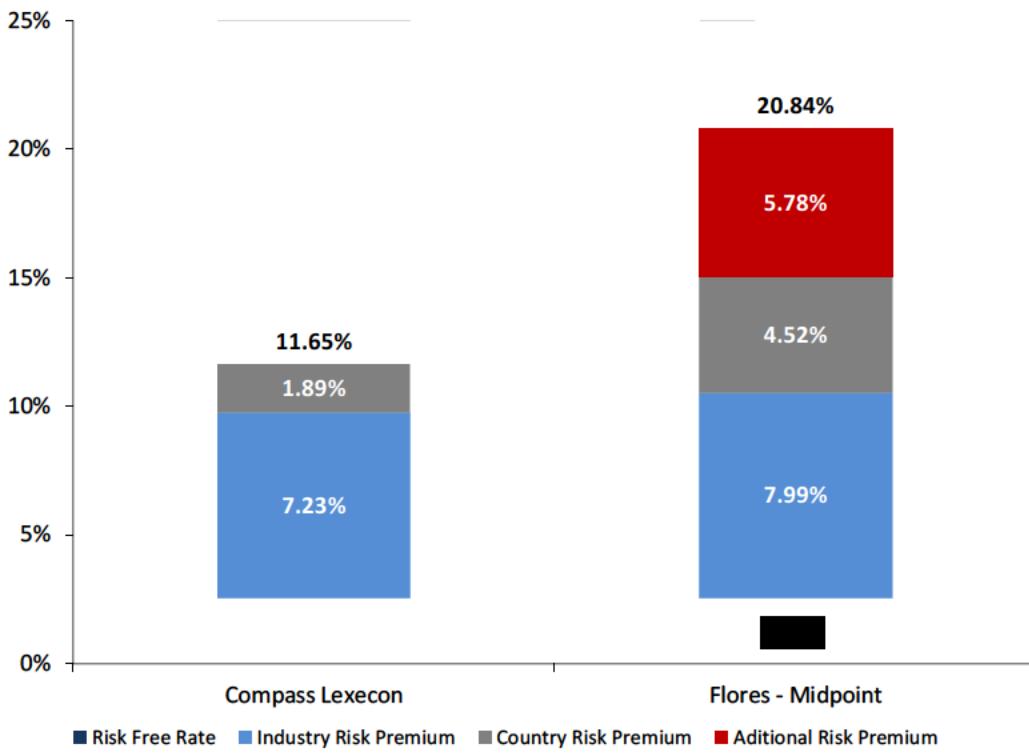
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<sup>10</sup> See CL First Report, ¶ 122.

<sup>11</sup> This figure is obtained as follows:  $5.78\% \times 1.25 = 7.23\%$ . See CL First Report, Table XVIII.

<sup>12</sup> This traditional index measures the spread between sovereign securities of developing countries, in this case, Panama, as compared to United States securities with the same maturity. See CL First Report, ¶¶ 135-136.

**Figure II. Comparison of Cost of Equity estimations**



Source: Compass Lexecon based on CL First Report and Flores Report. See Figures and Tables (CLEX-33).

### II.2.1 Market Risk Premium

21. Dr. Flores assumes a U.S. general Market Risk Premium (“MRP”)<sup>13</sup> of 6.39%, which he computes as the average between Prof. Damodaran’s estimate, which we use (5.78%), and the highest rate reported by a Duff and Phelps report (7.0%).<sup>14</sup>

<sup>13</sup> The market risk premium represents the additional return over the risk-free rate that an investor expects from holding a market portfolio of riskier securities. See CL First Report, ¶ 123.

<sup>14</sup> Furthermore, the 7% rate is affected by data distortions due to WWII as discussed by Duff and Phelps and, as an arithmetic average of historical data, it is not proper for the valuation of multi-period cash-flows like the ones we are dealing with as recommended by Prof. Damodaran. See Flores Report, Figure 14. See also, Duff & Phelps. 2015. *2015 Valuation Handbook, Guide to Cost of Capital*. John Wiley & Sons, Inc., pp. 3-24 and 3-25 (QE-0035). See also, Damodaran, Aswath. 2014. “Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2014 Edition” Stern School of Business, p. 27 (QE-0049).

22. Dr. Flores, however, misinterpreted the Duff and Phelps report. The report reviewed several approaches to calculating the MRP and concluded with a recommendation of 5.0%,<sup>15</sup> which is lower than Prof. Damodaran's estimate of 5.78% that we have used.
23. More precisely, the Duff and Phelps report states that the recommended approach to assess the MRP is to look at the conditional approach,<sup>16</sup> which is sensitive to current economic conditions, rather than the use of the long-term historical MRP approach (*i.e.*, the 7.0% Dr. Flores takes).
24. In other words, Dr. Flores is incorrectly taking the upper bound of Duff and Phelps unconditional range, instead of their “conditional” recommendation.<sup>17</sup> Had Dr. Flores properly applied Duff and Phelps analysis to the MRP, he should have arrived at a value even lower than Prof. Damodaran's estimate (*i.e.*, Duff and Phelps' 5.0%), thus implying that Dr. Flores' industry risk premium is not supported by his evidence.

## II.2.2              Country Risk Premium

25. Dr. Flores suggests a measure of Country Risk Premium of 4.52%, which is the hybrid of two approaches: i) the use of 1.5x multiplier factor to the sovereign debt spread (*i.e.*, the average spread of sovereign Panamanian bonds over U.S. sovereign bonds); and ii) a Country Risk Premium estimate based on the substandard Country Risk Premium model.<sup>18</sup> Both approaches, however, suffer from several flaws, and should be disregarded.

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<sup>15</sup> See Duff & Phelps. 2015. *2015 Valuation Handbook, Guide to Cost of Capital*. John Wiley & Sons, Inc., p. 3-35 (QE-0035).

<sup>16</sup> See Duff & Phelps. 2015. *2015 Valuation Handbook, Guide to Cost of Capital*. John Wiley & Sons, Inc., p. 3-30 (QE-0035).

<sup>17</sup> Alternatively, Dr. Flores could have averaged the minimum and maximum values reviewed by Duff and Phelps, which would have also resulted in an MRP lower than Damodaran's at 4.87% (average of 3.48% and 6.25%). See Duff & Phelps. 2015. *2015 Valuation Handbook, Guide to Cost of Capital*. John Wiley & Sons, Inc., p. 3-32 (QE-0035).

<sup>18</sup> See Flores Report, ¶ 135 and ¶ 141. Dr. Flores arrives to 4.52% by averaging 2.84% and 6.2%.

26. First, the use of Prof. Damodaran's 1.5x multiplier to the sovereign debt spread as proposed by Dr. Flores presents several inconsistencies and again fails to reflect the recommendations of the author. The sovereign debt spread approach (without the use of any type of multiplier) is the most widely used measure of Country Risk Premium.<sup>19</sup> Prof. Damodaran argues that, if a multiplier is used, it should be applied when measuring Country Risk Premium on short term investments, and not to long term instruments as those used to compute the sovereign debt spread.<sup>20</sup> More importantly, Dr. Flores is inconsistent with Prof. Damodaran's own assessment of Country Risk Premium for Panama in 2014. As it can be seen in Appendix 4 and Appendix 5 to QE-0049, Prof. Damodaran finds that equity market volatility in Panama is quite low vis-à-vis sovereign debt volatility, which would imply negative measures of Country Risk Premium for Panama when this "multiplier" factor is applied specifically for Panama (negative 2.17% Country Risk Premium).<sup>21</sup> We can therefore conclude that the multiplier method as presented by Prof. Damodaran for Panama is inapplicable to the case at hand.
27. Second, the Country Risk rating model is a survey approach whose drawbacks are widely recognized among experts. The method is based on the subjective assessment of 100 bankers and an arbitrary weighting by the publication *Institutional Investor* of those ratings, which are ultimately used as inputs in a very deficient econometric model. The shortcomings of this approach are numerous including the fact that: i) there is no transparency in how the individual Institutional Investor survey participants arrive at their ratings; ii) this model lacks statistical or econometric explanatory value; iii) the method of statistical analysis utilized by Duff and Phelps is substandard; and iv) the stability of the

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<sup>19</sup> The EMBI is the most widely used and comprehensive emerging market sovereign debt benchmark. It is an indicator for external debt instruments in emerging markets, which includes instruments such as Brady Bonds, loans and Eurobonds issued by sovereign entities and sub-sovereign entities with balance pending payment exceeding US\$ 500 million. See Financial Times, Definition of EMBI (CLEX-30).

<sup>20</sup> Furthermore, note that when reporting the EMBI spread, Duff and Phelps, which is Dr. Flores' preferred source for CoE inputs, omits the multiplier. See Duff & Phelps. 2015. 2015 International Valuation Handbook, Guide to Cost of Capital. John Wiley & Sons, Inc. (QE-0050).

<sup>21</sup> See Damodaran, Aswath. 2014. "Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2014 Edition" Stern School of Business, Appendix 4 and Appendix 5 (QE-0049).

method is not a desirable characteristic. See Appendix B for a technical explanation of the flaws in this methodology.

### **II.2.3 Additional Risk Premium**

28. Dr. Flores argues that an Additional Risk Premium should be included in the CoE estimation because:
  - a. Omega Panama is a small company vis-à-vis the companies used to calculate the standard Capital Asset Pricing Model (“**CAPM**”) cost of equity.<sup>22</sup>
  - b. Omega Panama is not a traded company and thus requires an illiquidity premium,<sup>23</sup> and investors face financing constraints.<sup>24</sup>
  - c. Omega Panama is not a diversified company.<sup>25</sup>
29. Dr. Flores purports that all these factors can be approximated by a single empirical measure called the size premium based on a measure of incremental returns by small companies vis-à-vis U.S. large companies (which is in fact linked only to the first of his three reasons above). As a result, he adds a 5.78% premium to the CoE computation. Dr. Flores argument is, however, flawed for the following reasons:<sup>26</sup>
  - a. It is not proper to compare the relative size of Omega Panama vis-à-vis U.S. companies. This factor is already included in Country Risk Premium, which accounts for, among others, the fact that Panama’s economy is smaller than the U.S. If a size premium were to be applied with reference to U.S. companies, we would be double

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<sup>22</sup> The CAPM postulates that the opportunity cost of equity is equal to the return on risk-free securities plus the beta, which represents a company’s systematic risk, multiplied by the market price of risk. *See CL First Report, ¶ 116.* *See also,* Flores Report, ¶ 124.

<sup>23</sup> *See Flores Report, ¶ 125.*

<sup>24</sup> *See Flores Report, ¶ 127.*

<sup>25</sup> *See Flores Report, ¶ 126.*

<sup>26</sup> *See Appendix B.*

counting Country Risk Premium and ignoring the relative position of the company in the market in which it operates.<sup>27</sup>

- b. It is not appropriate to consider an illiquidity discount (or financing constraints) given that Claimants were not under pressure to sell and would have only divested if compensated for the value they could derive from the company. In other words, illiquidity is inconsistent with the FMV principle.
- c. The CAPM does not reduce the discount rates by assuming that specific projects are diversified. In fact, the CAPM says nothing about the diversification of the companies but about the diversification of the investors, making Dr. Flores' criticism inapplicable.<sup>28</sup>

### **II.3 ADVANCE PAYMENTS SHOULD BE CREDITED AGAINST FUTURE PAYMENTS**

- 30. The advance payments were payments made to Omega Panama at the beginning of each project. These payments would have been allocated to and credited against Omega Panama's future invoices until completion of each project. In other words, the advance payments are cash flows that Omega Panama had received in advance as part of the completion of the existing contracts. A portion of the amounts advanced was retained by the contracting entities until the end of each contract, thus reducing the amount of the advance.
- 31. Based on Mr. McKinnon's Report, the nominal balance of net advance payments (advance payments net of retentions) amounted to US\$ [REDACTED] as of the Date of Valuation.<sup>29</sup>
- 32. In order to assess the value of such net advance payments as of December 2014, we have considered how these amounts would have been allocated to and credited against Omega

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<sup>27</sup> In fact, the Panamanian economy is 0.3% of the U.S. economy. Hence, large companies in Panama should, on average, have a value that is 0.3% of their U.S. counterparts. See IMF. GDP of Panama and USA (CLEX-34).

