




Damages and ISDS Reform: Between Procedure and Substance

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ABSTRACT

Monetary damages is the ordinary remedy in investor-state dispute settlement (ISDS). As such, arbitral practice relating to damages has direct, practical relevance for states and investors. The size of damages awards is also amongst the core critiques of ISDS. It is somewhat surprising, then, that the issue of damages has not figured prominently in discussions on reform of investment treaties and the ISDS mechanism, including those currently underway in Working Group III of the United Nations Commission on International Trade Law (UNCITRAL). In this context, this article makes three contributions. First, it provides an overview of *empirical* trends in damages in ISDS. Secondly, it considers the extent to which tribunals' approaches to damages raise the sorts of *concerns* with ISDS identified by UNCITRAL Working Group III, focusing specifically on concerns of correctness, consistency, legal and expert costs, and independence and impartiality. Thirdly, it identifies a range of possible procedural and substantive *reform* options that might alleviate these concerns.

1. INTRODUCTION

The issue of damages has, so far, not been accorded a central place in the investment arbitration reform process at the United Nations Commission on International Trade Law (UNCITRAL). This approach is curious. The size of damages awards has been at the forefront of critiques of investment arbitration and concerns with the calculation of damages have many procedural dimensions, the primary focus of the reform process. In this paper, we therefore ask two questions: First, to what extent does the assessment of damages by Investor-State Dispute Settlement (ISDS) tribunals raise any of the six procedural *concerns*

that are central in Working Group III (WG III) and its work on ISDS reform? Second, are there *reforms*—whether procedural or substantive—that could alleviate these concerns?

In the decade-long legitimacy crisis that has engulfed the system of ISDS, the magnitude of compensation claimed and awarded has often been a lightning rod for critique. Some awards have attracted considerable attention: eg the 50 billion USD award against Russia in the three Yukos nationalization cases, the more recent 8.4 billion USD award in favour of the oil giant, ConocoPhillips, against Venezuela, and the 4 billion USD award against Pakistan for a mining project that never got off the ground.¹ More generally, concerns have been raised about the upward trends in the amount of damages awarded in ISDS cases over time²; and concerns that the methods for calculating damages used in ISDS are different than those used in other areas of international law.³ The result is a system that critics allege favours investor claimants and places considerable burdens on developing states.⁴

However, the issue of damages was not initially included in the reform process at UNCITRAL. At its 50th session in July 2017, member states of UNCITRAL entrusted its Working Group III (WG III) with a broad, open-ended, and problem-driven mandate to address the normative and sociological legitimacy of the current ISDS regime.⁵ The WG III identified six concerns to be addressed by the reform process: excessive legal costs; duration of proceedings; legal consistency in awards; decisional correctness; arbitral diversity; and arbitral independence and impartiality.⁶ Importantly, this mandate was limited seemingly to procedural reforms. This position—often articulated by the Chair of WG III—was grounded in legal reasoning (the mandate was focused on ISDS not treaties) and pragmatism (there are over 3500 treaties and state enthusiasm for a multilateral approach to substantive rather than procedural reform was limited). The result was that in seminal discussions of concerns in October 2018, the topic of damages was not broached.⁷ Damages were viewed presumptively as a matter of substantive treaty law, on the basis that compensation levels were determined primarily by the wording of investment treaties rather than the design and procedure of arbitration.

Nonetheless, damages emerged subsequently in the WG III discussions in two distinct ways. First, some states and observers contested the procedural carve-out for reform and the

¹ *Hulley Enterprises Limited (Cyprus) v Russian Federation*, PCA Case No AA 226, Final Award, 18 July 2015; *Yukos Universal Limited (Isle of Man) v The Russian Federation*, PCA Case No AA 227, Final Award, 18 July 2014; *Veteran Petroleum Limited (Cyprus) v Russian Federation*, PCA Case No AA 228, Final Award, 18 July 2014; *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan*, ICSID Case No ARB/12/1, Award, 12 July 2019, para 278; The 6 billion USD award against Nigeria for a gas processing facility that was never constructed is sometimes also mentioned in this regard: *Process and Industrial Developments Limited v Nigeria*, 2018 WL 2080765, Ad Hoc Arbitration, Final Award, 31 January 2017. However, it is important to acknowledge that this was a case of contract-based ISDS and that damages were determined through the application of Nigerian law, not international law.

² Rachel Wellhausen, 'Recent Trends in Investor-State Dispute Settlement' (2016) 7(1) *Journal of International Dispute Settlement* 117.

