WALKING A TIGHTROPE: THE ROLE OF EQUITABLE DISCRETION IN QUANTUM DETERMINATION IN INVESTMENT TREATY LAW

Silke N Kumpf, Stanford University

Available at: https://works.bepress.com/kumpf/1/
WALKING A TIGHTROPE:

THE ROLE OF EQUITABLE DISCRETION IN QUANTUM DETERMINATION IN INVESTMENT TREATY LAW

A THESIS
SUBMITTED TO THE
STANFORD PROGRAM IN INTERNATIONAL LEGAL STUDIES
AT THE STANFORD LAW SCHOOL,
STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF THE SCIENCE OF LAW
Advised under the faculty supervision of
Professor Barton Thompson

By

Silke Noa Kumpf

June 2012
ABSTRACT

My thesis analyzes the manifestation of equitable arbitrator discretion in quantum determination and its role as a tool to balance treaty-based investor rights with extrinsic but competing international and public law obligations of States. Little has been written on the subject and my research sheds light on the issue from three perspectives. I examine, first, scholarly opinions on the subject, second, arbitral practice through a content analysis of all past awards published by the International Centre for the Settlement of Investment Disputes (ICSID), which held liable respondent State for expropriation and, third, the results of an online survey I conducted with ICSID arbitrators, the lawyers that plead before them and the scholars that write about the topic in scholarly journals. My findings reveal that whilst scholars acknowledge the role of equitable discretion in compensation determination, they tie on the question of whether or not its presence is desirable. The content analysis of the expropriation cases indicates that the manifestation of the public interest in disputes, prima facie, appears to depress compensation awards. The content analysis also makes apparent that the role of equitable discretion is hardly ever acknowledged in the various stages of quantum determination. Arbitrators generally only stress their inherent discretion (whether equitable or not) at moments of perplexity: when they are at a loss as to how to determine quantum. The survey indicates that the investment treaty law community is split on the question of permissibility of equitable arbitrator discretion. Moreover, the majority holds that arbitrators are permitted to consider the economic impact on and enrichment accruing to respondent State when determining quantum, matters beyond the purview of investment treaties. Perhaps as a surprise to critics, the large majority of the investment treaty law community considers it the obligation of arbitrators to balance the treaty-based rights of arbitrators with competing international law obligations of states.
PREFACE AND ACKNOWLEDGMENTS

This paper draws upon my prior work in the field of international arbitration and natural resource law at Clifford Chance London and Moscow as well as at Hafez, Cairo and my research at Stanford Law School. The concrete ideas were born during discussions with Prof. Barton Thompson and Dr. Sergio Puig of Stanford Law School, who I wish to thank especially for their invaluable help, patience and criticism. I additionally owe my thanks to a large number of individuals, who have supported my research. I wish to thank Prof. Deborah Hensler, Prof. Jonathan Greenberg, Prof. Lawrence Friedman and Prof. Alan Sykes, Loïc Coutelier and those that asked to remain anonymous. Of course, all flaws are mine.

I would like to acknowledge my extensive drawing on the scholarly works of Dr. Sergey Ripinsky and Kevin Williams, Prof. Irmgard Marboe, Dr. Burzū Ṣabāḥī, Prof. Mark Kantor and Prof. Elihu Lauterpacht on international investment law.

The empirical component of this thesis would not have been possible without the help of Dr. Ahmed El-Rifai and his employees of EGYWEB, Cairo, Egypt, who dedicated many hours into the design and hosting of the online platform for the purpose of this project. Above all, I wish to thank the anonymous participants of the online consultation for their participation in the project, whose answers build the bedrock of this thesis.

I am indebted to my J.S.M.-class of Stanford Law School, particularly Peter Slowinski, who kept me sane throughout the year. I am grateful to the Deutscher Akademischer Austauschdienst (German Academic Exchange Services) for a generous LL.M.-scholarship and to Stanford Law School for a partial tuition waiver, which rendered my studies at Stanford Law School possible.
Contents

ABSTRACT ........................................................................................................................................ II

PREFACE AND ACKNOWLEDGMENTS ....................................................................................... III

LIST OF TABLES ........................................................................................................................... VII

LIST OF FIGURES ........................................................................................................................ VII

LIST OF CASE ABBREVIATIONS ................................................................................................. IX

I. INTRODUCTION ....................................................................................................................... 1

a. The Wider Context ................................................................................................................. 1

b. My Research Question And Hypotheses ............................................................................. 4

c. The Project Outline ............................................................................................................... 5

II. THE LITERATURE .................................................................................................................... 7

a. Principal Works On Compensation In International Investment Law .................................... 7

b. The Process Of Determining Quantum ................................................................................ 9

c. Determination Of Property Valuation Method .................................................................... 15
   i. Income based Approach .................................................................................................... 16
   ii. Asset-based Approach ................................................................................................... 19
   iii. Hybrid Approach .......................................................................................................... 22
   iv. The Combination Of Methods: ‘Triangulation’ ............................................................. 22
   v. Tribunals’ Resort To Equitable Discretion When Choosing A Valuation Method ............. 22

d. Calculation Of The Property/Business Value ...................................................................... 24

e. Conversion Of The Property Value Into An Amount Of Compensation ............................. 26

f. Scholarly Ambivalence towards Equity and its Distinction from Discretion ......................... 27

g. What Are Those Equitable Considerations That May Affect Compensation? ...................... 29
   i. The Expropriatory Intent Of A State .............................................................................. 29
   ii. Level Of Enrichment To The State ................................................................................ 30
   iii. Does The Financial Situation Of The Respondent State Matter? ................................. 31

h. Contributory Negligence And Concurrent Causes Limiting Quantum ................................. 33
III. CONTENT ANALYSIS OF PUBLISHED ICSID EXPROPRIATION CASES ...... 35
   a. Overview And Methodology ............................................................................................................................. 35
   b. The Data Sample .............................................................................................................................................. 36
   c. The Award to Claim Value Ration Is Smaller In Cases Where The Public Interest Is Manifest. ............ 39
   d. Determination Of The Standard Of Compensation ............................................................................................ 42
      i. Applying The Customary International Law Standard Gives The Tribunal A Wider Margin Of Discretion. 42
      ii. Conclusion On Compensation Standard ........................................................................................................ 51
   e. Determining The Property Valuation Method .................................................................................................... 52
      i. The DCF-Method Generally Yields Higher Values Than Any Other Method, But Its Speculation-Propensity
         Has Led To Its Infrequent Use. .......................................................................................................................... 54
      ii. Arbitrators Consider The DCF-Method Speculative In Cases Where The Expropriated Business Did Not
         Operate As A Going Concern. .......................................................................................................................... 56
      iii. The DCF-Method Is Brittle: It May Produce Extreme Results And Underperform In in Robustness Tests. 58
      iv. Where The Company Has Financial Difficulty Without Prospects Of Future Profit At The Time Of
         Expropriation, applying the DCF-method May Lead To Nil Compensation. .............................................. 58
      v. Alternative Valuation Methods Lead To Lower Compensation Awards ................................................... 60
   f. Calculation Of The Expropriated Property/Business Value ............................................................................ 62
   g. Conversion Of The Property Value Into An Amount Of Compensation ............................................................. 70
      i. Intent And Enrichment Of The State May Be Relevant To The Determination Of Quantum ....................... 70
   h. Conclusion ......................................................................................................................................................... 74

IV. WHAT DO PROFESSIONALS THINK? - A REAL-TIME DELPHI ANALYSIS . 76
   a. Overview ............................................................................................................................................................ 76
   b. Methodology ...................................................................................................................................................... 77
      i. Survey Techniques: Traditional Survey and Delphi Technique ................................................................. 77
      ii. Why The Combination Of Methods Was Chosen ......................................................................................... 80
   c. The Research Population .................................................................................................................................. 80
      i. The Past And Present ICSID Arbitrators ................................................................................................. 80
      ii. The Benchmark Group – Academics, Law Firm Counsel And Jurists That Write In Peer Reviewed Journals
          And In Books On The Subject ......................................................................................................................... 81
      iii. Deletion Of Duplication ............................................................................................................................... 82
      iv. Availability Of E-Mail Addresses .................................................................................................................. 82
   d. Conducting The Survey ................................................................................................................................... 83
      i. The E-Mail Invitation ..................................................................................................................................... 83
      ii. The Online Platform .................................................................................................................................... 83
iii. Difficulties With The Level Of Participation ................................................................. 87

e. Discussion Of The Survey Design And Results Of The Pre-Fixed Survey Questions .......... 90
i. Statements On The Overarching Purpose Of BITs And Arbitrators’ Role In Adjudicating .......... 91
ii. Statements On Compensation Determination And The Role Of Equitable Discretion .......... 96
iii. Summary Of Findings Of Survey 1 .................................................................................. 109
iv. Survey 1 Correlations .................................................................................................. 111

f. Discussion Of The Design And Results Of The Delphi Survey: The Hypothetical And Related Questions 114
i. Overview ..................................................................................................................... 114
ii. Design Rationals Of Part II ......................................................................................... 114
iii. Statements To Be Rated And Results ......................................................................... 117
iv. The Quantum Estimate And Commentary By Participants ......................................... 136
v. Conclusion .................................................................................................................. 141

V. OVERALL CONCLUSION .......................................................................................... 143

APPENDICES .................................................................................................................. 146

a. APPENDIX 1 – LIST OF ARBITRATORS SAMPLED ......................................................... 147
b. APPENDIX 2 – LIST OF SCHOLARS SAMPLED .......................................................... 151
c. APPENDIX 3 - EXAMPLE OF E-MAIL INVITATION .................................................... 153
d. APPENDIX 3 – SHOT OF SCREEN 1 ............................................................................. 154
e. APPENDIX 4 – SHOT OF SCREEN 2 ............................................................................. 155
f. APPENDIX 5 – SHOT OF SCREEN 3 ............................................................................. 156
g. APPENDIX 6 – SHOT OF SCREEN 4 ............................................................................. 157
h. APPENDIX 7 – SHOT OF SCREEN 5 ............................................................................. 158
i. APPENDIX 8 – RATINGS, COMMENTS AND QUANTUM ESTIMATE OF THE BENCHMARK GROUP .............................................................................................................. 159

BIBLIOGRAPHY ............................................................................................................. 163
LIST OF TABLES

Table 1: Dataset 38
Table 2: Cases implicating the public interest with damage award and claim values 40
Table 3: BIT-text of ICSID expropriation cases 43
Table 4: Determination of the property value 53
Table 5: Survey statements of screen 2 84
Table 6: Survey 1, Statement 2 results 91
Table 7: Survey 1, Statement 3 results 93
Table 8: Survey 1, Statement 10 results 94
Table 9: Survey 1, Statement 11 results 97
Table 10: Survey 1, Statement 1 results 99
Table 11: Survey 1, Statement 4 results 100
Table 12: Survey 1, Statement 9 results 102
Table 13: Survey 1, Statement 12 results 103
Table 14: Survey 1, Statement 5 results 104
Table 15: Survey 1, Statement 6 results 105
Table 16: Survey 1, Statement 7 results 106
Table 17: Survey 1, Statement 8 results 107
Table 18: Summary of aggregated Survey 1 results 108
Table 19: Survey 2, Statement 1 results 116
Table 20: Survey 2, Statement 2 results 117
Table 21: Survey 2, Statement 3 results 119
Table 22: Survey 2, Statement 4 results 120
Table 23: Survey 2, Statement 5 results 121
Table 24: Survey 2, Statement 6 results 123
Table 25: Survey 2, Statement 7 results 124
Table 26: Survey 2, Statement 8 results 126
Table 27: Survey 2, Statement 9 results 128
Table 28: Survey 2, Statement 10 results 129
Table 29: Survey 2, Statement 11 results 130
Table 30: Survey 2, Statement 12 results 132
Table 31: Summary rating results of table 2 133

LIST OF FIGURES

Figure 1: Stages of Compensation Determination 10, 35, 135
Figure 2: Boxplot of the award and claim value ratios in cases that do involve the public interest (indicated as 1, y-axis) and those that do not (indicated as 0, x-axis)

Figure 3: Text of screen 1

Figure 4: Text of hypothetical, survey statements, and instructions quantum estimate instructions on screen 3

Figure 5: Instructions on screen 4

Figure 6: Screen 5 text

Figure 7: Equitable discretion decisions made by participants divided by quantum determination stages

Figure 8: Equitable discretion decisions made by participants divided by quantum determination stages
LIST OF CASE ABBREVIATIONS

When discussing cases in my thesis, I will refer to them by the commonly known name of the case in literature as follows:

<table>
<thead>
<tr>
<th>Full case names</th>
<th>Short forms used in the text</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC Affiliate Limited and ADC &amp; ADMC Management Limited v. Republic of Hungary, ICSID Case No. ARB/03/16, Award (Feb. 10, 2006)</td>
<td>ADC v Hungary</td>
</tr>
<tr>
<td>Alpha Projektholding GmbH v. Ukraine, ICSID Case No. ARB/07/16, Award (Aug. 11, 2010)</td>
<td>Alpha v Ukraine</td>
</tr>
<tr>
<td>Bernardus Henricus Funnekotter and others v. Republic of Zimbabwe, ICSID Case No. ARB/05/6, Award (Apr. 22, 2009)</td>
<td>Bernardus Henricus v Zimbabwe</td>
</tr>
<tr>
<td>Biwater Gauff (Tanzania) Limited v. United Republic of Tanzania, ICSID Case No. ARB/05/22, Award (Jul. 24, 2008)</td>
<td>Biwater Gauff v Tanzania</td>
</tr>
<tr>
<td>Compania del Desarrollo de Santa Elena v. Republic of Costa Rica, ICSID Case No. ARB/96/1, Award (Feb. 17, 2000)</td>
<td>Santa Elena v Costa Rica</td>
</tr>
<tr>
<td>Ioannis Kardassopoulos v. Georgia, ICSID Case No. ARB/05/18, Award (Mar 3, 2010)</td>
<td>Ioannis v Georgia</td>
</tr>
<tr>
<td>Metalclad Corporation v. United Mexican States, ICSID Case No. ARB(AF)/97/1, Award (Aug. 30, 2000)</td>
<td>Metalclad v Mexico</td>
</tr>
<tr>
<td>Middle East Cement v. Arab Republic of Egypt, ICSID Case No. ARB/99/6, Award (Dec. 4, 2002)</td>
<td>Middle East Cement v Egypt</td>
</tr>
<tr>
<td>Ron Fuchs v. Georgia, ICSID Case No. ARB/07/15, Award (Mar. 3, 2010)</td>
<td>Ioannis v Georgia</td>
</tr>
<tr>
<td>Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S. v. Republic of Kazakhstan, ICSID Case No. ARB/05/16, Award (Jul. 29, 2008)</td>
<td>Rumeli v Kazakhstan</td>
</tr>
<tr>
<td>Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S. v. Republic of Kazakhstan, ICSID Case No. ARB/05/16, Annulment decision, Award (Mar. 25, 2010)</td>
<td>Rumeli Annulment</td>
</tr>
<tr>
<td>Saipem S.p.A. v. People's Republic of Bangladesh, ICSID Case No. ARB/05/7, Award (Jun. 30, 2009)</td>
<td>Saipem v Bangladesh</td>
</tr>
<tr>
<td>Siemens AG v. Argentine Republic, ICSID Case No. ARB/02/8, Award (Feb 6, 2007)</td>
<td>Siemens v Argentina</td>
</tr>
<tr>
<td>Southern Pacific Properties v. Arab Republic of Egypt, ICSID Case No. ARB/84/3, Award (Apr. 20, 1992)</td>
<td>SPP v Egypt</td>
</tr>
<tr>
<td>Talsud, S.A. v. United Mexican States, ICSID Case No. ARB(AF)/04/4, Award (Jun. 16, 2010)</td>
<td>Gemplus v Mexico</td>
</tr>
<tr>
<td>Full case names</td>
<td>Short forms used in the text</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Tecnicas Medioambientales Tecmed S.A. v. United Mexican States,</td>
<td>Tecmed v Mexico</td>
</tr>
<tr>
<td>ICSID Case No. ARB(AF)/00/2, Award (May 29, 2003)</td>
<td></td>
</tr>
<tr>
<td>Tza Yap Shum v. Republic of Peru, ICSID Case No. ARB/07/6,</td>
<td>Tza Yap Shum v Peru</td>
</tr>
<tr>
<td>Award (Jul. 7, 2011)</td>
<td></td>
</tr>
<tr>
<td>Waguih Elie George Siag and Clorinda Vecchi v. Arab Republic of</td>
<td>Siag v Egypt</td>
</tr>
<tr>
<td>Egypt, ICSID Case No. ARB/05/15, Award (Jan. 6, 2009)</td>
<td></td>
</tr>
<tr>
<td>Wena Hotels Limited v. Arab Republic of Egypt, ICSID Case No. ARB/98/4,</td>
<td>Wena v Egypt</td>
</tr>
<tr>
<td>Award (Aug. 12, 2000)</td>
<td></td>
</tr>
<tr>
<td>Azurix Corp. v. the Argentine Republic, ICSID Case No. ARB/01/12 , Award (Jul.</td>
<td>Azurix v Argentina</td>
</tr>
<tr>
<td>15. 2006)</td>
<td></td>
</tr>
<tr>
<td>In Spyridon Roussalis v. Romania ICSID Case No. ARB/06/1, Award and</td>
<td>Spyridon Roussalis v. Romania</td>
</tr>
<tr>
<td>Separate Opinion (Dec. 07, 2011)</td>
<td></td>
</tr>
</tbody>
</table>
I. INTRODUCTION

a. THE WIDER CONTEXT

1. In the past twenty years, investment arbitration has undergone two significant changes, one quantitative, the other qualitative.\(^1\) Quantitatively, the exponential increase in the number of bilateral investment treaties (BITs) between States, which provide direct recourse for investors to sue State parties in international arbitration, has led to large numbers of investment treaty disputes.\(^2\) Qualitatively, the stakes at issue of these disputes have diversified. Following privatizations and large scale foreign direct investment in the public sector, those disputes are no longer only concerned with plain vanilla infringements against pure foreign commercial properties, but have branched out to concern the ambit of regulatory powers of respondent States. These disputes may, for example, concern the provision of public goods, such as water and sanitation, or the environment, such as the treatment of waste. The set of stakeholders has become larger. It increasingly includes the public of the affected respondent States. As a result, the role of the previously exclusively private-forum arbitrator has changed, serving a public law function adjudicating over public law disputes.

2. Some have argued that this public law function requires arbitrators to fastidiously balance the right to investment protection of the investor and the competing public law obligations of the State to serve its citizens.\(^3\)

---


3. Yet, although BITs provide for reciprocal terms of contracting States, most BITs provide third parties, investors, with rights, and the contracting States with inverse duties to honor such rights (or pay-up). In light of this, the substantive provisions of BITs may be said to be imbalanced; they are asymmetric. This substantive asymmetry is accepted as serving the purpose of attracting foreign investment: the State provides assurances that the foreign investor will be treated according to treaty, and if the foreign investor is not treated according to treaty, she can find redress by arbitration in an international depoliticized forum. These assurances are said to reduce the State’s investment risk and to lower the return/risk ratio needed for foreign investors to consider investment profitable. As a result, contracting States gain access to capital at cheaper rates than they would otherwise do. This in turn, it is said, furthers economic development. Seen from this perspective, the substantive imbalance of BITs is leveled out by the wider economic bargain the contracting States have struck by signing BITs. As a consequence, it is argued that it is sufficient for arbitrators to enforce investor rights as provided by the BIT in a self-contained system, without much regard to competing international and public law obligations of States.

4. Over the past decade however, these very assumptions have been cast in doubt: It is unclear whether BITs increase foreign direct investment (FDI) inflows; it is unclear whether FDI truly advances economic development. Moreover, the interpretation of treaty concepts in arbitral

---

4 Some newer BITs include exceptions, such as for example the US 2004 Model BIT. It is believed that a state has only very narrow rights to counterclaim in a treaty-based claim over the investor’s investment shortcomings. This issue is not settled. In *Spyridon Roussalis v. Romania* (ICSID Case No. ARB/06/1) Award and Separate Opinion (Dec 07, 2011) the State had no right to counterclaim.


awards has been heavily criticized8, as going “for beyond what was originally intended by the treaties” due to, as some suggest, “…an ideological fervour of the times which did not permit any contrary ideas to stand in the way of articulation of principles that were based on free-market fundamentalism”.9 Less adversarial and more factually however, fears have been voiced that the prospects of having to pay damages in investment treaty arbitrations restrict poor States with tight budgetary constraints from regulating progressively to further economic development.10 Attempts have been made to address this latter fear in some new BITs as illustrated by the arguably more balanced 2004 US and Canada Model BITs11. The two BITs exclude regulatory actions designed to respond to legitimate welfare objectives from the BIT expropriation provision.

5. Yet, while it is hoped that this treatment will increasingly gain a foothold in the BIT language worldwide, the settlement of actual disputes continues to require tribunals to adjudicate treaty-based cases under prima facie asymmetrical BITs.12 Hence, it squarely becomes the discretion,

---


10 See Martins Paparinski, Regulatory Expropriation and Sustainable Development in in Marie-Claire Cordonier Segger, Markus W Gehring & Andrew Newcombe, SUSTAINABLE DEVELOPMENT IN WORLD INVESTMENT LAW (2011), at 300-327.

11 The 2004 US Model BIT available at http://www.state.gov/documents/organization/117601.pdf., includes a public purpose exception precluding measures to amount to indirect expropriation in certain circumstances. See Annex B. 4(b): “Except in rare circumstances, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, and the environment, do not constitute indirect expropriations.”

12 See, as to asymmetry, Emma Saunders-Hastings, The Asymmetrical Legalization of Investment Regimes in Africa: Lessons from Water Privatization, in MARIE-CLAIRE CORDONIER SEGGER, MARKUS W GEHRING & ANDREW NEWCOMBE, SUSTAINABLE DEVELOPMENT IN WORLD INVESTMENT LAW, 457 -479.
and perhaps obligation, of the arbitrators (a) to balance competing investor rights and state powers and duties, and (b) to recognize their own evolving public law roles.

6. Arbitrators resort to discretion in all steps of the arbitration process. They resort to it, when ruling on jurisdiction, when seized of the merits of the dispute. They also resort to it when determining quantum after having held respondent State in violation of their substantive obligations under a BIT. Arguably, it is here that they enjoy the widest margin of discretion, the most powerful one in relation to what matters beyond the horizon of jurists: the amount of compensation. It is also the last opportunity in the stage of proceedings, at which arbitrators may correct or adjust substantively unjust outcomes that would result from a strict application of laws and BIT provisions.

b. MY RESEARCH QUESTION AND HYPOTHESES

7. My thesis analyzes the following research questions:

What is the scope of equitable arbitrator discretion in the process of determining compensation?

Is it legitimate for arbitrators to exercise equitable discretion in the quantum phase to balance treaty-based investor and competing state interests in investment treaty disputes that implicate the public interest?

8. I base my research on the following hypothesis:

Arbitrators, law firm counsel and academics increasingly appreciate the arbitrator’s role as global administrative law adjudicators as an evolving duty to balance the treaty rights of investors and the competing public law obligations of States. Equitable discretion at the quantum stage is one component of fulfilling this function absent other express authorization in bilateral investment treaties.

---

14 Ibid., at 166.
Yet, extensive exercise thereof may harm the legitimacy of the investment treaty system.

9. Scholars have previously analyzed the habit of arbitrators to make discretionary cost awards. The award of costs has particularly been used to punish parties for procedural bad behavior, such as dilatory techniques. The issue of costs is beyond the ambit of this thesis and I will not address it.

c. THE PROJECT OUTLINE

10. I approach this question by providing first, in Chapter 2, the scholarly discussions as to the role of equitable discretion in the law of compensation in international investment law.

11. Second, I will empirically analyze one institution: the International Centre for the Settlement of Investment Disputes (ICSID). ICSID not only administers the majority of investment treaty disputes, it also publishes information about the identities of all parties involved in disputes, the arbitrators adjudicating them and, in the majority of cases, the issued awards. In Chapter 3, I will provide a content analysis of all past published ICSID awards, in which tribunals found expropriation, and analyze them as to the role of equitable discretion in quantum determination. I chose all ICSID expropriation cases as a sample of the wider set of compensation cases in international investment law. In Chapter 4, I will provide and analyze the results of two expert panel surveys, which probe two groups of experts, i.e. (i) past and present ICSID arbitrators and (ii) scholars who published on the subject of international treaty arbitration, but have not sat in ICSID arbitration proceedings, about their viewpoints of the role of equitable discretion in

---

16 See, for example, Florian Grisel, L'octroi d'intérêts composés par les tribunaux arbitraux d'investissement, Journal du droit international (Clunet) n° 3, Juillet 2011, doctr. 9.

17 See, for example, Aguas v Argentine Republic ¶ 10.2.3–10.2.6.

18 If it does not publish the award, ICSID publishes its legal reasoning.
quantum determination. The surveys, hosted on a web portal designed for the project, follows a mixed technique:

a. a traditional survey, in which participants are asked to rate a set of 12 general statements about equitable discretion in compensation and the public law role of arbitrators in investment treaty arbitration; and

b. a reiterative group process known as the Delphi method, in which participants are asked to:

i. read a short hypothetical about the expropriation of a water rights concessions, rate a corresponding set of 12 statements and provide a quantum estimate; and

ii. compare their answers to those of their peers, encouraging them to adapt their own answers, generating more robust answers.

The hypothetical, while starkly simplified and thus only imperfectly representative of the real world, favors the investor in law, but the respondent State in equity. It is an attempt at simulating the response mechanisms that arbitrators resort to, when faced with a potentially inequitable result in investment treaty arbitration proceedings. It measures whether, and if so, at what stage of quantum determination, participants would allow equitable considerations to play a role. The combination of methods allows the comparison of the general opinion participants profess and their actual decision making.

12. In Chapter 5 I conclude.
II. THE LITERATURE

13. While most scholarship focuses on the jurisdiction and merit phase of investor-state disputes, the scholarship on compensation has recently also taken off. The earlier felt neglect of the topic is well echoed in Patrick Norton’s 1991 assessment that tribunals “after elaborate analysis of the law seemingly pluck the amount of an award out of thin air”. Yet, as Andrea Bjorklund has highlighted “quantum is rapidly losing its status as an under-theorized area of investment law” as books published as recent as 2011 make an important contribution to the field. The literature highlights that the sophistication of compensation valuation in investor-state arbitration practice has progressed significantly in the past decade necessitating parties to hire sophisticated quantum experts. It however also shows that compensation awards continue to appear incoherent. I posit that much of this incoherence may be ascribed to the arbitrators’ large margin of discretion in quantum determination, and a subset thereof premised on equity: equitable discretion that may be used to balance the rights of investors with competing public law obligations of states.

a. PRINCIPAL WORKS ON COMPENSATION IN INTERNATIONAL INVESTMENT LAW

14. While most textbooks on international investment law devote a short chapter on compensation, there are four works that exclusively focus on compensation in international investment law:

---

a. *Damages in International Investment Law* by Sergey Ripinsky with Kevin Williams,22 and

b. *Valuation for Arbitration: Compensation Standards, Valuation Methods and Expert Evidence* by Mark Kantor,23

c. *Calculation of Compensation and damages in International Investment Law* by Irmgard Marboe,24 and

d. *Compensation and restitution in investor-state arbitration: principles and practice* by Burzū Ţabāḥī.25

15. The backbone of Ripinsky with Williams’ book is an empirical analysis of compensation awards of investment treaty cases that were publicly available up to February 2008.26 It covers all possible aspects of compensation and all breaches. The book briefly touches on the issue of equitable discretion and compensation.27 Marboe’s work covers the same heads as Ripinsky with Williams, but is more grounded in European continental civil law tradition. The work is doctrinal and does not explicitly rely on a systematic analysis of existing practice. Kantor’s work squarely focuses on the technicalities of valuation, primarily analyzing the intricacies of discounted cash flow techniques but also less known valuation methods such as the capitalized cash flow method and the adjusted present value method. Kantor also briefly addresses the issue of equitable

---

22 SERGEY RIPINSKY WITH KEVIN WILLIAMS, DAMAGES IN INTERNATIONAL INVESTMENT LAW (2008). [hereinafter ‘RIPINSKY WITH WILLIAMS’]

23 MARK KANTOR, VALUATION FOR ARBITRATION: COMPENSATION STANDARDS, VALUATION METHODS AND EXPERT EVIDENCE (2008) [hereinafter “KANTOR”].

24 IRMGARD MARBOE, CALCULATION OF COMPENSATION AND DAMAGES IN INTERNATIONAL INVESTMENT LAW (2009) [hereinafter ‘MARBOE’].

25 BURZŪ ŢABĀḤĪ, COMPENSATION AND RESTITUTION IN INVESTOR-STATE ARBITRATION: PRINCIPLES AND PRACTICE (2011) [hereinafter “ŢABĀḤĪ”].

26 RIPINSKY WITH WILLIAMS, at 406- 485.

27 Ibid., at 313- 360.
considerations.\textsuperscript{28} Published in 2011, Şabahi’s work is the most concise and up to date and includes analyses of the most recent cases. Since 2006, there has been an increasing number of scholarly articles on the issue of compensation in international investment law, most of them doctrinal. I will mention relevant articles, where appropriate.

b. \textbf{THE PROCESS OF DETERMINING QUANTUM}

16. A tribunal seized of the task of determining compensation has to make a series of decisions which all impact upon the final amount of compensation awarded. In his early article on compensation for energy takings in 1990 Sir Elihu Lauterpacht elegantly unpacked the various stages when considering on whether a tribunal could take equitable discretion into account at any of the stages of compensation determination:\textsuperscript{29}

![Diagram](image)

\textit{Figure 1: Stages of Compensation Determination}

17. I will utilize this stylization of quantum determination as a reference point at various stages of this thesis. In each chapter, I will analyze the role of equitable discretion at the above stages through the lenses of scholarly work (Chapter 2), tribunal practice (Chapter 3) and survey results (Chapter 4). This will permit me to gain a 360 degree perspective on an a little researched topic.

\textsuperscript{28} Kantor, at 115- 118.
18. Accordingly, in this chapter I will start off with a doctrinal description and scholarly opinion of the role of equitable discretion each stage of quantum determination.

i. Determination Of The Standard Of Compensation In International Investment Law

19. In customary international law, expropriation is a legitimate exercise of state power, as long as the act follows pre-set criteria. While not entirely settled the criteria are said to be the following: the expropriation is undertaken a) for a public purpose, b) executed in a non-discriminatory fashion, c) with due process of law and d) for payment of compensation that is "prompt, adequate and effective". The specification "prompt, adequate and effective" is known as the Hull Formula. If those criteria are met, the expropriation is said to be lawful, if they are not, the expropriation is unlawful. In customary international law, lawful expropriation and unlawful expropriation arguably trigger differing compensation standards. These customary international law criteria have been imported into many bilateral investment treaties. Ordinarily, therefore, a contracting party is free to expropriate an investor, as long as it follows criteria stipulated in the BIT.

20. As regards the distinction of unlawful and lawful expropriation in the BIT context, Marboe acknowledges that scholars do not agree on the question of whether the compensation standards for lawful and unlawful expropriation differ and whether or not the BIT standard of compensation is to be applied to both. Emphasizing the deterrent function of compensation, she maintains that it should make a difference “as a matter of principle” because the financial

---

30 Ripinsky with Williams, at 78
31 Ibid.
32 Ibid.
33 Ibid., at 64 – 88.
consequences of lawful and unlawful behavior would otherwise be the same”.\textsuperscript{35} Campbell McLachlan QC, Laurence Shore and Matthew Weiniger dismiss any distinction between the two suggesting that “the problem of identifying a standard for compensation does not arise as a practical issue given that the treaty itself will contain provisions stating the appropriate standard”.\textsuperscript{36} Their comment of 2007 suggests that they understand the BIT standard to apply to both unlawful and lawful expropriations.\textsuperscript{37} In 2010, Burzū Ṣabāḥī and Nicholas J. Birch offer an explanation for this scholarly disagreement, suggesting that “the majority of the interested community assumed that expropriation was always lawful and hence that the corresponding compensation always had to be determined according to the Hull Formula [...]”.\textsuperscript{38} They highlight that “this distinction [had] to some extent [been] forgotten until recently [...]” and that “[t]he tribunal in ADC v Hungary in 2006 – followed by a 2007 paper by Irmgard Marboe – reminded the legal community of the distinction”.\textsuperscript{39} Accordingly, if the expropriation fulfills the criteria stipulated in the BIT, is it lawful and the BIT standard of compensation applies.\textsuperscript{40}

21. In relation to the BIT compensation standard, Ripinsky with Williams highlight that “about 75 per cent of all model BITs and around 70% of examined investment treaties [...]” stipulate that compensation needs to be ‘adequate’ “usually as part of the formula of ‘prompt, adequate and effective compensation’”.\textsuperscript{41} Compensation is often further specified, “the term ‘fair market value’

\textsuperscript{35} Marboe, at 68.
\textsuperscript{37} Ibid., at 315 – 319 (2007).
\textsuperscript{38} Borzu Sabahi & Nicholas J. Birch, Comparative Compensation for Expropriation, International Investment Law and Comparative Law 761 (Stephan Schill ed., 2010).
\textsuperscript{39} Ibid., at 761.
\textsuperscript{40} Ripinsky with Williams, 83 – 88.
\textsuperscript{41} Ibid., at 78.
The BIT may provide other concretizing instructions such as the date of property valuation to be taken into account, often stipulated as the date immediately before the expropriation has taken place/has become known. The fair market value is commonly understood to be objective and abstract; it is the price that an informed buyer would pay for the property in an arm’s length transaction. Ripinsky with Williams suggest that compensation based on the “fair market value” is “universally deemed to achieve the standard of full compensation” (Emphasis added). Marboe posits that the fair market value is not ‘full’ because it is independent of the subjective value a specific owner attaches to his property, who may take into account “differences in perception of the degree of risk” and other synergies. Whether or not this is so, scholars agree that fair market value (plus interest) “sets the upper limit of the compensation due...” and that “other damages, such as moral ones, are not payable” under the BIT standard.

22. When an expropriation does not meet the BIT criteria, an expropriation is said to be “unlawful”. As most BITs do not explicitly provide a compensation standard for unlawful expropriation, scholars and tribunals have argued that the compensation standard reverts back to the customary international law compensation standard for internationally wrongful acts under. The case commonly known as Chorzów Factory Case and Articles 31 and 36 of the International Law Commission (ILC) Articles on State Responsibility are widely accepted as

42 Ibid., at 79-80, fn.86 [quoting an UNCTAD study: “The overall level of convergence on this issue among BITs of the last decade is remarkable, except on the details concerning compensation.”]
44 RIPINSKY WITH WILLIAMS, at 78 - 79.
46 Borzu Sabahi & Nicholas J. Birch, Comparative Compensation for Expropriation, INTERNATIONAL INVESTMENT LAW AND COMPARATIVE LAW 763 (Stephan Schill ed., 2010).
47 RIPINSKY WITH WILLIAMS, at 79.
48 In fact, I have not seen a single one.
embodying the customary international law compensation standard for internationally wrongful acts, which aims to reestablish the situation as it would have been absent the breach.\textsuperscript{49} The\textit{ Chorzów Factory} case as elucidated by the Permanent Court of International Justice (PCIJ) suggests:

\textit{[t]he essential principle contained in the actual notion of an illegal act - a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals- is that reparation must, as far as possible, \textbf{wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed} [Emphasis added].}\textsuperscript{50}

Likewise, the ILC Articles On State Responsibility stipulate:

\textbf{Article 31}
1. The responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act.
2. Injury includes any damage, whether material or moral, caused by the internationally wrongful act of a State.

\textbf{Article 36}
1. The State responsible for an internationally wrongful act is under an obligation to compensate for the damage caused thereby, insofar as such damage is not made good by restitution.
2. The compensation shall cover any financially assessable damage including loss of profits insofar as it is established.

23. As Marboe puts it, the customary international law compensation standard for internationally wrongful acts compares \textit{“the actual financial situation of the injured person with the financial situation that would have existed if the illegal act had not been committed”}.\textsuperscript{51} Marboe suggests that, accordingly, what distinguishes this standard from the fair market value is that


\textsuperscript{50} Factory at Chorzów, (Germ. v. Pol.), Merits, 1928 P.C.I.J. (ser. A) No. 19, annex, (Order of Dec. 15) 47 [thereafter \textit{Chorzów Factory Case}].

compensation for an unlawful act follows a subjective approach: the damage is to be measured from the perspective of the affected individual and not from the perspective of a third person. Ripinsky with Williams point out that it is the fair market value which is the starting point for both lawful and unlawful expropriation:

The starting point for the assessment of compensation for an unlawful expropriation is usually the same as for a lawful one: fair market value of the investment taken.” [Emphasis added]. However, while in the case of lawful compensation fair market value represented the upper limit, it did not in the case of unlawful expropriation. Hence, in many expropriation cases, there would be no difference between the two legal bases to compensation.

24. The standard of compensation in customary international law as embodied in the nebulous Chorzów Factory Case and the ILC Articles does not provide as detailed instructions as may be laid down by the standard within a BIT. For example, the customary international law standard does not specify a date, whereas the BIT often does. The latter generally restricts compensation to quantifiable property losses, which may not include moral damages. The customary international law standard lays down no such limitation. In fact, the ILC Articles require compensation for “damage, whether material or moral”. From this perspective, the BIT standard may be set to limit the margin of discretion of arbitrators more than the customary international law standard by offering more concrete valuation instructions. There may be other nuanced differences. For example, under the BIT standard the finding of expropriation generally triggers the compensation provision, making room for a potential tendency to neglect proof of causation. Causation is however stressed in the Chorzów Factory Case and the ILC Articles, which explicitly requires compensation only for the “consequences of the illegal act” or “injury

52 Ibid.
53 As the content analysis in Chapter 3 will show, her view does not square well with arbitral practice, as it is the ‘fair market value’ to which nearly all cases allude whether or not they recognize a distinction between the customary international law standard or the BIT standard.
54 Ripinsky with Williams, at 85.
In brief, the choice of the compensation standard may affect the ambit of arbitrators’ discretion, including equitable discretion. In his article on compensation in energy takings, in which he overall militates against the use of equitable discretion, Sir Elihu Lauterpacht agrees that equitable discretion in the determination of the compensation standard for lawful takings is conceptually not improper:

The suggestion that the standard of compensation payable upon a lawful nationalisation or expropriation is determined by reference to equity is one which, though one may not accept it as the standard presented by the relevant treaty, cannot be said to be conceptually out of order.56

c. **DETERMINATION OF PROPERTY VALUATION METHOD**

25. From determining the compensation standard, arbitrators proceed to determining the method of valuing the property/business.57 Before considering the role of equitable discretion at this stage of compensation determination, the following briefly reviews the opinion of the scholarly community on the “correct” valuation technique(s), while current tribunal practice is covered in Chapter 3.