<sup>28</sup> See Brealey, R., Myers, S. and Allen, F. 2014. Principles of Corporate Finance. 11th Ed. New York: McGraw-Hill, Ch. 8, p. 199 (CLEX-35).

<sup>29</sup> See CL First Report ¶¶ 81-82.

Panama's future invoices until the completion of each project. For that purpose, we discount the allocation of such advance payments in the future against the scheduled payments for each contract. As a result, the deduction of the advance payments is spread out along time (much like the balance outstanding of each contract is). Hence, in the same fashion that the value outstanding for each contract is lower than the nominal value (as it is discounted at the 11.65% CoE), the reduction in those payments through the advance payments application should also be discounted. As a result, we estimate a value of US\$ [REDACTED] as of December 2014.<sup>30</sup>

33. In his assessment, Dr. Flores claims that the advance payments should be taken at a higher value of US\$ [REDACTED] as of the Date of Valuation.<sup>31</sup> Dr. Flores' proposition is contradictory because, as explained, advance payments should be treated in the same fashion as payments due, given that the former are meant to be credited towards the latter.
34. Furthermore, Dr. Flores compounds his mistake by considering that the portion of the advance payments that is retained by each contracting company should be discounted to the Date of Valuation. As a result, Dr. Flores ends up treating the advance payments at face value when considering them as deductions to Omega Panama's payments but discounting them when those add to Omega Panama's payments. This inconsistent approach explains why despite the nominal value of advance payments being US\$ [REDACTED], Dr. Flores reduces a higher amount, US\$ [REDACTED], from its calculations.
35. In conclusion, advance payments need to be considered as *pari passu* deductions to payments due to Claimants and, as such, should be affected in the same fashion by the time value of money adjustments.<sup>32</sup>

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<sup>30</sup> See CL First Report, Table XII.

<sup>31</sup> See Flores Report, ¶ 99. See also, Flores' Valuation Model (QE-0002), sheet "III. Advance Balance", cell H39.

<sup>32</sup> See CL First Report, ¶ 58.

#### **II.4 UNPAID BILLINGS SHOULD BE UPDATED USING THE COST OF EQUITY**

36. The unpaid progress billings represent contractual payments owed to Omega Panama (amounting to US\$ [REDACTED]) and past due as of December 2014.<sup>33</sup> Dr. Flores takes the nominal value of the unpaid billings, without applying any type of update factor that even recognizes the time value of money.
37. In other words, he applies a zero-interest rate to such unpaid billings, ignoring the financial losses suffered by Claimants. But this is again inconsistent, as all businesses incur in financing costs and a delay in receiving cash flows increases their financial burden.
38. In order to calculate the losses suffered by Claimants as of December 2014, these unpaid amounts have to be adjusted to reflect the financial cost to Omega Panama of the delayed collection. This financing or opportunity cost is the cost of financing Omega Panama's operations which is Omega Panama's CoE (11.65%). The value of outstanding unpaid billings when accounting for these financial costs is US\$ [REDACTED] as of December 2014.<sup>34</sup>
39. In conclusion, Dr. Flores underestimates the damages due to existing contracts by using an inconsistent methodology and applying an overstated cost of equity. Contrary, we estimated a cost of equity that correctly reflects the financing costs faced by Omega Panama and we applied it consistently to all financial cost considerations.

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<sup>33</sup> See CL First Report, Table X.

<sup>34</sup> See CL First Report, Table X.

### **III. LOSSES RELATED TO NEW CONTRACTS**

40. Dr. Flores states that Claimants have not suffered any loss on new contracts, as he argues that the value of Omega Panama for a willing buyer was zero as of the Date of Valuation.<sup>35</sup> According to Dr. Flores' opinion this is because:
  - a. The company had no significant tangible or intangible (*e.g.*, brand value, track record, special rights) assets, and lacked any discernable competitive advantage.<sup>36</sup>
  - b. Having a business license and the necessary permits to bid on contracts through PanamaCompra is relatively easy to accomplish, and therefore it is not a source of value.<sup>37</sup>
41. Dr. Flores claims that if a hypothetical buyer would ascribe any economic value to Omega Panama, such value would be only related to the generation of cash flows until 2020. This is because a new entrant could (in his opinion) match Omega Panama's projected cash flows by 2020, and therefore generate such cash flows on its own from that point forward.<sup>38</sup>
42. We find that Dr. Flores' arguments are flawed for several reasons, which we elaborate in the following subsections.
43. First, the allegation that Claimants' interest in Omega Panama was worthless as of the Date of Valuation is inconsistent with the FMV principle that should be applied to valuing the losses suffered by Claimants in the case at hand. While Dr. Flores performs his analysis from a "willing buyer" perspective, he omits to consider the "willing seller" perspective, namely that Claimants would not have sold their interest in Omega Panama for zero as of

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<sup>35</sup> See Flores Report, ¶ 92.

<sup>36</sup> See Flores Report, ¶ 8 and ¶ 23.

<sup>37</sup> See Flores Report, ¶ 21.

<sup>38</sup> See Flores Report, ¶ 50.

- December 2014. In fact, the value of Claimants' interest from a willing buyer/willing seller perspective was valued at several millions as we explain in this report.<sup>39</sup>
44. Second, the evidence shows that Omega Panama had a track record, as well as competitive advantages, that would have allowed it to continue to win public sector contracts in Panama beyond 2014 in the absence of the Measures. In fact, during its participation in the Panamanian market for public works, Omega Panama competed in █ bids for public infrastructure tenders, winning 10 of them.<sup>40</sup> Moreover, Omega Panama showed competitive advantages due to its financial capacity, bonding capacity, and experience in construction works.<sup>41</sup> As a consequence, and contrary to Dr. Flores' opinions, the operation and performance of Omega Panama cannot be easily replicated by a new entrant.
45. Third, there is no economic basis to argue that the value of Omega Panama should be restricted to its generation of cash flows until 2020.

### **III.1 DR. FLORES' ANALYSIS CONTRADICTS THE PRINCIPLE OF FULL COMPENSATION**

46. In his analysis, Dr. Flores argues that Claimants' ability to generate new businesses is easily replicable, and therefore no willing buyer would pay to acquire such ability. This approach, however, dismisses the relevance of a willing seller which central to a FMV standard for a hypothetical transaction.
47. FMV is defined by The World Bank (1992) as follows:

*“...an amount that a willing buyer would normally pay to a willing seller after taking into account the nature of the investment, the circumstances in which it would operate in the future and its specific characteristics, including the period in which it has been*

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<sup>39</sup> See Section V.

<sup>40</sup> Note that the contract won and completed by PR Solutions (Tocumen International Airport) is not counted here.

<sup>41</sup> See Section II.2 for an empirical analysis of Omega Panama's public works bidding performance. We understand Claimants have provided together with their witness statements, copies of the actual documents supporting the bid tenders including project references from former clients, financial references from banks and insurers and bonding capacity (for providing guarantees).

*in existence, the proportion of tangible assets in the total investment and other relevant factors pertinent to the specific circumstances of each case.”<sup>42</sup> [emphasis ours]*

48. This has been clearly explained by Lieblich:<sup>43</sup>

*“...the buyer must believe that he is paying no more than the asset is worth to him, while the seller must believe that he is receiving no less than the asset is worth to him. This means that the buyer must place either the same or a higher value on the asset than does the seller.”*

49. The FMV standard’s main purpose is to emulate the price at which a “willing buyer” would have agreed to buy Omega Panama and the price that the “willing seller” would have voluntarily agreed to sell it for.
50. Dr. Flores’ approach, however, contradicts this definition because it assumes that, absent the Measures, there can be a hypothetical transaction between a buyer and Claimants where, under no compulsion to sell, Claimants would assign zero value to their company.<sup>44</sup>
51. This approach does not recognize that Claimants, as a “willing seller”, would have assigned a positive value (of several millions) to their interest in Omega Panama. This is correct given Omega Panama’s historical track record and its ability to generate cash flow and profits in the future.
52. In fact, Claimants had a successful track record of winning 10 contracts for a total US\$ [REDACTED] and earned gross profits of US\$ [REDACTED]

<sup>42</sup> See World Bank. 1992. “Guidelines on the Treatment of Foreign Direct Investment.” *Foreign Investment Law Journal*, Chapter IV: Expropriation and Unilateral Alterations or Termination of Contracts, Section IV, ¶ 5 (CLEX-36).

<sup>43</sup> See Lieblich, W. 1991. *Determining the Economic Value of Expropriated Income-Producing Property in International Arbitration*. *Journal of International Arbitration*, 8 (1) 59 – 80, p. 74 (CLEX-13).

<sup>44</sup> Note that Omega Panama and Omega U.S. are currently precluded from participating in any PanamaCompra bids (until February 2020) and that its guarantees have been called, thus damaging the company’s reputation and precluding it from accessing performance guarantees required in construction projects. See PanamaCompra – Empresas Inhabilitadas, <http://www.panamacompra.gob.pa/Inicio/#!/empresasInhabilitadas>. Accessed: April 23, 2019 (CLEX-37).

- ████████<sup>45</sup> Moreover, Claimants had, as of December 2014, a valuable reputation, considerable experience both in the construction industry in general and in Panama's public construction industry in particular, as well as a solid financial standing that would have allowed it to participate in and to win additional bids into the future.
53. Given these circumstances, it is not rational to assume that Claimants would accept no money to sell their interest in Omega Panama. Both the track record and the ability to generate cash flows in the future have a positive value for Claimants (as well as for any buyer), which must be factored into a potential transaction.
54. Therefore, in order to compensate Claimants for the losses suffered as a result of the Measures, the value of Claimants' interest in Omega Panama should be calculated using the FMV standard. Namely the value that a willing buyer and a willing seller would have given to Omega Panama in a hypothetical transaction as of December 2014. This value cannot be zero as claimed by Dr. Flores, but US\$ 51.22 million as concluded in our analysis.

### **III.2 OMEGA PANAMA'S PROVEN ABILITY TO GENERATE NEW BUSINESSES**

55. In his report, Dr. Flores argues that there is no basis for assuming that Omega Panama would have obtained new contracts into the future and that, as a consequence, damages to Claimants should be limited to the short-term, if at all.<sup>46</sup>
56. His view is that the limited fixed assets held by Omega Panama, coupled with a lesser experience when compared to multinational companies with billions of U.S. dollars awarded

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<sup>45</sup> See CL First Report, Tables III and VI. ██████████

See Audited Financial Statements of Omega Engineering Inc. as of December 31 2011 (C-0311). See also, Omega Engineering, Inc. Financial Statements and Supplementary Information as of 31 December 2012 and Independent Auditors' report (C-0137). See also, Omega Engineering, Inc. Financial Statements and Supplementary Information as of 31 December 2013 and 2012 and Independent Auditors' report (C-0136). See also, Omega Engineering, Inc. Interim Balance Sheets for the Year Ended 31 December 2014 (C-0138). For consistency, the interest income is included in the gross profits' calculation, as it is the case in the 2011 and 2013 financial statements.

<sup>46</sup> See Flores Report, ¶ 48.

in contracts every year and the lack of ISO certifications,<sup>47</sup> imply that the future value of Omega Panama is nil because “*...there is no indication that Omega Panama had special access to business contacts that gave it an edge over its competitors*” to win any new contracts.<sup>48</sup> In his view, “*Omega Panama’s operating record prior to the Measures does not show that it had the capacity to achieve enduring success in public sector contracting, let alone private sector contracting.*”<sup>49</sup>

57. Dr. Flores also argues that no buyer would be willing to pay for Omega Panama’s business generation capacity because they might as well replicate Omega Panama’s intangible assets at an implicit cost of zero. We show below that Dr. Flores’ opinion is incorrect.

### **III.2.1           Claimants’ success rate and financial performance is undisputed**

58. In his report, Dr. Flores states that Omega Panama did not have the required international reputation, success rate, technical capacity, or financial capacity to compete against “*thousands of companies.*”<sup>50</sup>
59. The actual evidence shows, however, that even with minimal fixed assets and competing with large construction companies, Omega Panama was indeed able to have a very successful performance. These facts are uncontested.
60. Dr. Flores does not dispute the historical facts of the business, such as Claimants’ success rate and financial performance. In fact, Dr. Flores acknowledges that Omega Panama won 10 out of the █ public contract bids in which it participated,<sup>51</sup> successfully completed one contract and was in the process of concluding 8 more, and that these contracts were

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<sup>47</sup> See Flores Report, ¶ 40.

<sup>48</sup> See Flores Report, ¶ 23.

<sup>49</sup> See Flores Report, ¶ 31.

<sup>50</sup> Dr. Flores argues that “*...Omega Panama would have been one of thousands of companies competing for an unknown number of future public contracts.*” See Flores Report, ¶ 19.

<sup>51</sup> See Flores Report, ¶ 35.

profitable.<sup>52</sup> This is also evident in the financial statements provided by Omega Panama, which attest to its success rate over time. For example, in 2011, a year after its incorporation, Omega Panama earned US\$ [REDACTED] in revenues. In the following year, Omega Panama generated US\$ [REDACTED] in revenues and US\$ [REDACTED] in gross profits. Then in 2013, Omega Panama doubled its revenue by earning US\$ [REDACTED], just after three years operating in Panama. Lastly, gross profits in 2013 reached US\$ [REDACTED] [REDACTED] higher than the previous year.<sup>53</sup>

61. This track record shows that Omega Panama's experience and ability to partner with financial guarantors and knowledgeable contractors has proved valuable when looking at the market for mid-size infrastructure projects in Panama (US\$ 10 – 20 million), even with limited fixed assets when compared to large multinational companies.<sup>54</sup> Omega Panama is primarily a construction services firm which does not need substantial assets to operate. Although large contractors can afford to acquire their own construction equipment, as their volume guarantees that it is fully utilized, smaller-size construction firms rely on subcontractors for access to heavy machinery, which is more cost effective.
62. In short, and contrary to Dr. Flores' assertion, Omega Panama's limited fixed assets, and experience vis-à-vis very large construction companies did not preclude the company from performing successfully until the Measures. We consider it speculative to believe that this

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<sup>52</sup> Omega Panama completed the Aeropuerto Internacional de Tocumen, Ampliación Lateral Norte construction works. The bid won with the Social Security Fund, Urgencia Dr. MAG – Colón, was cancelled before a final contract could ever be signed, while the remaining eight contracts were ongoing, with varying degrees of completion. See CL First Report, ¶¶ 39 and 46.

<sup>53</sup> [REDACTED]. See Audited Financial Statements of Omega Engineering Inc. as of December 31 2011 (C-0311). See also, Omega Engineering, Inc. Financial Statements and Supplementary Information as of 31 December 2012 and Independent Auditors' report (C-0137). See also, Omega Engineering, Inc. Financial Statements and Supplementary Information as of 31 December 2013 and 2012 and Independent Auditors' report (C-0136). For consistency, the interest income is considered in the gross profits' calculation, as it is the case in the 2011 and 2013 financial statements.

<sup>54</sup> The bidding processes require years of experience and certain level of construction projects in the past. In the case of Omega Panama, this was achieved through the Omega Consortium, through the participation of Omega U.S., a company that put its reputation and industry standing at risk in Panama.

historical success would have been abruptly interrupted at the time when the Measures started.

### **III.2.2      Claimants' bidding performance confirms their competitive advantage**

63. In the following subsections we show that, contrary to Dr. Flores' opinion, Claimants had a competitive advantage based on their financial standing, experience and track record. We base our analysis on the results of the contracting bids where Omega Panama participated.
64. As a preliminary matter, it is important to summarize how winners of public bids are selected in most public contracts in which Omega Panama participated:
  - a. Each company presents the documentation requirements (often related to business license and other permits).<sup>55</sup> Those participants who do not comply with these requirements are disqualified.
  - b. Each company presents its credentials (e.g., experience in similar works, technical know-how, letters of satisfaction from other clients, and a confirmation that no default or termination has occurred in the recent years), its financial standing (e.g., liquidity, financing, banking relations, surety bonding proposals, historical revenue), a work-plan schedule, and a bidding price.
  - c. Each variable is assigned a maximum score: *e.g.*, Experience (20 points), Financial Capacity (24 points), Technical Capacity (6 points), and Economic Proposal (50 points).<sup>56</sup>

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<sup>55</sup> In some cases, documentation related to audited financial statements is also required. See Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

<sup>56</sup> The score assigned to the economic bid is usually computed as a ratio between the participant's bid and the lowest proposed bid, multiplied by the weight defined in the terms of the tender. Therefore, the score assigned to each participant depends on the amount offered by the other competitors. See Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

- d. Each bidder is analyzed based on each characteristic and the bidder with the higher aggregate scores is awarded the work.
  - e. In the case of the economic bid, however, the score is normalized by granting the lowest acceptable price bid the maximum score, and then awarding the higher bids a percentage of the maximum score equal to the ratio of the lowest bid to each bid.<sup>57</sup>
65. The process, which is known as Tender for Best Value, was implemented in 40 of the [REDACTED] in which Omega Panama participated.<sup>58</sup> This method highlights the importance that non-price variables have had in the bids that Omega Panama won.<sup>59</sup> This is *prima facie* evidence of the company's intangible capacities to generate new business. In fact, as we show next, it is virtually impossible for a company to win profitable contracts absent a solid track record and financial backing.

### *III.2.2.a Claimants had a solid financial standing*

- 66. A company's Financial Capacity is one of the relevant evaluation criteria that are taken into consideration within the bidding processes in the public contracting market in Panama. The main requirements include references from prestigious financial institutions, commercial references, and audited financial statement ratios.<sup>60</sup>
- 67. The relevance of this evaluation criterion is considerably high as it represents a median weight of 30% of the total possible score of the [REDACTED] in which Omega Panama

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<sup>57</sup> This implies that a 10% difference in bid prices results in approximately a 10% difference in the resulting score. Furthermore, each bidding process is given a reference price and bids that deviate from such price in +/- 15% are excluded (in some cases the accepted deviation is 10%).

<sup>58</sup> The other 2 projects were evaluated according to the Best Price criterium (this were the "Aeropuerto David - Chiriquí" and the "Aeropuerto Marcos A Gelabert - Albrook" projects, the latter being ultimately cancelled).

<sup>59</sup> See Gransberg, D., and M. Ellicott. 1997. Best Value Contracting: Breaking the Low-Bid Paradigm. *Journal of AACE International*, Vol. 39, (6) (CLEX-39).

<sup>60</sup> The requirements for banking reference usually include lines of credit or documentation regarding current accounts. The audited financial statements are considered specifically to compute liquidity ratios. See CL First Report, ¶ 35 (b). See also, Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

participated.<sup>61</sup> Furthermore, an analysis of the 40 projects under the Tender for Best Value process shows that in 97.5% of them it would have been impossible to win without obtaining any points in Financial Capacity, even if the company had obtained the maximum score in the remaining categories.<sup>62</sup> This demonstrates that having a solid financial standing is a necessary condition to win public works tenders in Panama.<sup>63</sup>

68. Dr. Flores underestimates Omega Panama’s financial capacity when he asserts that “In fact, Omega Panama competed against companies with overwhelmingly more significant international experience and financial capacity” referring to Elecnor S.A., SEMI S.A. (ACS) and Comsa EMTE S.L. as examples of such companies.<sup>64</sup> Dr. Flores’ assessment is wrong for at least 2 reasons.
69. First, Omega Panama had a remarkable performance in Financial Capacity in both absolute and relative terms. The evidence shows that Omega Panama reached the maximum possible financial capacity score in 32 of 35 tenders in which it was evaluated.<sup>65</sup>
70. Second, Omega Panama had an overwhelmingly better performance than the competitors mentioned by Dr. Flores. As shown in Table III below, Omega Panama reached the maximum score in Financial Capacity in 91% of the projects where it was evaluated,

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<sup>61</sup> See Figures and Tables, sheet “Financial Solvency” (CLEX-33).

<sup>62</sup> See Figures and Tables, sheet “Financial Capacity” (CLEX-33).

<sup>63</sup> In addition, if we replicate the exercise assuming a 50% of the maximum possible score in Financial Capacity, we find that it would be impossible to win in 85% the projects. In order to reach the results and be conservative and consistent with the bidding constraints, we considered as “invalid bids” the ones that were more than 15% lower than the reference price for each tender. Note that we conservatively assume such 15% cut-off, as there are many projects that require a more binding cut-off of 10%. See Figures and Tables, sheet “Financial Capacity” (CLEX-33). See also, Omega Panama’s Historical Bids Reference Prices (CLEX-40).

<sup>64</sup> See Flores Report, ¶ 38.

<sup>65</sup> Note that Omega Panama was not evaluated in Asamblea Nacional, CAPSI-Changuinola, Empalme, Aeropuerto Enrique A. Jimenez – Colon, CAPSI - Panamá, Chepo - Torti and Colegio Javier Best Value tenders because it did not fill with the preliminary documentation requirements. See Figures and Tables, sheets “Documentation” and “Omega Panama’s Performance” (CLEX-33).

whereas Dr. Flores' selected companies were all under 67% when competing with Omega Panama.<sup>66</sup>

**Table III. Omega Panama's financial capacity score relative to Dr. Flores' selected companies**

Contender	# Bids Evaluated [a]	Number of wins	Max. Score in Fin. Capacity [b]	Ratio [b] / [a]
OMEGA CONS.	35	10	32	91%
COMSA	3	2	2	67%
SEMI	16	2	10	63%
ELECNOR	7	0	3	43%

*Source: Compass Lexecon based on PanamaCompra. See Omega Panama's Historical Bids Evaluation Reports (CLEX-38). See also, Figures and Tables (CLEX-33).*

71. In short, not only did Omega Panama show an outstanding performance in one of the fundamental categories of the bidding process, but it also outperformed its competitors by a considerable margin. Contrary to Dr. Flores' assessment, Omega Panama had a clear competitive advantage due to its solid financial standing.

### *III.2.2.b Claimants had valuable Experience*

72. Experience is another relevant evaluation criterion taken into consideration within the bidding processes in the public contracting market in Panama. The requirements change

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<sup>66</sup> As an example, take the 2011-0-03-0-08-AV-007202 Mercado Público de Chorrera tender. Omega Panama competed against Elecnor and SEMI. While SEMI was disqualified due to failing to present the required documentation, Elecnor submitted a bid slightly lower than that of Omega Panama. However, Omega Panama outperformed Elecnor's total score due to a better performance in Financial Capacity. In particular, Elecnor did not achieve the best liquidity coefficient, which measures its ability to remain solvent under adverse shocks. Furthermore, Elecnor failed to win any point for banking references. *See Omega Panama's Historical Bids Evaluation Reports*, pp. 366-384 of PDF (CLEX-38).

depending on the specifics of the project, but Experience in significant construction works is certainly required.