26. Ripinsky with Williams caution the reader that there is no ‘right’ valuation technique, that a ‘magic formula’ did not exist, but “rather that every valuation requires careful analysis specific to the circumstances of the case”.58 In the case of expropriation, most quantum determinations require business valuation, because it is a business, not a set of unrelated assets, which is taken by the state. Ripinsky with Williams suggest three approaches to valuing businesses:

---

55 Please see paragraph 22.
57 Please refer to Figure 1 at paragraph 22.
58 RIPINSKY WITH WILLIAMS, at 194.
1. Income-based approach calculates the present value of a business’s anticipated cash flows.
2. Market-based approach determines the value of a business by comparing it to similar businesses, business ownership interests, or securities that are sold on the open market.
3. Asset-based approach values tangible and intangible assets comprising a business and aggregates these separate values to arrive at the value of the business.\(^5^9\)

### i. Income based Approach

27. Current academic debate revolves around one technique that follows the income-based approach: the Discounted Cash Flow (DCF) method, which is forward looking measuring the value of a company by discounting future income streams to the present day.\(^6^0\) Ripinsky with Williams note that it is considered the strongest method to determine fair market value, but also the most difficult one to use, because it requires forecasting, and thus speculation.\(^6^1\) Rubins and Kinsella suggest that the method is universally accepted to apply within both business and academic communities in cases, where the expropriated asset is a going concern.\(^6^2\) Mathematically, the valuation can be summarized as

\[
DPV = \sum_{t=0}^{N} \frac{FV_t}{(1 + i)^t},
\]

where \(FV\) is the nominal value of a cash flow amount in a future period, \(i\) is the discount rate, which reflects the cost of tying up capital (and potentially risk that the payment may not be received in full), \(t\) the discrete time period and \(N\) the number of years.\(^6^3\) The formula indicates that the economic value of an enterprise equals its ability to generate revenue, not profits, for its owner. Those that support this method point out

---

59 Ripinsky with Williams, at 193.
60 Thomas W. Wälde & Borzu Sabahi, Compensation, Damages and Valuation in International Investment Law, 4(6) INT‘L DISP. MGMT 1, 10 (2007).
61 Ripinsky with Williams, at 193 -195.
63 For continuous cash flows, the following would hold true: \(DPV = \int_{0}^{T} FV(t) e^{-\lambda t} dt\), where \(FV(t)\) is now the rate of cash flow, and \(\lambda = \log(1+i)\).
that both the BIT and customary international law standard must “enable the claimant to replace his expropriated property [with] one that is capable producing the same cash flow, no more and no less”, making the DCF method uniquely suited. The Worldbank Guidelines on the Treatment of Foreign Direct Investment also endorse this method; however limit its application to businesses that are going concerns with a proven track record of profitability. Knull et al. laconically hold that “it is widely accepted that an investment’s value usually lies in the future cash flows it was expected to produce”. They suggest that where a business is a going concern, “revenue projection...are generally considered sufficient bases for an award of damages....” As the formula shows, usage of the DCF method requires (a) the determination of the property’s productive life, (b) the projection of future net cash flows and (c) the application of a discount rate, reflecting both a time and risk component. As Knull notes “The discount rate’s effect on anticipated revenues also increases the farther into the future those revenues are expected to be received”.

28. Use of the DCF method requires the retainer of sophisticated quantum experts versed in modeling cash flows, risk and uncertainty. Experts, whilst generally using similar methods,  

67 Ibid., at 7.
68 One USD now is worth more than one USD tomorrow.
69 The more uncertain the cashflows, the higher the risk.
prepare their models based on assumptions provided by their client.\textsuperscript{71} Looking into the future requires many assumptions and, as Ripinsky with Williams note, is “inherently ... speculative”.\textsuperscript{72} The speculative character of the DCF method seems to be one reason why party-appointed experts come up with immensely, sometimes ridiculously, diverging valuations: Claimant-appointed experts tend to assume some special level of revenue streams inflating the market value and low level of risk, whereas respondent-appointed quantum experts use the same technique to depress the valuation. As the content analysis in Chapter 3 will show,\textsuperscript{73} many ICSID tribunals have in the past explicitly blamed the large discrepancies between valuation results and the method’s general speculation-propensity for its rejection.\textsuperscript{74} Moreover, as Marboe suggests, the diverging values reached by tribunals may have given tribunals reason to “set the amount of compensation exactly halfway between the Claimant’s and the respondent’s valuations, thus appearing to ‘split the baby’”.\textsuperscript{75}

29. Ripinsky with Williams highlight the tension between two principles of compensation in investment law: First, the principle prohibiting the award of speculative damages, second, the principle requiring the award of the ‘fair market value’ of the investment.\textsuperscript{76} They suggest that, if fair market value was indeed the approach tribunals strove to apply, then the DCF method was appropriate. Speculation and uncertainty could be taken care of by “taking conservative

\textsuperscript{71} Such as for example as the Monte Carlo Simulation technique described in William H. Knull, III, Scott T. Jones, Timothy J. Tyler & Richard D. Deutsch, \textit{Accounting for Uncertainty in Discounted Cash Flow Valuation of Upstream Oil and Gas Investments}, 25 J. ENERGY NAT. RESOURCES & ENVTL. L. 3, 24 (2007): “the simulation creates a distribution of potential cash flow outcomes by running thousands of iterations with the variables allowed to vary within assigned ranges in accordance with probability distributions prescribed for each.”

\textsuperscript{72} RIPINSKY WITH WILLIAMS, at 201.

\textsuperscript{73} [Include cross-reference to Chapter 4]

\textsuperscript{74} See RIPINSKY WITH WILLIAMS, at 211.

\textsuperscript{75} MARBOE, at 260.

\textsuperscript{76} RIPINSKY WITH WILLIAMS, at 211.
estimates of cash flow projections and application of a higher discount rate”. The speculative nature on its own was not “a sensible basis for rejecting the DCF method as a valuation technique”.

Marboe likewise discounts the reasons given by tribunals declining to apply the DCF method. She identifies four official reasons why this had been the case in the past:

1) No going concern, no record of past performance;
2) Divergence of amount of investment and expected profits;
3) Divergence of submission by the parties;
4) Valuation procedure too expensive.

She argues that none of the reasons given was consistently applied, e.g. that the period required for proving a going concern, fluctuated hugely and, had been applied in cases without any proven track record at all. Overall, both Ripinsky and Marboe’s analysis suggest that the speculative character of the DCF method is insufficient to explain why tribunals have in the past preferred other approaches. Among other things, Ripinsky with Williams have indicated that tribunals may be inclined to choose a valuation method producing lower compensation awards due to equitable considerations. They however do not expand on that suggestion.

ii. Asset-based Approach

30. The suggestion that equitable considerations may have played a role in the hesitation of tribunals to apply the DCF-method squares well with tribunals’ past preference for asset-based approaches, such as book value or, slightly different, investment value and replacement value.

---

77 Ibid.
78 RIPINSKY WITH WILLAIMS, at 210.
79 MARBOE, at 266.
80 MARBOE, at 260 – 266.
81 MARBOE, at 260 [citing Enron Corporation and Ponderosa Assets LP v Argentine Republic, ICSID Case No. ARB/01/3, Award of 22 May 2007, ¶ 369].
82 RIPINSKY WITH WILLAIMS, at 210.
83 See, for example the application of asset-based approaches in Chapter 3 in Siemens v Argentina, Tza Yap Shum v Argentina, SPP v Egypt, Wena v Egypt, Metalclad v Mexico, Compania de Aguas del Aconquija v Argentina.
Their focus on the historic track of a company makes them not only less speculative but generally results in lower property values.

31. The book value is the difference between the company’s assets and liabilities as shown on a balance sheet and determined in accordance with generally accepted accounting principles.\textsuperscript{84} Using book value as a valuation method for a business is controversial, because it does not indicate the cost of the right to receive a portion of the revenues.\textsuperscript{85} Marboe also notes that “the asset-based approach does not consider the combination of the assets, and thus the value of the entity as a whole”. She suggests that “the book value usually understates the value of an asset or a business”.\textsuperscript{86} She cites valuation expert Shannon Pratt, who suggested that “book value’ is an ‘unfortunate colloquialism from a valuation perspective’ because it is not a value at all but actually an accounting concept”.\textsuperscript{87} Marboe asserts that book value has only rarely been relied on by international arbitral institutions, but admits that ‘adjusted book value’ has been accepted more widely and that tribunals have mixed book value, book value, liquidation value and replacement value to value a property.\textsuperscript{88}

32. The investment value or ‘sunk investment’ is a variant of the book value method, which, however, does not take into account depreciation. Marboe highlights that some tribunals considered the investment value to best reflect fair market value.\textsuperscript{89} She highly doubts the correctness and logic of this approach, because ”it is not certain that a hypothetical willing buyer

\textsuperscript{85} Ibid.
\textsuperscript{86} MARBOE, at 268 - 269.
\textsuperscript{87} Ibid., 270 citing SHANNON PRATT, \textit{VALUING A BUSINESS: THE ANALYSIS AND APPRAISAL OF CLOSELY HELD COMPANIES} 256 (1996).
\textsuperscript{88} MARBOE, 273, 276 – 278.
\textsuperscript{89} Ibid., 279; see Metalclad Corp v Mexico, Wena Hotels v Egypt; see also Siemens v Argentina, ¶ 375.
would have paid to the investor all the expenses actually spent”. She notes however that those very cases had been cases of unlawful expropriation, where the more flexible customary international law standard “of full reparation applied” and the “fair market value was not decisive anyway”.

She notes that “Tribunals might well find that full reparation could best be achieved by a repayment of investments and expenses undertaken” instead of the market value. Ripinsky with Williams submit that the arbitrators’ function of balancing of investor and State interests may sometimes be better served by asset-based approaches and that this may partially explain tribunals’ preference:

[A]rbitrators view it as allowing them to achieve a better balance between the interests of investors and States”. They may be reluctant to apply the DCF method that would project future cash flows into perpetuity or for the full duration of a long term contract. The DCF method may be seen as putting too much of a burden on the respondent State.

Overall, neither Marboe, nor Kantor, Šabâhî and Ripinsky with Williams consider the book value approach (and its variations) an appropriate method to value an investment. However, many tribunals have relied on it. The answer why this is so may not only lie in the difficulty and speculative character of determining the fair market value by DCF-method but also in the aim to achieve something fairer than fair market value. Choosing an asset-based approach to valuation may thus fall into the ambit of equitable discretion, even if it is not clearly stated.

---

90 MARBOE, at 279; see Metalclad Corp v Mexico, ¶ 36; Wena Hotels v Egypt, ¶ 896; see also Siemens v Argentina, ¶ 375.

91 MARBOE, 280.

92 Ibid.

93 RIPINKSY WITH WILLIAMS, at 231.

94 See KANTOR at 30; RIPINKSY WITH WILLIAMS, at 229 – 231; MARBOE, at 267- 284.

95 See, generally, Chapter 3 (Content Analysis of published ICSID Expropriation Cases).
iii. **Hybrid Approach**

33. While indefensible in valuation theory, some tribunals have opted for a hybrid approach, in which they combined an asset-based approach, such as book value, with an element to reflect future profit. Ripinsky with Williams suggest that tribunals used this method when they recognized that the actual value of the investment was higher than just the value on the books, but also considered the DCF-method advanced by claimants too speculative or too inequitable towards respondent State. Again, equitable considerations may have driven a tribunal to opt for a prima facie ‘erroneous’ valuation method.

iv. **The Combination Of Methods: ‘Triangulation’**

34. The increased sophistication of quantum experts led some tribunals to adopt a ‘triangulation’ approach, which combines several methods and/or uses base data, which tribunals consider robust and credible, for example from the DCF-method advanced by quantum experts. Ripinsky notes that this is in line with business practice, where often all three -income, asset and market-based – approaches are used to value an asset. Ripinsky with Williams suggest that triangulation acts as a “useful tool for weeding out serious errors”.

v. **Tribunals’ Resort To Equitable Discretion When Choosing A Valuation Method**

---

96 See MARBOE, 230, RIPINSKY WITH WILLIAMS, at 233.
97 RIPINSKY WITH WILLIAMS, at 231 – 235.
98 Ibid., at 233.
99 Ibid., at 235.
100 Ibid.
101 Ibid.
35. In an effort to reconcile the fragmented use of valuation techniques in investment treaty arbitration, Ripinsky with Williams recognize equitable discretion as one of three factors affecting the choice of a valuation method by a tribunal. 

Tribunals seem to have an inclination to balance the private interests of an investor and the public interests of a State, seeking to make good the damage suffered by the investor, but without placing an excessive burden on the State. This might tilt the balance in favour of more conservative valuation approaches. 

Kantor suggests that doing so is not necessarily tantamount to abuse of power, but the exercise of a tribunal’s inherent discretion in quantum determination. Scholars agree that investment tribunals depart considerably from accepted business valuation theory and economic principles when determining compensation. Ripinsky with Williams and Kantor suggest that in the exercise of balancing the interests of investors and states other considerations also have a role to play.

36. In the case commonly known as the *Khemco Case* before the Iran-United States Claims Tribunal, the tribunal stressed that the choice of valuation method must allow the tribunal to arrive at an equitable compensation award, although the relevant treaty did not specify “equitable compensation” as a criteria:

The choice between all the available methods must rather be made in view of the purpose to be attained, in order to avoid arbitrary results and to arrive at

---

102 See, RIPINSKY WITH WILLIAMS, at 234 [The two other factors, which they suggest are of relevance are (1) the methods used by parties and their experts and (2) information available.]

103 Ibid.

104 As Kantor highlights, the question of whether a tribunal exercised its discretion improperly has come before the Milan Court of Appeal in *Virgilio de Agostini, et al. v Milloil SpA, et al.*, see KANTOR, at 117.

105 See, for example, KANTOR, at 116.

106 RIPINSKY WITH WILLIAMS, at 234; KANTOR, at 118.

equitable compensation in conformity with the applicable legal standards. The use of several methods, when possible, is also commendable.\textsuperscript{108} (Emphasis added)

Sir Elihu Lauterpacht criticizes the \textit{Khemco Case} suggesting that equity should play no role in the choice of the valuation technique:

> It is not that anyone seeks "inequitable" compensation; it is that the whole concept of equity is out of place when it comes to the application of a specific formula like "the full equivalent of the property taken" as dictated by the 1955 Treaty….The Treaty is quite specific and one is not entitled to accept the erosion of the specific obligation to pay the "full equivalent" by qualifying it with a reference to the concept of equity. Even if equity has a place in the assessment of compensation under customary international law, it is not the equivalent, or the replacement, of the Treaty provision establishing "the full equivalent of the property taken" as the standard of the compensation to be paid.\textsuperscript{109}

37. The foregoing analysis suggests that scholars do think that equitable considerations play a role in the tribunal’s choice of valuation technique. Whether this is legit, is however a different question.

d. \textbf{Calculation of the Property/Business Value}

38. After having determined the valuation method, tribunals move on to calculate the business/property value and determine the factors that should form basis of the calculation. Generally, quantum experts will present the actual calculations to tribunals, who in turn assess the valuation, probe experts about it and then either accept, partially accept or reject the calculations. The processes of determining valuation methods and calculating the property value are generally subsumed in one, as tribunals may agree to the entire package: they may decide against a method for reasons of disagreeing with the resulting values or for reason of disagreeing with ingredients being considered too speculative. They may agree to the valuation method but amend the various factors and thus reach results different from those suggested by the party’s

\textsuperscript{108} \textit{Ibid.}, ¶ 220

quantum experts. For example, notwithstanding their agreeing to the use of the DCF-method, tribunals may propose to apply higher discount factors, a shorter time horizon and lower prospected revenue streams than those proffered by quantum experts. This very process may turn highly technical. It is here when tribunals’ work may become increasingly complicated and when tribunals start stressing their wide margin of discretion. For example, in *Gemplus v Mexico* the tribunal stressed its wide margin of discretion after both reputable quantum experts provided hugely diverging property valuations and the tribunal admitted its difficulties in determining quantum:

> The Tribunal must exercise its own arbitral discretion in assessing compensation by reference to the applicable legal principles and the particular facts, as determined by the Tribunal.¹¹⁰

Sir Elihu Lauterpacht suggests that there is no room for equitable discretion in the process of calculating the property value, for example by qualifying the individual factors in a DCF-calculation:

> Before compensation or damages can be determined, the property involved must be valued. Admittedly, the process of valuation, though objective, is one that involves judgment … But that judgment may properly be exercised only by reference to objectively relevant factors. It is not the same thing as the exercise of an equitable discretion… Initially, only the whole value of an item of property can be established. Only after having first established the whole value of the item can one determine a worth that is more or less than the whole value… it is not permissible to use equitable considerations to qualify the role of the various individual factors in a DCF calculation of value.¹¹¹ (Emphasis added)

Ripinsky with Williams attribute the tendency of tribunals of tribunals to resort to equitable discretion in quantum determination to the difficulty of quantum determinaiton:¹¹²

¹¹⁰ *Gemplus v Mexico*, ¶¶ 12-57.
¹¹² *Ripinsky with Williams*, at 124.
Because of difficulties involved in the precise assessment of damages, subjective elements present in many assessment methodologies and the need for approximations, tribunals are almost inevitably, although to varying degrees, guided by equitable considerations.113

e. **CONVERSION OF THE PROPERTY VALUE INTO AN AMOUNT OF COMPENSATION**

39. After having determined the value of the expropriated property/business, the tribunal is to make a decision as to whether to award the property value as compensation or to make deductions/additions, taking into consideration equity and contributory fault by the investor. Sir Elihu suggests that it is only here that equitable discretion may play a role, and only if the compensation standard so allows:

> Once the value of an item has been established by an objective method, there arises the question of the weight that should be attached to that value for the purpose of the award of compensation or damages. One possibility, which is dictated by the requirement of a bilateral treaty…is that "full equivalent" weight shall be attached to the value. That is to say, compensation in the amount of the whole of the objective value must be awarded. There is no room for any discretionary reduction. Another possibility…is that "appropriate" compensation be paid. This is by implication necessarily something less than full compensation. Although the whole value of the item must first be determined, less than full weight is given to it when translating it into an amount of compensation. It is here, and only here, that the rule of international law permits the intervention of an element of discretion through the application of equitable considerations.114

40. Some BITs refer to ‘equity’ in quantum determination for expropriation, such as for example the 1973 Germany – Singapore BIT and the 1994 India-UK BIT, both referring to ‘**just and equitable compensation**’. Independent of the provision in the applicable BITs and despite Sir Elihu’s warnings, however, ICSID tribunals have in the past alluded to equity when determining the level of compensation. More often than not however, tribunals resort to equity without explicitly stating so. Kantor suggests that it is common that tribunals take equitable

---

113 **Ripinsky with Williams,** at 124.
considerations into account when making an assessment of damages, “*even when it is not always admitted*” equitable considerations “*lie just beneath the surface of many...arbitral decisions*”\(^{115}\).

International arbitrator Kreindler candidly pointed out that tribunal may not state but nevertheless take equity into account:

> Various techniques (interpretation) exist to arrive at the equitable solution desired by the arbitrator, even if he does not so state.\(^{116}\)

This tendency may indicate that arbitral awards have a preference to subsume their consideration of equity in stages 1 (Determination of the standard of compensation), 2 (Determination of the property valuation method) and 3 (Calculation of the property/ business value) of compensation determination, but not at stage 4 (Conversion of the property value into an amount of compensation), as the latter one would explicitly require the mentioning of deductions made.

When equitable considerations remain unpronounced, they may cause compensation awards to appear arbitrary, adding to the often criticized incoherence of arbitration awards. They may thus harm the legitimacy of the arbitration system. The desirability of their use in balancing investor rights with the public law obligations of states may be questionable, particularly when applied without explicit mentioning.

### f. Scholarly Ambivalence Towards Equity and Its Distinction from Discretion

41. Scholars do not seem to agree on the definition of equity and discretion. Thus Marboe suggests equity should not have a role to play in quantum determination, whereas discretion should.

However, where is the line to be drawn between equity and discretion? The discussion is complicated by the fact that ‘equity’ may have a different meaning to jurists from a common law jurisdiction, than those grounded in a civil law tradition. Ripinsky with Williams distinguish

---

\(^{115}\) Kantor, at 116.

between equity in terms of deciding a case *ex aequo et bono*, where the law of equity replaces legal norms, and the application of equity as a margin of discretion when legal norms are applied.\textsuperscript{117} Marboe agrees that equity has played a role in cases where "the amount of compensation of damages could...hardly be determined at all".\textsuperscript{118} She does not explicitly distinguish between the application of equity *ex aequo et bono* and equity within the boundaries of legal norms. She however suggests that the exercise of discretion "must not be confused with the application of equity".\textsuperscript{119} In line with Sir Elihu’s argument that it is judgment which may be relevant to the calculation of the property value, she submits that "the exercise of discretion, which is always necessary, is distinct from equity and estimation".\textsuperscript{120} She furthermore suggests that equity should not be used to cover up "imprecise or incoherent results by referring to ‘equity’" and that recourse to equity should neither be necessary in international investment cases and nor "be acceptable in modern investment arbitration".\textsuperscript{121} She agrees with Ripinsky that discretion has a role to play in quantum determination, however also suggests that ‘equity’ was a misguided principle in international investment law, unless BITs explicitly provided for it.\textsuperscript{122} Sir Elihu does not deny that tribunals regularly take equitable considerations into account but he cautions against its use:

> Attractive though the concept of equity may be in many situations, and perhaps as much beyond criticism as is mother love, we must recognise that it is not a concept that can be sprinkled like salt on every part of the law. There are many situations in which the law prescribes absolute rules. The limit of the exclusive economic zone is 200 miles; not 200 miles subject to equitable considerations…The treaty obligation that compensation be the "full equivalent" of property taken is also absolute unless the treaty provides otherwise. It is, therefore, quite wrong

\textsuperscript{117} RIPINSKY WITH WILLIAMS, at 127- 128.
\textsuperscript{118} MARBOE, 145.
\textsuperscript{119} Ibid.
\textsuperscript{120} Ibid., at 148.
\textsuperscript{121} Ibid.
\textsuperscript{122} Ibid.
to introduce the notion of "equity" into this last situation. If absolutes are to be qualified by "equity" or "equitable considerations", let that qualification be expressly stated. Otherwise we shall weaken the legal effect of clear rules.123

42. Whether or not equitable discretion should have a role to play in compensation determination in investment treaty law, one may wonder what those equitable considerations are that tribunals have taken into account, whether explicitly or inexplicitly

g. WHAT ARE THOSE EQUITABLE CONSIDERATIONS THAT MAY AFFECT COMPENSATION?

i. The Expropriatory Intent Of A State

43. It has been suggested that a State’s expropriatory intent may depress the level compensation awarded. However, tribunals have in the past affirmed the validity of the ‘sole effect’ doctrine in relation to both the finding of expropriation and the quantification of damages124, i.e. the effect of the measure rather than the reason it was put in place determine whether or not a measure amounts to expropriation and determines quantum.125 The ‘sole effect’ doctrine was clearly enunciated in Santa Elena v Costa Rica in relation to both the nature of the illegal act and the quantification of compensation:

While an expropriation or taking for environmental reasons may be classified as a taking for a public purpose, and thus may be legitimate, the fact that the property was taken for this reason does not affect either the nature or the measure of the compensation to be paid for the taking. The purpose of protecting the environment for which the Property was taken does not alter the legal character of the taking for which adequate compensation must be paid. The international source of the obligation to protect the environment makes no difference. (Emphasis added)126

124 See, for example, Santa Elena v Costa Rica, Compania de Aguas del Aconquija v Argentina and Metalclad v Mexico as discussed in Chapter 3 (Content Analysis of Published ICSID Expropriation Cases).
125 See, for example, CAMPBELL MCLACHLAN QC, LAURENCE SHORE & MATTHEW WEINIGER, INTERNATIONAL INVESTMENT ARBITRATION: SUBSTANTIVE PRINCIPLES 120 (2007).
126 Santa Elena v Mexico, ¶ 71; see also, Metalclad v Mexico.
44. Lahra Liberti notes that the correctness of this approach is in the realm of “the things of which we may doubt”.127 She highlights that the tribunals in Siemens v Argentina and SPP v Egypt accepted the fact that non-investment treaty obligations may be relevant, if not to the finding of the breach, but then at least to the assessment of compensation.128 20 paragraphs after endorsing the sole effect doctrine in relation to quantum determination, the tribunal in Santa Elena v Costa Rica partially retracts suggesting that “the determination of value by a tribunal must take into account all the relevant circumstances, including equitable considerations” (Emphasis added).129 Some commentators ascribe to the “purpose approach”.130 According to this approach, certain conduct may be justifiable and therefore not amount to expropriation, or even if it does, it may depress quantum.131 The proposition that intent of the state may be relevant for the determination of quantum is in line with tribunals’ insistence that they enjoy a wide margin of discretion when determining quantum. In Chapter 3, I analyze whether the public purpose behind an expropriation depressed quantum in past ICSID expropriation cases.132 The analysis will show that this seems to be so.

ii. Level Of Enrichment To The State

45. Some scholars suggest that the absence of enrichment to the State may depress quantum.133 Ripinsky with Williams argue that the tribunal in the case commonly known as Himpurna v

---

128 Ibid.
129 Santa Elena v Costa Rica, ¶ 92. See however Rumeli v Kazakhstan, ¶ 700 [where the tribunal finding a judicial expropriation, consider that “the intent of the State is relevant to, but is not decisive of the question whether there has been an expropriation.”]
131 Ibid., at 782.
132 See, Chapter 3, paragraph 55-56.
133 Ripinsky with Williams, at 353.
limited the amount of lost future profit, *inter alia*, because, quoting the tribunal, “‘the respondent could not be accused of having sought to usurp a revenue stream’”\(^{135}\) As Kantor points out, to do so, the tribunal in *Himpurna v PLN* alluded to the international law doctrine of ‘abuse of rights’.\(^{136}\) Kantor notes that “it may as well have been an instance of arbitrators acting to prevent what they saw as unjust enrichment of the investor and impoverishment of the respondent State”.\(^{137}\) The matter remains unsettled.

### iii. Does The Financial Situation Of The Respondent State Matter?

46. Marboe points to the dissenting opinion of the late Sir Ian Brownlie in *CME v Czech Republic*, who suggested that the financial situation of respondent state needed to be taken into account. She also mentions the many cases against Argentina, which were a fall-out of Argentina’s economic crisis, and in which Argentina argued necessity. The tribunals in the case commonly known as *LG&E v Argentina*\(^{138}\) accepted the defense precluding wrongfulness and thus also compensation.\(^{139}\) Marboe nevertheless concludes that “*economic difficulties of the respondent State were generally not accepted as a reason for diminishing [or precluding] damages in international investment disputes*”.\(^{140}\) She suggests that economic difficulties should automatically be reflected in the calculations without resort to equity. Difficult economic realities would reduce the value of a company measured based on future revenue streams

---


\(^{136}\) *Kantor*, at 115.

\(^{137}\) *Ibid.*


\(^{139}\) *Marboe*, at 149.

In contrast to Marboe, Ripinsky with Williams suggest that tribunals have diminished damages in light of the economic situation of the respondent state, even were the necessity defense had been rejected. They suggest that “the position of the State as a responsible party may be different from that of private parties because of the unavailability of the bankruptcy mechanism to States and because the burden of compensation is eventually borne by country’s population”. They furthermore suggest that, where the necessity defense was argued and accepted, customary international law left the question of whether compensation should be due open:

[T]he general underlying objective is to distribute equitably between the disputing parties the burden of the loss incurred during the emergency situation.

47. Susan Franck’s analysis of pre-2007 ICSID awards may cast doubt, but not disprove, the suggestion that low income status is being taken into account by tribunals when determining quantum. While not the purpose of her study, she points out that there was a significant difference between the awards against low income countries than against high income countries; the awards against low income countries were larger in average. She however speculates that the difference may be related to the quality of legal representation. Furthermore, as no country is equal, one cannot draw conclusions from these absolute findings. Instead, the ratio between award and claim value may be a more useful measure.

141 MARBOE, 152.
142 RIPINSKY WITH WILLIAMS, 352.
143 Ibid., at 356.
144 Ibid., at 352.
146 The purpose of the study was to investigate bias of ICSID as compared with non-ICSID forums.
148 Ibid., at 906.
h. CONTRIBUTORY NEGLIGENCE AND CONCURRENT CAUSES LIMITING QUANTUM

48. As Kantor notes “compensation is...payable only for the consequences of injuries caused by the breaching party’s conduct”. It is up to the claimant investor to show that the illegal act of which it complains caused the quantum it asserts. While international law is in disagreement on the characterization of contributory fault, and unclear on how quantum and causation interact, actions of the claimant, which tribunals felt where imprudent contributing to the loss, have reduced quantum in the past. In the case commonly known as MTD v Chile the imprudent assessment of business risk by MTD led the tribunal to reduce compensation by 50%. Although Chile applied for annulment asserting that the tribunal failed to state reason for the 50/50 split, the Ad hoc panel declined to annul the award referring to the tribunal’s inherent discretion and the difficulty in quantifying the impact of contributory fault. Ripinsky with Williams suggests that the most difficult task for a tribunal to assess is, first, the question whether certain conduct was imprudent and, second, to what extend it should reduce compensation.

i. CONCLUSION

49. The above analysis sets out the issues which touch on the interaction between quantum determination and equitable discretion in investment treaty law literature. Despite the explicit inclusion of the fair market value standard for expropriation in most BITs, the customary international law standard of compensation has found increasing support in international

---

149 Kantor, at 104.
150 It is discussed in relation to admissibility, attribution, causation, and jurisdiction.
151 Ripinsky with Williams, at 314.
152 MTD Equity Sdn Bhd. And MTD Chile S.A. v. Republic of Chile, ICSID Case No. ARB/01/7, Final Award (May 25, 2004).
153 Ibid.
154 Ibid., at ¶ 39.
155 Ripinsky with Williams, at 319.
investment treaty arbitration. This customary international standard appears more flexible and ostensibly gives greater discretion to tribunals to balance the rights of investor and State in determining quantum. While the DCF-method is widely accepted as the best method to value a business in business valuation theory, tribunals have been hesitating to use it. Its speculative character in itself seems unsatisfactory to explain its modest success and tribunals’ adherence to more conservative valuation methods, such as adjusted book value. The suggestion that equitable considerations may tilt tribunals towards selecting conservative methods remains unsupported by much evidence, though tribunals have generally stressed their inherent discretion to consider other factors, including equity. Scholars suggest that equitable discretion does play a role in the compensation decisions of tribunals, but they also acknowledge that this role may often not be explicit. Scholars are split on the question as to whether this role should at all exist, and if so, where at the stage of quantum determination. Systematic empirical work on the attitude of those that make the decisions, and those that are to make those decisions in future remains absent and my thesis is trying to fill this void.
III. CONTENT ANALYSIS OF PUBLISHED ICSID EXPROPRIATION CASES

a. Overview and Methodology

50. Following the analysis of scholarly opinions on the question of equitable arbitrator discretion in quantum determination, I shed light on the same issue in this chapter, but through the medium of a content analysis of past arbitral awards. I analyze the arbitral practice of ICSID tribunals that held respondent State liable for expropriation. As highlighted in the introduction, I chose ICSID, because the large majority of investment treaty cases have been adjudicated here. Furthermore, ICSID publishes the majority of its awards and the identities of all arbitrators appointed to its tribunals, the latter of which I will survey in Chapter 4 (What do Professionals Think? A Real-Time Delphi Analysis). The data sample is introduced in paragraph 52 below.

51. I will again use the schematization employed to illustrate the stages of compensation determination:  

![Figure 1: Stages of Compensation Determination](image)

The four stages will also function as my major coding instrument. I however furthermore code for the following factors: (a) whether subject of dispute has a manifest public interest, (b) whether the property/business was a going concern, (c) the ration between award and claim

---

156 It assumes that the process of determining the governing law was completed in the merit phase.
value (c) and the text of the BIT compensation provision. We have seen in Chapter 2 that the arbitrators’ use of equitable discretion in quantum determination may be explicitly addressed in past awards at each of these stages. It may also be implied without explicit mention. Before moving to analyze the manifestation of equitable discretion at each stage of compensation determination in arbitral awards, I will analyze a possible implicit effect of equitable discretion, which takes note of the additional coding factors mentioned. First however, I will introduce the data sample.

b. THE DATA SAMPLE

52. As of 30 January 2012, 231 arbitrations have been administered by ICSID (including those under the additional facility). 157 141 arbitrations are pending. 158 This calculation does not count resubmissions or annulment proceedings as separate cases. Instead, I count a case only once whether or not it consists of several proceedings. In some of the pending arbitrations, final awards have already been issued, yet those awards are now subject to annulment proceedings/resubmission proceedings. Whether concluded or pending, as of 20 January 2012, there have been 145 final awards. 159 55 cases have been settled; 20 discontinued. Of those final awards, I traced 120 (82%) to be publicly available. 43 (36%) of them find the respondent State liable for infringements, of which 20 (47%) find the respondent State liable for expropriation (including direct, indirect and creeping). Cases Nos. ARB(af)/04/3 and ARB(af)/04/4 have been consolidated; so have ARB/05/18 and ARB/07/15. This reduces the number of expropriation cases to 19 only. I have further excluded the case of Antoine Goetz and others v. Republic of

159 This counts resubmission awards but not annulment proceeding award.
as it not address compensation but the remedy of restitution, which was agreed in a settlement award after the tribunal found respondent liable for expropriation. I analyzed the remaining 18 cases, where tribunals found that the respondent State had expropriated claimant investor and compensation was considered and awarded as a remedy. I have chosen to analyze those cases only, because my focus is the stage of quantum determination and the role of equitable discretions at this stage of proceedings only. There may for example be cases where a tribunal did not find a violations and equitable discretion played a major role in the decision. I am not concerned with those cases. When discussing the cases, I will refer to them by the commonly known name of the case in literature, usually the claimants’ name and the short form of the respondent State. The full information, with Award date and ICSID case numbers is contained in the table on page ix and paragraph 53 on page 38. In the case of Rumeli v Kazakhstan I have not only analyzed the final award, but also the decision of the annulment committee, which considers the ambit of the tribunal’s discretion to determine quantum. As a side note, I mention here that the number of cases, in which expropriation has been found, has increased in the past years in line with the burgeoning number of cases registered at ICSID. 15 out of 20 expropriation cases have been issued since 2006, whereas only 6 were issued since ICSID’s creation and 2005.