73. The importance of Experience is considerably high, as it represents a median weight of 25% of the total possible score of the [REDACTED] in which Omega Panama participated.<sup>67</sup> As with Financial Capacity, it would be virtually impossible to win without obtaining any points on the Experience category. In fact, considering the 40 projects under the Tender for Best Value process, it would be impossible to win in 90% of the times without receiving any points in Experience.<sup>68</sup>
74. Contrary to Dr. Flores assessment, Omega Panama showed an outstanding performance in Experience. Overall, Omega Panama achieved the maximum score in Experience in 26 of the 35 tenders in which it was evaluated.<sup>69</sup>
75. Furthermore, despite being a smaller company, Omega Panama showed that it is capable of competing with the companies with “*overwhelmingly more significant international experience*” referred by Dr. Flores.<sup>70</sup> In fact, as shown in Table IV, [REDACTED]  
[REDACTED]  
[REDACTED] Omega Panama, on the other hand, obtained a perfect Experience score in more than twice as many instances than the competitors analyzed combined.

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<sup>67</sup> We refer to the experience of the company in construction works, excluding personnel’s experience. Note that our results do not materially change when considering other scoring categories. See Figures and Tables, sheet “Experience” (CLEX-33).

<sup>68</sup> Furthermore, if we replicate the exercise assuming a 50% of the maximum possible score in Experience, we find that it would be impossible to win in 82.5% of the times. In order to reach the results and be conservative and consistent with the bidding constraints, we considered as “invalid bids” the ones that were more than 15% lower than the reference price for each tender. Note that we conservatively assume such 15% cut-off, as there are many projects that require a more binding cut-off of 10%. See Figures and Tables, sheet “Experience” (CLEX-33). See also, Omega Panama’s Historical Bids Evaluation Reports (CLEX-38). See also, Omega Panama’s Historical Bids Reference Prices (CLEX-40).

<sup>69</sup> See Figures and Tables, sheet “Omega Panama’s Performance” (CLEX-33). See also, Omega Panama’s Historical Bids Evaluation Reports (CLEX-38).

<sup>70</sup> See Flores Report, ¶ 38.

**Table IV.     Omega Panama’s Experience scores relative to Dr. Flores selected companies**

Contender	# Bids Evaluated [a]	Number of wins	Max score in Experience [b]	Ratio [b] / [a]
COMSA	3	2	3	100%
ELECNOR	7	0	7	100%
<b>OMEGA PANAMA</b>	<b>35</b>	<b>10</b>	<b>26</b>	<b>74%</b>
SEMI	16	2	6	38%

*Source: Compass Lexecon based on PanamaCompra. See Omega Panama's Historical Bids Evaluation Reports (CLEX-38). See also, Figures and Tables (CLEX-33).*

76. Dr. Flores states that Omega Panama did not “[stand] out amongst its peers” due to its lack of an ISO Certification.<sup>71</sup> Dr. Flores arrives at this conclusion after considering the Mercado Público de Chitre project, in which 5 points out of 100 were awarded to those proponents with an ISO Certification.<sup>72</sup> Nevertheless, Dr. Flores fails to mention that this was the only case (in all [REDACTED] in which Omega Panama participated) where an explicit score was assigned to an ISO Certification.<sup>73</sup> It follows from this analysis that the ISO Certification was not a widespread requirement in the target market for Omega Panama’s bids.<sup>74</sup>
77. In short, Omega Panama’s track record demonstrates its valuable experience in construction works which resulted in a remarkable and improving performance over time in that regard.

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<sup>71</sup> See Flores Report, ¶ 40.

<sup>72</sup> See Omega Panama's Historical Bids Evaluation Reports, p. 455 of PDF (CLEX-38).

<sup>73</sup> See Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

<sup>74</sup> In any case, we note that Omega Engineering LLC had an ISO certificate issued on January 8, 2014. See ISO Certification (CLEX-41).

It is because of this that Omega Panama would have continued having an outstanding performance in the Experience category but for the Measures.<sup>75</sup>

*III.2.2.c Omega Panama's Operation and Performance cannot be easily replicated by a new entrant*

78. Dr. Flores argues that no buyer would be willing to pay for Omega Panama's business generation capacity, because they might as well replicate Omega Panama's intangible assets at an implicit cost of zero.
79. The fact that assets are intangible, however, does not mean that their reposition value is zero. To the contrary, replicating Omega Panama's intangible assets, which allowed it to win 10 out of [REDACTED] public works bids in which it participated and achieved uncontested profitability, is costly and requires time.<sup>76</sup>
80. Trajectory, experience and reputation require several periods of operations to create long term relationships with bankers and contractors. A construction company needs a trusting working relationship with contractors capable of delivering quality work. It also needs to have the necessary financial and track record to obtain construction guarantees that are essential for participating in public works bids. As such, there is a costly ramp-up period needed to acquire this experience and to forge relationships.
81. New companies will typically start with smaller projects, implying that acquiring the necessary experience and reputation is a process that takes time. Hence, to avoid this time

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<sup>75</sup> Furthermore, if we combine the Experience and Capacity requirements, a company scoring zero in both these variables would have only been able to win one of the 40 best value bids analyzed, which is a particular airport bid in which no Experience weight is assigned. We also note that there are other non-price components considered in best value tenders beyond financial capacity and experience which are generally related to the specific staffing and engineering proposal presented in each case. These other variables account for 22% of the bid score (on average) and are not further developed because they are not as closely related to the Company as they are to the specific proposal put forward for each tender. We however note that Omega Panama scored on average 83% of the maximum score on this category and that its consideration does not change the general conclusions of our analysis regarding Omega Panama's competitive advantage.

<sup>76</sup> See Figures and Tables, sheet "Success Rate" (CLEX-33).

- expense, a new investor in the industry might consider buying into a company that has already generated these assets successfully.
82. The value of trajectory and reputation cannot be understated. Panama publishes, for each bidding process, the results of the bidding analysis conducted by the contracting party.<sup>77</sup> As such, we can see how much weight is assigned to each of the parameters under analysis and compute the monetary value of all the non-price variables. In fact, having a high non-price score (“**Base Score**”) is undoubtedly a necessary condition in order to have success in public works tenders in Panama.
83. Take as an example bid 2016-0-14-0-04-LV-010323, which is mentioned by Dr. Flores in his report.<sup>78</sup> This process had four participants and, although the winner was the company offering the lowest price, the company with the second lowest bid scored fourth due to lack of Experience and Financial Capacity (implying a loss of 24 points).<sup>79</sup> In fact, despite offering only US\$ 128,516 more than the winner,<sup>80</sup> its score was 23.76 points lower.<sup>81</sup> Furthermore, the only way the company would have won the bid would have been with a bid of US\$ 4.3 million, more than US\$ 4.0 million less than the winning bid of the project at US\$ 8.4 million.<sup>82</sup>
84. The same analysis can be implemented to the sample of 40 projects under the Tender for Best Value process in which Omega Panama participated. The analysis consisted on

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<sup>77</sup> See PanamaCompra website: <http://www.panamacompra.gob.pa/>. See also, Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

<sup>78</sup> See Flores Report, ¶ 93.

<sup>79</sup> See República de Panamá, Ministerio de Vivienda y Ordenamiento Territorial, Informe de Comisión Técnica Evaluadora Verificadora, Acto Público, Bid 2016-0-14-0-04-LV-010323 (QE-0030). See also, Figures and Tables, sheet “Base Score-Example” (CLEX-33).

<sup>80</sup> See Figures and Tables, sheet “Base Score-Example” (CLEX-33).

<sup>81</sup> We arrive to such difference by subtracting “Consorcio Grupo Indocsa” total score of 99.00 from “O.B. Ground Move” total score of 75.24, as follows:  $75.24 - 99.00 = -23.76$ . See República de Panamá, Ministerio de Vivienda y Ordenamiento Territorial, Informe de Comisión Técnica Evaluadora Verificadora, Acto Público, Bid 2016-0-14-0-04-LV-010323, p. 6 (QE-0030).

<sup>82</sup> And even if the company would have been able to bid at such level, its bid would have been disqualified as it would have been characterized as a “risky bid” being less than 15% of the reference price. See Figures and Tables, sheet “Base Score-Example” (CLEX-33).

studying how many tenders a “potential participant” could have won, assuming a percentage of the Base Score (equal for all tenders).<sup>83</sup> We conclude that with 55% or less of the Base Score, it is impossible for any participant to win any bid (even at the lowest possible price).<sup>84</sup> With a 70% Base Score it would only be possible to win 1 out of the 40 bids (by placing a bid 15% below the reference price).<sup>85</sup> This means that the potential market for a company with a 70% Base Score is 2.5% of the bids (even without factoring the probability of winning those bids). Moreover, a Base Score as high of 85% would only make the bid competitive in 7 of the 40 bids, implying a success rate of 17.5% which is much lower than what Omega Panama achieved.<sup>86</sup>

85. Furthermore, we considered a hypothetical tender characterized by the median parameters of the 40 projects under the Tender for Best Value process in which Omega Panama participated.<sup>87</sup> We arrive to the conclusion that winning, even with a Base Score of 90%, implies a high cost in terms of profits. In fact, a hypothetical participant with a Base Score of 90% would need to reduce its bids by 20% in order to win (vis-à-vis the typical best value competitor).<sup>88</sup> Thus, the cost of winning the bids with a 90% Base Score is so high that even a firm with this Base Score would not derive any profit from contracts it could win (as

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<sup>83</sup> In order to evaluate the potential participant’s performance, we considered the actual bids for each tender. Note also that this analysis takes into consideration that any winning bid cannot be less than 85% of the reference price. *See Figures and Tables, sheet “Base Score” (CLEX-33).*

<sup>84</sup> *See Figures and Tables, sheet “Base Score” (CLEX-33).* In order to obtain such result, choose the option “55%” in cell C7.

<sup>85</sup> *See Figures and Tables, sheet “Base Score” (CLEX-33).* In order to obtain such result, choose the option “70%” in cell C7.

<sup>86</sup> *See Figures and Tables, sheet “Base Score” (CLEX-33).* In order to obtain such result, choose the option “85%” in cell C7.

<sup>87</sup> Note that we define as “median parameters” the median Base Score and the median Price Score that result from the 40 best value tenders in which Omega Panama participated, meaning a bid equal to 99.7% of the reference price, and a best competitor Base Score equal to 98.6% of the possible maximum Base Score. *See Figures and Tables, sheet “Base Score” (CLEX-33).*

<sup>88</sup> Note that in order to calculate the reduction in revenues of 20%, we compute the percentage difference between the median bid and the offer that would allow a participant to win with 90% of the Base Score. We note that in fact, this bid would most likely be disqualified as it would be below the 15% reasonability boundary. *See Figures and Tables, sheet “Base Score” (CLEX-33).*

our estimated gross profit margin of Omega Panama, as well as Dr. Flores', is much lower than 20 % in our base case analysis).<sup>89</sup>

86. This analysis proves that a company with a weak Base Score has only a marginal chance of winning in a public bid, and it has a significant cost in terms of potential profits. Consequently, having strong financial capacity and experience credentials, as Omega Panama had, increases the probability of winning in public works tenders and enables participants to make significant profits on each project. Given the difficulty and time that this requires, an investor would be interested in acquiring an existing company with such a successful track record, as opposed to starting a new company as Dr. Flores suggests.

### **III.3 THE VALUE OF OMEGA PANAMA EXTENDS BEYOND 2020**

87. Later in his Report, Dr. Flores relaxes his view as to the absence of future value of Omega Panama and claims that a willing buyer would not ascribe any value to Omega Panama's cash flows only after 2020. He argues that because a new entrant firm could reach Omega Panama's projected performance by 2020, and therefore generate such cash flows on its own from that point forward. According to Dr. Flores, after 2020, "*Omega Panama has no higher earnings than the new company.*"<sup>90</sup> Dr. Flores' argument is misguided for two reasons.
88. First, Dr. Flores fails to account for the difficulty in replicating Omega Panama's business, which would require several years of poor performance in the bidding process in order to build the financial and technical backing required to win competitive bids. In the preceding sections we showed that Omega Panama's experience, track record, financial stance, and reputation were valued in the bidding processes. Any new company looking to compete in

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<sup>89</sup> See Section IV.3.

<sup>90</sup> See Flores Report, ¶ 50.

- the market for public works bids in Panama would have needed time to become competitive, without ensuring any success.<sup>91</sup>
89. Second, and more fundamentally, Dr. Flores admits his valuation only looks at a willing buyer but ignores the requirement for having a willing seller in order to provide a FMV assessment. In the case at hand, Claimants were deprived of the ability to participate in the construction business in Panama into the future and the willing seller standard requires that damages should be set at a level in which Claimants would have willingly relinquished such possibility. As was explained in this report, a “willing seller” would have assigned a positive value (of several millions) to its interest in Omega Panama.
90. Additionally, regarding the performance of Dr. Flores’ new company, his assumptions are speculative at best. Dr. Flores does not provide any analysis that supports the growth path exhibited by the new company in Figure 3 of his report.<sup>92</sup> In fact, his hypothetical company reaches Omega Panama’s value by 2020 because of its overstated and ad-hoc growth between 2017 and 2019. Dr. Flores assumes annual growth rates of 200.0%, 133.3%, and 28.6% for the hypothetical company for the 2017-2019 period without any justification.<sup>93</sup>
91. Dr. Flores also neglects the existence of set-up costs and the difficulties in attaining high scores in experience and financial solvency with no previous experience. As it was shown, it is very difficult for a new company lacking financial backing and expertise to win any profitable bids.
92. Furthermore, even if an investor would decide to start a new venture, it would be subject to increased uncertainty as it would not know how much time it would take to become competitive in public work bids, another incentive to acquire an existing company.

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<sup>91</sup> Omega Panama also benefited from the financial stance, experience, reputation and resources of the Omega Consortium to attain the growth exhibited in the Panamanian market for public works.

<sup>92</sup> The hypothetical company values used in Flores’ Figure 3 were pasted as values without providing any source. See Flores’ Supporting Figures, sheet “1- Willing Buyer’s View”, cells I11:I26 (QE-0003).

<sup>93</sup> See Figures and Tables, sheet “Flores New Company” (CLEX-33).

93. In conclusion, Dr. Flores' position that firms like Omega Panama are worthless because they lack sufficient physical assets is untenable. Furthermore, the bidding processes where Omega Panama participated show that the value of intangible assets (specific experience, enough revenues, and prior construction performance) is significant and instrumental to winning new contracts. The presumption that any investor could set up a competitor of Omega Panama in a few years is speculative. Finally, as discussed previously, no willing seller would forego this ability to be competitive in infrastructure bids for free, thus requiring full consideration of the value of intangibles in a fair market value assessment.<sup>94</sup>
94. Dr. Flores' opinion that Claimants' interest in Omega Panama was zero as of the Date of Valuation is unfounded because it does not conform to the FMV principle. Moreover, and contrary to Dr. Flores' opinion, Omega Panama has a proven track record as well as competitive advantages and, consequently, its operations and performance in Panama cannot be easily replicated. Finally, there is no economic basis to argue that Omega Panama should be restricted to its generation of cash flows until 2020.

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<sup>94</sup> Dr. Flores tries an analogy between Omega Panama and an Uber driver to argue that an Uber driver cannot sell its driving business because anyone who wants to be an Uber driver can do so by just buying a car. The analogy misses the point that while the Uber driver has no capabilities to get additional customers on its own, Omega Panama's is the generator of new businesses. In other words, if we wanted to follow Dr. Flores' analogy, Omega Panama would have needed to be compared to Uber (*i.e.*, the generator of new businesses), not the driver. *See Flores Report, ¶¶ 24 and 51. See also, Section III.1.*

## IV. OUR DCF VALUATION IS BASED ON ROBUST ASSUMPTIONS

95. Dr. Flores criticizes our DCF calculations on five grounds:
- a. projected government capital expenditures were overestimated and based on a period of historically high relative capex in Panama;<sup>95</sup>
  - b. Omega Panama's success rate (25%) is overestimated and should be 9.4%;<sup>96</sup>
  - c. Omega Panama's gross profit margin (████) is overestimated and should be █████;<sup>97</sup>
  - d. our discount rate (11.65%) is not consistent with the risks faced by a construction company in Panama such as Omega Panama, which he estimated at 20.84%; and
  - e. general expenses were not deducted for the 2015-2019 period.
96. With the exception of item e) which was an inadvertent omission in our CL First Report, all of Dr. Flores' criticisms and suggested modifications to our assumptions are incorrect.<sup>98</sup>
97. In Section II.2 (and Appendix B) we have explained why our discount rate (11.65%) is reasonable, and why Dr. Flores' 20.84% (or range between 18.4% and 23.3%) should be disregarded. In this section we explain why the other three remaining criticisms are incorrect.

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<sup>95</sup> See Flores Report, ¶ 58.

<sup>96</sup> See Flores Report, ¶ 76.

<sup>97</sup> See Flores Report, ¶ 81.

<sup>98</sup> However, Dr. Flores errs when applying the general expenses correction. While he includes the general expenses attributable to Potential New Contracts, he does not deduct the proportion of general expenses attributable to the Existing Contracts for years 2015 and 2016. Therefore, the correct inclusion of general expenses for Potential New Contracts, accounting for the general expenses applicable to the Existing Contracts that still would be ongoing, reduce our original assessment of damages by US\$ 4.21 million. See CL Revised Valuation Model (CLEX-32). See also, Flores Report, ¶ 82.

#### **IV.1 DR. FLORES UNDERESTIMATES OMEGA PANAMA'S TARGET MARKET**

98. As we explained in the CL First Report, we estimate the potential target market relevant for Omega Panama (*i.e.*, the market that a willing buyer/seller would have considered) as of December 2014 by looking at the expected central Government capital expenditure and the expected evolution of Panama's GDP for 2015 onwards.<sup>99</sup> In particular, we applied the following method:

- a. First, we analyze the central Government's capital expenditure to GDP ratio for the relevant period prior to the Date of Valuation (*i.e.*, 2009-2014). We find that, on average, the central Government's capital expenditure (capex-to-GDP ratio) was around 8.5% of GDP during such period.<sup>100</sup>
- b. We then apply this ratio to the expected GDP for Panama for the period 2015-2019 as projected by the International Monetary Fund in October 2014.<sup>101</sup>
- c. Third, we estimate Omega Panama's target market by considering the share of its historical bids with respect to Panama's central Government capital expenditure during the period 2010-2013. During such period, the average amount of Omega Panama's historical bids (US\$ [REDACTED]) represented [REDACTED] of the total central Government capital expenditure (US\$ [REDACTED]).<sup>102</sup> We have assumed a 5.0% ratio that would have maintained constant in the future but for the Measures.<sup>103</sup>

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<sup>99</sup> See CL First Report, ¶ 88.

<sup>100</sup> See CL First Report, ¶ 89.

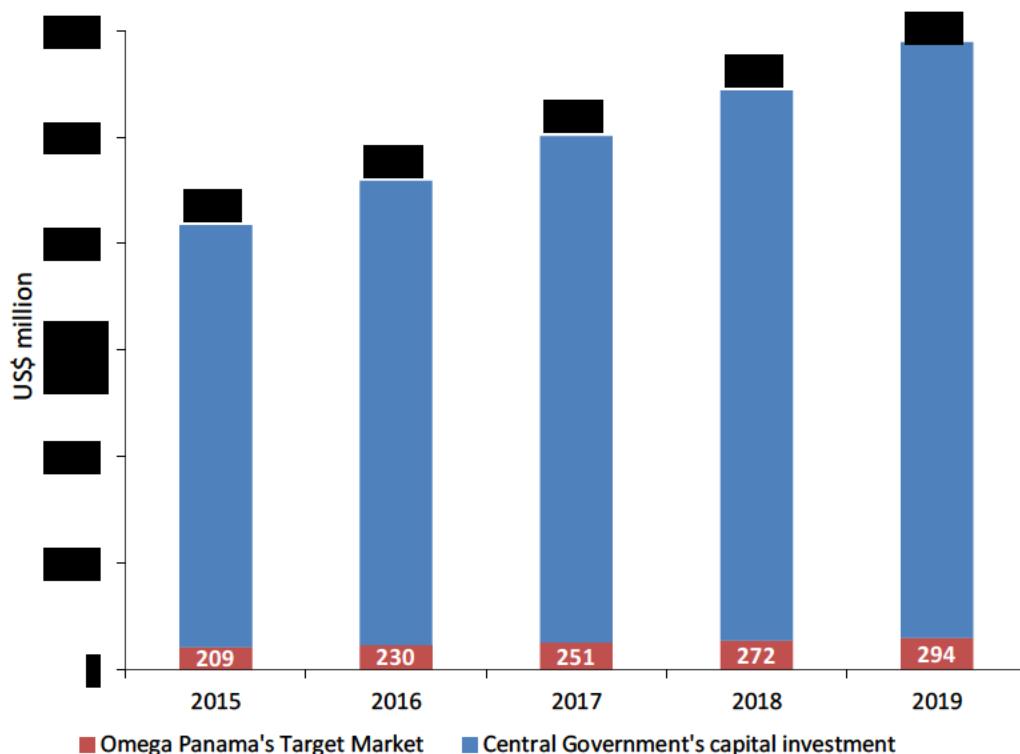
<sup>101</sup> For the period 2015-2019 we relied on the IMF's expected GDP estimation for Panama from the World Economic Outlook of October 2014. See IMF, World Economic Outlook Database – October 2014 (CLEX-31).

<sup>102</sup> We estimated this figure by computing the ratio between Omega Panama's total bids over the total capital expenditure for the period 2010-2013. Had we taken into consideration the period 2011-2013, the share would have been equal to 5.03%. See CL First Report, ¶ 90. See also, CL Revised Valuation Model, sheet "Historical Information", cells J9:K16 (CLEX-32). See also, CL First Report, Table III.

<sup>103</sup> See CL First Report, ¶ 90.

99. As a result, we found that, as of the Date of Valuation, the expected capital expenditure was, on average, US\$ 5,021 million per year, and that Omega Panama's expected target market was, on average, US\$ 251 million per year.<sup>104</sup> Figure III below shows our projections for each year of the period 2015-2019.

**Figure III. Expected capital expenditure and Omega Panama's target market**



*Source: Compass Lexecon based on CL First Report.*

100. Dr. Flores does not dispute our methodology but only our calculation inputs. In particular, he states that our assumed capex-to-GDP ratio of 8.5% is incorrect as “*Compass Lexecon relies on a period of abnormally high capital expenditures in Panama.*”<sup>105</sup> While Dr. Flores does not dispute Omega Panama’s share of 5.0% and Panama’s expected GDP, he disagrees

<sup>104</sup> See Figures and Tables, sheet “CAPEX”, cells O18 and O27 (CLEX-33).

<sup>105</sup> See Flores Report, ¶ 68.

with our estimate of the capex-to-GDP ratio. Specifically, Dr. Flores alleges that, based on Panama's Strategic Plan 2015-2019, the capex-to-GDP ratio would follow a downward trend (starting at 6.3% in 2015 and falling to 4.8% in 2019).<sup>106</sup>

101. As a result, he obtains a projection of the central Government's capital expenditure of US\$ 3,171 million per year on average. He estimates Omega Panama's target market in US\$ 159 million per year on average.<sup>107</sup>
102. Dr. Flores projection suffers from several inconsistencies, which lead him to underestimate Panama's capital expenditure.
  - a. First, Dr. Flores has simply taken the capex-to-GDP ratio from Panama's Strategic Plan without noting that the capital expenditure reflected in that plan was higher than Dr. Flores' own estimates.<sup>108</sup> This is because Dr. Flores selectively takes some information from the Strategic Plan, while keeping our own assumptions for others (e.g., GDP growth).<sup>109</sup> Given that our GDP estimate is lower than the one reflected in the Plan, Dr. Flores' estimate substantially understates both our and the Strategic Plan's forecasts.
  - b. Second, Dr. Flores' use of the Strategic Plan also ignores that the previous version of this Plan (for the period 2010-2014), underestimated the actual central Government's capital expenditure of that period by 14.1%.<sup>110</sup> This should not be surprising as Governments must show balanced budgets in their planning documents, but then have incentives to extend the budget to maximize social welfare as much as possible.