160 Antoine Goetz and others v. Republic of Burundi, ICSID Case No. ARB/95/3, Award (Feb. 10, 1999).
161 By way of illustration, Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S. v. Republic of Kazakhstan becomes Rumeli v Kazakhstan.
162 Rumeli Telekom A.S v Kazakhstan, ICSID Case No. ARB/81/2, Decision on Annulment (May 3, 1985), 2 ICSID Rep 95, ¶ 119.
53. I analyzed the following awards:

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Claimant</th>
<th>Respondent</th>
<th>Subject matter</th>
<th>Date of Claim</th>
<th>Date of Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARB/84/3</td>
<td>Southern Pacific Properties</td>
<td>Arab Republic of Egypt</td>
<td>Tourism development project</td>
<td>28-Aug-84</td>
<td>20-Apr-92</td>
</tr>
<tr>
<td>ARB/96/1</td>
<td>Compania del Desarrollo de Santa Elena</td>
<td>Republic of Costa Rica</td>
<td>Valuation of land holding</td>
<td>22-Mar-96</td>
<td>17-Feb-00</td>
</tr>
<tr>
<td>ARB/98/4</td>
<td>Wena Hotels Limited</td>
<td>Arab Republic of Egypt</td>
<td>Hotel lease and development agreements</td>
<td>31-Jul-98</td>
<td>12-Aug-00</td>
</tr>
<tr>
<td>ARB(AF)/97/1</td>
<td>Metalclad Corporation</td>
<td>United Mexican States</td>
<td>Waste disposal enterprise</td>
<td>13-Jan-97</td>
<td>30-Aug-00</td>
</tr>
<tr>
<td>ARB/99/6</td>
<td>Middle East Cement</td>
<td>Arab Republic of Egypt</td>
<td>Cement distribution enterprise</td>
<td>19-Nov-99</td>
<td>4-Dec-02</td>
</tr>
<tr>
<td>ARB(AF)/00/2</td>
<td>Tecnicas Medioambientales</td>
<td>United Mexican States</td>
<td>Waste disposal enterprise</td>
<td>28-Aug-01</td>
<td>29-May-03</td>
</tr>
<tr>
<td>ARB/03/16</td>
<td>ADC Affiliate Limited and ADC &amp; ADMC Management Limited</td>
<td>Republic of Hungary</td>
<td>Airport project</td>
<td>17-Jul-03</td>
<td>10-Feb-06</td>
</tr>
<tr>
<td>ARB/02/8</td>
<td>Siemens AG</td>
<td>Argentine Republic</td>
<td>Informatic Services agreement</td>
<td>17-Jul-02</td>
<td>6-Feb-07</td>
</tr>
<tr>
<td>ARB/07/3 (resubmission)</td>
<td>Compania de Aguas del Aconquija</td>
<td>Argentine Republic</td>
<td>Water and sewer services concession agreement</td>
<td>19-Feb-97</td>
<td>20-Aug-07</td>
</tr>
<tr>
<td>ARB/05/22</td>
<td>Biwater Gauthf (Tanzania) Limited</td>
<td>United Republic of Tanzania</td>
<td>Water and sewer services concession agreement</td>
<td>2-Nov-05</td>
<td>24-Jul-08</td>
</tr>
<tr>
<td>ARB/05/16</td>
<td>Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S.</td>
<td>Republic of Kazakhstan</td>
<td>Telecommunications enterprise</td>
<td>30-Aug-05</td>
<td>29-Jul-08</td>
</tr>
<tr>
<td>ARB/05/15</td>
<td>Waguih Elie George Song and Clorinda Vecchi</td>
<td>Arab Republic of Egypt</td>
<td>Resort development</td>
<td>5-Aug-05</td>
<td>6-Jan-09</td>
</tr>
<tr>
<td>ARB/05/6</td>
<td>Bernardus Henricus Funnekotter and others</td>
<td>Republic of Zimbabwe</td>
<td>Commercial farms</td>
<td>22-Apr-09</td>
<td>22-Apr-09</td>
</tr>
<tr>
<td>ARB/05/7</td>
<td>Saiman S.p.A.</td>
<td>People's Republic of Bangladesh</td>
<td>Gas pipeline project</td>
<td>25-Apr-05</td>
<td>30-Jun-09</td>
</tr>
<tr>
<td>ARB/05/18</td>
<td>Ioannis Kardassopoulos</td>
<td>Georgia</td>
<td>Oil and gas distribution enterprise</td>
<td>3-Oct-05</td>
<td>3-Mar-10</td>
</tr>
<tr>
<td>ARB/07/15</td>
<td>Ron Fuchs</td>
<td>Georgia</td>
<td>Oil and gas distribution enterprise</td>
<td>16-Jul-07</td>
<td>3-Mar-10</td>
</tr>
<tr>
<td>ARB/05/16</td>
<td>Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S.</td>
<td>Republic of Kazakhstan</td>
<td>Telecommunications enterprise</td>
<td>7-Nov-08</td>
<td>25-Mar-10</td>
</tr>
<tr>
<td>ARB(AF)/04/3</td>
<td>Gemplus, S.A., SLP, S.A. and Gemplus Industrial, S.A. de C.V. V</td>
<td>United Mexican States</td>
<td>Concession agreement to operate the National Registry of Motor Vehicles</td>
<td>29-Sep-04</td>
<td>16-Jun-10</td>
</tr>
<tr>
<td>ARB(AF)/04/4</td>
<td>Tahsud, S.A.</td>
<td>United Mexican States</td>
<td>Concession agreement to operate the National Registry of Motor Vehicles</td>
<td>29-Sep-04</td>
<td>16-Jun-10</td>
</tr>
<tr>
<td>ARB/07/16</td>
<td>Alpha Projektholding GmbH</td>
<td>Ukraine</td>
<td>Hotel development project</td>
<td>25-Jul-07</td>
<td>11-Aug-10</td>
</tr>
<tr>
<td>ARB/07/6</td>
<td>Tza Yap Shun</td>
<td>Republic of Peru</td>
<td>Fish flour production enterprise</td>
<td>12-Feb-07</td>
<td>7-Jul-11</td>
</tr>
</tbody>
</table>

Table 1: Dataset
c. **The Award to Claim Value Ratio Is Smaller in Cases Where the Public Interest Is Manifest.**

54. As indicated, before analyzing each of the four stages of compensation determination in turn, I will examine a more implicit indication of the use of equitable arbitrator discretion to balance investor rights and state’s public law interests: the ratio between compensation award and claim ratio. One may hypothesize that, if arbitrators recognize and take a State’s public law interests into account in a case, than the award value may be affected in a way or another. Specifically, everything being equal, the award value would be lower in a case where the public interest is manifest than in a case where it is not. One may measure such effect by calculating the ratio between award and claim value and assess whether or not the public interest is manifestly involved in the case. In table 1 below, I have made an assessment of whether or not the public interest was manifest in a case and calculated the claim and award ratio. I have defined ‘manifest public interest’ to be present in cases that involve health and environmental concerns, but not monetary values in commercial properties. From the 18 cases analyzed, I found the public interest to be manifest in the following cases: *Southern Pacific Properties v Egypt* (expropriation of a hotel project due to the archeological significance of the area), *Santa Elena v Costa Rica* (expropriation pursuant to a natural reserve creation), *Metalclad v Mexico* (indirect expropriation by revocation of a permit to operate a hazardous waste facility), *Tecmed v Mexico* (indirect expropriation by revocation of a permit to operate a waste landfill), *Compania de Aguas v Argentina* (expropriation of a water rights lease), and *Biwater Gauff v Tanzania* (expropriation of a water lease concession).164

---

164 One may argue that the public interest of the host state is always involved as it is the state and eventually the tax payer who pays the award damages. Furthermore, *Bernardus Henricus v Zimbabwe* concerned the reallocation of property from white Zimbabweans to black Zimbabweans. As this measure involves the expropriation of commercial farms, I have not include it in the list of cases with manifest public interest. This decision is however
### Table 2: Cases implicating the public interest with damage award and claim values

Debatable. As the ratio is an outlier, it is removed in the calculation of robust means. Therefore the inclusion of the case makes in practice little difference.

<table>
<thead>
<tr>
<th>Case</th>
<th>Respondent</th>
<th>Date of award</th>
<th>Chosen compensation standard</th>
<th>Valuation method requested by Claimant</th>
<th>Valuation method employed</th>
<th>Ratio between Damage awarded/Damage claimed</th>
<th>Subject of dispute of public interest?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Pacific Properties</td>
<td>Egypt</td>
<td>20-Apr-92</td>
<td>fair compensation</td>
<td>DCF</td>
<td>Investment value plus &quot;loss of commercial&quot;</td>
<td>0.19</td>
<td>Yes.</td>
</tr>
<tr>
<td>Santa Elena</td>
<td>Costa Rica</td>
<td>17-Feb-00</td>
<td>FMV</td>
<td>n/a</td>
<td>Splitting the baby between Claimants' and</td>
<td>0.12</td>
<td>Yes.</td>
</tr>
<tr>
<td>Wena</td>
<td>Egypt</td>
<td>12-Aug-00</td>
<td>FMV</td>
<td>DCF</td>
<td>Investment costs</td>
<td>0.18</td>
<td>No.</td>
</tr>
<tr>
<td>Metalclad</td>
<td>Mexico</td>
<td>30-Aug-00</td>
<td>FMV = CIL</td>
<td>DCF (but also investment costs proposed)</td>
<td>Investment costs</td>
<td>0.14</td>
<td>Yes.</td>
</tr>
<tr>
<td>Middle East Cement</td>
<td>Egypt</td>
<td>4-Dec-02</td>
<td>FMV</td>
<td>Future profits for some (but not discounted)</td>
<td>Lost profits for certain contracts plus splitting</td>
<td>0.05</td>
<td>No.</td>
</tr>
<tr>
<td>Tecned</td>
<td>Mexico</td>
<td>29-May-03</td>
<td>CIL</td>
<td>DCF</td>
<td>Investment costs plus 2 years of lost profits</td>
<td>0.11</td>
<td>Yes.</td>
</tr>
<tr>
<td>ADC</td>
<td>Hungary</td>
<td>10-Feb-06</td>
<td>CIL</td>
<td>DCF</td>
<td>DCF</td>
<td>1.00</td>
<td>No.</td>
</tr>
<tr>
<td>Siemens</td>
<td>Argentina</td>
<td>6-Feb-07</td>
<td>CIL</td>
<td>DCF</td>
<td>Investment costs</td>
<td>0.69</td>
<td>No.</td>
</tr>
<tr>
<td>Compania de Aguas</td>
<td>Argentina</td>
<td>20-Aug-07</td>
<td>CIL = FMV</td>
<td>DCF</td>
<td>Investment costs</td>
<td>0.35</td>
<td>Yes.</td>
</tr>
<tr>
<td>Bisuter Graz</td>
<td>Tanzania</td>
<td>24-Jul-08</td>
<td>CIL</td>
<td>Investment value</td>
<td>DCF=0</td>
<td>0.00</td>
<td>Yes.</td>
</tr>
<tr>
<td>Rumeli</td>
<td>Kazakhstan</td>
<td>29-Jul-08</td>
<td>FMV</td>
<td>DCF</td>
<td>Unclear from award as declined both DCF and</td>
<td>0.77</td>
<td>No.</td>
</tr>
<tr>
<td>Sai</td>
<td>Egypt</td>
<td>6-Jan-09</td>
<td>CIL</td>
<td>DCF</td>
<td>DCF, comparables or residual land valuation</td>
<td>0.41</td>
<td>No.</td>
</tr>
<tr>
<td>Bernardus Henricus</td>
<td>Zimbabwe</td>
<td>22-Apr-09</td>
<td>CIL</td>
<td>Market value</td>
<td>Market comparison</td>
<td>0.77</td>
<td>No.</td>
</tr>
<tr>
<td>Saipem</td>
<td>Bangladesh</td>
<td>30-Jan-09</td>
<td>CIL</td>
<td>Amount of ICC award</td>
<td>Amount of award not paid</td>
<td>0.88</td>
<td>No.</td>
</tr>
<tr>
<td>Ioannis</td>
<td>Georgia</td>
<td>3-Mar-10</td>
<td>CIL</td>
<td>Mixed approach: Comparables calculated</td>
<td>Mixed approach: Comparables calculated by</td>
<td>0.70</td>
<td>No.</td>
</tr>
<tr>
<td>Gemplus</td>
<td>Mexico</td>
<td>16-Jun-10</td>
<td>CIL = BIT standard</td>
<td>DCF</td>
<td>Mixture using information from claimant’s quantum expert’s DCF without</td>
<td>0.02</td>
<td>No.</td>
</tr>
<tr>
<td>Alpha</td>
<td>Ukraine</td>
<td>11-Aug-10</td>
<td>not mentioned</td>
<td>DCF plus outstanding</td>
<td>DCF plus outstanding payment</td>
<td>0.31</td>
<td>No.</td>
</tr>
<tr>
<td>Tza Yap Shum</td>
<td>Peru</td>
<td>7-Jul-11</td>
<td>CIL</td>
<td>DCF</td>
<td>Book Value</td>
<td>0.03</td>
<td>No.</td>
</tr>
</tbody>
</table>

55. Statistically, the case analysis indicates that the correlation between (a) the ratio of award and claim value and (b) the involvement of the public interest is significant. The ratios for cases that implicate the public interest and those that do not may be drawn in a boxplot. In the boxplot on the Y axis, 0 equates to ‘No implication of public interest’ and ‘1 equates to implication of public interest’. Here the boxplot widths are proportional to the square root of the respective samples size.
Figure 2: Boxplot of the award and claim value ratios in cases that do involve the public interest (indicated as 1 on the y-axis) and those that do not (indicated as 0 on the x-axis)

56. I calculated the mean of the ratios for cases that did not implicate the public interest at 0.4841667, whereas the mean of cases that involve the public interest is 0.15166. This tells us that the average award value when compared to the claim value is much lower in ICSID expropriation cases that implicate the public interest (0.15166) than in ICSID expropriation cases that do not (0.4841667). Employing a more robust measure of central tendency to reduce the sensitivity to outliers, I calculate the winsorized mean (at 0.2 winsorization), which gives us a value of 0.1433333 for cases implicating the public interest and 0.46. The answer does not change significantly. The ratios for the expropriation cases that do implicate the public interest furthermore have a much lower simple and winsorized variance and standard deviation (simple variance = 0.01333667, simple standard deviation = 0.1154845, winsorized variance 0.001426667, winsorized standard deviation 0.037771) than the cases that don’t implicate the public interest (variance = 0.1285174, standard deviation 0.3584933/ winsorized variance
0.1002364, winsorized standard deviation 0.316601). This indicates that there is a larger variability of award and claim ratio in the ICSID cases that do not implicate the public interest than in those that do. This is also apparent from the boxplot. Second, I measured whether the correlation observed between the award/claim value ratios for cases implicating the public interest and those that do not would be statistically significant at a 0.05-confidence interval, i.e. they are not produced by chance alone. The t-test indicates statistical significance at the 0.05 confidence interval.165 Likewise, a linear regression also indicates that the correlation is statistically significant.166

57. In the following I will look at each stage in the process of quantum determination analyzing both explicit mentioning and implicit application of equitable discretion:

**d. Determination Of The Standard Of Compensation**

**i. Applying The Customary International Law Standard Gives The Tribunal A Wider Margin Of Discretion.**

58. As analyzed in Chapter 2, international law entitles sovereign states to expropriate foreign property in recognition of their prerogative powers when certain standards are met. As we have seen, the same freedom is generally preserved in bilateral investment treaties. Compensation is often specified further as required to be “prompt, adequate and effective” and/or equal to the “fair market value” immediately before the expropriation takes place or the intent to expropriate becomes known.167 The table below shows that this applies to the analyzed dataset:

---

165 Welch Two Sample t-test, t = 2.9238, df = 14.651, p-value = 0.0106.
166 P-value=0.044
167 RIPINSKY WITH WILLIAMS, at 83.
<table>
<thead>
<tr>
<th>Claimant Responder</th>
<th>Date of award</th>
<th>BIT compensation text</th>
<th>Chosen compensati on standard</th>
<th>Difference between CIL and BIT standard?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Pacific Properties Egypt</td>
<td>20-Apr-92</td>
<td>&quot;fair compensation&quot;</td>
<td>BIT</td>
<td>matter not considered</td>
</tr>
<tr>
<td>Santa Elena Costa Rica</td>
<td>17-Feb-00</td>
<td>not considered</td>
<td>FMV</td>
<td>matter not considered</td>
</tr>
<tr>
<td>Wena Egypt</td>
<td>12-Aug-00</td>
<td>&quot;prompt, adequate and effective compensation&quot;</td>
<td>BIT</td>
<td>matter not considered</td>
</tr>
<tr>
<td>Metalclad Mexico</td>
<td>30-Aug-00</td>
<td>&quot;equivalent to the fair market value of the expropriated investment immediately before the expropriation took place... Valuation criteria shall include going concern value, asset value including declared tax value of tangible property, and other criteria, as appropriate, to determine fair market value.&quot;</td>
<td>BIT</td>
<td>matter not considered</td>
</tr>
<tr>
<td>Middle East Cement Egypt</td>
<td>4-Dec-02</td>
<td>&quot;payment of prompt, adequate and effective compensation. Such compensation shall amount to the market value of the investments affected immediately before the measures&quot;</td>
<td>BIT</td>
<td>matter not considered</td>
</tr>
<tr>
<td>Tecmed Mexico</td>
<td>29-May-03</td>
<td>&quot;Compensation shall be equivalent to the fair market value of the expropriated investment immediately before the time when the expropriation took place&quot;</td>
<td>BIT</td>
<td>matter not considered</td>
</tr>
<tr>
<td>ADC Hungary</td>
<td>10-Feb-04</td>
<td>&quot;payment of just compensation&quot;; &quot;Such compensation shall amount to the fair market value of the Investment expropriated at the time immediately before the Expropriation or impending Expropriation became known in such a way as to affect the value of the Investment.&quot;</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Siemens Argentina</td>
<td>6-Feb-07</td>
<td>“prompt compensation”</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Compania de Aguas Argentina</td>
<td>20-Aug-07</td>
<td>&quot;the payment of a prompt and adequate compensation, the amount of which, computed on the basis of the actual value of the investments affected, shall be evaluated in relation to the normal economic situation, and prior to any threat of dispossession&quot;.</td>
<td>CIL=BIT Yes</td>
<td></td>
</tr>
<tr>
<td>Brosater Gauff Tanzania</td>
<td>24-Jul-08</td>
<td>&quot;genuine value of the investment&quot;</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Rumeli Kazakhstan</td>
<td>29-Jul-08</td>
<td>“adequate and fair” compensation... “Where the market value [of the investment] cannot be readily ascertained, the compensation shall be determined on equitable principles taking into account, inter alia, the capital invested, depreciation, capital already repatriated, replacement value, goodwill and other relevant factors.”</td>
<td>BIT No</td>
<td></td>
</tr>
<tr>
<td>Siag Egypt</td>
<td>6-Jan-09</td>
<td>&quot;just compensation&quot;. Such compensation shall represent the genuine value of the investments affected... The genuine value of the investments shall include, but not exclusively, the net asset value thereof as certified by an independent firm of auditors.”</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Bernarda Henricus Zimbabwe</td>
<td>22-Apr-09</td>
<td>&quot;just compensation&quot; equal to &quot;the real market value of the investment&quot;</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Saipem Bangladesh</td>
<td>30-Jun-09</td>
<td>“payment of prompt, adequate and effective compensation”. “Such compensation shall amount to the fair market value of the Investment expropriated at the time immediately before the Expropriation or impending Expropriation became known in such a way as to affect the value of the Investment.”</td>
<td>CIL Yes.</td>
<td></td>
</tr>
<tr>
<td>Ioannis Georgia</td>
<td>3-Mar-10</td>
<td>“fair market value, or in the absence of such value, [of] actual value” and “any other criteria which, in the circumstances, are appropriate to determine fair market value” / “the amount of compensatory indemnification for the damage suffered”</td>
<td>CIL “BIT standard” Yes</td>
<td></td>
</tr>
<tr>
<td>Gemplus Mexico</td>
<td>16-Jun-10</td>
<td>“Fair market value immediately before the expropriatory measure become known or was announced, whatever earlier”</td>
<td>not mentioned</td>
<td>Not considered</td>
</tr>
<tr>
<td>Alpha Ukraine</td>
<td>11-Aug-10</td>
<td>“Compensation shall be equivalent to the fair market value of the expropriated property... Valuation criteria shall include going concern value, asset value including declared tax value of tangible property, and other criteria, as appropriate, to determine fair market value.”</td>
<td>CIL Yes</td>
<td></td>
</tr>
<tr>
<td>Tza Yap Shum Peru</td>
<td>7-Jul-11</td>
<td>“Compensation shall be equivalent to the fair market value of the expropriated property... Valuation criteria shall include going concern value, asset value including declared tax value of tangible property, and other criteria, as appropriate, to determine fair market value.”</td>
<td>CIL Yes</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: BIT-text of ICSID expropriation cases**

59. This table also shows that until the award in *ADC v Hungary* (2006), the BIT standard was applied as a given. The earlier unlawful ICSID expropriation cases of *Southern Pacific Properties v Egypt* (1992), *Wena v Egypt* (2000), *Middle East Cement v Egypt* (2002), and
Tecmed v Mexico (2003) apply the BIT standard of compensation despite the underlying expropriations being unlawful. Since then, most tribunals in the dataset have distinguished between lawful expropriation, in which case the BIT standard is applicable, and unlawful expropriation, in which case the tribunal reverted to the customary international law standard for internationally wrongful acts as expressed by the ILC Articles on State Responsibility. The case of Factory at Chorzów considered the leading authority on compensation for internationally wrongful acts of States is mentioned explicitly in most awards of the dataset.168 In Compania de Aguas v Argentina (2007), the tribunal found:169

The Treaty thus mandates that compensation for lawful expropriation be based on the actual value of the investment, and that interest shall be paid from the date of dispossession. However, it does not purport to establish a lex specialis governing the standards of compensation for wrongful expropriations. As to the appropriate measure of compensation for the breaches other than expropriation, the Treaty is silent.

Likewise in Gemplus v Mexico (2010) the tribunal concluded:

Since the BIT does not contain any lex specialis rules that govern the issue of the standard for assessing damages in the case of an unlawful expropriation, the Tribunal is required to apply the default standard contained in customary international law in the present case.170

In Siag v Egypt (2009), the tribunal found that the BIT did not provide any compensation standard for unlawful expropriations:

…[the BIT] does not purport to establish a lex specialis governing the standards of compensation for wrongful or unlawful expropriations.171

In Saipem v Bangladesh (2009), the tribunal determined:

168 For example, the Chorzów Factory Case is specifically referred to in Compania de Aguas v Argentina, ¶ 8.2.4, Bernardus Henricus v Zimbabwe, ¶ 108, Tza Yap Shum v Peru, ¶ 254, fn 233, Saipem v Bangladesh, ¶ 201. It is also mentioned in Rumeli v Kazakhstan, however, the tribunal states that Chórzow is the appropriate standard for breaches other than expropriation, ¶ 792.
169 Compania de Aguas v Argentina, ¶ 8.2.3.
170 Gemplus v Mexico, ¶ 483.
171 Siag v Egypt, ¶ 540.
This [BIT compensation] provision is not applicable to determine the amount of compensation in the present instance because it sets out the measure of compensation for lawful expropriation which this one is not. Hence, the Tribunal will resort to the relevant principles of customary international law and in particular to the principle set out by the Permanent Court of Justice in the Chorzów Factory case.\textsuperscript{172}

In \textit{Tza Yap Shum v Peru} (2011) the tribunal concluded:

En este caso las medidas expropiatorias no reunieron las condiciones establecidas en el artículo 4 y por lo tanto, la valoración del daño por parte del Tribunal se hará con base en el derecho internacional consuetudinario y no al artículo 4 del APPRI.\textsuperscript{173}

60. From the 18 ICSID cases two cases addressed lawful expropriation (\textit{Southern} (1992) and \textit{Compania} (2007)), whereas 16 concerned instances of unlawful expropriations. Of those 10 explicitly acknowledge the differing rational for lawful and unlawful expropriation. Since \textit{ADC v Hungary} (2006), only 2 cases of 11 cases have not recognized the distinction. One would assume that damages for unlawful expropriation cannot be lower than compensation for lawful expropriation and that the BIT standard was included for benefit of investors. Ironically however, the customary international law standard is wider and allows for seemingly more flexibility and arbitrator discretion. It provides greater freedom for claimants to argue lost profits, consequential, punitive and moral damages; as acknowledged by Marboe, it may also allow arbitrators to choose more conservative calculation methods and take a wider array of factors into account, including equity.\textsuperscript{174}

\textit{1. Tribunals acknowledgment the upward potential of the customary international law standard.}

61. Acknowledging the upside potential of the customary international damage approach, the tribunal in \textit{Compania de Aguas v Argentina} (2007) held:

\textsuperscript{172} \textit{Saipem v Bangladesh}, ¶ 201.
\textsuperscript{173} \textit{Tza Yap Shum v Peru}, ¶253.
\textsuperscript{174} See paragraph 21.
It is...clear that [the customary international law standard] permits, if the facts so require, a higher rate of recovery than that prescribed in Article 5(2) for lawful expropriations.175

Likewise, the tribunal pointed out in *Biwater Gauff v Tanzania* (2008):

The standard of compensation for unlawful expropriation (being the relevant claim here), includes full reparation for, and consequential losses suffered as a result of, the unlawful expropriation. Full reparation entitles the unlawfully expropriated investor to restitutionary damages which include, but are not limited to, the fair market value of the unlawfully expropriated investment as determined by the application of an appropriate valuation methodology. In addition, the unlawfully expropriated investor is entitled to damages for the consequential losses suffered as a result of the unlawful expropriation. Such losses ordinarily include an entitlement to loss of profits suffered by the investor between the date of the expropriation and the award.176 (Emphasis added)

In *Siag v Egypt* (2009), the tribunal called the CIL standard “the more generous regime”.177 The distinction is however not everywhere relevant, as the tribunal in *Bernardus Henricus v Zimbabwe* (2009) recognized. Although it concluded that the theoretical distinction between lawful and unlawful expropriation made no difference on the face of the facts of the case,178 it accepted that the application of the customary international law standard may, in certain cases, result in higher damages than the application of the BIT standard:

> The difference is that, if the taking is lawful the value of the undertaking at the time of the dispossession is the measure and the limit of the compensation, while if it is unlawful, this value is or may be, only a part of the reparation to be paid.”179

2. Tribunals acknowledge of downward potential of the CIL standard.

62. The case of *Biwater Gauff v Tanzania* (2008) involves the expropriation of a water concession lease from a private water and sewage operator. As the case shows, accepting the customary

---

175 *Compania de Aguas v Argentina*, ¶ 8.2.5.
176 *Biwater Gauff v Tanzania*, ¶ 775.
177 *Siag v Egypt*, ¶ 541
178 *Bernardus Henricus v Tanzania*, ¶ 112 [since however, the court awarded damages for ‘disturbance’, this statement may be considered incorrect, as there is little room under the BIT standard to award anything other than compensation for investment loss.]
179 *Bernardus Henricus v Zimbabwe*, ¶ 135.
international law standard may also provide more room for respondent to argue causation at the compensation stage. In *Biwater Gauff v Tanzania* (2008) the Republic argued that “customary international law, States are only obliged to rectify the “consequences of... illegal act[s].”\(^{180}\) Furthermore, “[w]ith respect to any breach of an obligation other than the prohibition on improper expropriation, BGT would thus be entitled to compensation only for such loss as was caused by the act constituting the violation”.\(^{181}\) Having held that the customary international law standard was applicable, which, as opposed to the BIT standard, does not specify that an expropriation requires compensation, but merely that injury caused by an international wrongful act does, the tribunal (by majority) held that injury was lacking: the unlawful expropriation had not caused any injury to the company, since it was insolvent and had no prospect of future profits.\(^{182}\) No compensation was due.

3. The date of valuation has a significant effect on the property/business value. The customary international law standard does not specify the date of the valuation.

63. In *Santa Elena v Costa Rica* (2000), which concerned the direct expropriation of property for inclusion in a nature reserve, Claimant argued for a later date of expropriation that would have increased the compensation due for an environmental cause. Tribunal however opted for the earlier date submitting that factors thereafter must be disregarded without specifying any further reasons.\(^{183}\) On the face of the award, it was not necessarily clear what the correct date was, and it is conceivable that the tribunal could have opted for a later date, if it so wished.

---

\(^{180}\) *Biwater Gauff v Tanzania*, ¶ 752.

\(^{181}\) *Biwater Gauff v Tanzania*, ¶ 752.

\(^{182}\) *Biwater Gauff v Tanzania*, ¶ 778. Gary Born dissents from the majorities’ reasoning. He suggests that while he would reach the same result, it was not correct to say that the expropriation did not cause injury but that Claimant had not sufficiently proven that the injury was compensable by compensation. He adds that even non-monetary injury was compensable under customary international law in form of moral damages. Please see Gary Born, *Biwater Gauff v Tanzania*, Concurrent and Dissenting Opinion, ¶ 15-23.

\(^{183}\) *Santa Elena v Costa Rica*, ¶¶ 83-85.
64. The customary international law standard leaves open the date, which, as can be seen in the table at paragraph 58, page 43, table 3, is often specified in BITs as “immediately before the expropriation took place”.\(^{184}\) Allowing the tribunal to select the date of expropriation based on the given but often ambiguous facts may change the amount of compensation significantly. This was first recognized in *ADC v Hungary* (2006). *ADC v Hungary* concerned the expropriation of the Budapest Airport, whose value had appreciated a lot since the expropriation. Had the tribunal been restricted by the language of the BIT, which suggested that the compensation to be paid was the property value at the time of the expropriation, the investor would not have been able to claim the value at the time of the award:

[T]he Tribunal concludes that it must assess the compensation to be paid by the Respondent to the Claimants in accordance with the Chorzów Factory standard, i.e., the Claimants should be compensated the market value of the expropriated investments as at the date of this Award, which the Tribunal takes as of September 30, 2006.\(^{185}\) (Emphasis added)

Likewise, the tribunal in *Siemens v Argentina* (2007) highlighted that the distinction between the compensation standards mattered most when a property had appreciated post-expropriation:

The key difference between compensation under the Draft Articles and the *Factory at Chorzów* case formula, and Article 4(2) of the Treaty is that under the former, compensation must take into account “all financially assessable damage” or “wipe out all the consequences of the illegal act” as opposed to compensation “equivalent to the value of the expropriated investment” under the Treaty. Under customary international law, Siemens is entitled not just to the value of its enterprise as of May 18, 2001, the date of expropriation, but also to any greater value that enterprise has gained up to the date of this Award, plus any consequential damages.\(^{186}\) (Emphasis added)

65. Another case that involves the flexibility of the expropriation date under the CIL standard and a tribunal’s interpretation of arbitrator discretion is *Ioannis v Georgia* (2010). In that case, the

---

\(^{184}\) RIPINSKY WITH WILLIAMS, at 160.

\(^{185}\) *ADC v Hungary*, ¶ 499.

\(^{186}\) *Siemens v Argentina*, ¶ 352.
claimant argued the customary international law standard to be able to rely on a post-
expropriation valuation date. The tribunal disagreed with the investor and held that claimants
would have sold their shares had they not be expropriated at an earlier date. Accordingly, the
tribunal chose the fair market value at the date of expropriation as the relevant standard.

Curiously, in Ioannis v Georgia, the tribunal was asked to consider whether the compensation
standard contained in a stabilization clause in two investment contracts worked as a cap to
compensation under the treaty and under customary international law. One of the contracts
specified that in the case of expropriation the investor should “receive full reimbursement for any
amounts expended” and that “the arbitrator may also award any additional amounts...in respect
of loss of profits.” (Emphasis added). The tribunal suggested that it was generally possible for
“host State and an investor...to contractually limit the compensation which may be owed
following an expropriation where a treaty is also in play”. Although the award of profits
seemed on the face of it entirely discretionary, the tribunal held that the investor could
“legitimately expect that a neutral arbitrator...would exercise his or her discretion to award
compensation...for the loss of profits from the investment....” Because the reasonable
arbitrator’s discretionary actions would involve the award of lost profit, the investment contracts
did not cap compensation. Out of those tribunals that recognized the distinction between the two
compensation standards, 10 held the respondent responsible for indirect and creeping
expropriation. One explanation for the reversion to the customary international law standard

---

187 Ioannis v Greece, at ¶ 507.
188 Ibid., at ¶ 516.
189 Ibid., at ¶ 478.
190 Ibid., at ¶ 481.
191 Ibid., at ¶ 484.
192 Indirect expropriations were found in Middle East Cement v Egypt (2002), Tecmed v Mexico (2003), Metalcold
v Mexico (2007), Compania de Aguas v Argentina (2007), Siemens v Argentina (2007), Biwater Gauff v Tanzania
may be the fact the exact expropriation date in indirect and creeping expropriation is more uncertain than in direct expropriation. This, in turn, may lead tribunals to make use of the wider theoretical latitude, the fuzziness, of the customary international law standard allowing determination of the valuation free from date restrictions.

4. Fluidity of the fair market value

While the customary international law standard of full reparation is very broad and nebulous, ‘fair market value’ may likewise mean a lot of different things allowing tribunals to determine value relatively freely. As such, the tribunal suggested in *Metalclad v Mexico* (2000) that “that fair market value is best arrived at in this case by reference to Metalclad’s actual investment in the project.” In *Rumeli v Kazakhstan* (2008) the tribunal affirmed that the term fair market value was largely a term of art:

[Th]e expression “fair market value” may in certain contexts have a specific technical meaning for the valuation of assets. In the context of the FIL, however, the expression must be taken to have a non-technical meaning and to convey a measure of value which can be applied whether or not a “fair market value” in a technical sense can be ascertained in the particular case. For present purposes, the Tribunal considers that no relevant distinction can be drawn between the expressions “real value” and “fair market value.”

In *Bernardus Henricus v Zimbabwe* (2009), Article 6 (c) of the relevant BIT specifies "just compensation". Furthermore, “such compensation shall represent the genuine value of the investments affected ... The genuine value of the investments shall include, but not exclusively, the net asset value thereof as certified by an independent firm of auditors.” Respondent submitted

---

193 *Metalclad v Mexico*, ¶ 122.
194 *Rumeli v Kazakhstan*, ¶ 786.
195 *Bernardus Henricus v Zimbabwe*, ¶ 96.
that it is the asset value of the farms that would thus need to be determined first.\footnote{Ibid., ¶ 121.} Tribunal however suggested that the genuine value and net asset value did not coincide in the present instance: the genuine value was higher and coincided with the market value of the whole farm at the time of expropriation. While the BIT standard suggested that the genuine value did not exclusively equate to the net asset value, the tribunal did not further explain its choice. Equating genuine value with fair market value however led it to conclude that there was no difference between the BIT and customary international law standard, presumably, because both mandated, in the eyes of the tribunal, the fair market value.\footnote{Ibid., ¶ 122.} Curiously, however, the tribunal later on awarded “\textit{reparation for the disturbances resulting from the taking over of their farms and for the necessity for them to start a new life often in another country}” at EUR 20,000 per claimant.\footnote{Ibid., ¶ 138.} As the BIT standard does not include compensation other than for property value of the investment, the tribunal’s suggestion that the difference between BIT and customary international law standard is immaterial, seems, on the face of it, inconsistent. It is rather surprising that the tribunal approached the way it did. Had it recognized a distinction between the two standards, it could have disregarded the BIT standard arguing in favor of the fair market value under the customary international law standard, which allows for such other remedies as reparations for disturbances.

\textit{ii. Conclusion On Compensation Standard}

67. The preceding analysis shows that the determination of the compensation standard may affect the amount of the expropriation considerably. As the case law is fragmented, tribunals have a wide margin of discretion. The customary international law compensation standard allows for more
leeway and flexibility. The choice between the two standards may be influenced by equitable
discretion, furthermore equitable discretion may have a larger role to play in cases were the
tribunal adopts the customary international law compensation standard. The water right
expropriation case of *Biwater Gauff v Tanzania* shows that the adoption of the customary
international law standard may have surprising downward effects on compensation in unusual
circumstances.

e. **Determining The Property Valuation Method**

68. In Chapter 2 I introduce the various calculation methods. The following table shows (a) the
calculation methods proposed by claimant, (b) applied by tribunal together with (d) the
compensation standard applied, (e) the ratio between award and claim value, (f) the income
status of a country and (e) whether or not the company was a going concern and or profitable.
<table>
<thead>
<tr>
<th>Claimant</th>
<th>Respondent</th>
<th>Date of award</th>
<th>Chosen compensation standard</th>
<th>Valuation method requested by Claimant</th>
<th>Valuation method employed</th>
<th>Going concern?</th>
<th>Ratio between award and claim value</th>
<th>Subject of dispute of public interest? [Yes/ No]</th>
<th>Worldbank income status of state</th>
<th>Ratio between claim value and GDP in year of award (this does not include interest and cost awards) Based on Worldbank LCU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Pacific Property Egypt</td>
<td>20-Apr-92</td>
<td>BIT</td>
<td>DCF</td>
<td>Investment value plus “loss of commercial opportunity”</td>
<td>No.</td>
<td>0.19</td>
<td>Yes, reservation</td>
<td>LMI</td>
<td>0.0311%</td>
<td></td>
</tr>
<tr>
<td>Santa Elena Costa Rica</td>
<td>17-Feb-00</td>
<td>FMV</td>
<td>n/a</td>
<td>Splitting the baby between Claimants and Respondents’ valuation</td>
<td>No.</td>
<td>0.12</td>
<td>Yes.</td>
<td>UMI</td>
<td>0.0007%</td>
<td></td>
</tr>
<tr>
<td>Wena Egypt*</td>
<td>12-Aug-00</td>
<td>BIT</td>
<td>DCF</td>
<td>Investment costs</td>
<td>No.</td>
<td>0.18</td>
<td>No.</td>
<td>LMI</td>
<td>0.0134%</td>
<td></td>
</tr>
<tr>
<td>Metalclad Mexico</td>
<td>30-Aug-00</td>
<td>BIT</td>
<td>DCF (but also investment costs proposed)</td>
<td>Investment costs</td>
<td>No.</td>
<td>0.14</td>
<td>Yes (landfill)</td>
<td>UMI</td>
<td>0.0016%</td>
<td></td>
</tr>
<tr>
<td>Middle East Cement Egypt</td>
<td>4-Dec-02</td>
<td>BIT</td>
<td>Undiscounted future profits</td>
<td>Lost profits and split-the-baby</td>
<td>Yes, but in liquidation.</td>
<td>0.05</td>
<td>No.</td>
<td>LMI</td>
<td>0.0111%</td>
<td></td>
</tr>
<tr>
<td>Tecmed Mexico</td>
<td>29-May-03</td>
<td>BIT</td>
<td>DCF</td>
<td>Investment costs plus 2 years of lost profits</td>
<td>No.</td>
<td>0.11</td>
<td>Yes, waste/landfill</td>
<td>UMI</td>
<td>0.0007%</td>
<td></td>
</tr>
<tr>
<td>ADC Hungary</td>
<td>10-Feb-06</td>
<td>CIL</td>
<td>DCF</td>
<td>DCF</td>
<td>Yes</td>
<td>1.00</td>
<td>No.</td>
<td>LI</td>
<td>0.0003%</td>
<td></td>
</tr>
<tr>
<td>Siemens Argentina</td>
<td>6-Feb-07</td>
<td>CIL</td>
<td>DCF</td>
<td>Investment costs</td>
<td>No.</td>
<td>0.69</td>
<td>No.</td>
<td>UMI</td>
<td>0.0390%</td>
<td></td>
</tr>
<tr>
<td>Compania de Aguas Argentina</td>
<td>20-Aug-07</td>
<td>CIL= BIT</td>
<td>DCF</td>
<td>Investment costs</td>
<td>No.</td>
<td>0.35</td>
<td>Yes</td>
<td>UMI</td>
<td>0.0370%</td>
<td></td>
</tr>
<tr>
<td>Hinwater Gauff Tanzania</td>
<td>24-Jul-08</td>
<td>CIL</td>
<td>Investment value</td>
<td>DCF=0</td>
<td>Yes, but without prospect of profit</td>
<td>0.00</td>
<td>Yes (water/sea)</td>
<td>LI</td>
<td>0.0001%</td>
<td></td>
</tr>
<tr>
<td>Rameli Kazakhstan</td>
<td>29-Jul-08</td>
<td>BIT</td>
<td>DCF (respondent argued liquidation value)</td>
<td>Unclear from award (but DCF and comparables considered)</td>
<td>Yes, but in liquidation.</td>
<td>0.77</td>
<td>No.</td>
<td>UMI</td>
<td>0.0014%</td>
<td></td>
</tr>
<tr>
<td>Sigma Egypt</td>
<td>6-Jan-09</td>
<td>CIL</td>
<td>DCF, comparables or residual land valuation</td>
<td>Market comparison, plus court costs</td>
<td>No.</td>
<td>0.41</td>
<td>No.</td>
<td>LMI</td>
<td>0.0217%</td>
<td></td>
</tr>
<tr>
<td>Bernardus Henricus Zimbabwe</td>
<td>22-Apr-09</td>
<td>CIL</td>
<td>Market value</td>
<td>Market comparison</td>
<td>Yes.</td>
<td>0.77</td>
<td>Yes.</td>
<td>LI</td>
<td>0.1832%</td>
<td></td>
</tr>
<tr>
<td>Saipem Bangladesh</td>
<td>30-Jun-09</td>
<td>CIL</td>
<td>Amount of award not paid</td>
<td>Amount of award not paid</td>
<td>n/a</td>
<td>0.88</td>
<td>No.</td>
<td>LI</td>
<td>0.00015%</td>
<td></td>
</tr>
<tr>
<td>Ioannis Greece</td>
<td>3-Mar-10</td>
<td>CIL</td>
<td>Income and market approaches: Comparables calculated by DCF</td>
<td>Mixed approach: Comparables calculated by DCF</td>
<td>No.</td>
<td>0.70</td>
<td>No.</td>
<td>LMI</td>
<td>0.1031%</td>
<td></td>
</tr>
<tr>
<td>Gemplus Mexico</td>
<td>16-Jun-10</td>
<td>CIL=BIT standard</td>
<td>DCF</td>
<td>Information from claimant’s quantum expert.</td>
<td>No.</td>
<td>0.02</td>
<td>No.</td>
<td>UMI</td>
<td>0.0034%</td>
<td></td>
</tr>
<tr>
<td>Alpha Ukraine</td>
<td>11-Aug-10</td>
<td>not mentioned</td>
<td>DCF plus outstanding payments</td>
<td>DCF plus outstanding payments</td>
<td>Yes.</td>
<td>0.31</td>
<td>No.</td>
<td>LMI</td>
<td>0.0009%</td>
<td></td>
</tr>
<tr>
<td>Tza Yap Shan Peru</td>
<td>7-Jul-11</td>
<td>CIL</td>
<td>DCF</td>
<td>Book Value</td>
<td>Yes, but only two years during which its cash flow was negative</td>
<td>0.03</td>
<td>No.</td>
<td>UMI</td>
<td>0.0475%</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Determination of the property value
i. The DCF-Method Generally Yields Higher Values Than Any Other Method, But Its Speculation-Propensity Has Led To Its Infrequent Use.