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<sup>106</sup> See Flores' Valuation Model (QE-0002), sheet "2 - PEG Panama CAPEX".

<sup>107</sup> See Figures and Tables, sheet "CAPEX", cells O19 and O28 (CLEX-33).

<sup>108</sup> See Figures and Tables, sheet "CAPEX", rows 11 and 12 (CLEX-33). See also, Plan Estratégico de Gobierno 2015-2019, p. 129 (QE-0027).

<sup>109</sup> Additionally, as a consequence of relying on Panama's Strategic Plan expectations, it is necessary to modify the long-term growth (post-2020) of Omega Panama in order to be consistent, which we assumed equal to inflation at 2% per year. The 2019 inflation estimated in the Strategic Plan is 3% which, coupled with the higher GDP growth during the 2015-2019 period, indicates that a post-2020 growth rate of at least 3% should be considered.

<sup>110</sup> There is only one Strategic Plan prior to Panama's Strategic Plan 2015-2019. See Plan Estratégico de Gobierno 2010-2014, p. 49 (CLEX-42). See also, Figures and Tables, sheet "CAPEX", cell C25 (CLEX-33).

Hence, accounting for the Government of Panama's recent policy evidence is a more accurate representation of market expectations than the automatic adoption of the Strategic Plans.

103. We find that if these two facts are corrected, the corrected forecast based on the Strategic Plan does not differ substantially from ours in the 2015-2016 period. In fact, once correctly implemented, the potential market for Omega Panama calculated by following Dr. Flores' sources increases by 24.2%
104. Furthermore, Dr. Flores ignores that general budget trends do not necessarily reflect the investment in small-medium size infrastructure (which is Omega Panama's market). In fact, the reduction in investment budgets is most likely to come out of big projects than from a multiplicity of smaller social services projects like schools, hospitals, libraries and public markets which are at the core of Omega Panama's business. In fact, the evidence from the small-medium infrastructure bids in the website PanamaCompra presented in our CL First Report confirms this presumption: in the period under consideration the number and value of calls for tenders that were a part of Omega Panama's target market did not exhibit a diminution.
105. As mentioned in the CL First Report, we have identified at least US\$ 1 billion in bids in which Omega Panama could have participated in 2015-2016.<sup>111</sup> This is an average of US\$ 550 million per year, substantially higher than the target market of US\$ 209 million and US\$ 230 million for those years as shown in Figure III above.<sup>112</sup> This implies that the

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<sup>111</sup> Dr. Flores reviewed our assessment and limited his observations to a single bid that was overstated because of a clerical error. Dr. Flores argues that the evidence from PanamaCompra is irrelevant because it shows a market size, and a number of bids that is too large compared to historical performance of Omega Panama. Still the purpose of this evidence is simply to prove that the market for Omega Panama's services exists. The fact that it is too large compared to our projections proves the reasonability of our estimates. Furthermore, given that we implicitly assume in our model that our market is 40% of the actual market, the number of bids in which we are assuming Omega Panama would participate is not 84 over a two-year period but 34, or 17 per year, below the 21 bids it did in 2011. See CL First Report, Table XIV.

<sup>112</sup> See Figures and Tables (CLEX-33).

market for Omega Panama's services was not curtailed after 2015 despite Dr. Flores' projected slowdown in capital expenditure,<sup>113</sup> and that our estimate as of the date of valuation proved reasonable in views of ex-post larger potential market observed.

106. Second, even if it were true that public sector demand is overstated in our analysis, which it is not, there is no reason why Omega Panama could not fill up its “spare capacity” with private sector projects. Once Omega Panama would have completed the 8 ongoing contracts in Panama as scheduled, and would have consolidated its relationships with local contractors, there is no reason why it would have been excluded from the private market. In the long-run we can expect that Omega Panama would have been able to break into the private market if the public sector did not offer enough opportunities for the company.
107. Dr. Flores also questions our reliance on historical data by arguing that it is based on an “abnormally high” period of RoP investment. A willing buyer/seller would have used all the available information for the time in which Omega Panama had been operating. Therefore, the 2009-2014 historical information represents the most recent historical information to be considered in forecasting Panama’s Government future investment.
108. For the aforementioned reasons,<sup>114</sup> we do not believe any change in our base case assessment is needed.<sup>115</sup> Dr. Flores’ approach is inconsistent and underestimates Omega Panama’s market potential.

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<sup>113</sup> Furthermore, had Omega Panama bid for these projects, as it traditionally did, and achieved a success rate of 25% (which is in line with the existence of approximately 4 bidders per tender), it would have earned contracts worth US\$ [REDACTED] per year, which is almost double our base case projection. *See also*, CL First Report, ¶¶ 93-96.

<sup>114</sup> Dr. Flores also questions our reliance on historical data by arguing that it is based on an “abnormally high” period of RoP investment. *See Flores Report*, ¶68. A willing buyer/seller would have used all the available information for the time in which Omega Panama had been operating. Therefore, the 2009-2014 historical information represents the most recent historical information to be considered in forecasting Panama’s Government future investment.

<sup>115</sup> Our model however allows for this sensitivity to be tested.

#### **IV.2 DR. FLORES ARBITRARILY REDUCES OMEGA PANAMA'S SUCCESS RATE IN PUBLIC WORKS**

109. The success rate in public work bids is defined as the proportion of winning bids from the total bids made by Omega Panama. In order to assess Omega Panama's expected success rate, we analyze historical data regarding its observed success rate achieved in the tenders in which it participated.
110. Between 2010 and 2013, Omega Panama participated in [REDACTED] for a total amount of US\$ [REDACTED] and won 10 projects for an amount of US\$ [REDACTED].<sup>116</sup> The observed success rate for the period is 21.4% in terms of value, and 23.8% in number of bids terms. Furthermore, if we exclude the first year of Omega Panama's biddings, when it was unsuccessful, we find that the observed success rate is 29.4% in terms of value (and 35.7% in terms of number of bids).<sup>117</sup>
111. Based on this information, we assume a success rate of 25.0%. This value is consistent with the historical success rate in terms of both value and number of bids. Table V below summarizes the success rate calculations.

**Table V. Summary of Omega Panama's Bids and Success Rate calculations**

Period	[REDACTED]	[REDACTED]	# Won Bids [c]	Success Rate	
				# Bids [c]/[a]	Value [d]/[b]
2010-2013	[REDACTED]	[REDACTED]	10	[REDACTED]	23.8% 21.4%
2011-2013	[REDACTED]	[REDACTED]	10	[REDACTED]	35.7% 29.2%
<b>Compass Lexecon</b>					<b>25%</b>
<b>Flores (2011 &amp; 2013)</b>					<b>26.8% 9.4%</b>

*Source: Compass Lexecon based on PanamaCompra, CL First Report and Flores Report.*

112. Dr. Flores criticizes our estimate and computes Omega Panama's expected success rate by relying only on its performance of 2011 and 2013 and ignoring the years 2010 and 2012

<sup>116</sup> See CL First Report, Table III.

<sup>117</sup> See Omega Panama's Historical Bids Evaluation Reports (CLEX-38).

altogether. He calculated the observed success rate for 2011 and 2013, which were 15.6% and 3.2% respectively. After that, he computed the average between those two observed success rates arriving at his final estimation of 9.4%. Dr. Flores' approach, however, is incorrect for multiple reasons.

113. First, Dr. Flores' estimate is arbitrary. He does not provide an explanation that justifies analyzing specific years in isolation instead of considering the period as a whole. Moreover, treating years 2010 and 2012 as “outliers” is unfounded.<sup>118</sup> Omega Panama’s performance observed in 2010 is explained by it being a new entrant in the Panamanian market; while its 2012 outstanding performance is a result of Omega Panama’s learning and adaptation to the new market environment. Consequently, those two years must be taken into consideration and thus it is incorrect to remove them from the analyzed data.
114. Second, Dr. Flores states that Omega Panama’s observed success rate is too variable as one of the reasons for removing years 2010 and 2012.<sup>119</sup> His concern about the variability of observed data is unfounded. The variability of the observed success rate achieved by Omega Panama should not be a surprise. There will be certain projects that are more aligned with Omega Panama’s expertise than others, and there will be certain years in which those projects show up more frequently than in other years.
115. In addition, there will be certain years in which Omega Panama will have more time and resources allocated to bid in new projects and others where its resources would be applied to finishing existing projects. Hence it should not be surprising that after winning a substantial number of bids in 2011, Omega Panama reduced the number of bids in which it participated thereafter, as it had to dedicate its resources to fulfilling its contracts (and it presumably learned to better target its efforts).

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<sup>118</sup> Furthermore, Dr. Flores contradicts his own logic when he asserts that our expected success rate is not robust because it is based on a small sample. However, he then proposes a method that consists of using an even smaller sample. See Flores Report, ¶¶ 74-76.

<sup>119</sup> See Flores Report, ¶ 76.

116. In short, one would expect Omega Panama's bidding performance to vary, even significantly, year by year, both in terms of participation and success. However, it is an undisputed fact that Omega Panama won approximately 25% of the bids where it chose to participate (including during its very first year). Hence, it is conservative to assume that Omega Panama would have been able to win 25% of the bids in which it would have chosen to participate in the future but for the Measures. This means that our estimate success rate is accurate while Dr. Flores' is not.

#### **IV.3 DR. FLORES UNDERESTIMATES OMEGA PANAMA'S PROFITABILITY**

117. As mentioned in our CL First Report, we assume that Omega Panama would have achieved gross profit margins of [REDACTED] for 2014 onwards.<sup>120</sup> We arrived at such estimate by analyzing two sources:

- a. Omega Panama's audited financial statements for the 2011-2013 period, that result in a gross estimated margin of [REDACTED].<sup>121</sup>
- b. The analysis of job costs reports relevant to the eight existing contracts, which shows a margin on contracts of [REDACTED]<sup>122</sup>

118. Had we applied the [REDACTED] profit margin underlying Claimant's economic decision to participate in the bids to our valuation, damages would have increased to US\$ [REDACTED] as of the Date of Valuation (an increase of US\$ [REDACTED] over our base case).<sup>123</sup>

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<sup>120</sup> See CL First Report, ¶ 99.

<sup>121</sup> Note that in our CL First Report, we rounded the financial statements gross profit margin to [REDACTED]. However, we used the exact [REDACTED] for the sensitivity analysis of our Valuation Model. See CL First Report, ¶ 99. See also, CL Revised Valuation Model (CLEX-32). Profit margins vary by project. Of the outstanding contracts as of the date of Valuation, the Puerto Caimito contract was the most advanced, with an estimated margin at completion of [REDACTED]. See McKinnon Report, Annex 3.

<sup>122</sup> "Construction costs estimates" (or job costs reports) are prepared internally (not for the owner) and they are relied on by the contractor to determine whether the dollar amount of a proposal is economically feasible to the contractor. Thus, their reasonableness is paramount to the Contractor at the moment of making a proposal. See Omega Job Costs Reports (CLEX-20). See also, CL First Report, ¶¶ 97-99.

<sup>123</sup> See CL Revised Valuation Model (CLEX-32).

119. Dr. Flores estimates Omega Panama's profitability by using only its audited financial statements, arriving at an average annual gross profit margin of █.<sup>124</sup> Dr. Flores approach is flawed and underestimates Omega Panama's profitability because of multiple reasons.
120. First, Dr. Flores ignores the available and relevant information related to the eight ongoing projects presented in the job costs reports. Those reports provide detailed estimation of the gross profit margin that Omega Panama would have made but for the Measures. In addition, and contrary to Dr. Flores' assessment, the job costs reports are contemporaneous with the bidding process. Thus, they needed to be realistic so that Omega Panama could make sure it was putting forward economically reasonable bids.
121. Second, Dr. Flores' projection is biased because it does not take into consideration that Omega Panama's average gross profit margin is affected by its start-up year, which was lower than the average for the 2011-2013 period. As the literature on the topic shows, low revenues and margins are expected in the start-up phase, as well as a rapid growth.<sup>125</sup> Thus it is reasonable to expect profit margins to increase beyond those experienced in the first few years of operations.
122. Contrary to Dr. Flores' projected margin, our projection is conservative and consistent with the evidence of the construction sector. Prof. Damodaran reports gross margins (EBITDA

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<sup>124</sup> Note that Dr. Flores is wrong when he asserts that our gross profit margin of █ “is a result of several assumptions made by McKinnon”. Such 13% was estimated by us based on all information available. See Flores Report, ¶ 79.

<sup>125</sup> See Corporate Finance Institute, What is the Business Life Cycle?, “Phase One: Launch”. <https://corporatefinanceinstitute.com/resources/knowledge/finance/business-life-cycle/>. Accessed: May 3, 2019 (CLEX-43). See also, Damodaran, Aswath. 2015. *Applied Corporate Finance*, Fourth Edition, John Wiley & Sons, Figure 10.7 (CLEX-44).

without general, selling, and administrative expenses) of [REDACTED] for global construction companies in as of the Date of Valuation,<sup>126</sup> confirming our estimate.

123. This analysis shows that our profitability projection is not only consistent with the evidence, but also conservative. Dr. Flores' estimate, however, is biased and underestimates the gross profit margin that Omega Panama would have achieved but for the Measures.
124. In conclusion, our DCF assumptions are appropriate in order to estimate the losses suffered by Claimants. We estimate Omega Panama's relevant target market by looking at the most reliable sources just as a willing buyer/seller would have done as of the Date of Valuation, while Dr. Flores applied an inconsistent methodology. Furthermore, we calculated Omega Panama's expected success rate by considering the totality of its track record, while Dr. Flores did not. Finally, and contrary to Dr. Flores' opinion, we estimated Omega Panama's profitability consistently with its peers and using all relevant information.

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<sup>126</sup> See Damodaran, Aswath. Global Operating and Net Margins by Industry (CLEX-45). The global survey performed by Prof. Damodaran in fact reports statistics for two industry groups that are related to Omega Panama's activities: Engineering/Construction (16.33%), Construction Supplies (24.99%), or a simple average of 20.66%. Furthermore, we were able to access the underlying dataset used by Prof. Damodaran for EBITDA margins (which are net of general costs) of the Latin American construction companies in his sample, which exhibit higher margins than the global benchmark he reports. See Damodaran, Aswath. Firms by Industry (CLEX-46).

## V. VALUATION OF LOSSES

125. Total losses to Claimants amount to US\$ 51.22 million as of December 23, 2014. As shown in Table VI below, this value is comprised of US\$ 8.69 million of losses associated with existing contracts, and US\$ 42.53 million related to the inability to continue as a going concern, bidding and winning new public sector contracts after December 2014.

**Table VI. Summary of Damages as of Dec 23, 2014  
(in US\$ million)**

Total Losses as of December 23, 2014	
[REDACTED]	
Total Losses (US\$ million)	51.22

*Source: Compass Lexecon based on CL Revised Valuation Model (CLEX-32).*

126. To grant Claimants full compensation for their losses, damages as of the Date of Valuation must be brought forward to the present and until the date of payment “at a commercially reasonable rate” of interest.
127. From an economic point of view, the rate that is commercially reasonable for Claimants’ investment is the cost of financing its investment, which is an equity stake in a general contractor company operating in Panama. No market participant can finance such investment at a cost lower to the CoE, which is the appropriate interest rate in the case at hand.

128. In other words, the CoE reflects the financing cost effectively incurred by Claimants for having been deprived of their investment proceeds due to the Measures. Such financial cost, albeit not explicit like it would be in a debt document, is the economic cost of funding the investment which is tied up to the asset until Claimants receive compensation. This theory has been recognized by recent writings of Gotanda and Senechal and Escher,<sup>127</sup> among others.
129. Consequently, as was established in the CL First Report, a commercially reasonable interest rate applicable to Claimants' investment is one that reflects its financing cost: the cost of equity capital. We have estimated the CoE at 11.65% as of December 23, 2014. Damages as of May 15, 2019 updated at the CoE of 11.65% amount to US\$ 83.13 million, as shown in Table VII below.

**Table VII. Summary of Losses as of May 15, 2019  
(in US\$ million)**

Summary of Losses			
	As of December 23 2014 [a]	Update Factor [b]	As of May 15 2019 [a] x [b]
Total Losses (US\$ million)	51.22	1.62	83.13

Source: Compass Lexecon based on CL Revised Valuation Model (CLEX-32).

<sup>127</sup> See Escher, Susan and Kurt Krueger. 2003. "The Cost of Carry and Prejudgment Interest." *Litigation Economic Review* 6, no.1: 12-16 (CLEX-21), and Gotanda, John Y. and Thierry J. Sénéchal. 2009. "Interest as Damages." *The Columbia Journal of Transnational Law* 47, no. 3: 491-536 (CLEX-22).

## VI. SIGNATURE AND DECLARATION

130. We declare that:

- a. We understand that our duty in giving evidence in this arbitration is to assist the arbitral tribunal decide the issues in respect of which expert evidence is adduced. We have complied with, and will continue to comply with, that duty.
- b. We confirm that this is our own, impartial, objective, unbiased opinion which has not been influenced by the pressures of the dispute resolution process or by any party to the arbitration.
- c. We confirm that, at the time of providing this written opinion, we consider it to be complete and accurate and constitute our true, professional opinion.



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Pablo Lopez Zadicoff  
May 27, 2019

Sebastian Zuccon  
May 27, 2019

## APPENDIX A LIST OF EXHIBITS

Exhibit N°	List of Cited Documents
CLEX-32	CL Revised Valuation Model
CLEX-33	Figures and Tables
CLEX-34	IMF. GDP of Panama and USA
CLEX-35	Brealey, R., Myers, S. and Allen, F. 2014. Principles of Corporate Finance. 11th Ed. New York: McGraw-Hill, Ch. 8, pp. 190-217
CLEX-36	World Bank. 1992. "Guidelines on the Treatment of Foreign Direct Investment." Foreign Investment Law Journal, Chapter IV: Expropriation and Unilateral Alterations or Termination of Contracts
CLEX-37	PanamaCompra - Empresas Inhabilitadas. <a href="http://www.panamacompra.gob.pa/Inicio/#!/empresasInhabilitadas">http://www.panamacompra.gob.pa/Inicio/#!/empresasInhabilitadas</a> . Accessed: April 23, 2019
CLEX-38	Omega Panama's Historical Bids Evaluation Reports
CLEX-39	Gransberg, D., Ellicott, M., Best Value Contracting: Breaking the Low-Bid Paradigm
CLEX-40	Omega Panama's Historical Bids Reference Prices
CLEX-41	ISO Certification
CLEX-42	Plan Estratégico de Gobierno 2010-2014
CLEX-43	Corporate Finance Institute, What is the Business Life Cycle?, "Phase One: Launch". <a href="https://corporatefinanceinstitute.com/resources/knowledge/finance/business-life-cycle/">https://corporatefinanceinstitute.com/resources/knowledge/finance/business-life-cycle/</a> . Accessed: May 3, 2019
CLEX-44	Damodaran, Aswath. 2015. Applied Corporate Finance, Fourth Edition, John Wiley & Sons
CLEX-45	Damodaran, Aswath. Global Operating and Net Margins by Industry
CLEX-46	Damodaran, Aswath. Firms by Industry

CLEX-47	Haque, N., Kumar, M., Mark, N., and D. Mathieson. 1996. The Economic Content of Indicators of Developing Country Creditworthiness. IMF Working Paper, WP/96/9
CLEX-48	Elkhoury, M. 2008. "Credit Rating Agencies and Their Potential Impact on Developing Countries." Discussion Paper presented at United Nations Conference on Trade and Development, No. 186
CLEX-49	Estrada, J. 2000. The Cost of Equity in Emerging Markets: A Downside Risk Approach. Emerging Markets Quarterly, Vol. 4, No. 3
CLEX-50	Haque, N., Mathieson, D., and N. Mark. 1997. Rating the Raters of Country Creditworthiness. Finance & Development, Vol. 34, No. 1
CLEX-51	Thurner, M. 2003. "Valuation of MNC Subsidiaries in Emerging Markets: The Case of China." Doctoral Seminar in International Finance
CLEX-52	Mercer, C. 1994. Should "Marketability Discounts" be Applied to Controlling Interests of Private Companies?, Business Valuation Review, Vol. 13, No. 2
CLEX-53	Phillips, J. y N. Freeman. 1995. Do Privately-Held Controlling Interests Sell For Less?, Business Valuation Review, Vol. 14, No. 3
CLEX-54	Becker, B. y G. Gutzler. 2000. Should a Blockage Discount Apply? Perspectives of Both a Hypothetical Willing Buyer and a Hypothetical Willing Seller. Business Valuation Review, Vol. 19, No. 1

## APPENDIX B COST OF EQUITY TOPICS

131. In order to account for the financing costs faced by Omega Panama, we estimate its CoE (of 11.65%) using a “building block” structure that is composed of a risk-free rate, a Market Risk Premium and a Country Risk Premium.
132. Dr. Flores agrees with our methodology, but he overstates all the components of the CoE and he adds (unnecessarily) an Additional Risk Premium. In the following subsections we expand on two technical issues that were not fully developed in Section II.2 of this report.

### B.1 THE COUNTRY RISK RATING MODEL IS INAPPLICABLE

133. The Emerging Markets Bond Index (“EMBI”) spread is the most widely used measure of Country Risk Premium,<sup>128</sup> and it relates the excess interest rate that a given country needs to pay on its sovereign debt to the rate paid by the U.S. for its debt. In other words, if Panama needs to pay an interest rate 1.9% higher than the U.S. to its bond holders, we can assume that a business in Panama will have a financing cost 1.9% higher than a similar business located in the U.S.
134. Furthermore, in the case of Omega Panama, which is a Government contractor and hence subject to Government counterparty risk, the link with the EMBI is direct as its business depends primarily on the ability of the government to continue with its long-term infrastructure development plans and whose risk of interruption is conceptually similar to the risk of sovereign default captured by the EMBI.
135. In this respect, and especially when analyzing the existing contracts, the link between the EMBI measure and Omega Panama’s counterparty risk is unquestionable, therefore making our measure of Country Risk Premium at 1.89% appropriate.

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<sup>128</sup> See Financial Times, Definition of EMBI (CLEX-30).

136. Dr. Flores however suggests a measure of Country Risk Premium of 4.52%,<sup>129</sup> which is the hybrid of two approaches:
- a. He amplifies the EMBI approach by a factor of 1.5x based on his erroneous characterization of Prof. Damodaran's recommendation, concluding in a 2.84% Country Risk Premium under this approach.<sup>130</sup> As discussed in Section II.2.2, the addition of the multiplication factor is improper and contradicts Prof. Damodaran's specific findings for Panama.
  - b. He uses an unreliable methodology, the Country Risk rating model, based on sub-standard data analysis to conclude in a 6.20% premium.<sup>131</sup>
137. Regarding the Country Risk rating model, this is a survey approach whose drawbacks are thoroughly identified in the literature, as we indicate below. The method is based on the subjective assessment of 100 bankers and an arbitrary weighting by the publication *Institutional Investor* of those ratings, which are ultimately used as inputs in a very deficient econometric model. The shortcomings of this approach are as follows:
- a. There is no transparency in how the individual Institutional Investor survey participants arrive at their ratings.<sup>132</sup> Moreover, the ratings are subjective and based on qualitative variables, often with arbitrary weightings applied by their authors.<sup>133</sup>

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<sup>129</sup> See ¶ 26.