69. The analysis of the ICSID expropriation cases shows that claimants generally propose the use of the DCF-method. The DCF-method seemingly yields market values for the expropriated property exponentially higher than the proposed book value valuations, which are often proposed by respondent.199 We have seen in Chapter 2 that under the DCF-method the economic value of an enterprise equals its ability to generate revenue, not profits, for its owner. Tribunals submit that the DCF is the correct method, where the expropriated company is a ‘going concern’ that has a record of profitability. As seen in Chapter 2, the World Bank Guidelines on the Treatment of Foreign Direct Investment espouse this assessment suggesting a “determination will be deemed reasonable if conducted...for a going concern with a proven record of profitability, on the basis of the discounted cash flow value...”200 In Metalclad v Mexico (2000) the tribunal considered that the DCF-method was appropriate to establish the fair market value of a company that operates as a going concern: The “fair market value of a going concern which has a history of profitable operation may be based on an estimate of future profits subject to a discounted cash flow analysis...However, where the enterprise has not operated for a sufficiently long time to establish a performance record or where it has failed to make a profit, future profits cannot be used to determine going concern or fair market value.”201

199 See table at paragraph 68.
201 Metalclad v Mexico, at ¶¶ 199-120.
The Oxford Dictionary defines ‘going concern’ as “one in actual operation; a flourishing business; a profitable enterprise”\(^\text{202}\). It may thus be understood either as an operating or a profitable business. These concepts do not necessarily coincide. The fact that the DCF-method measures revenue streams but tribunals apply it only to profitable – not revenue generating – businesses means that the economic definition and legal application are incongruent. A claimant-proposed DCF application has only been accepted in *ADC v Hungary* (2006) in its entirety, the subject of which was the Budapest airport, a going concern that was highly profitable. In *ADC v Hungary* (2006) the tribunal praised claimant-appointed quantum expert LECG\(^\text{203}\) stating:

> Like many other tribunals in cases such as the present one, the Tribunal prefers to apply the DCF method…Tribunal accepts DCF method by LEGG completely.... The Tribunal would like to point out here that the LECG reports are, in the Tribunal’s view, an example as to how damages calculations should be presented in international arbitration; they reflect a high degree of professionalism, clarity, integrity and independence by financial expert witnesses. LECG’s valuation is fully validated by the amount of the acquisition by BAA of Budapest Airport Rt. on December 22, 2005, being US$ 2.23 billion (£1.26 billion) for 75% minus one share and a 75-year assets management contract plus moveable assets.\(^\text{204}\)

This assessment of LECG’s work explains why *ADC v Hungary* (2006) is the only case in the dataset where the claim amount equals the compensation award. It is interesting that the valuation method was accepted in a case against Hungary, the only high income country in the data set and that it was an expropriation that enriched the State significantly.


\(^{203}\) LECG is now in bankruptcy.

\(^{204}\) *ADC v Hungary*, ¶ 516.
ii. Arbitrators Consider The DCF-Method Speculative In Cases Where The Expropriated Business Did Not Operate As A Going Concern.

71. When declining to apply the DCF-method, arbitrators in the dataset generally blamed the speculation-propensity. In *Compania de Aguas* (2007) the tribunal recognized the validity of the DCF-method in quantum determination:

> The Tribunal accepts, in principle, that fair market value may be determined with reference to future lost profits in an appropriate case. Indeed, theoretically, it may even be the preferred method of calculating damages in cases involving the appropriation of or fundamental impairment of going concerns.205

Yet, it rejects the claimants’ proposed DCF method, because it did not persuade the tribunal that the concession would generate profits in the future:

> Claimants faced significant challenges and we conclude that they have failed to establish with a sufficient degree of certainty that the Tucumán concession would have been profitable.206

It is noteworthy that the tribunal did not think that going-concern status was an absolute precondition to using the DCF-method:

> The Tribunal also recognizes that in an appropriate case, a claimant might be able to establish the likelihood of lost profits with sufficient certainty even in the absence of a genuine going concern….As previously noted, the absence of a history of demonstrated profitability does not absolutely preclude the use of DCF valuation methodology. But to overcome the hurdle of its absence, a claimant must lead convincing evidence of its ability to produce profits in the particular circumstances it faced.207

Likewise, in *Metalclad v Mexico* (2000), the tribunal rejected the DCF method for want of going concern:

---

205 *Aguas v Argentina*, ¶ 8.3.3
206 *Ibid.*, ¶ 8.3.5.
207 *Ibid.*, ¶¶ 8.3.4 and 8.3.8.
The discounted cash flow analysis is inappropriate in the present case because the landfill was never operative and any award based on future profits would be wholly speculative.208

In *Compania de Aguas v Argentina* (2007), the tribunal concluded that the claimant’s valuation by DCF-method was too speculative, and could not be relied upon.209 In *Tza Yap Shum v Peru* (2011), the DCF-method was equally rejected as the company had only operated for 3 years incurring losses.210

72. In *Middle East Cement v Egypt* (2002), the tribunal reasoned that it lacked the necessary means to reasonable determine compensation as the difference between claimant’s values for both lost profits and net asset value was too ‘large’. Rather than appointing an outside expert, which it considered prohibitively expensive, the Tribunal decided to crudely “splits the baby”, i.e. adding the property values suggested by respondent and claimant and dividing the result by two.211 Similarly, the discrepancy between investment value and alleged present value was cited against using the DCF-method. In *Wena v Egypt* (2000), the tribunal reasoned:

…The Tribunal is disinclined to grant Wena's request for lost profits and lost opportunities given the large disparity between the requested amount (GBP £ 45.7 million) and Wena's stated investment [representing approximately the book value] in the two hotels (US$8,819,466.93).

Similarly, in *Tecmed v Mexico* (2003), the tribunal considered a large disparity between property and investment value suspect:

The Arbitral Tribunal has noted both the remarkable disparity between the estimates of the two expert witnesses upheld throughout the examination directed by the parties and the Arbitral Tribunal…and also the considerable difference in the amount paid under the tender offer for the assets related to the Landfill —US$ 4,028,788—and the relief sought by the Claimant, amounting to US$ 52,000,000,

208 *Metalclad v Mexico*, ¶ 121.
209 *Compania de Aguas v Argentina*, ¶ 8.3.11.
210 *Tza Yap Shum v Peru*, ¶¶ 261 -262
211 *Middle East Cement v Egypt*, ¶ 125.
likely to be inconsistent with the legitimate and genuine estimates on return on the
Claimant’s investment at the time of making the investment.\textsuperscript{212}

The suggestion that such discrepancy would play a role was rejected in \textit{Gemplus v Mexico}
(2010), where the tribunal suggested that “\textit{a significant disparity between the shareholders’
contributions and the Concessionaire’s profits, given the high degree of risk associated with the
Concession and the correlative prospect of significant profitability}”, was to be expected and not
a reason not to apply the DCF-method.\textsuperscript{213}

\textbf{iii. The DCF-Method Is Brittle: It May Produce Extreme Results And Underperform In
in Robustness Tests.}

73. In \textit{Rumeli v Kazakhstan} (2008) small mistakes in calculations are shown to result in large
fluctuations of claim value. As such, Respondent recounts the recalibration which was necessary
during one of the hearing:

Claimants’ counsel opened the hearing before the Tribunal on the basis of the
figures in the Analysys Report. It was extraordinary, therefore, when, in the
middle of the hearing, Analysys informed Respondent that they had got it
dramatically wrong. In fact, Analysys provided new figures which reduced their
valuations by 50%. If, as is its usual role, Analysys had been advising a company
on the purchase of KaR-Tel, that company would have paid more than the double
of what Analysys now believes the company to have been worth.\textsuperscript{214}

\textbf{iv. Where The Company Has Financial Difficulty Without Prospects Of Future Profit
At The Time Of Expropriation, applying the DCF-method May Lead To Nil
Compensation.}

74. It is not always the case that claimant proposes the DCF method. In \textit{Biwater Gauff v Tanzania}
(2008), it was Tanzania that suggested that the DCF method yielded a value of nil, because any
forecast would be negative for the loss-making water and sewage operator:

\textsuperscript{212} \textit{Tecmed v Mexico}, ¶186.
\textsuperscript{213} \textit{Gemplus v Mexico}, ¶ 13-67.
\textsuperscript{214} \textit{Rumeli v Kazakhstan}, ¶ 775
According to the Republic, the value of BGT’s shares in City Water equates to the net present value of future dividends to be paid on the shares, plus 51% of the net assets that City Water would have held at the end of the ten-year term of the Lease Contract. As of 12 May 2005, as confirmed by the Castalia Report, the net present value of future cash flows that BGT could expect was negative.215

Claimant argued against the DCF-method, suggesting it was inappropriate “*because City Water had not made any profits at the date of the expropriation and its forecast of profits for the future had not been determined on the basis of reliable information.*”216 It is the claimant that advances the usual argument found in earlier awards: the DCF-method is normally reserved for profitable ‘going concerns’ with sufficient prospect to be profitable in the future.

75. Intriguingly, the tribunal sided with the respondent, applying the DCF-method to the loss-making revenue-generating going concern, breaking from earlier precedent:

In assessing value for the purposes of a damages claim, the Arbitral Tribunal considers that the appropriate method in the present case is the Discounted Cash Flow method (which is the method used in most BIT cases). Contrary to BGT’s case, the Arbitral Tribunal does not consider that the Costs - or Net Investment – method is appropriate…Indeed, the application of the Costs / Net Investment method…consists of claiming a guaranteed return of 20% or 25% on every conceivable City Water–related expenditure, which has no justification. Further, as a testament to the inappropriateness of the method, the …calculations lead to a conclusion that 51% of City Water was worth US$ 20 million as of 1 June 2005, the date the expropriation took place. On any view, this is completely inconsistent not only with the relevant evidence, but also with BGT’s repeated statements at the time, and City Water’s own accounts.217

76. The tribunal claims the method is “*used in most BIT cases*”. Table 3 in paragraph 58 however indicates that tribunals, as far as ICSID-administered expropriation cases are concerned, hesitated to apply the DCF-method. Moreover, tribunals seized of cases, where the Claimant was insolvent, specifically relied on the investment value.218 Given, those earlier cases, the answer

215 *Biwater Gauff v Tanzania*, ¶ 766.
216 Ibid., ¶ 749.
217 Ibid., ¶ 793.
218 See, for example, *Middle East Cement v Egypt*, ¶ 100.
that the net investment value technique is not appropriate, is insufficient to explain adequately the suitability of the DCF-method. One may explain these discrepancies perhaps by the tribunal’s equitable discretion: The tribunal is taking a view on what would be ‘right’, what would be ‘equitable’ in the specific case. While no more than mere guesswork, the fact that the issue of the case concerned the public good of water may have informed the arbitrators’ choice. Deciding whether or not a valuation method is speculative necessarily involves great arbitrator discretion.

v. Alternative Valuation Methods Lead To Lower Compensation Awards.

77. In all cases other than ADC v Hungary (2006), Rumeli v Kazakhstan (2008) and Alpha v Ukraine (2010), the tribunal resorted to alternative valuation methods. The market-based comparable approach was most successful in securing favorable compensation amount for the claimant. In Siag v Egypt (2009), the tribunal started the process of valuation by asserting that the value of the expropriated asset “far exceeded the sum which was paid by Siag Touristic under the Sale Contract and the sums which had been expended on construction by 23 May 1996 and on other work undertaken in relation to developing and progressing the Project”.219 The Italy-Egypt BIT under which the claim in Siag v Egypt (2009) was brought, mandated expropriation for “adequate and fair compensation”.220 It further specifies:

[C]ompensation shall be computed…on the basis of the market value applicable to the investment immediately at the moment when the nationalization or expropriation was announced or became publicly known. Where the market value cannot be readily ascertained, the compensation shall be determined on equitable principles taking into account, inter alia, the capital invested, depreciation, capital already repatriated, replacement value, goodwill and other factors….” (Emphasis added)

219 Siag v Egypt, ¶ 542
The BIT directly references equitable principles in cases where the property value cannot be ‘readily ascertained’. What ‘readily ascertainable’ means, is decided by the tribunal and subject to debate. The discussion up until now may indicate that little is readily ascertainable in compensation. In *Siag v Egypt* (2009), *prima facie*, this provision seems to be favorable to the respondent, because it references the generally lower investment value as opposed to the market value. Unsurprisingly therefore, respondent argued that compensation was not readily ascertainable and that equitable principles should play a role. The question was however never put to test, since the tribunal argued that the BIT standard did not apply, as the expropriation was unlawful, and hence the provision was irrelevant to the process of quantum determination. It held that it was the customary international standard, the “more generous damages regime applicable under customary international law” as it is called a paragraph later, which the tribunal applied to the expropriation.\(^{221}\) The tribunal went on to suggest that it was required to ascertain “the value of the expropriated asset in the Claimants’ hands immediately prior to the expropriation”. It immediately excluded any asset-based approaches suggesting that “this value far exceeded the sum which was paid by Siag Touristic under the Sale Contract and the sums which had been expended on construction by 23 May 1996 and on other work undertaken in relation to developing and progressing the Project”.\(^{222}\) It did not accept the dictum in *Wena v Egypt* (2000), where the tribunal found the DCF valuation unconvincing for reasons of the large discrepancy between investment value and fair market value.\(^{223}\) The strength of the claimant’s case lay in offering three different valuation methods, which were well coordinated between the different experts yielding all similar results and persuaded the tribunal that the project must have been a

---

\(^{221}\) *Siag v Egypt*, ¶ 540 – 541.  
\(^{222}\) *Ibid.*, ¶ 542  
\(^{223}\) *Ibid.*, ¶ 120.
very promising. Egypt’s argument that the project had still been in construction and, therefore, had no trading history at all, did not convince the tribunal breaking from earlier precedent. The project had been “a very promising one ...[it] appeared to be moving forward successfully, albeit that it was still at an early stage”.224

f. **Calculation Of The Expropriated Property/Business Value.**

78. In *Siag v Egypt* (2009), the court eventually went for a comparable sales valuation praising claimant’s quantum expert’s “credentials and experience” as excellent:

> The inquiries made by him were wide-ranging. Further, the Tribunal found him to be a very thoughtful, professional and fair-minded person whose opinion on matters within his area of expertise could be relied upon.225

The tribunal asked the expert for the margin of error applicable to the comparable sales valuation. Suggesting that he would normally hope to be within the ±5% range, he conceded the difficulty of valuing the property, proposing a ±10% instead. The tribunal applied its discretion and increased this number further to ±20%.226

79. One issue that appears from the analysis of *Siag v Egypt* (2009) and *ADC v Egypt* (2006) is the fact that claimants’ quantum experts have a huge sway and that respondent are generally not as well represented by sophisticated, and expensive, quantum experts.227 The sway of elite quantum experts is also apparent in *Tza Yap Shum v Peru* (2011). As seen earlier, the tribunal declined to use the DCF method for want of profitability and a track record of only 3 years

---

224 *Siag v Egypt*, ¶ 542.
225 Ibid., ¶ 573.
226 Ibid., ¶ 576 [Tribunal awarded 50% thereof as specified in the sales contract as accruing to the claimant in case of sale.]
227 A factor in the case of *Siag v Egypt* (2009) may also have been the bad intent that may be inferred from the government leveling spurious allegations about the claimant’s connections to an Israeli entity (See *Siag v Egypt*, ¶ 68).
operation. Respondent had employed not only an elite law firm, but also LECG, world-reputed quantum expert’s that features in at least 3 of 18 cases as claimant’s expert. The tribunal in *Tza Yap Shum v Peru* not only adapted the asset method but moreover accepted the exact value suggested by LECG, without entering any serious discussion over the provided valuation.

80. In comparison to other cases, the calculations in *Siag v Egypt* (2009) seemed rather straightforward. Claimant presented three valuation techniques, which all produced similar results carefully coordinated by claimant quantum expert LECG, and from which the tribunal then could pick. In *Bernardus Henricus v Zimbabwe* (2009), after the tribunal had rejected the valuation technique presented by Zimbabwe, i.e. “valuing arable land plus the estimated value of the various buildings and equipments which are necessary for the operation of the farms”, it chose the method of the claimant’s quantum expert “as the correct starting point”. It reduced the claimants’ valuation on account of a 15% increase in the value of land between 1999- 2001, which had been factored in by claimant expert but had turned out to be unfounded. It however also used its discretion to reduce it by a further USD 2 million having considered “the natural region in which it falls and the quality of the soils…production of the farms…the equipments, their importance and their state…”. Without spelling out any specific reductions, it set compensation at overall rounded values.

81. The inherent difficulty in quantum determination coupled with the increased sophistication of quantum experts led tribunals to stress the inherent discretion of the tribunal to depart from economic valuation techniques provided by experts. So, while experts calculated values by a

---

228 Fill in reference. 3 years may be considered adequate in other cases.
229 *Gemplus v Mexico, Alpha v Ukraine, ADC v Hungary*
230 *Tza Yap Shum v Peru*, ¶ 264.
231 *Bernardus Henricus v Zimbabwe*, ¶ 131.
certain method, tribunals cherry picked data or subtracted from the calculated value to reach compensation awards. The difficulty of proving the actual value of the property in *Tecmed v Mexico* (2000), a case that involved the revocation of a license to operate a landfill, let claimant to suggest, or beg, that equitable principles should guide the tribunal in awarding compensation. The unsympathetic tribunal replied that “although the Arbitral Tribunal may consider general equitable principles when setting the compensation owed to the Claimant, without thereby assuming the role of an arbitrator ex aequo et bono, the burden to prove the investment’s market value alleged by the Claimant is on the Claimant”.234 Due to its difficulties in the actual property valuation, the tribunal in *Gemplus v Mexico* (2010) rejected both DCF and book value methods and adopted a mixture:

[T]he Claimants use of the DCF method, with its expert (LECG) produces figures for the Concessionaire’s future lost profits which are manifestly too high on the facts found by the Tribunal….Equally, the Tribunal rejects the Non-DCF methods advanced by the Respondent. Neither the Asset Approach nor the Declared Tax Value Approach take any account of the Concessionaire’s most valuable intangible asset as at 24 June 2001, namely its future income stream reasonably anticipated from the Concession Agreement under its remaining ten-year term….it is necessary for the Tribunal to steer an appropriate middle course….

The tribunal described the method as a "lost opportunity method". Purists may say that this method is equivalent to the crude “split the baby”- method mentioned in Chapter 2. Such comment would however neglect the fact that the present version relies on more numerous and vigorous base data than the earlier “split the baby-cases” and, as a result, provides an improvement to prior quantum determination.236

82. The difficulty of determining quantum does not allow a tribunal to skip reasoning. Failing to explain the steps of property valuation in the body of the award may trigger annulment

234 *Tecmed v Mexico*, ¶ 190.
235 *Gemplus v Mexico*, ¶¶ 13-75.
236 See, *Aguas v Argentina*, ¶ 95.
proceedings. The recent application for annulment in *Rumeli v Kazakhstan* (2010) under Clause 52(1)(e) ICSID Convention is a case in point. It was based on the tribunal’s alleged failure to state reasons for its compensation award. In *Rumeli v Kazakhstan* (2008) both sides used sophisticated quantum experts. The award spread across 233 pages; 14 pages spent on quantum determination. Yet, it left unmentioned the important step of how the tribunal got from having considered various alternative property valuations to its final compensation award. Underscoring the difficulty of all approaches, it merely stated:

> Taking into account all the circumstances described above, the Tribunal concludes that an award of USD 125 million will adequately compensate Claimants for the expropriation of their shares and will give them full reparation for the injury caused by the internationally wrongful acts which the Tribunal has found to have been committed by Respondent.\(^{237}\)

The amount of USD 125 million is not mentioned anywhere else in the award; it cannot be deduced by simple arithmetic methods either. The award hence arouses the suspicion that the final quantum was plucked out of thin air. By way of illustration: in the form of \(x+y=z\), therefore \(v=a\).\(^{238}\) The tribunal used its discretion to pick seemingly arbitrarily a number. While the ad hoc committee did not annul the award, it rebuked the original tribunal:

> It is highly desirable that tribunals should minimise to the greatest extent possible the element of estimation in their quantification of damages and maximise the specifics of the ratiocination explaining how the ultimate figure was arrived at.\(^{239}\)

It however also confirmed the tribunal’s inherent discretion in quantum determination:

> To be sure, the tribunal must be satisfied that the claimant has suffered some damage under the relevant head as a result of the respondent’s breach. But once it is satisfied of this, the determination of the precise amount of this damage is a

---

\(^{237}\) *Rumeli v Kazakhstan*, ¶ 814.

\(^{238}\) *Ibid.*, ¶ 815.

\(^{239}\) *Rumeli v Kazakhstan* Annulment Decision, ¶ 184.
matter for the tribunal’s informed estimation in the light of all the evidence available to it.  

83. In *SPP v Egypt* (1992), the tribunal considered that “it is well settled that the fact that damages cannot be fixed with certainty is no reason not to award damages when a loss has been incurred”. In *Compania de Aguas v Argentina* (2007), the tribunal repeated this statement and added “In such cases, approximations are inevitable; the settling of damages is not an exact science.” In *Ioannis v Georgia* (2010), the tribunal stressed its “duty is to make the best estimate that it can of the amount of the loss, on the basis of the available evidence. That must be done even if there is no absolute documentary proof of the precise amount lost.” It opted for the hybrid method advanced by the claimant, which combined a market-based valuation with an income-based method. The tribunal was impressed with the fact that the three market transactions, on which the expert based his DCF calculations, yielded all similar results:

It is not common in investment treaty arbitrations that a Tribunal has available to it three arm’s-length, contemporaneous transactions (or potential transactions) to assist in valuing an investment, much less three that converge in a narrow range of value, *i.e.* US$ 28.1 million to US$ 30.6 million. Without insinuating that this had been the case here, it seems that the tribunal did not consider that valuation methods may be carefully coordinated, not to say manipulated, by the valuation experts. The tribunal chided the respondent’s expert for asking the wrong questions:

The Tribunal also agrees with the Claimants that the Respondent’s expert has, with all due respect, asked the “wrong questions” and arrived at the “wrong answers”. This is not an appropriate case in which to value the Claimants’ interest

---

241 *SPP v Egypt*, ¶ 328 et seq.
242 *Aguas v Argentina*, ¶ 8.3.16.
243 *Ioannis v Greece*, ¶ 594.
244 *Ibid.*, ¶ 598.
in GTI on the basis of a costs approach, much less the wasted costs approach advocated by the Respondent.\textsuperscript{245}

84. The tribunal then went on to consider the downward adjustments asserted by the quantum expert of the respondent in the event the tribunal adopted the claimant’s approach, but rejected them in their entirety.\textsuperscript{246} While this paper does not address interest and costs, it is noteworthy that the tribunal considered it necessary to award a high interest rate on account of the unlawfulness of Georgia’s conduct.\textsuperscript{247} It stipulated an interest rate of 4\% above LIBOR from the date of expropriation. This meant that the interest award was trice as high as the actual damage award.\textsuperscript{248} Georgia was also asked to pay all arbitration and legal costs of claimants, which were half the damage award.\textsuperscript{249} This case is an example where the tribunal used its discretion against the respondent, who got vastly enriched by expropriating an oil pipeline project. It is noteworthy that using interest to allocate blame above fair market value would not be available against a claimant, because respondents seldom counterclaim. Cost awards would however have the same force.

85. In \textit{Alpha v Ukraine} (2010) the Tribunal, providing a step-by-step description of its quantum determination, noted at one point that, while it knew that certain contributions between claimant and Hotel did not represent the originally contractual 50/50 split, it did not have the required information to assess the actual split and thus could only award in accordance with the original:

\[ \text{[I]}t \text{ would be pure speculation for the Tribunal to assess with precision, based on the record, what the parties’ actual relative contributions were.} \textsuperscript{250} \]

\textsuperscript{245} \textit{Ibid.}, ¶ 602.
\textsuperscript{246} \textit{Ibid.}, ¶¶ 605 – 639 [The transcript as copied in the award show the Respondent’s expert, Mr. Lagerberg, underperformed not only in content but also in eloquence in cross-examination. He also suggested a discount rate which was imprudent on the face of it for oil/gas investments.]
\textsuperscript{247} \textit{Ibid.}, ¶ 659.
\textsuperscript{248} \textit{Ibid.}, ¶ 693.
\textsuperscript{249} \textit{Ibid.}
\textsuperscript{250} \textit{Alpha v Ukraine.} ¶ 508.
86. Perhaps as a result of the *Rumeli v Kazakhstan* annulment decision issued on March 25, 2010, the tribunal in *Gemplus v Mexico* (2010) again emphasized its inherent discretion in a 383-paged award on 16 June 2010. This tribunal, spending 113 pages on compensation and quantum, admitted that it had serious issues with quantum determination:

As indicated above, the Tribunal has experienced considerable difficulties in deciding certain quantum issues in these arbitration proceedings. It is not the Tribunal’s function, as an arbitration tribunal, to make a simplistic binary choice between the very different cases advanced by the two sides. Moreover, given these issues’ dependence on multiple findings of fact by the Tribunal, it would not even be possible to do so in the present case, even if this Tribunal were willing to do so (which it is not). Ultimately, the Tribunal must exercise its own arbitral discretion in assessing compensation by reference to the applicable legal principles and the particular facts, as determined by the Tribunal.251 (Emphasis added)

87. The problems were caused by party-appointed quantum experts, both sophisticated and reputable experts, offering entirely opposing quantum determinations, with the consequence that the tribunal felt unable to choose. Notwithstanding the sophistication of both experts, the text of the award indicates that the tribunal was highly sympathetic to Claimants’ cause.252 Referring to the underlying France-Mexico BIT, which allowed calculation of the fair market value through “*any other criteria which, in the circumstances, are appropriate to determine fair market value*”, the tribunal went on to suggest that claimant should be awarded compensation for loss of chance.253 The tribunal went on to cite Ripinsky with Williams (discussed in Chapter 2) in support of awarding a sum for loss of chance:

---

251 *Gemplus v Mexico*, ¶¶ 12-57.

252 This is indicated by phrases such as, for example at ¶¶ 13-98: “In the Tribunal’s view, there was therefore as at 24 June 2001 no certainty or realistic expectation of this project's profitability as originally envisaged, but there was nonetheless a reasonable opportunity. That opportunity, however small, has a monetary value for the purpose of Article 36 of the IIA Articles and the indemnities for compensation provided by the two BITs.”

253 *Gemplus v Mexico*, ¶¶ 13-93.
In theory, the loss of a chance is assessed by reference to the degree of probability of the chance turning out in the plaintiff’s favour, although in practice the amount awarded on this account is often discretionary.²⁵⁴

The tribunal then submitted that the tribunal’s discretion in awarding compensation for loss of a chance did “not depend upon the tribunal or court acting ex aequo et bono”. Citing the ILC commentary, the tribunal suggested that instead what was required was a “‘reasonable degree of certainty’ for establishing compensation for future harm”, or “sufficient certainty”.²⁵⁵ Uncertainty or ability to exactly determine compensation was not a reason to preclude the tribunal from awarding damages:

Tribunal rejects any argument that because the quantification of loss or damage in the form of lost future profits is uncertain or difficult, that the Claimants should be treated in this case as having failed to prove an essential element of their claims in respect of lost future profits, with the result that their claims for compensation should be dismissed.²⁵⁶

Not awarding damages would “produce a harsh and unfair result in this case” particularly since the “lack of evidence [to prove damages] is directly attributable to the Respondent’s own wrongs”.²⁵⁷ The tribunal further pre-excused its deviation from valuation technique suggestion that “it is a fact that business people can agree a price notwithstanding expert accountants respectively advising them that only a higher or lower price is appropriate”.²⁵⁸ Without explaining how it had reached its numbers, the Tribunal announced:

Tribunal determines in the exercise of its arbitral discretion that the price agreed by these hypothetical parties for the Claimants” shares in the Concessionaire would have been (in total) the sum of MXN 130,000,000 or US$ 14,340,872.

²⁵⁴ Ibid.
²⁵⁵ Ibid., ¶¶ 13-88.
²⁵⁶ Ibid., ¶¶ 13-88.
²⁵⁷ Ibid., ¶¶ 13-99
²⁵⁸ Ibid.
The *Gemplus case* seems to be a case in which the tribunal squarely exercised discretion in favor of the Claimant. In conflict with established valuation techniques, the ad hoc committee in the *Rumeli v Kazakhstan* annulment decision goes so far as to suggest that valuation methods are not mutually exclusive:

> But it is worth emphasising that valuation methodologies are not mutually exclusive.”259…Nor is a court or tribunal required to shut its eyes to events subsequent to the date of injury, if these shed light in more concrete terms on the value applicable at the date of injury or validate the reasonableness of a valuation made at that date.260

This statement again stresses the tribunal’s discretion to depart from economic valuations when awarding compensation.

g. **CONVERSION OF THE PROPERTY VALUE INTO AN AMOUNT OF COMPENSATION**

   i. **Intent And Enrichment Of The State May Be Relevant To The Determination Of Quantum.**

88. In *SPP v Egypt* (1992), Egypt argued that the following factors should play a role in the determination of compensation: (a) that it did not get enriched by the expropriation, (b) that it was obliged to do so pursuant to obligations under the UNESCO convention and (c) that property was located “where the Claimants should have known there was a risk that antiquities would be discovered”. The tribunal rejected the reductions. First it argued that while “Respondent has not benefited financially from the cancellation of the project”… “Respondent has obtained certain non-material benefits through the preservation of an area constituting a world cultural heritage, thus becoming entitled to the advantages-including the possibility of outside financial assistance--deriving from the UNESCO Convention.”261 It furthermore argued “that although unjust enrichment has on infrequent occasion been used by international

---

259 *Rumeli v Kazakhstan* Annulment, ¶ 149.
260 *Rumeli v Kazakhstan* Annulment, ¶ 151.
261 *SPP v Egypt*, ¶ 246.
tribunals as a basis for awarding compensation... the measure of compensation should reflect the claimant's loss rather than the defendant's gain.”²⁶² The tribunal also rejected Egypt’s second argument, not because it found the argument invalid, but because the tribunal had already taken into account the legality of the expropriation in the choice of valuation method, i.e. “in the Tribunal's decision not to award compensation based on profits that might have accrued to the claimants after the date on which areas on the Plateau were registered with the World Heritage Committee”.²⁶³ Likewise, it rejected Respondent’s third argument suggesting:

Again, this is a factor that is already reflected in the method used by the Tribunal to value the Claimants' loss, and particularly in the Tribunal's decision and not to base compensation on profits that might have been earned after the Plateau areas were registered with UNESCO.²⁶⁴

The tribunal’s decision in SPP v Egypt (1992) supports my suspicion that tribunals prefer to resort to equitable considerations discretely by choice of compensation standards, valuation techniques or actual calculation, as opposed to overtly reducing compensation after calculation of the property value.

89. As mentioned earlier, the case of Santa Elena v Costa Rica (2000) is always cited as authority for the proposition that the purpose of the expropriation has no effect on the finding of expropriation or the obligation to pay damages:

While an expropriation or taking for environmental reasons may be classified as a taking for a public purpose, and thus may be legitimate, the fact that the Property was taken for this reason does not affect either the nature or the measure of the compensation to be paid for the taking. That is, the purpose of protecting the environment for which the Property was taken does not alter the legal character of the taking for which adequate compensation must be paid. The international source of the obligation to protect the environment makes no difference. Expropriatory environmental measures—no matter how laudable and beneficial to society as a whole—are, in this respect, similar to any other expropriatory

²⁶² Ibid., ¶ 247.
²⁶³ Ibid., ¶ 250.
²⁶⁴ Ibid., ¶ 251.
measures that a state may take in order to implement its policies: where property
is expropriated, even for environmental purposes, whether domestic or
international, the state’s obligation to pay compensation remains.265 [Emphasis
added]

Yet, 20 paragraphs after endorsing this ‘sole effect doctrine’, the tribunal partially retracted
suggesting that “the determination of value by a tribunal must take into account all the relevant
circumstances, including equitable considerations”.266 In Bernardus Henricus v Zimbabwe
(2009), which concerned the direct and violent expropriation of White farmers, Zimbabwe
conceded that the correct method would be the determination of the market value, but suggested
that “account must be taken of the investment initially made, of the date of such an investment
and of the profit resulting in the past of investment. Account must also be taken of the fact that
dISCOUNTING FROM THE MARKET VALUE IS TO BE MADE IN CASE OF LARGE SCALE NATIONALIZATION.”267

The Tribunal denied the validity of any of these principles merely observing:

[U]nder general international law as well as under the BIT, investors have a right
to indemnities corresponding to the value of their investment, independently of
the origin and past success of their investment, as well as of the number and aim
of the expropriations done. It will accordingly proceed to the evaluation of the
damages suffered in each case at the date of dispossession on the basis of the
market value at that date. [Footnotes omitted].268

By doing so, the tribunal made a clear statement that intent, purpose as well as excessive profits
garnered from the investment could not be taken into account in calculating damages. In
Compania de Aguas v Argentina (2007), a case that concerned the expropriation of a water lease
concessions, Argentina further raised three defenses suggesting that full compensation was not
appropriate. In doing so, it relied “on the doctrine of abuse of rights, Respondent’s economic

265 Santa Elena v Costa Rica, ¶ 71-72.
266 Ibid., ¶ 92.
267 Bernardus Henricus v Zimbabwe, ¶ 25.
268 Ibid., ¶ 124.
condition, and the fact that Respondent acted in the public interest".\textsuperscript{269} Without any further discussion, the tribunal rejected the suggested equitable limits:

Having regard to the nature and time frame of Tucumán’s breaches, the Tribunal does not consider it appropriate to reduce the award of full compensation to Claimants on any of these bases.\textsuperscript{270}

The tribunal had earlier remarked that the purpose of an expropriatory act could not immunize the expropriator from having to pay compensation:

If public purpose automatically immunises the measure from being found to be expropriatory, then there would never be a compensable taking for a public purpose. As the tribunal in Santa Elena correctly pointed out, the purpose for which the property was taken “does not alter the legal character of the taking for which adequate compensation must be paid.”\textsuperscript{271}

90. The tribunal, by majority (Gary Born concurring and partially dissenting), in \textit{Biwater Gauff v Tanzania} (2008) held that economic loss is not a necessary ingredient for a measure to constitute indirect expropriation but “\textit{a matter of causation and quantum}”.\textsuperscript{272} After having determined that respondent had indirectly expropriated the claimant, the tribunal denied an award of damages on the basis of the maxim \textit{pacta sunt servanda}. The investment treaty did not function as an insurance policy for bad investment decisions.\textsuperscript{273} First, this indicates a not previously recognized theoretical basis of compensation in expropriation, and second that the tribunal was influenced by the \textit{amicus curiae} brief, which primarily relied on the aforementioned \textit{Latin} maxim. Similarly, in \textit{Tecmed v Mexico} (2003) and \textit{Metaclad v Mexico} (2007), two cases that concerned the operation of landfill and hazardous waste, the measures at issue that effected the claimants’ investments were instituted following strong political pressure. In \textit{Tecmed v Mexico} (2003) and

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{269} \textit{Aguas v Argentina}, ¶ 8.4.3
\item\textsuperscript{270} \textit{Ibid.}, ¶ 8.4.3
\item\textsuperscript{271} \textit{Ibid.}, ¶ 7.5.21.
\item\textsuperscript{272} \textit{Biwater Gauff v Tanzania}, ¶ 465.
\item\textsuperscript{273} \textit{Ibid.}, ¶ 769.
\end{enumerate}
\end{footnotesize}
Metalclad v Mexico (2007), the tribunals concluded that (good) intent behind the measures did not inform the finding of expropriation under international law. While not expressly stated by the Tribunal, the determination of quantum in Metalclad v Mexico, in addition to the proportionality approach employed when finding expropriation, may suggest that the expropriation for the benefit of a third party (thus without enrichment) and under the political pressure may have depressed the quantum in line with the statistical observations provided at the beginning of this chapter in paragraphs 55-56. In Metalclad v Mexico, the tribunal awarded USD 5.5 million principal, a far cry from USD 52 million claimed. In Biwater Gauff v Tanzania (2008), the tribunal suggests that intent may impact on quantum determination as well as the contractual non-performance of the Claimant.274 The award in Rumeli v Kazakhstan (2008) published 4 days after the Biwater Gauff v Tanzania (2008) award expands on the notion of intent suggesting that the intent of the State is relevant to, but is not decisive of the question whether there has been an expropriation.275 It does however not refer again to this issue in the compensation section.276

h. CONCLUSION

91. This review of all ICSID expropriation cases shows that one must go through the awards with a fine tooth comb to find any indication of equitable discretion and the tribunal’s efforts to balance investor rights with competing public law obligations of the State. This is so, despite the prima facie correlation between the presence of manifest public interest on the award and claim ratio. The preceding analysis showed foremost, the general incoherence of compensation decisions and, second, that arbitral tribunals expressly refer to their inherent discretion when choices become difficult. The review is however insufficient to clarify the role and scope of equitable

274 Biwater Gauff v Tanzania, ¶ 769.
275 Rumeli v Kazakhstan, ¶ 180.
276 Ibid.
arbitration discretion and the balancing duty of arbitrator as global administrative law adjudicators. The following chapter therefore consults the people who write the awards, the ones that plead in front of them and the academics that criticize them to voice their opinion.
IV. WHAT DO PROFESSIONALS THINK? - A REAL-TIME DELPHI ANALYSIS

a. OVERVIEW

92. As the preceding sections show, little has been written on the role of equity and arbitrator discretion in arbitration proceedings; neither the scholarly literature nor the analysis of past ICSID expropriation awards enables me to paint a complete picture. I therefore chose to ask the decision makers, i.e. the arbitrators, and the scholars directly in an online survey designed to answer my research questions:

   a. What is the scope of this equitable arbitrator discretion in the process of determining compensation in investment treaty arbitration proceedings?

   b. Is it legitimate for arbitrators to exercise this equitable discretion in the quantum phase for the purpose of balancing the treaty-based rights of investors with the extrinsic but competing international and public law obligations of States in disputes that implicate the public interest?