<sup>130</sup> See Flores Report, ¶ 135.

<sup>131</sup> See Flores Report, ¶ 141.

<sup>132</sup> According to Haque *et al.* (1996), credit ratings decrease sizably following a worsening of the international scenario over and beyond the real impact on local fundamentals. See Haque, N., Kumar, M., Mark, N., and D. Mathieson. 1996. The Economic Content of Indicators of Developing Country Creditworthiness. *IMF Working Paper*, WP/96/9 (CLEX-47). See also, Elkhouri, M. 2008. “Credit Rating Agencies and Their Potential Impact on Developing Countries.” Discussion Paper presented at United Nations Conference on Trade and Development, No. 186 (CLEX-48).

<sup>133</sup> According to Estrada (2000) “...the numerical value of the ratings, critical for quantitative analysis, is highly subjective. In many cases, the indices are based on qualitative variables and arbitrary weights.” See Estrada, J. 2000. The Cost of Equity in Emerging Markets: A Downside Risk Approach. *Emerging Markets Quarterly*, Vol. 4, No. 3, p. 2 (CLEX-49).

Additionally, there are claims that the surveys are biased toward certain regions of the world.<sup>134</sup>

- b. Second, these models lack statistical or econometric explanatory value. The relationship between earned returns and the results of country-risk ratings is very weak. The initial paper on this topic found that the country-risk ratings explained only 1.76% of the variation in market returns (meaning that 98% of the variation is not explained by the model).<sup>135</sup> The reason the models explain so little is that the sole explanatory variable, which is the Institutional Investor ratings survey, seems to be an unreliable and opaque source.<sup>136</sup>
- c. Third, the method of statistical analysis utilized by Duff and Phelps is substandard. The computations are made on one set of countries (developed) and applied to another out-of-sample set (undeveloped/non-emerging). In other words, the method fails to account for the non-linearity of assessment. For example, it is possible that the incremental risk of a country rated at 70 over a country that scored 80 could be much higher than the difference between a country that scored 20 and one rated at 30. Also,

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<sup>134</sup> For example, Haque *et al.* (1997) note that the *Institutional Investor* is more generous to Asian and European countries than to African countries. See Haque, N., Mathieson, D., and N. Mark. 1997. Rating the Raters of Country Creditworthiness. *Finance & Development*, Vol. 34, No. 1 (CLEX-50).

<sup>135</sup> See Thurner, M. 2003. "Valuation of MNC Subsidiaries in Emerging Markets: The Case of China." Doctoral Seminar in International Finance, p. 8 (CLEX-51).

<sup>136</sup> Thurner has concluded that "*The low R<sup>2</sup> factors [a measure of the variation explained by the model] are also, not surprisingly, an indication that there are plenty of other very relevant factors not captured by this relatively simplistic formula.*" See Thurner, M. 2003. "Valuation of MNC Subsidiaries in Emerging Markets: The Case of China." Doctoral Seminar in International Finance, p. 8 (CLEX-51). The fact that the model depends on a single variable is defended by Erb *et al.* (1996) by arguing that "[*The requirement that the candidate risk measure must be available for all 135 countries] eliminates [the usage in my model of] measures based on macroeconomic data that are subject to irregular releases and often dramatic revisions.*]" And "*There are many factors that simultaneously influence a country credit rating: political and other expropriation risk, inflation, exchange rate volatility and controls, the nation's industrial portfolio, its economic viability, and its sensitivity to global economic shocks, to name some of the most important. The credit rating, because it is survey-based, may proxy for many of these fundamental risks.*" See Erb, C., Harvey, C. and Viskanta, T. 1996. Expected Returns and Volatility in 135 Countries. *The Journal of Portfolio Management*, pp. 47-48 (QE-0051). Note that, as argued by Erb, *et al.* (1996) country ratings may be influenced by expropriation and currency risks, which as noted above should not be included in the cost of capital estimations for the Projects at issue in this dispute.

one would expect all countries with data availability to run a regression, to be clustered around a “narrow” range of ratings, hence minimizing variability. The method also fails to consider country-fixed effects (*i.e.*, making an accommodation for country-specific conditions unrelated to the ratings) and so its estimates are likely biased. Accordingly, the survey-based country-risk ratings approach is not of sufficient quality to provide reliable information about capital costs.

- d. Furthermore, the stability of the results obtained by this method is not a desirable characteristic. As Duff and Phelps explain, “equity risks vary constantly”. The fact that the Country Risk Rating Model has “Stability of results” is therefore a disadvantage.<sup>137</sup>
- 138. Given the discussion above, the Country Risk rating model should be rejected. In fact, if one were to choose a Country Risk Premium based on rating models, Prof. Damodaran’s recommendation is a superior alternative, as it is transparent and based on financial market information. As mentioned, Prof. Damodaran’s Country Risk Premium value is similar to ours.

## **B.2 THE INCLUSION OF AN ADDITIONAL RISK PREMIUM DUPLICATES COUNTRY RISK PREMIUM AND CONTRADICTS FMV PRINCIPLES**

- 139. Dr. Flores explains that several authors have pointed out deficiencies in the CAPM formulation and that this is the justification for the addition of an additional risk premium to the discount rate. Nevertheless, the CAPM remains the most widely used methodology to estimate the CoE,<sup>138</sup> and none of the authors cited by Dr. Flores have been able to propose a methodology that is as widely adopted.

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<sup>137</sup> See Flores Report, ¶ 139.

<sup>138</sup> See Brealey, R., Myers, S. and Allen, F. 2014. Principles of Corporate Finance. 11th Ed. New York: McGraw-Hill, Ch. 8, p. 190 (CLEX-35).

140. This being said, Dr. Flores explains that there are four reasons for the inclusion of a risk adder in the case at hand, namely:
- a. Omega Panama is a small company vis-à-vis the companies used to calculate the CAPM discount rate.
  - b. Omega Panama is not a traded company and thus requires an illiquidity premium.
  - c. Omega Panama is not a diversified company.
  - d. There is capital rationing.
141. Dr. Flores purports that all these factors can be approximated by a single empirical measure called the size premium which is based on a measure of incremental returns by small companies vis-à-vis large companies (which, paradoxically, is only the first of his four justifications for an additional risk).<sup>139</sup> Hence, he goes on to compares the size of Omega Panama with the U.S. companies and concludes that Omega Panama should be considered a micro company.
142. The problem with this logic is that given that the discount rate we are computing is already inclusive of Country Risk Premium (which accounts for, among others, the fact that Panama's economy is smaller than that of U.S.), it is not proper to compare the relative size of Omega Panama vis-à-vis U.S. companies. If a size premium were to be applied with reference to U.S. companies, we would be double counting Country Risk Premium and ignoring the relative position of the company in the market in which it operates. In fact, the Panamanian economy is 0.3% of the U.S. economy. Hence, large companies in Panama should, on average, be much smaller than large companies in the US (probably less than 0.3% of the US large companies' size).

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<sup>139</sup> See Flores Report, ¶ 128.

143. As a consequence, no adjustment for size premium is needed once we account for Country Risk Premium, which implies that Dr. Flores empirical measure of the risk adder is not only unjustified by the size differential, but it is also inapplicable to the other reasons he mentions (even if those were valid).
144. Regarding Dr. Flores' second explanation (*i.e.*, illiquidity), this discount goes against the principle of FMV. Claimants were not under pressure to sell and would have only divested if compensated for the value it could derive from the company. It is unquestionable that selling a share of a public company takes less time than divesting a private company, but it is improper to assume that Claimants should be compensated only at the value it could have realized when assuming a rushed sale.
145. When sales take place within the buyer and seller's planning horizons, the price need not deviate from fundamental value. Thus, there is no need to increase the discount rate to account for illiquidity related to financial distress and/or transaction costs and price discovery.
146. This view has wide acceptance in the related literature:
  - a. Mercer (1994) states that an illiquidity discount should not be applied when valuing controlling interests in private companies, from a theoretical point of view.<sup>140</sup> Additionally, Mercer (1994) also states that such discount does not correspond with the common practices: "...*how many investment bankers, when valuing a business for sale, take a 'marketability discount' from their concluded DCF or other valuation? Again, I have never seen such a discount taken, or even discussed, in a transaction environment*".<sup>141</sup>

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<sup>140</sup> See Mercer, C. 1994. Should "Marketability Discounts" be Applied to Controlling Interests of Private Companies?. *Business Valuation Review*, Vol. 13, No. 2, p. 57 (CLEX-52).

<sup>141</sup> See Mercer, C. 1994. Should "Marketability Discounts" be Applied to Controlling Interests of Private Companies?, *Business Valuation Review*, Vol. 13, No. 2, p. 59 (CLEX-52).

- b. Phillips and Freeman (1995) conducted an empirical research and concluded that there is no evidence of the existence of an illiquidity discount in the case of controlling participations of private companies. Furthermore, according to the authors: “*...private controlling interests did not sell for less than controlling interests in publicly-traded companies. Public/private status was not statistically significant in any tested industry or year*”.<sup>142</sup>
  - c. Becker and Gutzler (2000) state that an illiquidity premium should not be applied under the FMV principle. In particular, according to the authors: “[w]hen the valuation standard of an existing willing buyer and seller is invoked, the theoretical results suggest that no such discount (or premium) from the market price is required”.<sup>143</sup>
147. Regarding the lack of diversification, the observation is unfounded and unrelated to the CAPM theory. The CAPM does calculate the discount rates by assuming that specific projects are diversified. In fact, the CAPM says nothing about the diversification of the companies.<sup>144</sup> It simply concludes that an investor will be able to diversify its holdings, hence spreading out risk across investment. Since an investor’s portfolio may contain many pure plays (*i.e.*, non-diversified companies), such risks can be diversified away, and thus would not require a premium. Thus, there is no need to increase the discount rate to account for the lack of diversification in Omega Panama.
148. Fourth, Dr. Flores argues that a firm’s financial and other resources are not unlimited, and that this leads to hurdle rates that are higher than the cost of capital as calculated by the CAPM. The profit-adders that potential buyers may seek to add to their hurdle rates,

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<sup>142</sup> See Phillips, J. y N. Freeman. 1995. Do Privately-Held Controlling Interests Sell For Less?, *Business Valuation Review*, Vol. 14, No. 3, p. 102 (CLEX-53).

<sup>143</sup> See Becker, B. y G. Gutzler. 2000. Should a Blockage Discount Apply? Perspectives of Both a Hypothetical Willing Buyer and a Hypothetical Willing Seller. *Business Valuation Review*, Vol. 19, No. 1, p. 6 (CLEX-54).

<sup>144</sup> Note that the CAPM incorporates diversification from the investor’s perspective. This derives from the basic assumptions of the CAPM. See Brealey, R., Myers, S. and Allen, F. 2014. Principles of Corporate Finance. 11th Ed. New York: McGraw-Hill, Ch. 8, p. 199 (CLEX-35).

however, will not be accommodated in competitive bidding for a company. That is, even if a company is generating above normal returns for its current owner, bidders in a fair market value transaction will bid the price of the company up to the point that the winning price will generate only a normal return on investment. Hence, while hurdle rates may be valuable managerial tools and/or decision guidelines for specific managers, the competitive bidding process implies that the market price is set at the level that generates CAPM compatible profits to the buyer.