93. I selected as my research population two groups: (a) all individuals that previously sat as arbitrators in ICSID panels, and (b) a sample of those who published on the question of international investment arbitration, but who had not sat as arbitrators in ICSID arbitrations. I surveyed these two groups and kept them distinct throughout to be able to analyze group differences between the decision makers and those participating in the scholarly debate.

94. I chose to use two techniques for the online survey. First, I pre-fixed a traditional survey of 12 statements to be rated by my research population’s opinion, and, second, I presented an expropriation hypothetical and asked the population to rate statements relating to that hypothetical. I also asked them to provide a quantum estimate based on the limited facts available. The second survey is structured as a reiterative group process known as the Delphi
method, which allows experts to take into account the opinion of their peers. It is further discussed below.

95. In the following sections, I will first explain the methodology and the population design, the online hosting space, the way I reached out to the population and difficulties I faced, particularly in relation to the level of participation. I will then provide survey content and discuss results, statistical significance and attitudinal group differences. I will furthermore explore possible correlations between various answers.

b. METHODOLOGY

i. Survey Techniques: Traditional Survey and Delphi Technique

1. Methodology for Part I – Traditional Survey

96. I combined two survey techniques to answer my research questions. In Part I of my survey, I asked the two groups to rate 12 statements on the traditional Likert Scale: (1) strongly disagree, (2) tend to disagree, (3) neither agree nor disagree, (4) tend to agree, and (5) strongly agree. The 12 statements probed the groups’ general viewpoints on the role of equitable discretion and equitable limits in the determination of compensation and the arbitrator’s function as a global administrative law adjudicator. I included this part of the survey, knowing that Part II would require participants to dedicate more time and patience, i.e. to read a hypothetical, rate the statements and determine a quantum estimate. Inclusion of this short traditional survey would thus ensure that even if I could not find any participants for Part II, I may harvest answers to Part I. Furthermore, while Part I tests the general attitude of participants, Part II tests the application of those views. I chose the five-scale Likert scale for two reasons: First, it is most well-known and I hence expected my research population to be familiar with it. Second, various experts have suggested that parametric tests applicable to continues variables may be applied to the 5-scale
Likert scale with only negligible statistical errors, although Likert scales are strictly speaking non-continuous.  

2. Methodology for Part II – Online Real-time Delphi Method

a. Online Real-time Delphi Method

For Part II of the survey, I followed the Delphi method, a reiterative and interactive group process that allows experts to take their peers’ opinions into account before making their final choice. Designed to harvest information from experts “within their domain”, the method is thus very suitable for surveying my population. It is not only a method to gather information, but also “a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.” Keeping in mind that very few individuals call themselves experts of quantum, let alone equitable discretion in investment law, the format thus allows those who are unsure about a subject, to revise their opinion after having seen the answers of their peers. This allows for more robust results. As a group communication process, it is designed to encourage a convergence of opinion. Generally, any survey method may be called Delphi as long as it provides “some feedback of individual contributions of information and knowledge, some assessment of the group judgment

---


280 Indeed, two current arbitrators sitting in ICSID proceedings informed me that they would not take part on the consultation due to a lack of knowledge of the field of quantum.

or view, some opportunity for individuals to revise views, and some degree of anonymity for the individual responses.” 282

b. The Original and Real-time Delphi Method

98. The original Delphi method involves a reiterative number of paper or e-mail questionnaires to a population of experts in the field. After each round the answers are collected, analyzed and send out again to the expert to reconsider their opinion. The Real-time Delphi consultation combines all rounds into one prolonged computer simulation that is open for a certain period of time, where an expert, after having filled in her answers, is automatically presented with the group opinion of other participants, and asked to reconsider her earlier answers. Thereafter, the expert is given the chance to visit the site as many times as she wishes, but every time she does so her prior answers are replaced and added to the group opinion. 283 I selected the Real-Time Delphi method for Part II as opposed to the original Delphi method for reasons of ease, time saving and immediacy of results. Additionally, choosing the Real-Time Delphi allowed me to combine both surveys, thus increasing the likelihood of answering my research questions.

c. Strength And Weaknesses Of The Real-Time Delphi Method

99. The strength of the method consists of its “speed, flexibility, lower costs, and centralization of a data bank of questions and responses”. 284 The weakness “is its failure to attract most of its respondents back for reestimation”. 285 However, despite the low rate, even a participant, who does not revisit, is presented with the group responses at least once to influence her opinion. To overcome this weakness of non-revisitation, administrators have opted to send out reminders to

those members of the population who opted to participate. I did not do so due to the consultation being double-blind, which did not allow me to know the identity of the actual participants. However, I received various e-mails from participants informing me that they had filled in the survey, where after I generally encouraged them to visit the forum again to consider whether they wished to adapt their answers in light of new submissions from other participants.

**ii. Why The Combination Of Methods Was Chosen**

100. Overall, the combination of the Real-Time Delphi and traditional survey was chosen to take account of (a) the lack of time and willingness of ICSID arbitrators, academics and counsel to engage in surveys and (b) the marginality and fragmentation of the subject of quantum determination, which had until recently been the poor relation of more prestigious areas of international law. Using the Delphi process thus allowed participants to change their opinion after having seen the opinion of others and overall lead to a more robust, while not perfect, result. The traditional survey questions that where prefixed to the Delphi portion of the survey ensured that - even if individuals chose not to take part in the more-time Delphi portion – certain data was collected to inform the study.

**c. The Research Population**

**i. The Past And Present ICSID Arbitrators**

101. The research population consists of all persons that sat in arbitrations administered under the auspices of ICSID up until 20 January 2012. I used ICSID as opposed to other investment treaty arbitrators as research population, because (a) the large majority of investment treaty arbitrations are administered by ICSID, (b) ICSID publishes the names of all individuals appointed to a tribunal and (c) the content analysis of Chapter 3 concerns ICSID cases only. Individuals that
were included were appointed, even if the full tribunal had not yet been constituted.\textsuperscript{286} I identified those individuals by checking ICSID’s public record on pending and concluded cases.\textsuperscript{287} They are 324 individuals as of 20 January 2012. It is known in open source that at least 45 thereof have passed away. I had valid contact information for 217 of 279 individuals still believed alive (78%). I did not have the relevant information for 62 arbitrators. 21 thereof are believed to be above the age of 80. Please see Appendix 1 for the list of arbitrators.

\textit{ii. The Benchmark Group – Academics, Law Firm Counsel And Jurists That Write In Peer Reviewed Journals And In Books On The Subject}

102. In addition to the arbitrators, I assembled another population, the benchmark group, which consists of those individuals who have published on the issue of international investment law in peer-reviewed journals or who have published books between 20 January 2005 to 20 January 2012 listed in the Index for Legal Periodicals and Books (H.W. Wilson) (ILPB).\textsuperscript{288} I chose the Index for Legal Periodicals and Books because it is one of the leading indices in the English speaking world with the overall largest journal and publication coverage. It furthermore allowed me to design a population sample without resort to much subjective decision making by conducting an automatic search. The ILPB does not include all publications and thus I do not lay claim to the suggestion that I surveyed all those who write on the subject. Search terms used on 20 February 2012 to identify this population are: (1) international investment law, (2) investment treaty law, (3) investor-state disputes, (4) and investment treaty arbitration. I manually removed search results, which were manifestly unrelated to investment treaty law. The short time frame

\textsuperscript{286} Therefore the number of adjudicated cases based on the different groups does not necessarily match.


has been chosen to minimize, although not exclude, the number of potential participants, who no longer work in the field, and thus may no longer be sufficiently regarded as experts. The time period also coincides approximately with the period when ITA gained popularity. This group consists of 200 individuals. Please see Appendix 2 for a list of individuals.

103. 76 or 38% percent of the individuals identified practice as lawyers in elite law firms, 80 or 40% are professors, lecturers or PhD students at universities and 11 or 6% work for international or intergovernmental organization, arbitral institutions, think tanks or governments. I was unable to locate information for 33 or 16% thereof. The number of practitioners seems surprisingly high.

iii. Deletion Of Duplication

104. To ensure that potential participants are not asked to take part in the consultation twice, I was required to delete duplicates. I cleared the benchmark group of members of the arbitrator group, so the benchmark group would not contain individuals who sat as ICSID arbitrators, but only those that have published on the subject. Some of the members of the benchmark group have however sat as arbitrators in other non-ICSID cases.

iv. Availability Of E-Mail Addresses

105. I found in the public domain the e-mail addresses/ telephone numbers of 215 (77%) of alive members of the arbitrator group and 167 (84%) of the benchmark group. Arbitrators, who I could not track down without resort to non-public information, appear to fall in the following category: (a) they are very old and/or (b) very well-known holding high public office. One smaller group about whom the internet does not seem to hold information remains after consideration of those very old and very well-known. Although I cannot be 100% about this assumption, I consider it

---

relatively safe to assume that they no longer work as arbitrators or international lawyers, because some details would otherwise be in the public domain. The majority of those, about whom I was unable to secure e-mail/phone number, only sat once as arbitrators. In consideration of the privacy laws in some European countries (such as Germany and Switzerland) I did not send unsolicited email invitations to those individuals whose contact details I had gotten hold of through different means.

d. **CONDUCTING THE SURVEY**

i. **The E-Mail Invitation**

106. I contacted all potential participants for whom I had contact details by e-mail invitation. The e-mails were personally tailored, yet all followed a similar format to ensure consistency to prevent systematic bias. I attach a sample e-mail invitation in Appendix 3. All e-mails were sent out between March 22 and March 28, 2012. I followed them up by random calls. The consultation remained open from March 21, 2012 until April 2, 2012. I allowed for late entries until April 4, 2012. This short window was chosen to ensure that the Delphi part of the survey would stay as active as possible for a short length of time to minimize the consequence of a low re-visitation rate as described in paragraph 99 (Strength And Weaknesses Of The Real-Time Delphi Method) above.

ii. **The Online Platform**

107. Since other commercial survey programs did not cater to the Real-time Delphi design of Part II, the online platform was custom-made for the project on the following domain:

www.arbitrationdelphi.com, which I acquired. It was programmed in PHP with the help of the

---

290 In the category of claimant-appointed arbitrators 26 out of 28 (93%) of those without public information have only sat once as arbitrators; the respective numbers for respondent-appointed arbitrators are 32/35 (91%) [2 of 35 have sat twice, and a current ICJ-member trice] and 11 out of 15 (73%) [2 of 15 have sat trice or four times but are in their 80ies and 90ies, 2 have sat twice with one being a current member of the ICJ].
Egyptian web development company EGYWEB.\textsuperscript{291} It included 5 screens. Screen 1 was a welcome screen summarizing briefly the project’s aim:

Dear Participant,

Welcome to the Delphi expert panel on compensation in investment treaty law.

On the following two screens you will be asked to (a) rate 12 brief statements on the role of equitable discretion in quantum determination and (b) consider a short expropriation hypothetical.

After making your selection, you will be able to compare your Screen 2 answers to those of other participants and revise them accordingly. You can access the panel to see newly submitted answers and to revise your own answers as many times as you wish until ***2 April 2012***. All answers are anonymous and your participation is fully confidential. This study complies with the guidelines of the Institutional Review Board for human subjects research at Stanford University.

If you have questions or comments, please get in touch with me using the contact details below.

I thank you for your participation.

With kind regards,

Silke Noa Kumpf
Fellow, Stanford Program in International Legal Studies
Stanford Law School
+1 650 283 8945/ snkumpf@stanford.edu

\textit{Figure 3: Text of screen 1}

108. On Screen 2, I ask participants to rate the following 12 general statements about BIT-based investment treaty arbitration (ITA) on the Likert Scale:\textsuperscript{292}

\begin{flushleft}
\textsuperscript{291} EGYWEB, 90, El- Hegaz Street, Heliopolis, Cairo, Egypt, 11341 with online presence at www.egyweb.com.
\textsuperscript{292} The following Lickert Scale was used: strongly disagree, tend to disagree, neither disagree nor agree, tend to agree, strongly agree. See Appendix 4-8 for actual screenshots of the online platform.
\end{flushleft}
| 1.) | Generally, the customary international law standard of full reparation - and not the usual BIT standard – applies to unlawful expropriations. |
| 2.) | If not otherwise stated, BITs are instruments to maximize investor protection. Accordingly, lacunae and ambiguities should ordinarily be resolved in favor of the investor. |
| 3.) | Arbitrators must balance treaty-based investor rights with respondent State’s competing international law obligations implicated in the dispute. |
| 4.) | When choosing between competing and equally plausible valuation models, arbitrators may use equitable discretion to balance investor rights and respondent State’s human rights obligations. |
| 5.) | When determining compensation, arbitrators may factor in the potential economic impact of the award on the respondent State. |
| 6.) | When determining compensation, arbitrators may factor in whether the expropriation enriched the respondent State. |
| 7.) | When determining compensation, arbitrators may factor in the expropriatory intent of the respondent State. |
| 8.) | When determining compensation, arbitrators may factor in the investor’s contributory fault. |
| 9.) | Arbitrators may exercise equitable discretion when converting the established value of an expropriated property into a specific sum to be awarded as compensation. |
| 10.) | Arbitrators are more akin to private dispute-resolution service providers than global public law adjudicators. |
| 11.) | The major rationale of compensation in ITA is deterrence, as opposed to procedural or corrective justice. |
| 12.) | Where losses can be quantified with relative certainty, equitable discretion has no role to play in determining compensation. |

Table 5 – Survey statements of screen 2

109. Screen 3 provided the hypothetical on the right side and twelve statements about the hypothetical on the left. Please see Appendix 5 for an actual screen shot. The process of rating the statements was to help participants estimate quantum based on the limited facts provided. They were asked to do so at the end of Screen 3. They were prompted to list comments thereunder.
### Table 6: Text of hypothetical, survey statements, and instructions quantum estimate instructions on screen 3

<table>
<thead>
<tr>
<th>Statements:</th>
<th>(The hypothetical has been simplified greatly for reasons of brevity and illustration purposes. Please assume facts as stated.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The expropriation would be lawful.</td>
<td>Vadis is a small and poor developing State with annual GDP of $10B. In 1998 Vadis received a $250M World Bank loan for the purposes of a nationwide upgrade to its water system budgeted at $300M. As a pre-condition, Vadis had to appoint a private operator to manage the system. Vadis appointed the DA-based Q as operator under a 30-year lease. The lease required Q to invest $50M into the system's infrastructure within 10 years (which it did) in return for charging water tariffs at its discretion. Until 2008, citizens regularly complained about high tariffs, yet Vadis never intervened.</td>
</tr>
<tr>
<td>2. The applicable compensation standard would be the customary international law standard.</td>
<td>In May 2008, Q tripled its water tariffs causing countrywide riots. To quell the riots and out of fear that the tariff increases would severely restrict the attained access to water, Vadis unsuccessfully requested Q to reverse the increases. Thereafter, in July 2008, Vadis deposed the company management, took over operations and adjusted tariffs to half of their pre-riot levels.</td>
</tr>
<tr>
<td>3. The most appropriate starting point to determine quantum would be the DCF-value of $300M.</td>
<td>Q sued Vadis under the Vadis - DA BIT at ICSID. The BIT prohibits expropriation &quot;except for a public purpose, under due process of law, in a non-discriminatory manner and for compensation&quot;. The BIT further states the &quot;compensation shall be ... equivalent to the fair market value of the expropriated investment immediately before the expropriation took place&quot;. The BIT does not allow the tribunal to determine the case ex aequo et bono and it does not include any non-precluded measure/necessity defense clause.</td>
</tr>
<tr>
<td>4. The most appropriate starting point to determine quantum would be the DCF-value of $100M.</td>
<td>The tribunal found that Vadis expropriated Q but considered Vadis' water access considerations reasonable. Q is now claiming for damages based on the fair market value (FMV). Vadis claims that no damages are due because Vadis' actions were necessary to protect its population's right to water. Alternatively, Vadis argues that the tribunal should set off against the compensation award the riot costs (at $7M as corroborated by credible amicus brief) and factor in that (i) Vadis had to protect its citizens' right to water without intention to enrich itself and (ii) an award would impoverish Vadis.</td>
</tr>
<tr>
<td>5. The most appropriate starting point to determine quantum would be the DCF-value of $50M.</td>
<td>The tribunal-appointed well-reputed quantum expert determined: (i) adjusted book value of $60M; (ii) FMV of $300M by DCF-method (using Q's high tariff as base tariff) taking all relevant risk factors judiciously into account, (iii) FMV of $100M (as (ii) but using Q's pre-riot tariff as base tariff), and (iii) FMV of $50M (as (ii) but using Vadis' post-expropriation tariff as base tariff).</td>
</tr>
<tr>
<td>6. The most appropriate starting point to determine quantum would be the adjusted book value of $60M.</td>
<td></td>
</tr>
<tr>
<td>7. The riot costs of $7M should be set off against the compensation awarded.</td>
<td></td>
</tr>
<tr>
<td>8. Q's tariff increases causing the water riots (and its refusal to reverse them) should be taken into account as contributory fault when determining compensation.</td>
<td></td>
</tr>
<tr>
<td>9. The economic impact of an award on Vadis should be factored in when determining compensation.</td>
<td></td>
</tr>
<tr>
<td>10. Vadis' relative lack of enrichment should be factored in when determining compensation.</td>
<td></td>
</tr>
<tr>
<td>11. The special character of water as a public good, human necessity and nascent human right should be factored in when determining compensation.</td>
<td></td>
</tr>
<tr>
<td>12. Vadis' expropriatory intent should be factored in when determining compensation.</td>
<td></td>
</tr>
</tbody>
</table>

Please provide your best estimate for the amount of compensation (excluding interest). If any, based on the limited facts and expert evidence offered:  

Million USD

Please briefly list here the components of your estimate. Please also use this space for additional comments, assumptions made or solutions considered.

---

110. On Screen 4, the platform aggregated the ratings made by participants of the same group and listed quantum estimates and comments made visible to the members of the same group. Please see Appendix 7 for actual screenshots. When clicking on the estimates provided by another group member, a pop-up with the entire rating for all questions appeared. It allowed each member to follow the thought-process of all other members of that group. This screen prompted
participants to compare their assessment to those of their peers, to change their own assessment, if they so wished, and to resubmit to increase consensus. Members could re-access the summary screen as often as they wished to compare with other members and to change their assessment as often as they wish.

On the top of the screen members were instructed to consider the following:

<table>
<thead>
<tr>
<th>The red brackets below list the aggregate of your peers’ responses. Their estimate and comments are on the right. If you wish to revise your answers after having considered theirs, you can do this here. Thereafter please press ‘Submit’. You can re-access this screen and change your answers as many times as you wish.</th>
<th>Your comment and estimate have been added to your peers' responses, which are listed below. If you are the first participant, this box only includes your comment and estimate. In this case, we suggest you check a little later for your peers’ responses.</th>
</tr>
</thead>
</table>

If you would like to see the hypothetical again, please click here.

**Figure 6: Instructions on screen 4**

111. Screen 5 thanked participants for their participation and reminded them that they could change their answers until April 2, 2012, when the consultation closed:

| Thank you very much for taking the time to participate in this Delphi expert panel! If you wish to change your answers later, you can do so until ***2 April 2012*** by clicking on the link included in my original e-mail. This will bring you back to the summary screen, where you can change your answers and compare them to those of the other participants. | With kind regards, Silke Noa Kumpf Fellow, Stanford Program in International Legal Studies Stanford Law School +1 650 283 8945 snkumpf@stanford.edu |

**Figure 7: Screen 5 text**

112. The design and results of both surveys are discussed in section (e) and (f) below.

**iii. Difficulties With The Level Of Participation**
113. The task of assembling the arbitrator population - and by doing so, researching the identity of all past ICSID arbitrators – made it apparent that it would be difficult to get a sufficient number of arbitrators to participate in the study for the following reasons: the set of appointed arbitrators consisted of (a) prominent scholars at the apex of their career sitting as judges at international courts or senior courts in their countries or in other high functions in politics, (b) professional arbitrators earning their livelihood from sitting as arbitrators charging large hourly fees, who therefore may not wish to participate in an unremunerated activity, or who may be worried about potential effects on their future prospects of sitting as arbitrators, and/or (c) jurists who were aged and thus not versed in working with computers. While confidentiality was assured through a double-blind process and anonymity in the panels online, e-mail replies by potential participants showed that this did not convince all of the participants. Other potential participants politely declined the invitation due to lack of time. Some e-mails were highly discourteous. I received complementing emails by aged jurists and arbitrators expressing regret that they were unable to participate in an online panel.

114. Unknown to me, an earlier survey request about demographics had been sent to past ICSID arbitrators by Stanford law employees in early 2012. The said survey allegedly was not anonymous and contained information requests about religion and race, which had not been well received by the population.\textsuperscript{293} Independent of how well the survey was perceived, the very existence of a survey invitation from the same institution only 1 1/2 months apart was bound to depress the response rate of the survey. I received 11 responses (4\%) from arbitrators and 31 responses (18\%) from the benchmark group. The nonresponse rate of arbitrators is thus very high.

\textsuperscript{293} I received various e-mails replies to my invitation that considered my Delphi Panel invitation as a follow-up to the earlier survey, and/or expressed anger as to the questions posed by the earlier survey. Particularly, various e-mails complained about the fact that information about religion and or race had been requested by this earlier survey. Furthermore, I received an angry phone call at 4am on 28 March 2012 by an arbitrator complaining about the very same fact.
and may perhaps indicate that the non-responding arbitrators exhibit different characteristics than the responding arbitrators. This may mean that the results presented herein are unrepresentative of the arbitrator population. To allow any extrapolation one must assume that the decision to participate by members of the Groups was random, for example, due to the fact that they had no time, not however because they knew me or had an affiliation with Stanford Law School. I received seven e-mails from arbitrators, who I had not previously acquainted stating that they participated. Six emails were from high-profile individuals at the apex of either their academic or professional career. Prominence and nonresponse does thus not necessarily coincide, however it cannot be excluded that prominence and response correlates. Any extrapolations should thus be only accepted with great caution.

115. While some individuals did change their answers after having considered the responses of their colleagues, the “rate of adaption” lay at ca. 10% and did not allow the panels to reach consensus.294 The process was most effective in reducing the number of occurrences of selecting “neither disagree nor agree” on the chosen Likert scales on screen 3. E-mail answers by those in the benchmark group who said they participated indicates, but does not prove, that the 31 responses consist of answers from law firm counsel, academics and individuals working for international institutions in approximately equal measures. Furthermore, surveys that employ Likert scales may be distorted for several reasons. Participants may (1) avoid using extreme response categories, i.e. exhibit a central tendency bias; (2) acquiesce with statements as

294 Part II asked participants to make 14 choices (12 ratings, one quantum estimate, and amendments to the comment box). As 39 people participated in Part II, there were thus a total of 546 (14 * 39) changes possible. 55 (ca. 10%) changes were made.
presented, i.e. exhibit an *acquiescence response bias*; or (3) try to portray themselves or their group in a more favorable light, i.e. exhibit a *social desirability bias*. 295

e. Discussion of the Survey Design and Results of the Pre-Fixed Survey Questions

116. In the following, I discuss the rationale and the results of the traditional survey part of the consultation. I will analyze the results of each statement that I asked participants to rate in turn. In the actual consultation, the statements purposefully did not follow a logical order. Here, I however bundled them by topic to facilitate their analysis. For each statement, I provide a frequency table, which sets out the number of participants who agreed with the 5 scales: (1) strongly disagree, (2) tend to disagree, (3) neither disagree nor agree, (4) tend to agree, (5) strongly agree. The table aggregates them in column 2 (absolute numbers) and 3 (percentage distribution), presents the separate results of the arbitrator group in column 3 (absolute numbers) and 4 (percentage distribution) and of the benchmark group in column 6 (absolute results) and 7 (percentage distribution). For each of the 12 statements I tested the suggestion that there was no statistically significant difference of proportions between the results of the arbitrator and the benchmark group, i.e. the fact of whether a participant was an arbitrator or a member of the benchmark group had no bearing on their answer. I did so by using the non-parametric Fisher’s Exact Test, since Likert Scales are non-parametric. Fisher’s Exact Test is suitable when sample sized are very small as is the case here. The test makes no assumptions on the distribution. Some critics have suggested that the Fisher’s Exact Test is too conservative in that the actual rejection

rate is below the nominal significance level,\textsuperscript{296} i.e. differences of proportions between arbitrators and the benchmark group are rejected as insignificant more than they should be. This fact should be kept in mind when assessing the results of this test. I will address each bundle of statements and within each bundle, each statement in turn.

\textbf{i. Statements On The Overarching Purpose Of BITs And Arbitrators’ Role In Adjudicating}

117. A first set of statements addresses the participants’ belief about the purpose of the investment treaty system. These questions have been added to test for correlation between opinions on equitable discretion and the public/private dichotomy underlying international investment law.

\textbf{Statement 2: If not otherwise stated, BITs are instruments to maximize investor protection. Accordingly, lacunae and ambiguities should ordinarily be resolved in favor of the investor.}

118. The statement represents one of the views held about the overall purpose of Bilateral Investment Treaties. The statement is two-pronged. First, it affirms the belief that treaties are there to maximize investor protection, unless they specify otherwise. Second, it suggests that, this being so, lacunae and ambiguities should be resolved in favor of the investor, as doing otherwise, i.e. interpreting in favor of the state, would defeat the very purpose of the BIT: investor protection. As has been highlighted in Chapter 1 (The Literature), this narrow and one-sided definition may restrict the opportunity for investment law to contribute to sustainable development.\textsuperscript{297} A more holistic and balanced viewpoint is advocated by others, suggesting that (1) the overall purpose is the economic development of the states that entered into the BIT and (2) protection in form of


recourse to investor-state arbitration has only been bestowed upon investors as a means to achieve this larger end.\(^{298}\) This viewpoint does not require that lacunae and ambiguities are interpreted strictly in favor of the investor; only if doing so would be in line with the overall purpose of furthering the economic development of the parties to the BIT. There is also the famous dictum by Sir Ian Browlie in his dissenting opinion in *CME v Czech Republic*,\(^{299}\) suggesting that that the purpose of the BIT between the Netherlands and the Czech and Sloval Federal Republic is not the protection of “foreign property”, but “the protection of ‘investments’...in the context of the promotion of the economic development of the Contracting Parties”.\(^{300}\) For the purposes of brevity, I did not ask participants to rate both positions. The second prong of the statement ensures that the two positions are sufficiently mutually exclusive to allow for an assessment of the participants’ stance. The following table provides the participants’ aggregate level of agreement.

<table>
<thead>
<tr>
<th>Statement 2: If not otherwise stated, BITs are instruments to maximize investor protection. Accordingly, lacunae and ambiguities should ordinarily be resolved in favor of the investor.</th>
<th>Absolute number of responses (All)</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>8</td>
<td>19.0%</td>
<td>0</td>
<td>0%</td>
<td>8</td>
<td>26%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>22</td>
<td>52.4%</td>
<td>7</td>
<td>64%</td>
<td>15</td>
<td>48%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>9</td>
<td>21.4%</td>
<td>2</td>
<td>18%</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>2</td>
<td>4.8%</td>
<td>1</td>
<td>9%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>1</td>
<td>2.4%</td>
<td>1</td>
<td>9%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 6: Survey 1, Statement 2 results*


\(^{299}\) *CME Czech Republic B.V. (The Netherlands) v. The Czech Republic*, UNICITRAL, Separate and Dissenting Opinion on the Issues at the Quantum Phase by Sir Ian Brownlie (March 14, 2003).

\(^{300}\) *Ibid.*, ¶ 17.
The answers show a strong level of disagreement with the statement, indicating that only 3 people agreed with the suggestion that since BITs are to maximize investor protection, ambiguities and lacunae must also be interpreted in favor of the investor. Interestingly however, two of 11 arbitrators held this view, whereas only 1 out of 31 in the benchmark group took this position. I performed a non-parametric Fisher’s Exact Test to test the null hypothesis that there is no statistically significant difference in proportions between the benchmark and arbitrator group and thus no correlation between participant’s status as arbitrator or benchmark group member. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.\footnote{Test performed in R, returning $p=0.118$ for (Fisher’s Exact Test)}

**Statement No. 3: Arbitrators must balance treaty-based investor rights with respondent State’s competing international law obligations implicated in the dispute.**

119. Scholars have argued that that arbitrators have a customary international law obligation to “settle[] disputes in conformity with human rights obligations of governments and other principles of justice” and that arbitrators do not sufficiently consider such obligation.\footnote{Ernst-Ulrich Petersmann, *International Rule of Law and Constitutional Justice in International Investment Law and Arbitration*, 16 IND. J. GLOBAL LEGAL STUD. Studies 513, 513 (Summer 2009).} Instead, it is argued, they adjudicate in a vacuum, not taking into account all public and private interests that are affected by the dispute. This obligation is not self-evident however, if one assumes the overarching purpose of BITs to be the protection of investors and hence a self-contained private law system limited by the ambit of the specific BIT. I thus ask participants to rate this very statement. The following table lists the aggregate group results:
Table 7: Survey 1, Statement 3 results

The result shows that the majority of respondents agrees that arbitrators must balance treaty-based investor rights with a State’s competing international law obligations. The benchmark group’s opinion is more pronounced with 7 (23%) of people strongly agreeing and 16 (52%) tending to agree that this is the case. However, the result of the non-parametric Fisher’s Exact Test suggests that there is no statistically significant difference in proportions between the benchmark and arbitrator group.\(^{303}\) Overall, while the sample may not be representative of the larger set of arbitrators, it indicates that the allegation that tribunals adjudicate entirely in a vacuum may not be warranted.

**Statement 10: Arbitrators are more akin to private dispute-resolution service providers than global public law adjudicators.**

This statement considers the dichotomy between the private law function of arbitrators in investment treaty disputes and their public law character of adjudication under a BIT, an international treaty instrument. The statement takes into account that investment treaty tribunals are mainly staffed by the very same arbitrators that adjudicate international commercial arbitrations, and considers the assertion that “commercial arbitration paradigms” such as party autonomy and confidentiality have inappropriately be imported into investment treaty

---

\(^{303}\) Test performed in R, returning p=0.3735 (Fisher’s Exact Test).
It juxtaposes the view that the arbitrator in investment treaty arbitration is a "private" dispute-resolution 'service provider', reflecting only the specific facts, arguments and sources presented by the parties" with the view that the arbitrator is a quasi-judge of the "global 'public' legal order", who balances investor rights and takes into account the wider effect of the tribunal’s ruling. The following table provides the responses to whether or participants see arbitrators more like private dispute-resolution service providers than global public law adjudicators:

<table>
<thead>
<tr>
<th>Statement 10: Arbitrators are more akin to private dispute-resolution service providers than global public law adjudicators.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>5</td>
<td>11.9%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>16%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>10</td>
<td>23.8%</td>
<td>1</td>
<td>9%</td>
<td>9</td>
<td>29%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>10</td>
<td>23.8%</td>
<td>4</td>
<td>36%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>13</td>
<td>31.0%</td>
<td>4</td>
<td>36%</td>
<td>9</td>
<td>29%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>4</td>
<td>9.5%</td>
<td>2</td>
<td>18%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 8: Survey 1, Statement 10 results

The table suggests that in the arbitrator group more participants agreed with this suggestion than in the benchmark group, where a higher percentage disagreed. Interestingly, 4 out of 11 arbitrators were neutral on the question, suggesting that they either had not made up their mind on the issue or that they considered that neither one nor the other was correct: arbitrators could be both. A non-parametric Fisher’s Exact Test was performed to test the null hypothesis that

---


305 Alex Mills, *The public-private dualities of international investment law and arbitration*, in in Chester Brown & Kare Miles, *Evolution in Investment Treaty Law and Arbitration*, 101 (2011);
there is no difference between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.\textsuperscript{306}

\textbf{ii. \textit{Statements On Compensation Determination And The Role Of Equitable Discretion}}

121. The following questions probe (a) the basis of compensation in international investment law, (b) the different stages in arbitrators’ decision making process that implicate question of equitable discretion and (c) equitable limits on compensation.

\textbf{Statement 11: The major rationale of compensation in ITA is deterrence, as opposed to procedural or corrective justice.}

122. Statement 11 probes the theoretical rationale of awarding compensation in investment treaty arbitration. Procedural justice as a basis of compensation suggests that the fairness and the transparency of the decisions making process results in fair compensation. From the outset, international treaty arbitration proceedings fall short of what is generally considered procedurally fair, because the confidentiality of proceedings restricts (a) transparency and (b) the ability of all parties affected by the issues to be heard. While the amendment of the ICSID Convention to allow for \textit{amicus curiae} briefs reduced this latter flaw of the dispute settlement system a little, it cannot be considered sufficient to entirely compensate for this rather obvious lack of procedural justice. Procedural justice on its own is thus unlikely to form the theoretical basis of compensation in investment treaty arbitration. Instead, scholars have suggested that corrective justice fills this void. At the basis of corrective justice lies the axiom that the “\textit{wrongdoer compensates those she has wronged}” and that fully, not more and not less.\textsuperscript{307} Both compensation standards, the \textit{Chorzów Factory} of full reparation and the BIT standard of fair market value,

\textsuperscript{306} Test performed in R, returning $p=0.2548$.

ostensibly endorse full compensatory damages. The reluctance of arbitral tribunals to award punitive damages and, to some extent, moral damages is said to also support this theory. Different corrective justice theories suggest different ways to measure damages, but most attempt to answer two questions: (a) what lost interest is compensable (pecuniary loss, emotional distress, lost opportunity etc.) and (b) what method should be used to assign a pecuniary value to that lost and compensable interest? In line with contract law, international investment law and practice suggests that the compensable interest coincides with expectation interest, i.e. the value the claimant would have received, had the treaty breach never occurred. However, by awarding investment value or out-of-pocket expenses, tribunals have frequently endorsed reliance interest, i.e. the value the claimant would have received had he or she never agreed to the investment. On the face of it, investment law literature does not seem to endorse restitution interest, i.e. the value of the extra benefit the Respondent State may have gained from the breach. Again however, albeit infrequently, restitution has played a role in compensation determination when unjust enrichment of Respondent state was explicitly mentioned to be a factor. Following economic analysis of law, deterrence suggests that the amount of compensation should be the economic value that most efficiently deters similar breaches from occurring in the future. The level of compensation may thus be higher than full compensation under the compensatory principle or lower; it may also not be compensatory at all, but lie, for example, in restitution, if restitution happens to be more efficient under the given circumstances than pecuniary

308 See, for example the tribunal in Aguas v Argentina suggesting in ¶ 8.2.7: “[T]he level of damages awarded in international investment arbitration is supposed to be sufficient to compensate the affected party fully and to eliminate the consequences of the state’s action.”


It may also allow specific and subjective valuations, taking into account synergies a particular firm harvests from owning a certain property in combination with others. The latter element would be unlikely to be taken into account when calculating the fair market value under the compensatory rule, since the latter is measured objectively. The relative fragmentation and normlessness, as coined by Muthucumaraswamy Sornarajah, may be used as an indication that deterrence is the basis of compensation in international investment law. However, accepting deterrence as the underlying rationale of compensation in investment treaty arbitration may reduce the role accorded to equitable discretion as compensation is merely instrumental to the deterrence of future breaches, purely economic, and has no axiomatic or moral value by itself. Deterrence as evaluated in purely economic terms would also favor the insulation and isolation of arbitration as private-law adjudication, and thus not accord value to its ostensible function as global administrative law balancing investor and state rights. The following table shows the frequency distribution of the participants’ agreement to the statement that the major rationale of compensation in international treaty arbitration is deterrence.

<table>
<thead>
<tr>
<th>Statement 11: The major rationale of compensation in ITA is deterrence, as opposed to procedural or corrective justice.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>12</td>
<td>28.6%</td>
<td>2</td>
<td>18%</td>
<td>10</td>
<td>32%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>16</td>
<td>38.1%</td>
<td>5</td>
<td>45%</td>
<td>11</td>
<td>35%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>8</td>
<td>19.0%</td>
<td>2</td>
<td>18%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>5</td>
<td>11.9%</td>
<td>1</td>
<td>9%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>1</td>
<td>2.4%</td>
<td>1</td>
<td>9%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 9: Survey 1, Statement 11 results

---

The table suggests that the majority (66%) of participants disagrees with this statement. There is no significant difference between the statements of ICSID arbitrators and those of the benchmark group other than that the benchmark group disagrees slightly more strongly than the arbitrators. This was confirmed by the Fisher’s Exact Test accepting the null hypothesis at a 0.05 confidence interval that there is no difference between the benchmark and arbitrator group.313

Statement No. 1: Generally, the customary international law standard of full reparation - and not the usual BIT standard – applies to unlawful expropriations.

123. As seen explained in the literature review, arbitrators make a set of decisions, when determining quantum, which, prima facie, leave room for discretion. After considering applicable laws, arbitrators are asked to determine the compensation standard according to which compensation is determined. Statement No. 1 enquires into the compensation standard for unlawful expropriation. We have seen in the background section (Chapter 1) and content analysis of ICSID expropriation cases (Chapter 2) that there are two compensation standards, the customary international law standard and the BIT standard. The former is said to specify the requirement that the damage needs to be wiped out “fully” in accordance with the Chorzów Factory Case, whereas the BIT standard is specified in the BIT itself. BITs often specify the requirement for “prompt, adequate and effective” compensation and further “the fair market value immediately prior to the expropriation”. As the customary international law standard is silent on further requirements, it appears, on the face of it, more flexible than the BIT standard. Greater flexibility implies a wider margin of arbitrator discretion, and thus also greater discretion to balance investor and state rights. We’ve seen that until the award in ADC v Hungary, in 2006, which held that the BIT standard only applied to cases of lawful expropriation, arbitral awards took it as a given that the

313 Test performed in R, returning p=0.5713.
BIT standard applied. Since then, ICSID tribunals determining compensation have nearly exclusively distinguished between the two standards, and have held that the customary international law standard is applicable to unlawful expropriation.314 The 20 ICSID cases however are not representative of all investor-state dispute cases. Additionally, as the literature review shows, arbitrators and scholars remain divided on the issue and its significance. The following frequency table shows the level of agreement of participants with the suggestion that it is the customary international law standard that applies to compensation in investment treaty arbitration.

<table>
<thead>
<tr>
<th>Statement No. 1: Generally, the customary international law standard of full reparation - and not the usual BIT standard – applies to unlawful expropriations.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>2</td>
<td>4.8%</td>
<td>1</td>
<td>9%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>16</td>
<td>38.1%</td>
<td>3</td>
<td>27%</td>
<td>13</td>
<td>42%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>9.5%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>12</td>
<td>28.6%</td>
<td>5</td>
<td>45%</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>8</td>
<td>19.0%</td>
<td>2</td>
<td>18%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 10: Survey 1, Statement 1 results

124. When taken both groups together, the table shows a rather even distribution by those who find that, generally, the customary international law standard applies to unlawful expropriation and those who don’t. The distribution changes significantly when looking at the responses received from arbitrators: a majority tends to or strongly agrees that this statement is correct. I performed the non-parametric Fisher’s Exact Test to test the null hypothesis that there is no difference between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that

---

314 See table in paragraph 59 in Chapter 3 (Content Analysis of Published ICSID Expropriation Cases).
this is correct, accepting the null hypothesis. The discrepancy between arbitrator and benchmark proportions may this be due to chance alone.

Statement 4: When choosing between competing and equally plausible valuation models, arbitrators may use equitable discretion to balance investor rights and respondent State’s human rights obligations.

125. After having determined the compensation standard, arbitrators are called upon to decide which valuation method to employ. As seen in Chapter 3, tribunals have employed differing valuation methods, which may result in starkly different valuations. The literature review also shows that there is seldom one “correct” valuation method. Statement 4 suggests that arbitrators may resort to discretion and pick a method among equally plausible ones. We have seen that even the DCF-method stipulation for ‘going concerns’ is not strict and may be interpreted in many ways. Second, it suggests that this discretion may be “equitable”, i.e. it allows “arbitrators.....to correct or adjust unjust outcomes that could result from a strict application of rules of law”. Third, this equitable discretion is used for the purpose of balancing investor rights with respondent State’s human rights obligations. It thus not only requires a participant expert to think that this equitable discretion is permissible, but also that it is permissible for the purpose of balancing investor rights, explicitly mentioned in a BIT, and the State’s human rights obligations, not explicitly mention in a BIT. This statement is intimately related to Statement 9 and 12. The following table shows the aggregate level of agreement with the suggestion that arbitrations may use equitable discretion when choosing between equally plausible valuation models to balance investor rights and respondent State’s human rights obligations.

315 Test performed in R, returning p=0.4121.
316 See, for example, paragraph 26 above quoting Ripinsky.
317 Ibid.
Table 11: Survey 1, Statement 4 results

The table shows that as an aggregate group, more than half of the respondents suggested that arbitrators could do so, whereas only a third thought this was not so. The level of acceptance is lower in the arbitrator group. I performed the non-parametric Fisher’s Exact Test to test the null hypothesis that there is no difference between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.319

Statement 9: Arbitrators may exercise equitable discretion when converting the established value of an expropriated property into a specific sum to be awarded as compensation.

126. This statement suggests that arbitrators, after having (a) chosen a compensation standard, (b) a chosen method to determine the value of property, and (c) determined the value of the property, have a further opportunity to resort to equitable discretion: by deviating from the established property value by decreasing or increasing compensation, which is finally to be awarded. The statement distinguishes thus between the value of an expropriated property and the value of compensation to be awarded, the latter of which derives from the relevant compensation standard.

---

319 Test performed in R, returning p=0.3707 (using Fisher’s Exact Test).
and may or may not coincide with the value of the property.\footnote{320} Sir Elihu Lauterpacht asserts that it is only at this moment of quantum determination, that equitable discretion should play a role.\footnote{321} He suggests that equitable considerations cannot play a role in the actual economic valuation of an expropriated property.\footnote{322} As Sir Elihu criticizes, and as seen in both content analysis and literature review, this assessment contrasts with practice and other scholarly assertions.\footnote{323} This statement is closely related to Statements No. 6, 7, and 8. The following table shows the participants’ aggregate agreement level with the suggestion that arbitrators may exercise equitable discretion when converting a property value into an award of compensation:

<table>
<thead>
<tr>
<th>Statement 9: Arbitrators may exercise equitable discretion when converting the established value of an expropriated property into a specific sum to be awarded as compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>2</td>
<td>4.8%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>11</td>
<td>26.2%</td>
<td>3</td>
<td>27%</td>
<td>8</td>
<td>26%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>8</td>
<td>19.0%</td>
<td>1</td>
<td>9%</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>19</td>
<td>45.2%</td>
<td>5</td>
<td>45%</td>
<td>14</td>
<td>45%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>2</td>
<td>4.8%</td>
<td>2</td>
<td>18%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 12: Survey 1, Statement 9 results

When taken together, the results show that half of the participants thought arbitrators could do so, whereas 30% disagreed. The acceptance of the statement is stronger in the arbitrator group. I performed the non-parametric Fisher’s Exact Test to test the null hypothesis that there is no

\footnote{320} Elihu Lauterpacht, Issues of Compensation and Nationality in the Taking of Energy Investments, 8 J. Energy & Nat. Resources L. 241, 249 (1990) [stating “In particular, the concept of value must be kept quite distinct from the concepts of compensation or damages.”]

\footnote{321} Ibid., at 249 – 250.

\footnote{322} Ibid., at 250.

\footnote{323} Ibid., at 245-250.
statistically significant difference in proportions between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.\(^{324}\)

**Statement 12: Where losses can be quantified with relative certainty, equitable discretion has no role to play in determining compensation.**

Statement 12 suggests that where investor losses can be quantified unambiguously, equitable discretion cannot affect the amount of compensation. It thus negates Statement 9, in cases where the loss (or as in cases of expropriation, the property value) is easily quantified. As statement 9 does not specify whether or not a valuation is certain or not, statement 9 and statement 12 are not mutually exclusive. It would for example be possible for an expert to agree with both statements, suggesting discretion plays a role when converting a property value into a compensation value, but that this very value cannot be determined with relative certainty. This statement adds nuance.

The following table shows the participants’ agreement level with the suggestion that where losses are quantifiable with relative certainty, there was no room for equitable discretion:

<table>
<thead>
<tr>
<th>Statement 12: Where losses can be quantified with relative certainty, equitable discretion has no role to play in determining compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbiator responses</th>
<th>Percentage (Arbitrator)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>13</td>
<td>31.0%</td>
<td>2</td>
<td>18%</td>
<td>11</td>
<td>35%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>3</td>
<td>7.1%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>19</td>
<td>45.2%</td>
<td>8</td>
<td>73%</td>
<td>11</td>
<td>35%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>7</td>
<td>16.7%</td>
<td>1</td>
<td>9%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Table 13: Survey 1, Statement 12 results**

From the aggregate group more than 60% agreed with this statement. The acceptance was very strong in the arbitrator group where 82% agreed and 18% disagreed, whereas in the benchmark group 54% agreed with this statement. I performed the non-parametric Fisher’s Exact Test to test

---

\(^{324}\) Test performed in R, returning \(p=0.2215\) (Fisher’s Exact Test).
the null hypothesis that there is no statistically significant difference in proportion between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.325

**Statement 5:** When determining compensation, arbitrators may factor in the potential economic impact of the award on the respondent State.

128. This statement implies that the potentially adverse economic impact of an award on a poor respondent State may be a factor arbitrators take into consideration when determining compensation. This statement is in line with the assertions by the late Sir Ian Brownlie in his dissenting opinion in *CME v Czech Republic* suggesting the economic effect of the award on the Czech Republic was relevant to the level of compensation.326 Contrasting the claim value of USD 495.2 million to the gross national income of the Czech Republic of USD 53.9 billion, Brownlie suggests that “even States which have been held responsible for wars of aggression and crimes against humanities are not subjected to economic ruin.”327 The literature review however shows that Brownlie’s opinion represents a minority view, albeit not lightly disregarded. As no customary norm can be established in support of the statement, it falls squarely into the purview of equitable discretion. The following table shows that the participants’ level of agreement with the suggestion that arbitrators may factor in the potential economic impact of the award on the host state.

---

325 Test performed in R, returning p=0.2668.
Table 14: Survey 1, Statement 5 results

The results show that approximately two thirds of the groups agree with this statement, casting into doubt the suggestion that Sir Ian Brownlie’s dissent in *CME v Czech Republic* is a renegade minority opinion. The agreement is particularly strong in the arbitrator group, where 8 out of 11 accept this statement and only 2 disagree. I performed the non-parametric Fisher’s Exact Test to test the null hypothesis that there is no statistically significant difference in proportion between the benchmark and arbitrator group. At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis.328

<table>
<thead>
<tr>
<th>Statement 5: When determining compensation, arbitrators may factor in the potential economic impact of the award on the respondent State.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>3</td>
<td>7.1%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>6</td>
<td>14.3%</td>
<td>2</td>
<td>18%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>9.5%</td>
<td>1</td>
<td>9%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>26</td>
<td>61.9%</td>
<td>6</td>
<td>55%</td>
<td>20</td>
<td>65%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>3</td>
<td>7.1%</td>
<td>2</td>
<td>18%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

Statement 6: When determining compensation, arbitrators may factor in whether the expropriation enriched the respondent State.

129. The predominant view, reiterated in *SPP v Egypt* is that compensation is measured by the loss of the claimant only, not, however, by the enrichment of the respondent State.329 At the same time, the Content Analysis of cases suggests that compensation was more modest in cases, where respondent States did not get enriched by the expropriation. A possible explanation would be that the Respondent’s lack of enrichment prompted arbitrators to use their discretion opting for

---

328 Test performed in R, returning p=0.4532 (using Fisher’s Exact Test).
329 See *SPP v Egypt*, ¶ 247 (stating “It is generally accepted that the measure of compensation should reflect the claimant’s loss rather than the defendant’s gain. The question of whether the Respondent was enriched by the cancellation of the Pyramids Oasis Project is not, in the Tribunal’s view, relevant to the amount of compensation to be awarded in the present case.”)
valuation methods more conservative than other equally plausible methods. The table below shows the participants’ aggregate agreement of whether or not arbitrators may factor in the enrichment of the respondent State when determining compensation.

Table 15: Survey 1, Statement 6 results

The majority (>60%) of participants agrees with this statement. There does not seem to be much of a difference in opinion between the arbitrator or benchmark group. The Fisher’s Exact test supports this fact: At a 0.05 confidence interval, the test suggests that this is correct, accepting the null hypothesis that there is no difference between the groups.330

Statement 7: When determining compensation, arbitrators may factor in the expropriatory intent of the respondent State.

130. This statement probes whether the culpability of a state performing the act of expropriation matters to the determination of compensation. Thus, does it matter whether a State expropriated for a good purpose, such as to create a nature reserve? The literature review and content analysis show that the predominant view is that the purpose of the expropriation does not affect compensation, albeit some awards and jurists indicate otherwise.331 The table below provides the participants’ aggregate opinion:

<table>
<thead>
<tr>
<th>Statement 6: When determining compensation, arbitrators may factor in whether the expropriation enriched the respondent State.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>6</td>
<td>14.3%</td>
<td>1</td>
<td>9%</td>
<td>5</td>
<td>16%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>6</td>
<td>14.3%</td>
<td>2</td>
<td>18%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>3</td>
<td>7.1%</td>
<td>1</td>
<td>9%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>22</td>
<td>52.4%</td>
<td>5</td>
<td>45%</td>
<td>17</td>
<td>55%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>5</td>
<td>11.9%</td>
<td>2</td>
<td>18%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

330 Test performed in R, returning p=0.8364.
331 See Chapter 3, paragraphs 43-45.
Table 16: Survey 1, Statement 7 results

The results support the predominant view, yet the answers also reflect a high level of abstentions. This may indicate that many participants did not hold a view on the matter or were unsure. 5 of the arbitrators however suggest that arbitrators may consider the expropriatory intent of the State when setting compensation. The benchmark group is less convinced. Notwithstanding this, Fisher’s Exact Test within an 0.05 confidence interval accepts the null-hypothesis that there is no significant difference in proportion between the two groups.332

Statement 8: When determining compensation, arbitrators may factor in the investor’s contributory fault.

131. This statement probes whether contributory fault may be considered at the quantum stage. It does not further specify whether and how contributory fault is to be measured. Chapter 1 (The Literature) suggests that actions of the claimant, which were considered imprudent by tribunals contributing to the loss, have not only affected merit phase liability, but also separately reduced quantum.333 The following table shows the participants’ aggregate opinion on whether or not

<table>
<thead>
<tr>
<th>Statement 7: When determining compensation, arbitrators may factor in the expropriatory intent of the respondent State.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>4</td>
<td>9.5%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>17</td>
<td>40.5%</td>
<td>4</td>
<td>36%</td>
<td>13</td>
<td>42%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>8</td>
<td>19.0%</td>
<td>2</td>
<td>18%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>13</td>
<td>31.0%</td>
<td>5</td>
<td>45%</td>
<td>8</td>
<td>26%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

332 Test performed in R, returning p=0.568.
333 See Chapter 3, paragraph 48.
arbitrators may factor in contributory fault at the quantum stage

<table>
<thead>
<tr>
<th>Statement 8: When determining compensation, arbitrators may factor in the investor’s contributory fault.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>2</td>
<td>4.8%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>3</td>
<td>7.1%</td>
<td>3</td>
<td>27%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>23</td>
<td>54.8%</td>
<td>5</td>
<td>45%</td>
<td>18</td>
<td>58%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>14</td>
<td>33.3%</td>
<td>3</td>
<td>27%</td>
<td>11</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100.0%</td>
<td>11</td>
<td>100%</td>
<td>31</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 17: Survey 1, Statement 8 results*

The large majority of participants agreed with the suggestion, however the arbitrator group seemed a little less sure with 3 of 11 arbitrators remaining neutral to the statement. This is in contrast to the benchmark group, where no one remained neutral. I performed a Fisher’s Exact Test to test the null-hypothesis that there is no difference between the groups’ distribution (i.e. attitudes). At 0.05 confidence interval, the test results reject the null hypothesis suggesting that there is a significant difference in the attitude between arbitrators and the benchmark group. As the repeated use of the Fisher’s Exact Test requires a lowering of the relevant confidence interval for robust results, a p-value of 0.043 may not be sufficiently significant to consider this result defensible. It should therefore be viewed with great caution.

**iii. Summary Of Findings Of Survey 1**

132. The following presents a summary of the results, in which the categories “strongly agree” and “tend to agree” were aggregates as were the categories of “strongly disagree” and “tend to disagree”. The numbers in the brackets represent the split up between the benchmark group ‘BM’ and the arbitrator group “A”.

---

334 Test performed in R, p-value = 0.04303.
335 I omitted the results of statement 1 as they did not seem to present any relevance to the analysis.
Table 18: Summary of aggregated Survey 1 results

133. The prefixed survey indicates that the great majority of arbitrators, academics and law firm
counsel sampled consider it the obligation of arbitrators to balance the treaty-based rights of
arbitrators with competing international law obligations of states. In line with this finding, only a
small minority considers that lacunae and ambiguities in BITs should be resolved in favor of the
investors on account of BITs stated purpose as instruments to maximize investor protection.
Participants were however split on the question of whether arbitrators in investment treaty
arbitrations are more akin to private dispute-resolution service providers than global public law
adjudicators, a statement a quarter could neither agree nor disagree to. Perhaps as a surprise to
law & economics scholars touting the deterrent function of investment treaties, only a small
minority of participants agreed that deterrence was the main rationale of compensation in investment treaty arbitration as opposed to procedural or corrective justice.

134. Participants were generally split on the question of whether or not equitable discretion should play a role in quantum determination. The majority thought that arbitrators may take equitable considerations into account to balance investor rights and human rights obligations of states when choosing between equally plausible but competing valuation method. Nevertheless, 30% disagreed. Participants were equally split on the question of whether arbitrators may take equitable discretion into account when converting the established value of the expropriated property into a specific compensation award. 50% agreed, 31% disagreed. A clear majority of participants (60%) agreed that equitable discretion had no role to play where losses could be quantified with were relative certainty. Significantly, 9 out of 11 arbitrators held that view, which was much less pronounced in the benchmark group.

135. In relation to equitable factors that arbitrators may take into account when determining compensation, the large majority thought that the enrichment accruing to (84%) and the economic impact (69%) on a state may be considered, whereas only a minority thought that the expropriatory intent (31%) of a state may play a role. The contributory fault of investors was considered a factor that could be considered by arbitrators in quantum determination by the large majority of participants (88%). The split in attitude on equitable discretion is mirrored in the Delphi section of the survey, which required participants to make a more specific assessment in relation to an expropriation hypothetical.

iv. Survey 1 Correlations

136. In addition to providing the aforementioned details about the participants’ ratings, I have performed linear regressions to test whether there were correlations between a participant’s
answer to one question and another. In using linear regression, I assumed Likert scale answers to be quasi-continuous, i.e. that the distances between strongly disagree, tend to disagree, neither disagree nor agree, tend to agree and strongly agree are approximately the same. Purists may suggest that this is not a legitimate use of linear regression as Likert scales are said to be categorical.\(^3\) I also assumed the underlying distribution to be normal. The following results must therefore be consumed with caution because they may not hold, if the assumptions are incorrect. This is particularly true if the p-values are large. The findings are furthermore subject to the limitations listed in paragraphs 112 in relation to difficulties caused by the high non-response rate.

1. **Statement 3/ Statement 4:**

137. Keeping in mind the caveat of paragraph 136, I performed a simple linear regression to test whether participants, who agreed with statement 3 (i.e. that arbitrators must balance treaty-based investor rights with respondent State’s competing international law obligations implicated in the dispute), would be likely to agree with Statement 4 (i.e. arbitrators may use equitable discretion to balance investor rights and respondent State’s human rights obligations when choosing between competing and equally plausible valuation models). The regression results indicate that this is so, and that the correlation is highly significant at a 0.001 confidence level.\(^3\)

2. **Statement 4/Statement 9**

138. Keeping in mind the caveat of paragraph 136, I performed a simple linear regression to test whether participants who agreed with statement 4 (permitting equitable discretion to play a role in the choice of valuation models to balance investor and state rights) would be likely to agree

\(^3\) See, for example, the treatment by Karen Grace-Martin, *Can Likert Scale Data ever be Continuous?*, available at http://karengracemartin.articlealley.com/can-likert-scale-data-ever-be-continuous-670606.html (last visited May 30, 2012).

\(^3\) P-value = 0.000387.
with statement 9 (permitting equitable discretion in the transformation of a determined property
value into a compensation amount). Again, the regression indicates that this is so; the correlation
is highly significant at a 0.01 confidence level. The correlation was however not significant in
the arbitrator group.


139. Keeping in mind the caveat of paragraph 136, I performed a linear regression to test whether
there was an inverse correlation between statement 4 (permitting equitable discretion to play a
role in the choice between equally plausible valuation models), and statement 12 (which suggests
that there is no space for equitable discretion when losses are relatively certain). As expected this
is indeed so, and statistically highly significant. The correlation was not statistically significant
in the arbitrator group. The statistical correlation is even stronger in the case of statement 9
(permitting arbitrator to exercise equitable discretion when converting a property value into
compensation) and Statement 12 (prohibiting equitable discretion when loss (property value) can
be determined with certainty).

140. Assuming that the underlying distribution is normal and that the adopted Likert scale is
continuous, the above correlations suggest that participants who permitted equitable discretion at
one stage of quantum determination, were likely to permit it at other stages too. This could be
seen as an indication that they held a general position as to the permissibility of equitable
discretion. The correlations also suggest that those who agree that arbitrators had an obligation to
balance treaty-based investor rights with respondent State’s competing international law

338 P-value = 0.007437.
339 P-value = 0.00471.
340 P-value = 0.000128.
obligations implicated in the dispute were more likely to agree that arbitrators may use discretion in the quantum phase.

f. **Discussion of the Design and Results of the Delphi Survey: The Hypothetical and Related Questions**

i. **Overview**

141. In the following, I will explain, first, the rationale and design of the hypothetical, the correspondent statements to be rated and the compensation estimate. Second, I will present the survey results of each statement in order and any conclusions that can be drawn from them. Third, I will present the decision process of participants of whether or not to take equitable discretion into account and, if so, at what stage, schematically, in two tree diagrams: (1) both groups aggregated together and (2) the arbitrator group only. Fourth, I will conclude summarizing what the results tell us.

ii. **Design Rationals of Part II**

142. Screen 2 was divided into two: on the right side participants were presented with a hypothetical of an expropriation of a water rights concession with 12 statements to be rated on the left: 341

1. **The hypothetical**

143. The premise of the hypothetical is an expropriation of a water right concession in a poor developing country. The hypothetical assumes that (a) a 30-year lease of a management concession had been awarded to a foreign investor to manage the water and sewage system nationwide in return for an investment of USD 50 million into the infrastructure within 10 years and a right to charge water prices at its discretion, i.e. without state interference. Being free to adjust its tariffs as it pleased, it tripled the tariffs in 2008 causing countrywide riots that in turn

341 Please see Appendix 4-8 for actual web platform design.
caused riot damage. To quell the riots and out of fear that the new tariffs would threaten water access, the host State attempted to renegotiated water tariffs. As negotiations failed, the host State deported the management of the company and took over operations cutting tariffs to half their pre-riot levels. The investor then instituted proceedings under the relevant BIT at ICSID. The hypothetical assumed bifurcated merit and damages phases and a finding of expropriation in the merit phase. Participants were asked to (a) rate 12 statements on the Likert Scale\textsuperscript{342} in relation to the level of damages to be awarded and, with the help thereof , (b) provide an estimate of a monetary sum which should be awarded as damages based on the limited facts provided.

The hypothetical assumed that the operator complied with its obligation under the concession to invest USD 50 Million into the infrastructure of the water and sewage system within 10 years. The concession gave the operator complete discretion to set the water tariffs. When it tripled the tariffs it was entitled to do so by the terms of the contract. Under the basic principle of \textit{pacta sunt servanda} and absent an infringement of a \textit{jus cogens} norm, the operator had no obligation to agree renegotiating the tariffs with the State. It was then expropriated by the State.

\textbf{144.} Legally, all speaks, \textit{prima facie}, for the investor’s claim. The matter appears straight-forward. The finding of expropriation ordinarily requires compensation either in form of full reparation under the customary international law standard or the fair market value under the relevant BIT. As the company was a going concern and the lease’s duration 30 years, compensation would appear substantial. In equity, however, matters are tilted in favor of the state. In the face of the water riots, the operator’s tariff increases appear imprudent. The State’s fears that the new water tariffs would restrict water access were considered reasonable by the tribunal. While bound by the BIT, the State had a competing obligation under international human rights law to protect its

\footnotesize{\textsuperscript{342} [strongly disagree, tend to disagree, neither agree nor disagree, tend to agree and strongly agree]}

115
populations’ access to water. Its attempts to renegotiate the tariffs failed. It resorted to
expropriation to benefit its population. Since it slashed the tariffs to half their pre-riot level, its
enrichment deriving from the expropriation is low. An award may further impoverish the State.
The operator’s tripling of tariffs caused the state to incur riot costs. The hypothetical was thus
framed to test, whether participants would apply equitable limits to compensation in light of (a)
the economic impact of a large award on the poor state, (b) the good intention of the state, (c) the
cause of the riots, (d) the lack of enrichment and (d) the special character of water. If so inclined,
it was furthermore framed to test the method participants chose to value the property and
compensation.

145. In order to facilitate and simplify the complex issue of quantum calculations, \(^3\) the hypothetical
assumed a company that is a going concern \(^4\) and a neutral tribunal-appointed expert that
calculated DCF-values (at differing tariff base values) but also offered an adjusted book value.
The hypothetical furthermore provides the original investment value. Three DCF-values were,
perhaps somewhat artificially, chosen to allow participants to have an option to take equitable
considerations into account in the process of DCF calculation. The first, and theoretically
“correct” one, appears excessive, whereas the third one takes a post-expropriation event into
account and hence does not comply with the relative BIT standard. The middle one may be
defensible taking into account that the high tariffs had little track record and that the expert had
made a mistake. It may also be chosen for equitable reasons in cognizance that the first is the
more “correct” one.

\(^3\) In practice, a problem often is that each side fields an expert, whose quantum calculations differ significantly.
Often, the cost of appointing a third expert is prohibitively expensive to the tribunal, requiring them to make
intricate choices between the proffered valuations.

\(^4\) This would suggest that the DCF-method is, \textit{prima facie}, the most correct.
iii. Statements To Be Rated And Results

146. After reading the hypothetical, participants were asked to rate the 12 statements listed on the left of the hypothetical. The purpose of the statements was, primarily, to facilitate the finding of a quantum estimate by the participant and to allow the determination of whether, and if so, when, participants would concede equitable discretion and limits to play a role. I will address each statement in turn. I will consider whether there is a difference in attitude between arbitrators and the benchmark group by applying the Fisher’s Exact Test I will make use in the following section of linear regression and/or correlations. As opposed to the previous section, I will present those correlations per statement as there are many correlations in this section. The concerns raised early may apply here too. The results should thus be looked at with great caution.

Statement 1: The expropriation would be lawful.

147. This statement relates to the compensation standard. The hypothetical lists that an expropriation is not prohibited under the BIT if it is “for a public purpose, under due process of law, in a non-discriminatory manner and for compensation”. The BIT further states the "compensation shall be ... equivalent to the fair market value of the expropriated investment immediately before the expropriation took place". As seen in the literature review many scholars in the past considered that an expropriation was within a State’s sovereign powers and thus always lawful.

<table>
<thead>
<tr>
<th>Statement 1: The expropriation would be lawful.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>9</td>
<td>23.1%</td>
<td>4</td>
<td>40%</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>11</td>
<td>28.2%</td>
<td>1</td>
<td>10%</td>
<td>10</td>
<td>34%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>2</td>
<td>5.1%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>13</td>
<td>33.3%</td>
<td>3</td>
<td>30%</td>
<td>10</td>
<td>34%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>4</td>
<td>10.3%</td>
<td>2</td>
<td>20%</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>10</strong></td>
<td><strong>100%</strong></td>
<td><strong>29</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Table 19: Survey 2, Statement 1 results*
As the table shows, participants were relatively evenly split on the question of whether or not the expropriation had been lawful. The arbitrator group tied exactly on this question. In theory, one may suggest that those who considered the expropriation lawful would award lower compensation than those who considered it to be unlawful. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\textsuperscript{345}

For those who agreed with the suggestion that the expropriation was lawful the quantum mean was 81.08824 (winsorized mean at 0.2 winsorization is 81.94118), whereas the mean for those who disagreed was 122.18421 (winsorized mean at 0.2 winsorization 111.6579). The winsorized variance of those who disagree stands at 4067.835 (winsorized standard deviation = 63.77958137), whereas the variance of those who agree stands at 412.8088 (winsorized standard deviation = 20.31769). A t-test indicates that the difference between the two populations is not statistically significant.\textsuperscript{346} Since the distribution may not be entirely continuous\textsuperscript{347} and not of the Gaussian type, I furthermore performed the non-parametric Mann-Whitney U Test, which again showed that the difference in mean was not statistically significant.\textsuperscript{348}

Statement 2: The applicable compensation standard would be the customary international law standard.

148. This statement builds upon statement 1 asserting that the applicable compensation standard would be the customary international law standard, hence, not the BIT standard. Agreement with this statement therefore should logically follow from opining that statement 1 is wrong, or in the alternative, that the customary international law standard coincides with the BIT standard.

\textsuperscript{345} P-value =0.2774
\textsuperscript{346} The t-test assumes that the underlying compensation numbers are continuous. P-value = 0.0704 (T-Test)
\textsuperscript{347} Participants mainly chose between different values 50, 60, 100, 300 and discretionary deductions.
\textsuperscript{348} P-value = 0.452 (but due to ties in the sample, P-value is an approximation)
Disagreement may be due to a participant’s conviction that the BIT standard applies to both unlawful and lawful expropriation or alternatively from the assessment in statement 1 that the expropriation is lawful.

<table>
<thead>
<tr>
<th>Statement 2: The applicable compensation standard would be the customary international law standard.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>11</td>
<td>28.2%</td>
<td>2</td>
<td>20%</td>
<td>9</td>
<td>31%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>8</td>
<td>20.5%</td>
<td>1</td>
<td>10%</td>
<td>7</td>
<td>24%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>10.3%</td>
<td>1</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>15</td>
<td>38.5%</td>
<td>6</td>
<td>60%</td>
<td>9</td>
<td>31%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>1</td>
<td>2.6%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 20: Survey 2, Statement 2 results

The table shows that, overall, half of the participants disagree with the statement that the customary international law standard applies to the expropriation, whereas ca. 40% agree with it. 6 out of 10 arbitrators agree with the statement, whereas only 3 disagree. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\textsuperscript{349} A linear regression shows that there is no correlation between the ratings of statement 1 and statement 2 for the overall group, nor for the two subgroups (arbitrators and benchmark), i.e. it does not follow that, if a participants thinks that the expropriation was unlawful, that the participant would then agree with the statement that the customary international law standard applies. This result may indicate that participants either believe that the BIT standard always applies and/or that the customary international law standard coincides with the BIT standard. It does not echo the recent development in ICSID expropriation case law as traced in Chapter 3 (Content Analysis of ICSID

\textsuperscript{349} P-value =0.6715.
cases) that distinguishes between the customary international law standard and the BIT standard for unlawful expropriations.

1. **DCF or not DCF**

149. Statements 3, 4, 5 suggest that the DCF-method is the appropriate starting point for valuing the expropriated lease. As the hypothetical clarifies, the valuation for all three is the same but for the base tariff used (and whatever factors would be influenced by the use of that particular tariff as risk and discount factors have been judiciously taken into account). The amounts do not strive to be realistic reflections, instead the hypothetical requests participants to accept facts as stated which are there to simplify the hypothetical by not requiring participants to make any calculations.

**Statement 3: The most appropriate starting point to determine quantum would be the DCF-value of $300M.**

150. Statement 3 assumes selection of the higher, and riot-causing, tariff as base tariff. Applying the BIT standard strictly, this may be considered the literally “correct” starting point for valuation.

<table>
<thead>
<tr>
<th>Statement 3: The most appropriate starting point to determine quantum would be the DCF-value of $300M.</th>
<th>Absolute number of responses (All)</th>
<th>Percentage</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>9</td>
<td>23.1%</td>
<td>2</td>
<td>20%</td>
<td>7</td>
<td>24%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>19</td>
<td>48.7%</td>
<td>4</td>
<td>40%</td>
<td>15</td>
<td>52%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>10.3%</td>
<td>1</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>6</td>
<td>15.4%</td>
<td>3</td>
<td>30%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>1</td>
<td>2.6%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 21: Survey 2, Statement 3 results*

The above table indicates that 2/3s of participants reject the statement that the DCF-value of $300 million is the adequate starting point to determine quantum, whereas 18% accept the

---

350 The design here did seemingly not make it sufficiently clear that all pertinent factors has been take into account. The use of simple multiplications of values persuaded some participants otherwise.
statement. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\textsuperscript{351} The choice of the DCF-value would seem to depend on the compensation standard selected in statement 2. There are arguable valid reasons for using any one of the tariffs to determine the DCF value. Taking the BIT standard as a given, the value in Statement 3 appears correct, as the BIT stipulates that the fair market value be measured immediately prior to the expropriatory act. However, there is no statistically significant correlation between the choice of compensation standard (question 2) and the choice of the DCF-value of $300. There appears however a strong negative correlation between choosing the DCF-value of $300 and the decision whether or not the expropriation is lawful.\textsuperscript{352} Participants, who decided that the expropriation was lawful, rejected the statement that the DCF-value of $300 was the correct starting point for quantum determination more strongly, indicating that their acceptance of statement 1 would lead them to search for a more conservative starting point to evaluate quantum.

\textbf{Statement 4: The most appropriate starting point to determine quantum would be the DCF-value of $100M.}

\textsuperscript{151} Statement 4 stipulates as base tariff the operator’s tariffs before the increase. While the base tariff in Statement 4 exhibited a sufficient track record, it would also not strictly comply with the BIT standard requirement that the market value be measured immediately prior to the expropriatory act. Choosing the customary international law standard in statement 2, would increase a participant’s flexibility and free him from being bound by valuation restrictions specified in the BIT.

\textsuperscript{351} P-value =0.685.
\textsuperscript{352} I performed a linear regression to analyse the relationship: P-value = 0.001622.
Table 22: Survey 2, Statement 4 results

Participants were split in attitudes about the statement. Although a majority of participants accepted the statement that the DCF-value of $100M was the correct starting point to determine quantum, nearly equally as many (> 40%) rejected this statement. In the benchmark group more participants accepted the statement (59%), whereas only 34% rejected it. The assessment is reversed in the arbitrator group, where 6 disagree and 4 agree. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\[353\] For the overall group, there is no statistically significant relationship between accepting/rejecting statement No. 1 as to the lawfulness of the expropriation and statement 2 as to the compensation standard and accepting/rejecting the DCF-value of $100M as a starting point, nor is there a correlation in the subgroups.

Statement 5: The most appropriate starting point to determine quantum would be the DCF-value of $50M.

Statement 5 stipulates as base tariff the lower tariff set by respondent State after expropriation.

The valuation in Statement 5 makes the valuation dependent on an act post-expropriation, which

\[353\] P-value = 0.6378.
would be inconsistent with the BIT standard and would theoretically require that the participant accepts the customary law standard in statement 2.

<table>
<thead>
<tr>
<th>Table 23: Survey 2, Statement 5 results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statement 5: The most appropriate starting point to determine quantum would be the DCF-value of $50M.</strong></td>
</tr>
<tr>
<td>strongly disagree</td>
</tr>
<tr>
<td>tend to disagree</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
</tr>
<tr>
<td>tend to agree</td>
</tr>
<tr>
<td>strongly agree</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 23: Survey 2, Statement 5 results

The majority (>70%) of participants rejects this statement; only a minority considers this DCF-value a correct starting point for valuation. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference. There is no statistically significant correlation between answers to statement 1/statement 2 and accepting that the correct starting point would be the DCF-value of $50M. In average, therefore, it seems that participants did not consider it necessary to select the customary international law standard in order to accept the DCF-value of $50M as the correct starting point for quantum determination. There is however a statistically significant and positive correlation between accepting statement 5 and statement 6 (which considers the book value of $60M the correct starting point). Participants, who agreed with statement 5, were likely to agree with statement 6. This may indicate that it was more the actual compensation amount the participants went by than the theoretical basis, which the options represented. Furthermore, there is a statistically significant relationship between accepting

---

354 P-value = 0.6428.
355 P-value = 6.131e-06.
statement 5 and accepting that the special character of water should be taken into account in quantum calculation.\textsuperscript{356} The correlation persists in the arbitrator subgroup, but is less strong.\textsuperscript{357} There is however no significant correlation between choosing book value and allowing for any of the other extrinsic factors (statements 8, 9, 10 and 12) to have an effect on quantum determination.

**Statement 6: The most appropriate starting point to determine quantum would be the adjusted book value of $60M.**

153. The statement suggests that it is the book value that should be used as the starting point to determine compensation. As the content analysis shows, tribunals appear to have opted for asset-based approaches for three reasons: (a) the expropriated company had not been a going concern, (b) DCF-values appeared largely exaggerated or inequitable and/or (c) the expropriated property was an asset valued best by its book value. This is not to say that there are other reasons why arbitrators chose book value. In the hypothetical, choosing book value does not seem straightforward as the company had operated as a going concern for 10 years.

<table>
<thead>
<tr>
<th>Statement 6: The most appropriate starting point to determine quantum would be the adjusted book value of $60M.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>9</td>
<td>23.1%</td>
<td>2</td>
<td>20%</td>
<td>7</td>
<td>24%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>13</td>
<td>33.3%</td>
<td>5</td>
<td>50%</td>
<td>8</td>
<td>28%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>3</td>
<td>7.7%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>10</td>
<td>25.6%</td>
<td>2</td>
<td>20%</td>
<td>8</td>
<td>28%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>4</td>
<td>10.3%</td>
<td>1</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 24: Survey 2, Statement 6 results*

This is reflected in the answers of participants. Overall, 56% reject the statement, whereas 35% accept it. Seven out of 10 arbitrators strongly reject the statement. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups,

\textsuperscript{356} P-value = 0.006338.
\textsuperscript{357} P-value = 0.0119.
indicating that there is no statistically significant difference.\textsuperscript{358} Similar to statement 5 results, there is a strong statistically significant correlation between statement 6 accepting the book-value as the correct starting point for valuation and statement 11, accepting that the special character of water should be taken into account.\textsuperscript{359} The correlation persists in the arbitrator subset.\textsuperscript{360}

2. Limits On Compensation And Set-Offs

154. The following statements probe the participant’s willingness to put limits onto compensation and allow set-offs.

\textbf{Statement 7: The riot costs of $7M should be set off against the compensation awarded.}

155. The hypothetical suggests as facts that the tariff increases \textit{had caused} the water riots, which inflicted damage to the State’s property. The property damage had been valued in a credible amicus curiae brief at USD 7 million. The hypothetical does not inform the reader whether the counterclaim was raised in the merit phase, but that the State is raising it in the damage phase as a set-off against any damages to be awarded in light of the fact that the tariff increases had caused the water riots. Literature is unclear on whether a counterclaim not explicitly considered in the merit phase can function as a set off in the liability phase.

\textsuperscript{358} P-value = 0.8086.
\textsuperscript{359} P-value = 0.006738.
\textsuperscript{360} P-value = 0.007352.
Table 25: Survey 2, Statement 7 results

Only a minority of participants accepts the statement that the riot costs should be set off against the award costs (25%), whereas more than half of the participants rejected the statement. 17% of the participants neither accept nor reject the statement. This attitude is more pronounced in the benchmark group; whereas only one arbitrator abstains from voicing an opinion. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\(^{361}\) There is a statistically significant and positive relationship between accepting that riot costs should be set off against the compensation award and accepting that the special character of water should be factored in when determining quantum.\(^{362}\) This correlation is not present in the arbitrator subset, but in the benchmark group. As expected, there is also a positive and statistically significant relation between statement 7 and statement 8, which differs from statement 7 by stating that the tariff increases should be factored in as contributory fault without specifying a magnitude.\(^{363}\) The same goes for statement 7 and statement 9, suggesting that the economic impact of the award on Vadis’ should be factored in\(^{364}\) and for statement 7 and statement 10, suggesting that Vadis’

\(^{361}\) P-value = 0.8195.

\(^{362}\) P-value = 0.0001286.

\(^{363}\) P-value = 0.008946.

\(^{364}\) P-value = 6.127e0.5.
relative lack of enrichment should be factored in.\textsuperscript{365} Overall, a participant’s acceptance of this statement does have a statistically negative effect on the actual quantum determination.\textsuperscript{366} The effect is not significant in the arbitrator group.

\textit{Statement 8: Q's tariff increases causing the water riots (and its refusal to reverse them) should be taken into account as contributory fault when determining compensation.}

156. This statement is less definite than statement 7 suggesting that the investor’s \textit{prima facie} imprudent behavior ( tripling the tariffs and refusing to reverse the tariffs in light of the riots) should be taking into account as contributory fault, i.e. contributing to its loss at the compensation stage.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|c|c|}
\hline
\textbf{Statement 8: Q's tariff increases causing the water riots (and its refusal to reverse them) should be taken into account as contributory fault when determining compensation.} & \textbf{Absolute number of responses} & \textbf{Percentage (All)} & \textbf{Absolute number of Arbitrator responses} & \textbf{Percentage (Arbitrators)} & \textbf{Absolute number of Benchmark Group responses} & \textbf{Percentage (Benchmark Group)} \\
\hline
strongly disagree & 2 & 5.1\% & 0 & 0\% & 2 & 7\% \\
\hline
tend to disagree & 12 & 30.8\% & 4 & 40\% & 8 & 28\% \\
\hline
neither disagree nor agree & 4 & 10.3\% & 0 & 0\% & 4 & 14\% \\
\hline
tend to agree & 15 & 38.5\% & 5 & 50\% & 10 & 34\% \\
\hline
strongly agree & 6 & 15.4\% & 1 & 10\% & 5 & 17\% \\
\hline
Total & 39 & 100.0\% & 10 & 100\% & 29 & 100\% \\
\hline
\end{tabular}
\caption{Survey 2, Statement 8 results}
\end{table}

The majority of participants accept this statement, whereas a third rejects it. Four members of the benchmark group abstain, whereas arbitrators are more definite in their answer, none of them abstains. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\textsuperscript{367} In the overall group, there is a statistically significant correlation between

\textsuperscript{365} P-value = 0.003702.
\textsuperscript{366} P-value = 0.04373.
\textsuperscript{367} P-value = 0.7138.
statement 8 and statement 9, suggesting the economic impact of the award on Vadis should be taken into account in quantum determination.\textsuperscript{368} The same goes for statement 8 and (a) statement 10, suggesting Vadis relative lack of enrichment should be taken into account when determining quantum,\textsuperscript{369} (b) statement 11, accepting that the special character of water should be factored in\textsuperscript{370} and (c) statement 12, suggesting that Vadis’ expropriatory intent should be factored in.\textsuperscript{371}

Yet, as all these statements are correlated with each other, I used the Sobel-Goodman Mediation test to test whether statistical mediation causes the correlation, e.g. whether statement 11 mediates (is responsible) the correlation between statement 8 and 12. The correlations are statistically significant in their own right.\textsuperscript{372} There is also a strong and statistically significant correlation between statement 8 and statement 9\textsuperscript{373} and statement 8 and statement 10.\textsuperscript{374} Overall, a participant’s acceptance of statement 8 does have a statistically negative effect on the actual quantum determination.\textsuperscript{375} The effect is also significant in the arbitrator group.\textsuperscript{376}

**Statement 9: The economic impact of an award on Vadis should be factored in when determining compensation.**

157. Agreeing to this statement suggests that the person subscribes to the opinion that in certain circumstances the economic impact of an award on a host state may have a depressing effect on

\textsuperscript{368} P-value = 0.00747.
\textsuperscript{369} P-value = 0.007499.
\textsuperscript{370} P-value = 6.826e\textsuperscript{-0.5}.

The correlation is not significant in the arbitrator group.
\textsuperscript{371} This correlation is not significant in the arbitrator group.
\textsuperscript{372} We conducted a mediation analysis following Baron & Kenny (1986).
\textsuperscript{373} P-value = 0.00747.
\textsuperscript{374} P-value = 0.007499.
\textsuperscript{375} P-value = 0.007799.
\textsuperscript{376} P-value = 0.01268.
the compensation awarded. It also suggests that the participant believes that the situation described in the hypothetical fulfills those circumstances. Agreeing that the economic impact of an award on a country may be factored in falls into the purview of equitable discretion at the quantum stage.

<table>
<thead>
<tr>
<th>Statement 9: The economic impact of an award on Vadis should be factored in when determining compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>7</td>
<td>17.9%</td>
<td>2</td>
<td>20%</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>20</td>
<td>51.3%</td>
<td>7</td>
<td>70%</td>
<td>13</td>
<td>45%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>3</td>
<td>7.7%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>9</td>
<td>23.1%</td>
<td>1</td>
<td>10%</td>
<td>8</td>
<td>28%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 27: Survey 2, Statement 9 results*

Roughly two thirds of all participants disagree with the suggestion that Vadis’ status as a poor country should be taken into account when determining compensation. The rejection is particular strong in the arbitrator group, where 9 (90%) out of 10 disagree. This stands in contrast to the majority’s acceptance that the economic impact may be factored in professed in the pre-fixed survey. This result may indicate that the hypothetical did not fulfill a ‘severity’ threshold. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\(^{377}\)

There is a strong statistically significant correlation between participants’ agreement that Vadis’ economic impact should be taken into account and the suggestions that (a) the special character of water (statement 11)\(^{378}\), (b) Vadis’ relative lack of enrichment (statement 10)\(^{379}\), (c) Vadis’

\(^{377}\) P-value = 0.4641.

\(^{378}\) P-value = 0.0001072.

\(^{379}\) P-value = 1.918e\(^{-6}\).
expropriatory intent should be taken into account. As highlighted earlier, there is also a correlation between statement 9 and statement 7 and statement 9 and statement 8. Overall, a participant’s acceptance of this statement does have a statistically significant negative effect on the actual quantum determination. Yet, the effect is not significant in the arbitrator group.

Statement 10: Vadis' relative lack of enrichment should be factored in when determining compensation.

158. The statement suggests, first, that the State did not get enriched much from the expropriation and, second, that this lack should be factored in when determining compensation. One may argue that the state did get enriched. When valuing the company by DCF-method taking into account the new lower tariffs, the company is still worth USD 50 million, which exactly coincides with the unadjusted investment value. Furthermore, even considering that the expropriation was at the benefit of the population only, this enrichment accrues to the state as an agent. The statement that the enrichment of the state matters is a minority opinion in literature and not backed up by established customary rules or arbitral practice. It thus falls into the purview of equitable discretion at the compensation stage.

<table>
<thead>
<tr>
<th>Statement 10: Vadis' relative lack of enrichment should be factored in when determining compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>4</td>
<td>10.3%</td>
<td>1</td>
<td>10%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>13</td>
<td>33.3%</td>
<td>4</td>
<td>40%</td>
<td>9</td>
<td>31%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>10.3%</td>
<td>2</td>
<td>20%</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>18</td>
<td>46.2%</td>
<td>3</td>
<td>30%</td>
<td>15</td>
<td>52%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 28: Survey 2, Statement 10 results

---

380 P-value = 0.000139.
381 P-value = 0.04749.
Overall, participants are approximately equally split, with the rejection stronger in the arbitrator group. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference.\(^{382}\) In the abstract 64% of participants agreed that a State’s enrichment may be taken into account in Survey 1. There is a strong and statistically significant correlation between statement 10 and (a) statement 11\(^{383}\) and (b) statement 12\(^{384}\). Overall, a participant’s acceptance of this statement does have a statistically negative effect on the actual quantum determination.\(^{385}\)

Yet, the effect is not significant in the arbitrator group.

**Statement 11: The special character of water as a public good, human necessity and nascent human right should be factored in when determining compensation.**

159. This statement echoes the call of an increasing number of scholars, who suggest that certain special property cannot be subjected to the same treatment as other commercial interests in investment treaty arbitration.\(^{386}\) It suggests that (a) water may be considered a public good and a human necessity that is increasingly considered a human right and (b) that this special character must be factored in investors are awarded compensation. The awards in which water rights were considered thus far rendered in investment treaty arbitration (\textit{Biwater Gauff v Tanzania} and \textit{Azurix v Argentina}) have not yielded any compensation. At the same time, however, they do not overtly pay consideration to the special character of water and do not mention that compensation might be reduced due to it. As access to water is at most a positive human right, but certainly not

\(^{382}\) P-value = 0.2774.

\(^{383}\) P-value = 6.313e\(^{-0.5}\). The correlation is not significant in the arbitrator group.

\(^{384}\) P-value = 0.001612.

\(^{385}\) P-value = 0.02005.

a *jus cogens* norm, reducing compensation based on the special character of water falls in the
category of equitable discretion.

<table>
<thead>
<tr>
<th>Statement 11: The special character of water as a public good, human necessity and nascent human right should be factored in when determining compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>3</td>
<td>7.7%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>10</td>
<td>25.6%</td>
<td>4</td>
<td>40%</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>4</td>
<td>10.3%</td>
<td>2</td>
<td>20%</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>16</td>
<td>41.0%</td>
<td>4</td>
<td>40%</td>
<td>12</td>
<td>41%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>6</td>
<td>15.4%</td>
<td>0</td>
<td>0%</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 29: Survey 2, Statement 11 results*

Overall, the majority of participants agrees with this statement, whereas a third disagree. The arbitrator group is split equally between rejection and acceptance with 4 arbitrators against 4, 2 “abstaining”. I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference. We have already shown that the statement is statistically significantly correlated to statements 7, 8, 9, 10. There is furthermore a statistical significant correlation between statement 11 and statement 12, suggesting that Vadis expropriatory intent should be factored in when determining quantum. Overall, a participant’s acceptance of this statement does have a statistically negative effect on the actual quantum determination. Yet, the effect is not significant in the arbitrator group.

387 P-value = 0.2703.
388 P-value = 0.02025.
389 P-value = 0.02726.
Statement 12: Vadis’ expropriatory intent should be factored in when determining compensation.

160. The statement suggests that the intent behind the State’s expropriation should be factored in when determining compensation. The hypothetical suggests that Vadis expropriated the investor for the benefit of the population out of a reasonable fear that water access would severely restrict water access. Reducing compensation based on intent falls in the category of equitable discretion as no hard law or customary rule caters for this. If a participant agrees with the statement, one would suggest seeing a reduction in the compensation.

<table>
<thead>
<tr>
<th>Statement 12: Vadis’ expropriatory intent should be factored in when determining compensation.</th>
<th>Absolute number of responses</th>
<th>Percentage (All)</th>
<th>Absolute number of Arbitrator responses</th>
<th>Percentage (Arbitrators)</th>
<th>Absolute number of Benchmark Group responses</th>
<th>Percentage (Benchmark Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td>6</td>
<td>15.4%</td>
<td>0</td>
<td>0%</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td>tend to disagree</td>
<td>9</td>
<td>23.1%</td>
<td>4</td>
<td>40%</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>neither disagree nor agree</td>
<td>6</td>
<td>15.4%</td>
<td>1</td>
<td>10%</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>tend to agree</td>
<td>18</td>
<td>46.2%</td>
<td>5</td>
<td>50%</td>
<td>13</td>
<td>45%</td>
</tr>
<tr>
<td>strongly agree</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0%</td>
<td>10</td>
<td>100%</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 30: Survey 2, Statement 12 results

Overall, slightly more participants accept this statement (46%) than reject it (38%). I performed the Fisher’s Exact test to whether there are any attitudinal differences between the arbitrator and benchmark groups, indicating that there is no statistically significant difference. A higher percentage of participants agrees that Vadis’ intent matters than did in the abstract survey (31%).

I already highlighted the positive and statistically significant correlation with statements 8, 9, 10, and 11. While the overall group does not exhibit a statistically significant negative correlation between the assessment that Vadis’ expropriatory intent should be factored in when determining compensation.

\[P\text{-value} = 0.2894.\]
quantum and the actual quantum value eventually reached, the correlation is statistically significant in the arbitrator group.391

3. Summary Of Rating Results

161. The following presents a summary of the survey 2 rating results, in which the categories “strongly agree” and “tend to agree” were aggregates as were the categories of “strongly disagree” and “tend to disagree”. The numbers in the brackets represent the split up between the benchmark group ‘BM’ and the arbitrator group “A”.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagreed</th>
<th>neither/nor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.)</td>
<td>The expropriation would be lawful.</td>
<td>43.4% (A:50%, BM:41%)</td>
<td>51.3% (A:50%, BM:51%)</td>
</tr>
<tr>
<td>2.)</td>
<td>The applicable compensation standard would be the customary international law standard.</td>
<td>41.1% (A:60%, BM:34%)</td>
<td>48.7% (A:30%, 55%)</td>
</tr>
<tr>
<td>3.)</td>
<td>The most appropriate starting point to determine quantum would be the DCF-value of $300M.</td>
<td>17% (A:30%, BM:13%)</td>
<td>71.8% (A:60%, BM:76%)</td>
</tr>
<tr>
<td>4.)</td>
<td>The most appropriate starting point to determine quantum would be the DCF-value of $100M.</td>
<td>53.8% (A:40%, BM:59%)</td>
<td>41.1%, (A:60%, BM:34%)</td>
</tr>
<tr>
<td>5.)</td>
<td>The most appropriate starting point to determine quantum would be the DCF-value of $50M.</td>
<td>17.9% (A:30%, BM:14%)</td>
<td>74.4% (A:70%, BM:76%)</td>
</tr>
<tr>
<td>6.)</td>
<td>The most appropriate starting point to determine quantum would be the adjusted book value of $60M.</td>
<td>35.9% (A:30%, BM:38%)</td>
<td>56.4% (A:70%, BM:52%)</td>
</tr>
<tr>
<td>7.)</td>
<td>The riot costs of $7M should be set off against the compensation awarded.</td>
<td>25.6% (A:20%, BM:28%)</td>
<td>56.4% (A:70%, BM:52%)</td>
</tr>
<tr>
<td>8.)</td>
<td>Q's tariff increases causing the water riots (and its refusal to reverse them) should be taken into account as contributory fault when determining compensation.</td>
<td>53.9% (A:60%, BM:51%)</td>
<td>35.9% (A:40%, BM:35%)</td>
</tr>
<tr>
<td>9.)</td>
<td>The economic impact of an award on Vadis should be factored in when determining compensation.</td>
<td>23.3% (A:10%, BM:28%)</td>
<td>69.2 (A:90%, BM:62%)</td>
</tr>
<tr>
<td>10.)</td>
<td>Vadis' relative lack of enrichment should be factored in when determining compensation.</td>
<td>46.2% (A:30%, BM:52%)</td>
<td>43.6% (A:50%, BM:41%)</td>
</tr>
<tr>
<td>11.)</td>
<td>The special character of water as a public good, human necessity and nascent human right should be factored in when determining compensation.</td>
<td>56.4% (A:40%, BM:62%)</td>
<td>33.3% (A:40%, A:31%)</td>
</tr>
<tr>
<td>12.)</td>
<td>Vadis' expropriatory intent should be factored in when determining compensation.</td>
<td>46.2% (A:50%, BM:45%)</td>
<td>38.5% (A:40%, BM:38%)</td>
</tr>
</tbody>
</table>

Table 31: Summary rating results of table 2

---

391 P-value = 0.0229.
Participants where split on the question of whether or not the expropriation in the hypothetical was lawful and whether or not the customary international law standard applied. The majority of participants felt that the DCF-value of USD 100 million would be the most appropriate starting point to determine quantum. Interestingly, the rejection of the book value and the low DCF value of USD 50 million as a starting point was particularly strong in the arbitrator group. Only a minority of participants would allow Vadis’ to offset riot costs, whereas the majority of participants agreed that Vadis’ tariff increases should be taken into account as contributory fault. The majority agreed that the economic impact of an award on Vadis should not be taken into account. Participants were less sure about Vadis’ relative lack of enrichment; a high number of abstentions perhaps indicates that they did not consider Vadis to have lacked enrichment, which is a legitimate response. Likewise, participants were less sure about taking into account Vadis expropriatory intent. It is interesting that the group of arbitrators was less amenable to take into account any of these limiting factors than the benchmark group. A majority of participants thought that the special character of water should be taken into account when determining compensation. We have seen that a participant’s decision that the expropriation was lawful, made it unlikely that she would chose the high DCF-value. This indicates that the finding of lawfulness may depress the value of compensation. This suggestion is reasonable. The correlation between choosing the book value and the low DCF-value of USD 50 million indicates that some participants were concerned about the compensation amount, not so much the method. There is a strong correlation between choosing either the low DCF-value or the book value and accepting that the special character of water should be taken into account. The various positive correlations between limiting factors indicates that accepting one limiting factors makes a person likely to also find other extrinsic factors legitimate to play a limiting role.
iv. The Quantum Estimate And Commentary By Participants

162. I put the process of quantum estimation of participants into the framework developed in Chapter 2 and utilized in Chapter 3:

![Diagram of stages of compensation determination]

*Figure 1: Stages of Compensation Determination*

163. While in reality stage 2 and stage 3 may be fluid, the artificial partition helps to analyze the process.

1. Determination of standard of compensation

164. I have determined above that the chosen standard of compensation had little effect on the level of quantum, whereas the determination that the expropriation was legal did. The hypothetical states that the expropriation was conducted by (1) deportation of the company’s management, (2) takeover of operations and (3) slashing tariffs to half their pre-riot levels. As highlighted by 2 participants,\(^{392}\) it was not sufficiently clear to them whether the expropriation followed due process. This ambiguity in the design was however not serious enough to negate the correlation between finding legality and quantum. The lack of correlation between the compensation standard and the quantum estimate may possibly be explained by the suggestion that the

\(^{392}\) See Appendix 8.
compensation standard does not affect the level of compensation as highlighted by 2 participants. The lack of correlation may also have been surmised by the acceptance levels of statement 1 of the prefixed survey, where participants tied over the suggestion that it is the customary international law standard that applied to unlawful expropriations.

2. Determination of the valuation method

165. In relation to the determination of the valuation method, participants can be divided into two groups:

a. Those that chose the DCF-method to determine FMV, and

b. Those that chose book value taking equitable considerations into account.

3. Calculation of the property value

166. Going from here, these two groups passed to the next stage of calculating the business value. Participants may be divided into

a. Group 1 (that chose DCF-method to determine FMV) that went on to:

i. calculate the property value without taking into account equitable considerations (and, if applicable, made deductions thereafter for it)

and:

1. elected the DCF-value of $300, and

2. elected the DCF-value of $100M as the appropriate FMV (doubting the sustainability/track record etc. of the DCF-value of $300M)

ii. take equitable behavior into account when purposefully choosing:

1. the low DCF-value of $50M, which was based on a post-expropriation event not in compliance with the BIT standard, or
2. the DCF-value of $100M for equitable considerations, although explicitly or implicitly acknowledging that the BIT standard was best represented by the DCF-value of $300M.

b. Group 2 (that purposefully chose the book value for equitable considerations).

4. Conversion of the property/business value into an amount of compensation

167. At stage 4, independent of whether or not they had already factored in equitable considerations, various participants made deductions by (a) assigning contributory fault to the investor or (b) by deducting riot costs and (c) other equitable considerations. Some others added sums for reasonable rate increases.
5. Actual process summary of participants’ behavior

The process of paragraphs 167 may be presented in a tree diagram:

- Determination of compensation standard
- Determination of valuation method
- Determination of property/business value
- Conversion of the property/business value into an amount of compensation

![Tree diagram](Image)

**Figure 7: Equitable discretion decisions made by participants divided by quantum determination stages**

168. The diagram shows that 25 of 36 took equitable considerations and limits into account when estimating quantum in the water expropriation hypothetical. Those considerations played a role at all three stages: when determining the valuation method (8 chose book value for equitable

---

393 For two answers it was neither clear from the comments nor their actual statement choice how they chose quantum. One person was taken out as the person stated that information was insufficient without making a tentative choice.
considerations), when determining the business value (12 took equitable considerations into account purposefully selecting the lower DCF-valuation), and when converting the property value into an award of compensation (7). As suggested in Chapter 2, paragraph 39 and in statement 9 of the prefixed survey, the practice of doing so after having determined the actual property/business value seems to be most defensible. Although there was not sufficient information to make an allover informed choice, as would have been the case in real investment treaty arbitration proceedings, the hypothetical does indicate that equitable discretion may play a role in the process of quantum determination, particularly in cases implicating public interests. It is interesting to see that those who chose the low book value to determine the property value were strongly disposed to making further deductions when converting the value into a compensation award.

6. Process Diagram For Arbitrators

I include a separate process diagram for arbitrators.

Figure 8: Equitable discretion decisions made by participants divided by quantum determination stages

---

394 Statement 9: Arbitrators may exercise equitable discretion when converting the established value of an expropriated property into a specific sum to be awarded as compensation. 50% of the participants agreed with this statement.
169. 6 out of 10 arbitrators took equitable considerations into account in the process of quantum estimation corresponding to the number of arbitrators who accepted statement 3 of the prefixed survey.\textsuperscript{395} Furthermore, 6 arbitrators considered equitable considerations when choosing the actual valuation models/ making the calculations, in line with the acceptance of statement 4 of the prefixed survey by 5 arbitrators.\textsuperscript{396} Later deductions were made by 4 in line with statement 9\textsuperscript{397} of the pre-fixed survey, which had been accepted by 7 arbitrators. The diagram shows that the arbitrators were less willing to make deductions after having determined the property value.

v. Conclusion

170. Taken together, both surveys indicate that participants are split on the question whether equitable arbitrator discretion should play a role in compensation determination. There is furthermore no agreement on the designation of ITA arbitrators: are they private dispute resolution service providers or global public law adjudicators? Notwithstanding this, the majority agrees that arbitrators must balance the treaty rights of investors with competing international law obligations of states. Whereas the large majority of participants suggested that the economic impact of an award and the level of enrichment accruing to a State may be taken into account, only a minority of people thought this should be the case in the hypothetical. The stress is on ‘\textit{may}’. Perhaps as a beacon of hope to environmentalist, a majority of participants thought that the special character of water had to be taken into account when determining compensation in the hypothetical. The examination shows that agreement to bestowing a role upon equitable arbitrator discretion in compensation determination comes in bulk: agreeing to one factor, often

\textsuperscript{395} Statement 3: Arbitrators must balance treaty-based investor rights with respondent State’s competing international law obligations implicated in the dispute.

\textsuperscript{396} Statement 4: When choosing between competing and equally plausible valuation models, arbitrators may use equitable discretion to balance investor rights and respondent State’s human rights obligations.

\textsuperscript{397} Statement 9: Arbitrators may exercise equitable discretion when converting the established value of an expropriated property into a specific sum to be awarded as compensation. 50% of the participants agreed with this statement.
means agreeing to other factors. The same goes for limiting factors. The overall group diagram highlights the relative militancy of a small group of people: those participants opted for the low book value and made further deductions. Astute law firm counsel representing respondent in arbitration proceedings would be well-served hiring one of the latter onto a panel.
V. OVERALL CONCLUSION

171. It was the aim of this thesis to shed light on the scope of equitable arbitrator discretion in the process of determining compensation in ITA and its role as a tool to balance treaty-based investor rights with extrinsic but competing international and public law obligations of States.

172. From chapter 2 (The Literature) I can conclude that scholars recognize the role of equitable discretion in arbitral practice, although they disagree on its desirability. Ripinsky with Williams suggest two reasons for the existence of equitable arbitrator discretion: (a) arbitrators desire to balance rights of investors and States to avoid inequitable results and (b) the process of determining compensation is inherently difficult and not an exact science. Scholars also suggest that equitable discretion may be behind arbitrators’ hesitation to apply the DCF-methods; a reluctance, which can neither be explained alone by the speculation-propensity nor the arithmetic difficulty of the DCF-method.

173. From chapter 3 (Content Analysis of All Published ICSID Expropriation Cases), we learn that equitable discretion is seldom overt, more often, it remains unmentioned. When it is mentioned it is at the moment of perplexity: when arbitrators are at a loss as to how to make a compensation decision. Furthermore, more statistical work is needed to conclusively prove the depressing effect of public interest matters on compensation awards.

174. From chapter 4 (What do Professional thin? A Real-Time Delphi Analysis), we harvested opinions from the actual arbitrators, the lawyers pleading before them, the scholars writing about them. We find that they are split on the question: This is apparent from both the traditional and the Delphi survey. They are also split on the function of ITA arbitrators: Private Dispute
Resolution Service Provider or Global Public Law Adjudicators. Yet, it may be comforting to know that the majority of participants agreed that arbitrators must balance the treaty-based rights of investors with competing international law obligations of states.

175. Approval of equitable arbitrator discretion as a factor in compensation determination comes in bulk: agreeing to one factor, often means agreeing to other factors that limit or depress compensation. While participants were in disagreement as to which factors were legitimate, Sir Ian Brownlie’s opinion that the impact of the award on the respondent state should play a role may not be as unpopular as assumed, the same applies to the lack of enrichment. As an experiment, the Delphi survey indicated that participants take equitable factors into account at different stages of compensation determination; factors may be considered at any of the four stages of compensation determination. The suspicion of Chapter 2 that arbitrators prefer to apply equitable discretion clandestinely is supported: overt deductions were made by only a minority of participants when converting the determined property value into a compensation award. In its place, taking equitable considerations into account when determining the valuation method and actual property value seemed preferred.

176. It remains to be discussed whether equitable arbitration is a bad or a good thing. One participant voiced his/her disapproval of the suggestion that equitable discretion may affect the compensation determination of arbitrators:

I see no basis for diminishing the amount of compensation by reference to "equitable" principles. These are (critically) important, but must be reflected in the substantive standards of protection. If ITA is to retain credibility, it must provide awards produced according to law, not according to amorphous discretion. If the law is inadequate, it must be improved.

---

398 Perhaps more appropriately, they are Private Service Provider of Global Public Law.
177. The suggestion that mixing compensation with equitable principles may hurt the system’s credibility is to be taken seriously. Indeed, I agree that the substantive provisions of the BITs should ensure the overall fairness to all parties. Equitable discretion cannot have a place beyond the shadow of the law. It’s walking a tightrope: without assurance that equitable discretion will save an imbalanced system. However, I believe, that absent such substantive provisions, equitable discretion will continue to play a role in compensation determination. Equitable discretion may be a good thing, so long as arbitrators clearly specify where and when it impacted their compensation decision. This, however, has been rarely done in the past and is rarely done today.
### a. APPENDIX 1 – LIST OF ARBITRATORS SAMPLED

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANIMIR A. ALEXANDROV</td>
<td>BULGARIAN</td>
</tr>
<tr>
<td>ABNER J. MIKVA</td>
<td>(US)</td>
</tr>
<tr>
<td>AHMED SADEK EL-KOSHERI</td>
<td>EGYPTIAN</td>
</tr>
<tr>
<td>AKTHAM EL KHOZY</td>
<td>(DUTCH)</td>
</tr>
<tr>
<td>ALAIN VIANDIER (FRENCH)</td>
<td></td>
</tr>
<tr>
<td>ALBERT JAN VAN DEN BERG</td>
<td>(DUTCH)</td>
</tr>
<tr>
<td>ALBERTO FELICIANI (ITALIAN)</td>
<td></td>
</tr>
<tr>
<td>ALBERTO GUILLERMO SAAVEDRA</td>
<td>MEXICAN (MEXICAN)</td>
</tr>
<tr>
<td>ALBERTO WRAY ESPINSA</td>
<td>ECUADORIAN</td>
</tr>
<tr>
<td>ALEJANDRO PONCE MARTÍNEZ</td>
<td>ECUADORIAN</td>
</tr>
<tr>
<td>ALEXIS MOURE (FRENCH)</td>
<td></td>
</tr>
<tr>
<td>ALOUINE DIAIGNE (SENEGAL)</td>
<td></td>
</tr>
<tr>
<td>ALLAN PHILIP (DANISH)</td>
<td></td>
</tr>
<tr>
<td>AN CHEN (CHINESE)</td>
<td></td>
</tr>
<tr>
<td>ANDRE J.E. FAURÈS (BELGIAN)</td>
<td></td>
</tr>
<tr>
<td>ANDREA GARDINA (ITALIAN)</td>
<td></td>
</tr>
<tr>
<td>ANDREAS BUCHER (SWISS)</td>
<td></td>
</tr>
<tr>
<td>ANDREAS J. JACOVIDES (CYPRIOT)</td>
<td></td>
</tr>
<tr>
<td>ANDRÈS RICO SUREDA (SPANISH)</td>
<td></td>
</tr>
<tr>
<td>ANDREW RODGERS (AUSTRALIAN)</td>
<td></td>
</tr>
<tr>
<td>ANTHONY COLMAN (BRITISH)</td>
<td></td>
</tr>
<tr>
<td>ANTHONY MASON (AUSTRALIAN)</td>
<td></td>
</tr>
<tr>
<td>ANTONIO A. CANÇÃO TRINDADE</td>
<td>BRAZILIAN (BRAZILIAN)</td>
</tr>
<tr>
<td>ANTONIO CRIVELLARO (ITALIAN)</td>
<td></td>
</tr>
<tr>
<td>ANTONIO REMIRO BROTÔNS</td>
<td></td>
</tr>
<tr>
<td>ARGHYRIOS A. FATOUROS (GREEK)</td>
<td></td>
</tr>
<tr>
<td>ARMAND DE MESTRAL (CANADIAN)</td>
<td></td>
</tr>
<tr>
<td>ARON BORCHES (DUTCH)</td>
<td></td>
</tr>
<tr>
<td>ARTHUR A. MAYNARD (BARBADIAN)</td>
<td></td>
</tr>
<tr>
<td>ARTHUR L. MARRIOTT (BRITISH)</td>
<td></td>
</tr>
<tr>
<td>ARTHUR W. ROVINE (U.S.)</td>
<td></td>
</tr>
<tr>
<td>ASHRAF ULLAH KHAN (BRITISH)</td>
<td></td>
</tr>
<tr>
<td>AZZEDINE KETTANI (MOROCCAN)</td>
<td></td>
</tr>
<tr>
<td>BARTON LEOGUM (U.S.)</td>
<td></td>
</tr>
<tr>
<td>BENJAMIN J. GREENBERG</td>
<td></td>
</tr>
<tr>
<td>BENJAMIN R. CIVILETTI (US)</td>
<td></td>
</tr>
<tr>
<td>BERNARD AUDIT (FRENCH)</td>
<td></td>
</tr>
<tr>
<td>BERNARD HANOTIAU (BELGIAN)</td>
<td></td>
</tr>
<tr>
<td>BERNARDO M. CREMDES (SPANISH)</td>
<td></td>
</tr>
<tr>
<td>BERNARDO SEPÚLVEDA AMOR</td>
<td></td>
</tr>
<tr>
<td>BERTHOLD GOLDMAN (FRENCH)</td>
<td></td>
</tr>
<tr>
<td>BOHUSLAV KLEIN (CZECH)</td>
<td></td>
</tr>
<tr>
<td>BRANKO VUKMIR (CROATIAN)</td>
<td></td>
</tr>
<tr>
<td>BRIGITTE STERN (FRENCH)</td>
<td></td>
</tr>
<tr>
<td>BRUNO SIMMA (GERMAN)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- C. G. WEERAMANTRY (SRI LANKAN) C. G. WEERAMANTRY (SRI LANKAN)
- CARLOS BERNAL VERA (MEXICAN) CARLOS BERNAL VERA (MEXICAN)
- CARLOs ROBERTO CASTILLO (HONDURAN) CARLOs ROBERTO CASTILLO (HONDURAN)
- CAROLYN B. LAMM (U.S.) CAROLYN B. LAMM (U.S.)
- CARVETH HARcourt GEACH (SOUTH AFRICAN) CARVETH HARcourt GEACH (SOUTH AFRICAN)
- CHRISTOPHER J. GREENWOOD (BRITISH) CHRISTOPHER J. GREENWOOD (BRITISH)
- CHRISTOPHER J. THOMAS (CANADIAN) CHRISTOPHER J. THOMAS (CANADIAN)
- CLAUS-VON WOBESER (MEXICAN) CLAUS-VON WOBESER (MEXICAN)
- CLAUS-DIETER EHLMANN (GERMAN) CLAUS-DIETER EHLMANN (GERMAN)
- D.A. REDFERN (BRITISH) D.A. REDFERN (BRITISH)
- DANIEL M. PRICE (U.S.) DANIEL M. PRICE (U.S.)
- DAVID A. GANTZ (US) DAVID A. GANTZ (US)
- DAVID A. R. WILLIAMS (NEW ZEALAND) DAVID A. R. WILLIAMS (NEW ZEALAND)
- DAVID BERRY (CANADIAN) DAVID BERRY (CANADIAN)
- CLAIRE REYMOND (SWISS) CLAIRE REYMOND (SWISS)
- DAVID S. KESSELIAS (FRENCH) DAVID S. KESSELIAS (FRENCH)
- DAVID SHARP (US) DAVID SHARP (US)
- DAVID SURA (BRITISH) DAVID SURA (BRITISH)
- DAVID V. BISHOP (U.S.) DAVID V. BISHOP (U.S.)
- DOMINGO BELLO JANEIRO (SPANISH) DOMINGO BELLO JANEIRO (SPANISH)
- DOMINIQUE GRISAY (BELGIAN) DOMINIQUE GRISAY (BELGIAN)
- DOMINIQUE PONCET (SWISS) DOMINIQUE PONCET (SWISS)
- DOMINIQUE SCHMIDT (FRENCH) DOMINIQUE SCHMIDT (FRENCH)
- DON WALLACE (US) DON WALLACE (US)
- DONALD DONOVAN (U.S.) DONALD DONOVAN (U.S.)
- DONALD E. ZUBROD (US) DONALD E. ZUBROD (US)
- DONALD M. MCRAE (CANADIAN) DONALD M. MCRAE (CANADIAN)
- DOUG JONES (AUSTRALIAN) DOUG JONES (AUSTRALIAN)
- DUNCAN H. CAMERON (U.S.) DUNCAN H. CAMERON (U.S.)
- EUDILBERT RAZAFINDRALAMBO (MALAGASY) EUDILBERT RAZAFINDRALAMBO (MALAGASY)
- EDUARDO CARMIÑI (ECUADORIAN) EDUARDO CARMIÑI (ECUADORIAN)
- EDUARDO JIMENEZ DE ARECHAGA (URUGUAYAN) EDUARDO JIMENEZ DE ARECHAGA (URUGUAYAN)
- EDUARDO MAGALLÓN GÓMEZ (MEXICAN) EDUARDO MAGALLÓN GÓMEZ (MEXICAN)
- EDUARDO MAYORA ALVARADO (GUATEMALAN) EDUARDO MAYORA ALVARADO (GUATEMALAN)
### LIST OF ARBITRATORS SAMPLED (CONTINUED)

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUARDO SANCHO GONZÁLEZ (COSTA RICAN)</td>
<td>HÉCTOR GROS ESPIEL (URUGUAYAN)</td>
</tr>
<tr>
<td>EDUARDO SILVA ROMERO (COLOMBIAN/FRENCH)</td>
<td>HENRI C. ÁLVAREZ (CANADIAN)</td>
</tr>
<tr>
<td>EDUARDO T. SIQUEIROS (MEXICAN)</td>
<td>HENRI CAILLAUT (FRANCE)</td>
</tr>
<tr>
<td>EDUARDO ZULETA (COLOMBIAN)</td>
<td>HERIBERT GOLSONG (GERMAN)</td>
</tr>
<tr>
<td>EDWARD C. CHIASSON (CANADA)</td>
<td>HERNANDO OTERO (COLOMBIAN)</td>
</tr>
<tr>
<td>EDWARD NOTTINGHAM (US)</td>
<td>HORACIO A. GRIGERA NAÓN (ARGENTINE)</td>
</tr>
<tr>
<td>EDWARD W RUBIN (CANADIAN)</td>
<td>IAN BROWNLE (BRITISH)</td>
</tr>
<tr>
<td>EDWIN MEES III (U.S.)</td>
<td>IAN E. MCPHERSON (CANADIAN)</td>
</tr>
<tr>
<td>ELIHU LAUTERPACHT (BRITISH)</td>
<td>IAN GICK (BRITISH)</td>
</tr>
<tr>
<td>EMMANUEL GAillaRD (FRENCH)</td>
<td>IAN S. FORRESTER (BRITISH)</td>
</tr>
<tr>
<td>ENRIQUE BARROS BOURIE (CHILEAN)</td>
<td>IAN SINCLAIR (BRITISH) (1)</td>
</tr>
<tr>
<td>ENRIQUE ELIAS (PERUVIAN)</td>
<td>IBRAHIM FADLALLAH (LEBANESE/FRENCH)</td>
</tr>
<tr>
<td>ENRIQUE GÓMEZ-Pinzón (COLOMBIAN)</td>
<td>IGNACIO GÓMEZ PALACIO (MEXICAN)</td>
</tr>
<tr>
<td>ERIC SCHWARTZ (U.S.)</td>
<td>IGNAZ SEIDL-HOHENVELDERN (AUSTRIAN)</td>
</tr>
<tr>
<td>ERNESTO CANALES SANTOS (MEXICAN)</td>
<td>ISI FOIGHEL (DANISH)</td>
</tr>
<tr>
<td>EUGEN SALPIUS (AUSTRIAN)</td>
<td>IVAN W. ALLENBERG (SWEDISH)</td>
</tr>
<tr>
<td>FADI MOGHAEZEL (LEBANESE)</td>
<td>J. CHRISTOPHER THOMAS (CANADIAN)</td>
</tr>
<tr>
<td>FALL S. NARIMAN (INDIAN)</td>
<td>J. WILLIAM ROWLEY (CANADIAN)</td>
</tr>
<tr>
<td>FERNANDO DE TRAZEGNIES GRANDA (PERUVIAN)</td>
<td>J.S. SCHULTSZ (DUTCH)</td>
</tr>
<tr>
<td>FERNANDO MANTILLA-SERRANO (COLOMBIAN)</td>
<td>JACK BERG (US)</td>
</tr>
<tr>
<td>FLORENTINO P. FELICIANO (PHILIPPINE)</td>
<td>JACQUES MICHEL GROSSEN (SWISS)</td>
</tr>
<tr>
<td>FRANCISCO ORREGO VICUÑA (CHILEAN)</td>
<td>JAIME C. IRARRÁZÁBAL (CHILEAN)</td>
</tr>
<tr>
<td>FRANCISCO REZEK (BRAZILIAN)</td>
<td>JAMES R. CRAWFORD (AUSTRALIAN)</td>
</tr>
<tr>
<td>FRANÇOIS T'KINT (BELGIAN)</td>
<td>JAN PAULSSON (FRENCH)</td>
</tr>
<tr>
<td>FRANKLIN BERMAN (BRITISH)</td>
<td>JEAN KALICKI (U.S.)</td>
</tr>
<tr>
<td>FRED F. FIELDING (US)</td>
<td>JEAN PAUL CHABANEIX (PERUVIAN)</td>
</tr>
<tr>
<td>FUAD ROUHANI (IRANIAN)</td>
<td>JEAN-DENIS BREDIGN (FRENCH)</td>
</tr>
<tr>
<td>GABRIELLE KAUFMANN-KOHLER (SWISS)</td>
<td>JEAN-FRANCOIS PRAT (FRENCH)</td>
</tr>
<tr>
<td>GARY B. BORN (U.S.)</td>
<td>JEREMY LEVER (BRITISH)</td>
</tr>
<tr>
<td>GASTON KENFACK DOUAJIN (CAMEROONIAN)</td>
<td>JERNEJ SEKOLEC (SLOVENE)</td>
</tr>
<tr>
<td>GA VAN GRIFFITH (AUSTRALIAN)</td>
<td>JESÚS REMÓN (SPANISH)</td>
</tr>
<tr>
<td>GEORGES ABI-SAAAB (EGYPTIAN)</td>
<td>JESUS SERRANO DE LA VEGA (MEXICAN) (1)</td>
</tr>
<tr>
<td>GERMAN FLORES (HONDURAN)</td>
<td>JESWALD W. SALACUSE (U.S.)</td>
</tr>
<tr>
<td>GILBERT GUILLAUME (FRENCH)</td>
<td>JOAN DONOGHUE (U.S.)</td>
</tr>
<tr>
<td>GIORGIO BERNINI (ITALIAN)</td>
<td>JOAQUIN MORALES GODOY (CHILEAN)</td>
</tr>
<tr>
<td>GIORGIO SACERDOTTI (ITALIAN)</td>
<td>JOHN BEECHEY (BRITISH)</td>
</tr>
<tr>
<td>GRAHAM SPEIGHT (NEW ZEALAND)</td>
<td>JOHN H. ROONEY (U.S.)</td>
</tr>
<tr>
<td>GRANT D. ALDONAS (U.S.)</td>
<td>JOHN MURRAY (BRITISH)</td>
</tr>
<tr>
<td>GUIDO SANTIAGO TA WIL (ARGENTINE)</td>
<td>JOHN TOWNSEND (U.S.)</td>
</tr>
<tr>
<td>GUILLERMO AGUILAR ÁLVAREZ (MEXICAN)</td>
<td>JOHN Y. GOTANDA (U.S.)</td>
</tr>
<tr>
<td>GUNNAR LAGERGREN (SWEDISH)</td>
<td>JORGE COVARUBIAS BRAVO (MEXICAN)</td>
</tr>
<tr>
<td>GUSTAF MÖLLER (FINNISH)</td>
<td>JORGE GONCALVES PEREIRA (PORTUGESE)</td>
</tr>
<tr>
<td>HAMID G. GHARAVI (IRANIAN/FRENCH)</td>
<td>JORGEN TROLLE (DANISH)</td>
</tr>
<tr>
<td>HANS DANIELIUS (SWEDISH)</td>
<td>JOSE CARLOS FERNANDEZ ROZAS (SPANISH)</td>
</tr>
<tr>
<td>HANS SPITZNAEL (SWISS)</td>
<td>JOSE LUIS SIQUEIROS (MEXICAN)</td>
</tr>
<tr>
<td>HANS VAN HOUTTE (BELGIAN)</td>
<td>JOSE MARIA CHILLÓN MEDINA (SPANISH)</td>
</tr>
<tr>
<td>Name</td>
<td>Nationality</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>JOSEPH M. MATTHEWS (U.S.)</td>
<td>MICHEL GENTOT (FRENCH)</td>
</tr>
<tr>
<td>JUDD L. KESSLER (U.S.)</td>
<td>MIRKO VASILJEVIĆ (SERBIAN)</td>
</tr>
<tr>
<td>JÜRGEN VOSS (GERMAN)</td>
<td>MOHAMED BEDJAoui (ALGERIAN)</td>
</tr>
<tr>
<td>KAMAL HOSSAIN (BANGLADESHI)</td>
<td>MOHAMMAD WASI ZAFAR (PAKISTANI)</td>
</tr>
<tr>
<td>JUAN FERNÁNDEZ-ARMESTO (SPANISH)</td>
<td>MICHEL NADER (MEXICAN)</td>
</tr>
<tr>
<td>JULIAN D.M. LEW (BRITISH)</td>
<td>MOHAMED AMIN ELABASSY EL MAHDI (EGYPTIAN)</td>
</tr>
<tr>
<td>KAJ HOBÉR (SWEDISH)</td>
<td>MOHAMED YASSIN ABD EL A'AL (SUDANESE)</td>
</tr>
<tr>
<td>KA J HOBÉR (SWEDISH)</td>
<td>MOHAMED YASSIN ABD EL A'AL (SUDANESE)</td>
</tr>
</tbody>
</table>

**LIST OF ARBITRATORS SAMPLED (CONTINUED)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>Name</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>KARIM HAFEZ (EGYPTIAN)</td>
<td>MOHAMMED CHEMLoul (ALGERIAN)</td>
<td>KARL-HEINZ BÖCKSTIEGEL (GERMAN)</td>
<td>MONROE LEIGH (U.S.)</td>
</tr>
<tr>
<td>KEBE Mbaye (SENEGALESE)</td>
<td>MUTHUCUMARASWANG SORNARAJAH (AUSTRALIAN)</td>
<td>KEITH HIGHT (US)</td>
<td>NABIL ELARABY (EGYPTIAN)</td>
</tr>
<tr>
<td>KENNETH KEITH (NEW ZEALAND)</td>
<td>NEIL KAPLAN (BRITISH)</td>
<td>KENNETH O. RATTRAY (JAMAICAN)</td>
<td>NICHOLAS LIVERPOOL (DOMINICA)</td>
</tr>
<tr>
<td>KENNETH S. ROKISON (BRITISH)</td>
<td>NICHOLAS W. ALLARD (U.S.)</td>
<td>KENNETH S. ROKISON (BRITISH)</td>
<td>NICOLAS HERZOG (SWISS)</td>
</tr>
<tr>
<td>KLAUS M. SACHS (GERMAN)</td>
<td>NINIAN STEPHEN (AUSTRALIAN)</td>
<td>KONSTANTINOS D. KERAMEUS (GREEK)</td>
<td>NOAH RUBINS (U.S.)</td>
</tr>
<tr>
<td>L. YVES FORTIER (CANADIAN)</td>
<td>OTTO L.O. DE WITT WIJNEN (DUTCH)</td>
<td>LAURENCE BOISSON DE CHAZOURNES (FRENCH)</td>
<td>PABLO GARCÍA MÉXICA (SPANISH)</td>
</tr>
<tr>
<td>LAURENT AYNES (FRENCH)</td>
<td>PAOLO MICHELLE PATOCCHI (SWISS)</td>
<td>LAURENT LEVY (BRITISH)</td>
<td>PATRICK HUBERT (FRENCH)</td>
</tr>
<tr>
<td>LEÓN ROLDOS AGUILERA (ECUADORIAN)</td>
<td>PATRICK ROBINSON (JAMAICAN)</td>
<td>LUCIUS CAFLISCH (SWISS)</td>
<td>PAUL REUTER (FRENCH)</td>
</tr>
<tr>
<td>LUIS HERRERA MARCANO (VENEZUELAN)</td>
<td>PEDRO J. MARTÍNEZ-FRAGA (U.S.)</td>
<td>LUIZ OLIVEIRA BAPTISTA (BRAZILIAN)</td>
<td>PEDRO NIKKEN (VENEZUELAN)</td>
</tr>
<tr>
<td>MAKDoom ALI KHAN (PAKISTANI)</td>
<td>PETER D. TROOBOFF (U.S.)</td>
<td>MARC GRÜNINGER (SWISS)</td>
<td>PETER TOMKA (SLOVAK)</td>
</tr>
<tr>
<td>MARC LALONDE (CANADIAN)</td>
<td>PETER W. GABRAITH (U.S.)</td>
<td>MARCEL STORME (BELGIAN)</td>
<td>PHILIP OTTON (BRITISH)</td>
</tr>
<tr>
<td>MARIE-ANDRÉE NGWE (FRENCH)</td>
<td>PHILIPPE MERLE (FRENCH)</td>
<td>MARIE-MADELEINE MBORANTSUO (GABONESE)</td>
<td>PHILIPPE PINSOLLE (FRENCH)</td>
</tr>
<tr>
<td>MARKUS WIRTH (SWISS)</td>
<td>PHILIPPE SANDS (BRITISH/FRENCH)</td>
<td>MATTHIEU DE BOISSESSON (FRENCH)</td>
<td>PIERO BERNARDINI (ITALIAN)</td>
</tr>
<tr>
<td>MAUREEN BRUNT (AustralIAN)</td>
<td>PIERRE CAVIN (SWISS)</td>
<td>MAUREEN PONSONBY (BRITISH)</td>
<td>PIERRE DRAI (FRENCH)</td>
</tr>
<tr>
<td>MAURICE MENDELSOHN (BRITISH)</td>
<td>PIERRE LALIVE (SWISS)</td>
<td>MAURICE WOLF (US)</td>
<td>PIERRE MAYER (FRENCH)</td>
</tr>
<tr>
<td>MEIR HETH (ISRAELI)</td>
<td>PIERRE TERCIER (SWISS)</td>
<td>MERIT JANOW (U.S.)</td>
<td>PIERRE-MAURICE DUPUY (FRENCH)</td>
</tr>
<tr>
<td>MICHAEL C. PRYLES (AustralIAN)</td>
<td>PIERRE-YVES TSCHANZ (SWISS/IRISH)</td>
<td>MICHAEL E. SCHNEIDER (GERMAN)</td>
<td>PIETER SANDERS (DUTCH)</td>
</tr>
<tr>
<td>MICHAEL E. SCHNEIDER (GERMAN)</td>
<td>PIETER SANDERS (DUTCH)</td>
<td>MICHAEL EVAN JAFFE (U.S.)</td>
<td>PROSPER WEL (FRENCH)</td>
</tr>
<tr>
<td>MICHAEL HWANG (SINGAPOREAN)</td>
<td>RAÚL E. VINUESA (ARGENTINE)</td>
<td>MICHAEL J.A. LEE (BRITISH)</td>
<td>RENE-JEAN DUPUY (FRENCH)</td>
</tr>
<tr>
<td>MICHAEL KERR (BRITISH)</td>
<td>REX MCKAY (GUYANESE)</td>
<td>MICHAEL MUSTILL (BRITISH)</td>
<td>ROBERT B. OWEN (US)</td>
</tr>
</tbody>
</table>
### LIST OF ARBITRATORS SAMPLED (CONTINUED)

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROBERT BRINER (SWISS)</td>
<td>STEPHEN CHARLES (AUSTRALIAN)</td>
</tr>
<tr>
<td>ROBERT F. PIETROWSKI</td>
<td>STEPHEN M. SCHWEBEL (U.S.)</td>
</tr>
<tr>
<td>ROBERT S. M. DOSSOU (BENINESE)</td>
<td>STEVEN A. HAMMOND (U.S.) [CLAIMANT]</td>
</tr>
<tr>
<td>ROBERT VON MEHREN (U.S.)</td>
<td>STEWART BOYD (BRITISH)</td>
</tr>
<tr>
<td>ROBERT Y. JENNINGS (BRITISH)</td>
<td>STUART E. EIZENSTAT (U.S.)</td>
</tr>
<tr>
<td>ROBERTO ANDINO (HONDURAN)</td>
<td>SUSANA B. CZAR DE ZALDUENDO (ARGENTINE)</td>
</tr>
<tr>
<td>ROBERTO MACLEAN (PERUVIAN)</td>
<td>TATIANA BOGDANOWSKY DE MAEKELT (VENEZUELAN)</td>
</tr>
<tr>
<td>RODRIGO JIJÓN LETORT (ECUADORIAN)</td>
<td>TERESA CHENG (CHINESE)</td>
</tr>
<tr>
<td>RODRIGO OREAMUNO (COSTA RICAN)</td>
<td>THOMAS BUERGENTHAL (U.S.)</td>
</tr>
<tr>
<td>ROLF Knieper (GERMAN)</td>
<td>TIBOR VARADY (SERBIAN)</td>
</tr>
<tr>
<td>RONALD A. CASS (U.S.)</td>
<td>TOBY LANDAU (BRITISH)</td>
</tr>
<tr>
<td>Ronny Abraham (FRENCH)</td>
<td>V.V. VEEDER (BRITISH)</td>
</tr>
<tr>
<td>ROYSTON GOODE (BRITISH)</td>
<td>VAUGHAN LOWE (BRITISH)</td>
</tr>
<tr>
<td>RUDOLF BYSTRICKY (CZECHOSLOVAK)</td>
<td>VEJIO HEISKANEN (FINNISH)</td>
</tr>
<tr>
<td>RUDOLF DOLZER (GERMAN)</td>
<td>VICTOR-GASTON MARTINY (BELGIAN)</td>
</tr>
<tr>
<td>SALIM MOOLLAN (FRENCH)</td>
<td>W. MICHAEL REISMAN (U.S.)</td>
</tr>
<tr>
<td>SAMUEL K.B. ASANTE (GHANAIAN)</td>
<td>WILLIAM D RODGERS (US)</td>
</tr>
<tr>
<td>Sandra Morelli Rico (COLOMBIAN)</td>
<td>WILLIAM LAURENCE CRAIG (U.S.)</td>
</tr>
<tr>
<td>Santiago Torres Bernárdez (SPANISH)</td>
<td>WILLIAM W. PARK (U.S.)</td>
</tr>
<tr>
<td>Sena AGBAYISSAH (TOGOLESE)</td>
<td>WOODBINE A. DAVIS (BARBADIAN)</td>
</tr>
<tr>
<td>Seymour J. Rubin (US)</td>
<td>YAWOVI AGBOYIBO (TOGOLESE)</td>
</tr>
<tr>
<td>Sompong Sucharitkul (THAI)</td>
<td>Yoram A. Turbowicz (ISRAELI)</td>
</tr>
<tr>
<td>Stanimir A. Alexandrov (BULGARIAN)</td>
<td>Yves Derains (FRENCH)</td>
</tr>
<tr>
<td>Zachary Douglas (AUSTRALIAN)</td>
<td>ZACHARY DOUGLAS (AUSTRALIAN)</td>
</tr>
</tbody>
</table>
### APPENDIX 2 – LIST OF SCHOLARS SAMPLED

<table>
<thead>
<tr>
<th>Name</th>
<th>First Name</th>
<th>Last Name</th>
<th>Organization</th>
<th>Country</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Khalifa, Haya Rashed</td>
<td></td>
<td></td>
<td>Dujzentkunst, Bart L. Smit</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Amerasinghe, Niranjali Manel</td>
<td></td>
<td></td>
<td>Dumberry, Patrick</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Antonetti, Aurelia</td>
<td></td>
<td></td>
<td>Escobar, Alejandro A.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Arsanjani, Mahnoush H.</td>
<td></td>
<td></td>
<td>Feit, Michael</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Assoud, Amine</td>
<td></td>
<td></td>
<td>Fellenbaum, Joshua</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Avila, Gabriela Alvarez</td>
<td></td>
<td></td>
<td>Foster, George K.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Baetens</td>
<td></td>
<td></td>
<td>Fouret, Julien</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Benedict, Christoph G.</td>
<td></td>
<td></td>
<td>Foy, Patrick G.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Bennett, Lisa</td>
<td></td>
<td></td>
<td>Francioni, Francesco</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Bettauer, Ronald J.</td>
<td></td>
<td></td>
<td>Franck, Susan D.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Biggs, Gonzalo</td>
<td></td>
<td></td>
<td>Freyer, Dana H.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Bjorklund, Andrea K.</td>
<td></td>
<td></td>
<td>Friedland, Paul</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Blyschak, Paul</td>
<td></td>
<td></td>
<td>Friedman, Mark W.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Bonnin, Victor</td>
<td></td>
<td></td>
<td>Frutos-Peterson, Claudia</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Boralessa, Anoosha</td>
<td></td>
<td></td>
<td>Gaines, Sanford E.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Bottini, Gabriel</td>
<td></td>
<td></td>
<td>Gal-Or, Noemi</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Boute, Anatole</td>
<td></td>
<td></td>
<td>García, Carlos G.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Branson, David J.</td>
<td></td>
<td></td>
<td>García-Bolívar, Omar E.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Braun, Tillmann Rudolf</td>
<td></td>
<td></td>
<td>Garnett, Richard</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Brower, Charles H., II</td>
<td></td>
<td></td>
<td>Gazzini, Tarcisio</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Burgstaller, Markus</td>
<td></td>
<td></td>
<td>Gelberg, Grant</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Burke-White, William W.</td>
<td></td>
<td></td>
<td>Ghouri, Ahmad Ali</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Calamita, N. Jansen</td>
<td></td>
<td></td>
<td>Gibson, Christopher</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Canè, Giuliana</td>
<td></td>
<td></td>
<td>Gill, Judith</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Cantegreil, Julien</td>
<td></td>
<td></td>
<td>Griebel, Jörn</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Care, Jennifer Corin</td>
<td></td>
<td></td>
<td>Grisel, Florian</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Chalamish, Efralm</td>
<td></td>
<td></td>
<td>Haeri, Hussein</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Cheng, Tai-Heng</td>
<td></td>
<td></td>
<td>Hansen, Robin F.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Cingel, Ivana</td>
<td></td>
<td></td>
<td>Hawkins, Rob</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Clodfelter, Mark A.</td>
<td></td>
<td></td>
<td>Hellbeck, Eckhard R.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Coe, Jack J., Jr.</td>
<td></td>
<td></td>
<td>Henry, Laura</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Cole, Tony</td>
<td></td>
<td></td>
<td>Herlihy, David</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Collins, David</td>
<td></td>
<td></td>
<td>Hird, Rachel A.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Crook, John R.</td>
<td></td>
<td></td>
<td>Ho, Jean</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Cuniberti, Gilles</td>
<td></td>
<td></td>
<td>Hobe, Stephan</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Deutsch, Richard</td>
<td></td>
<td></td>
<td>Hoffmann, Anne K.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Diop, Aïssatou</td>
<td></td>
<td></td>
<td>Hornick, Robert N.</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Dolzer, Rudolf</td>
<td></td>
<td></td>
<td>Howse, Robert</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Donovan, Donald Francis</td>
<td></td>
<td></td>
<td>Hunter, Robert</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Drymer, Stephen L.</td>
<td></td>
<td></td>
<td>Ishikawa, Tomoko</td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Name 1</td>
<td>Name 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mizrahi, David M.</td>
<td>Smith, Steven</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moloo, Rahim</td>
<td>Smutny, Abby Cohen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortenson, Julian Davis</td>
<td>Snodgrass, Elizabeth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myers, Terry</td>
<td>Sohail, Syed Bulent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naimark, Richard</td>
<td>Spears, Suzanne A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nelson, Timothy G.</td>
<td>Spiermann, Ole</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newcombe, Andrew</td>
<td>Steffens, Joachim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nowrot, Karsten</td>
<td>Sutton, Stephen D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obadia, Eloise</td>
<td>Szewczyk, Bart M. J.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odunmosu, Ibronneke T.</td>
<td>Tawil, Guido Santiago</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onwuamaegbu, Ucheora</td>
<td>Telesetsky, Anastasia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ormachea, Pablo A.</td>
<td>Tevini, Anna Giulia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parra, Antonio</td>
<td>Trisotto, Robert</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partasides, Constantine</td>
<td>Vadi, Valentina Sara</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petersmann, Ernst-Ulrich</td>
<td>Vaksha, Anuj Kumar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petrochilos, Georgios</td>
<td>Valasek, Martin J.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pirker, Benedikt</td>
<td>van Aaken, Anne</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polasek, Martina</td>
<td>van Harten, Gus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potesta, Michele</td>
<td>Vandeveld, Kenneth J.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potts, Jonathan B.</td>
<td>VanDuzer, J. Anthony</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raouf, Mohamed Abdel</td>
<td>Verhoosel, Gaetan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reed, Lucy</td>
<td>Volterra, Robert</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinisch, August</td>
<td>von Staden, Andreas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rogers, Stephanie</td>
<td>Waibel, Michael</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubina, Evgeniya</td>
<td>Wall, Robin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubino, Kevin</td>
<td>Wallace, Stephen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryan, Christopher M.</td>
<td>Walsh, Thomas W.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryan, Margaret Clare</td>
<td>Wang, Guiguo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sabater, Anibal</td>
<td>Weeramantry, J. Romesh</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampliner, Gary H.</td>
<td>Wolff, Lutz-Christian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandrock, Otto</td>
<td>Wölker, Ulrich</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schill, Stephan W.</td>
<td>Wythes, Annika</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schneiderman, David</td>
<td>Yackee, Jason Webb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schonard, Pascal</td>
<td>Yannaca-Small, Katia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schreiber, William</td>
<td>Yuejiao, Zhang</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seelig, Marie Louise</td>
<td>Zeyl, Trevor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shan, Wenhua</td>
<td>Zhan, James X.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shany, Yuval</td>
<td>Ziade, Nassib G.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sloane, Robert D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smietana, Benjamin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dear Prof. []:

In your capacity as a leading scholar and arbitrator in numerous investor-state disputes, I would like to invite you to take part in an online Real-Time Delphi (RTD) panel on the role of equitable discretion in compensation determination in investment treaty law.

RTD is a survey technique, which relies on a panel of experts and encourages consensus by providing immediate feedback of the aggregate group opinion, whilst preserving the anonymity of all participants.

Please take a look at the portal via your invitation link: [Link omitted]

The portal is open until **2 April 2012**. Your participation is fully confidential and complies with the guidelines of the Institutional Review Board on human subjects research at Stanford University. The consultation will take approximately 5-20 minutes to complete. After final analysis every participant will get a free electronic copy of the results.

This consultation aims to make an empirical contribution to the law of compensation in international treaty arbitration. It has been developed as part of my research with the Stanford Program in International Legal Studies at Stanford Law School.

Many thanks for considering my request.

Yours sincerely,

Silke Noa Kumpf  
Fellow, Stanford Program in International Legal Studies  
J.S.M.-Candidate 2012  
Stanford Law School  

+1 650 283 8945  
snkumpf@stanford.edu
d. APPENDIX 3 – SHOT OF SCREEN 1
e. APPENDIX 4 – SHOT OF SCREEN 2
f. APPENDIX 5 – SHOT OF SCREEN 3
g. APPENDIX 6 – SHOT OF SCREEN 4
h. APPENDIX 7 – SHOT OF SCREEN 5
### APPENDIX 8 – RATINGS, COMMENTS AND QUANTUM ESTIMATE OF THE BENCHMARK GROUP

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Estimate</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>300</td>
<td>Close call. Were the riots politically instigated? Even if not, the government must live with its commitment that the operator can charge water tariffs at its discretion. The tribunal is not to rescue the government from a bad business/legal decision.</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>107.5</td>
<td>Adjusted book value plus investment - half the riot costs</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>150</td>
<td>M seemed grossly inflated considering the fact that the high prices charged on consumers would have been hardly sustainable in any event. Yet, 300 M corresponds to the BIT standard, and should therefore serve as a basis for the calculation. I would personally be inclined to take into consideration (i) the unreasonable behaviour of the investor, (ii) the special character of water as a public good, (iii) the fact that Yadis protected its citizen's right to water without intention to enrich itself as reasons to mitigate damages. 150M seems like a reasonable compromise to me.</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>93</td>
<td>100-7</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>93</td>
<td>DCF value of 100M using QUO's pre-riot tariff as base tariff minus 7M riot costs</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>I assume the FMV by DCF method accounts for only tariff revenues and operating costs over the remainder of the 30-year lease, with appropriate discounting over time—i.e., the FMV of the 30-year lease, not the water system. It is not clear if the &quot;FMV&quot; also makes allowance for recovery of an appropriate portion of the $50 million investment by QUO, which should be part of the compensation award. But compensation by FMV should not include the $250 million loan from WB, which Yadis must pay in any event (unless lease with QUO provides otherwise). Starting point to determine quantum: $100M.</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>50</td>
<td>Because the investment has operated for a considerable time before the expropriation, book value seems inappropriate. While fair market value based on DCF seems an appropriate model, use of the high tariff seems inappropriate because it caused widespread riots, a good indication that the high tariff was not economically sustainable. Having used the pre-riot tariff, however, it does not seem appropriate to discount further for the relatively low amount of costs associated with the riots.</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>Overall equity principles</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>50</td>
<td>Assuming liability, the pre-riot rate seems appropriate. Political and perhaps economically doubtful whether QUO could have maintained the higher tariffs even if it had stayed in the country. There is probably also some degree of a &quot;split-the-baby&quot; instinct at work in my answer.</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>100</td>
<td>The expropriation would have been legal, if accompanied by compensation. Only the failure to compensate made it illegal. In any event, there is not really any distinction in PIL between legal and illegal expropriation. The proper restitution in CIL is restitutio ad integrum. So the applicable compensation standard in the BIT is not the same as CIL. However, it is likely that the the appropriate restitution in CIL would be identical as that set out in the BIT. The value of the company was at the water rates they legally introduced. States have the right in international law to expropriate. They have the right to regulate. They have the right to ensure their citizens have access to basic needs such as water. They must act in conformity with their international legal obligations. That includes providing the compensation required under the BIT.</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

399 One member of the benchmark group asked me to delete her/his responses from the records. They therefore do not appear in this list.
APPENDIX 8 – RATINGS, COMMENTS AND QUANTUM ESTIMATE OF THE
BENCHMARK GROUP TO HYPOTHETICAL (CONTINUED)

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Estimate</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>FMV using QUO's pre-riot tariff</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>124</td>
<td>enforcement proceedings under the New York Convention</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>100</td>
<td>adequate amount of compensation</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>80</td>
<td>DCF based on 100 USD</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>100</td>
<td>FMV of $100M (as (ii) but using Q's pre-riot tariff as base tariff)</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>40</td>
<td>investment over the 10 year period</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>120</td>
<td>The Tribunal's task is to assess the FMV of the expropriated investment immediately before the expropriation took place. An expropriation did take place</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>160</td>
<td></td>
</tr>
</tbody>
</table>

QUO invested 50 million, now valued at 60 million. QUO over-charged during the first 10 years of the agreement, exceeding reasonable return on investment. QUO refused to mitigate the circumstances by reducing the water tariffs. But, Vadis did not consider alternative measures to offset the impact of QUO's stance, e.g. mediation to work out a solution ("under due process of law"), or through corporate taxation which could have gone to reimburse water users. 40 million would have represented the 2/3 remaining duration of the lease and return of QUO's investment excluding its revenue for the 10 years; 30 million represent less than that and reflect consideration of both QUO's tripling of the water tariff and Vadis' 30 expropriation as contributory faults.

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

BOOK VALUE BUT NO FLEXIBILITY AND UNREASONABLE INCREASE; ALREADY EXPLOITED FOR 10 YEARS THUS RETURN ON THE SUMS INVESTED PROBABLY ALREADY MADE

There is not enough information in the hypothetical to provide a rational estimate of the level of total damages that should be awarded or to answer the questions above with any degree of certainty. For example, one would need more details of the lease contract and its negotiation, the background laws and investment climate in Vadis, the interactions in 2008, the depreciation rates used in the DCF calculations, and relevant interest rate. Any award made on this level of information would not survive in an Ad Hoc Committee (if Vadis is party to the Washington Convention) or in enforcement proceedings under the New York Convention.

It would seem to me that $100 million in the circumstances is the most adequate amount of compensation.

80 DCF based on 100 USD

100 FMV of $100M (as (ii) but using Q's pre-riot tariff as base tariff);

Adjusted book value as base, part of riot costs and contributory fault as deductions. Compensation might also need to reflect investor's return on investment over the 10 year period.

The Tribunal's task is to assess the FMV of the expropriated investment immediately before the expropriation took place. An expropriation did take place.

I see no inherent difficulty with using DFC methodologies, provided they are applied carefully and sensibly.

I see no basis for diminishing the amount of compensation by reference to "equitable" principles. These are (critically) important, but must be reflected in the substantive standards of protection. If ITA is to retain credibility, it must provide awards produced according to law, not according to amorphous discretion. If the law is inadequate, it must be improved.

Here, the expected value of Q's investment over time will depend upon what tariffs were truly sustainable over time. Given the de facto monopoly of Q's water concession, this will, I believe, require some assumptions as to a fair return on Q's investment taking all relevant circumstances into account. There is no need for a tribunal to compensate Q on the basis of pure rent-taking behaviour. In other words, Q must be assumed to be operating as a responsible corporate citizen with a long-term interest in building and supporting a sustainable business. On the limited facts presented, I suspect a fair and sustainable tariff would be less than the immediate pre-riot tariff, but more than the immediate post-expropriation tariff.
APPENDIX 8 – RATINGS, COMMENTS AND QUANTUM ESTIMATE OF THE
BENCHMARK GROUP TO HYPOTHETICAL (CONTINUED)

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Estimate</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>41</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Given the circumstances, the investment's book value should be compensated, but not more. In particular, Q should not be able to benefit from the presumably only profit-driven tripling of rates. In other words, where investors provide non-substitutable public goods, they should be held to higher ethical standards than if they produced, say, iPads.

Although the relevant BIT provides for FMV, the compensation cannot be a punishment to the State. The facts seem to point out that the expropriation did not follow the classic requirements. However, factors such as the intent of the State, the economic conditions and the importance of water should be considered. Using the adjusted book value with a plus would probably achieve a fair result.

Fair market value of $100 million. There appears to be an insufficient track record for a DCF valuation of $300 million, based on the high tariff, to be applicable.

BIT: "compensation shall be ... equivalent to the fair market value of the expropriated investment immediately before the expropriation took place".

FMV of $100M (= pre-riot tariff) - $50M (invest over 10 years; Q determined tariff rate for 10 years and gained) = $50M % 2 (for Q's increase in tariff, which was turning water into a private good (need more facts to crystallise this)) = $25M - $7M (not costs, which was reasonably foreseeable by Q in increasing the tariffs) = $18M

60 minus contributory fault and taking into account the other international obligations, since investment was made and would upgrade the water system, that benefits Vadis.

adjusted book value of initial investment: I assumed that Q totally lost its pre-riot DCF value, minus the cost of the riots for the following reasons. First, the facts suggest that Q had a sufficient operating history (10 years) for a valid DCF analysis to be performed. Second, while the usual method when conducting a DCF analysis is to use the parameters as of the date of the expropriation (or the date on which the intended expropriation became known, whichever is earlier), here we are told that the higher tariff rates led not only to riots but also threatened the citizens' right of access to water by making the tariffs too expensive. Thus, using the high tariff rate as a base does not seem to comport with the need to take "all relevant risk factors judiciously into account", since the hypo suggests many people would not have been able to pay the higher tariff. Thus, it seems suspect that the DCF value under "judicious" assumptions would be three times the DCF value using the pre-riot tariff rates. In general, while it may sometimes be the case that a tribunal will need to consider an increased compensation award for behavior that is intended to unjustly enrich the state (and which in fact has that effect), in most cases I believe the state's expropriatory intent is irrelevant to the calculation of damages. Either way (good intent or bad), the state is obliged to pay FMV when it expropriates under a BIT. I found it a fair suggestion to reduce the compensation by the amount of damage suffered by the state in consequence of the riots, since the facts tell us these were "caused" by Q's actions and Q persisted in refusing to reverse its tariff hike when requested to do so. The facts also suggest that the consumers would have submitted to a lower tariff hike, since they ultimately ended up with tariffs higher than the pre-riot tariffs after the government seized control. There may be a need to make further adjustments here on account of the government's decision to deport Q's personnel. It is also not clear whether the expropriation was taken out in accordance with due process, per the requirements of Vadis' administrative and constitutional law. If these measures were arbitrary or unreasonable or did not comport with due process under the circumstances, then there would need to be an increase in the compensation in order to take account of the harms suffered by Q and its original investment (which is not clear from the facts of the case).
## APPENDIX 9 – RATINGS, COMMENTS AND QUANTUM ESTIMATE OF THE ARBITRATOR GROUP TO HYPOTHETICAL

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Estimation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>300</td>
<td>Close call. Were the riots politically instigated? Even if not, the government must live with its commitment that the operator can charge water tariffs at its discretion. The tribunal is not to rescue the government from a bad business/legal decision.</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>107,5</td>
<td>Adjusted book value plus investment - half the riot costs</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>150</td>
<td>DCF value of 100M using QUO's pre-riot tariff as base tariff minus 7M riot costs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>93</td>
<td>I assume the FMV by DCF method accounts for only tariff revenues and operating costs over the remainder of the 30-year lease, with appropriate discounting over time—i.e., the FMV of the 30-year lease, not the water system. It is not clear if the &quot;FMV&quot; also makes allowance for recovery of an appropriate portion of the $50 million investment by QUO, which should be part of the compensation award. But compensation by FMV should not include the $250 million loan from WB, which Vadis must pay in any event (unless lease with QUO provides otherwise).</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>50</td>
<td>Because the investment has operated for a considerable time before the expropriation, book value seems inappropriate. While fair market value based on DCF seems an appropriate model, use of the high tariff seems inappropriate because it caused widespread riots, a good indication that the high tariff was not economically sustainable. Having used the pre-riot tariff, however, it does not seem appropriate to discount further for the relatively low amount of costs associated with the riots.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>100</td>
<td>Assuming liability, the pre-riot rate seems appropriate. Political and perhaps economically doubtful whether QUO could have maintained the higher tariffs even if it had stayed in the country. There is probably also some degree of a &quot;split-the-baby&quot; instinct at work in my answer.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>300</td>
<td>The expropriation would have been legal, if accompanied by compensation. Only the failure to compensate made it illegal. In any event, there is not really any distinction in PIL between legal and illegal expropriation. The proper restitution in CIL is restituto ad integrum. So the applicable compensation standard in the BIT is not the same as CIL. However, it is likely that the the appropriate restitution in CIL would be identical as that set out in the BIT. The value of the company was at the water rates they legally introduced. States have the right in international law to expropriate. They have the right to regulate. They have the right to ensure their citizens have access to basic needs such as water. They must act in conformity with their international legal obligations. That includes providing the compensation required under the BIT.</td>
<td></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

BOOKS

BROWN, CHESTER & MILES, KATE, EVOLUTION IN INVESTMENT TREATY LAW AND ARBITRATION (2011).
CORDONIER SEGGER, MARIE-CLAIRE, GEHRING, MARKUS W. & NEWCOMBE, ANDREW, SUSTAINABLE DEVELOPMENT IN WORLD INVESTMENT LAW (2011).
DERAINS, YVES AND KREINDLER, RICHARD H. (Eds.), EVALUATION OF DAMAGES IN INTERNATIONAL ARBITRATION (2006).
MARBOE, IRMGARD, CALCULATION OF COMPENSATION AND DAMAGES IN INTERNATIONAL INVESTMENT LAW (2009).
MONTT, SANTIAGO, STATE LIABILITY IN INVESTMENT TREATY ARBITRATION: GLOBAL CONSTITUTIONAL AND ADMINISTRATIVE LAW IN THE BIT GENERATION (2009).
MUTHUCUMARASWAMY, SORNARAJAH, THE INTERNATIONAL LAW ON FOREIGN INVESTMENT (3rd ed. 2010).
RIPINSKY, SERGEY WITH KEVIN WILLIAMS, DAMAGES IN INTERNATIONAL INVESTMENT LAW (2008).
SAUVANT, KARL & SACHS, LISA (Eds), THE EFFECT OF TREATIES ON FOREIGN DIRECT INVESTMENT: BILATERAL INVESTMENT TREATIES, DOUBLE TAXATION TREATIES, AND INVESTMENT FLOWS (2009).
JOURNAL ARTICLES


**ONLINE RESOURCES**