³ For example, the International Court of Justice has only awarded compensation on three occasions: *Corfu Channel case (United Kingdom of Great Britain and Northern Ireland v Albania)* Judgment of 15 December 1949, ICJ Reports 1949, 244; *Ahmadou Sadio Diallo (Republic of Guinea v Democratic Republic of the Congo)* Compensation, Judgment, ICJ Reports 2012, 324; and *Certain Activities carried out by Nicaragua in the Border Area (Costa Rica v Nicaragua)* Compensation, Judgment, ICJ Reports 2018, 15. The largest of these was £843,947 in *Corfu Channel*, which would be roughly USD 40 million in today's terms. In probably the most consequential decision of an international tribunal in the past decade—the *South China Sea Arbitration (The Republic of Philippines v The People's Republic of China)*, PCA Case No 2013-19—the Tribunal did not award any compensation despite finding multiple violations of UNCLOS by China. For other examples: Jonathan Bonnitcha and Sarah Brewin, 'Compensation under Investment Treaties' [2020] IISD Best Practices Series.

⁴ Vera Wegmann and David Hall, 'The Unsustainable Political Economy of Investor-State Dispute Settlement Mechanisms' 87 (2021) *International Review of Administrative Sciences* 1.

⁵ UNCITRAL, 'Report of the United Nations Commission on International Trade Law', Fiftieth session (Vienna, 3–21 July 2017), UN Doc No A/72/17, para 245. See also: UNCITRAL, 'Report of Working Group III (Investor-State Dispute Settlement Reform)', Thirty-fourth session (Vienna, 27 November–1 December 2017), UN Doc No A/CN.9/930/Rev.1.

⁶ UNCITRAL, 'Possible Reform of Investor-State Dispute Settlement (ISDS)', Thirty-sixth session (Vienna, 2 November 2018) UN Doc No A/CN.9/WG.III/WP.149.

⁷ UNCITRAL, Report of Working Group III (Investor-State Dispute Settlement Reform), Thirty-sixth session (Vienna, 29 October–2 November 2018), UN Doc No A/CN.9/964, para 28.

interpretation of the mandate. It was claimed that the core concerns with the system identified by WG III could not be addressed without accompanying substantive rule reform.⁸ For example, the South African government stated the ‘Working Group would not be fully discharging its mandate if discussions on the substantive reforms were excluded’.⁹ Some state delegates and scholars have argued that there is no consensus that substantive treaty reform is excluded legally under the mandate.¹⁰ These claims have not been accepted by the majority of states in WG III. Nonetheless, emerging proposals for reform architecture by both states and observers have focused on the need to include procedural mechanisms that facilitate substantive treaty reform.¹¹

Secondly, there has been a practical acknowledgment that the distinction between procedural and substantive matters can be illusory.¹² In the April 2019 UNCITRAL WG III session, under the banner of ‘other concerns’, a discussion on a number of themes that crossed the procedural-substantive divide took place, with damages being one of the discussed topics. The outcome of this session resulted in a statement that while ‘the focus of its work should be on the procedural aspects of ISDS’, WG III should take ‘due note of the interaction with underlying substantive standards’.¹³ In a subsequent session, delegates discussed the ‘determination of damages’ by arbitral tribunals and recognized that the ‘calculation’ of damages could fall under the procedural mandate.¹⁴ The summary report by the Chair reads accordingly:

[I]t was generally felt that concerns about incorrect calculation of damages by tribunals could be linked to other concerns, for example, concerns about incorrect decisions by arbitral tribunals and therefore, for the purposes of structuring the work, they could be considered as a sub-topic of those other concerns.¹⁵

This openness to damages as a procedural and substantive concern was strengthened and partly formalized in the October 2019 session. States such as Nigeria and Pakistan took to the floor to discuss the excessive levels of compensation in cases taken against them. Moreover, the issues of damages have been increasingly highlighted as an important sub-

⁸ See overview in Anthea Roberts and Taylor St John, ‘UNCITRAL and ISDS Reforms: Agenda-Widening and Paradigm-Shifting’ (*EJIL: Talk!*, 20 September 2019) <<https://www.ejiltalk.org/uncitral-and-isds-reforms-agenda-widening-and-paradigm-shifting/>> accessed 8 July 2021.

⁹ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WGIII/WP.176, Submission from the Government of South Africa, para 20.

¹⁰ For example, see the exchange of states in UNCITRAL, ‘Report of the United Nations Commission on International Trade Law’, Fiftieth session (Vienna, 3–21 July 2017), UN Doc No. A/72/17, para 257: ‘It was mentioned that work on investor-State dispute settlement reform should not be limited to procedural issues relating to investor-State dispute settlement but should encompass a broader discussion on the substantive aspects of international investment agreements, including but not limited to States’ right to regulate, fair and equitable treatment, expropriation and due process requirements.’ See discussion of legal interpretation of the mandate in Gus Van Harten, Jane Kelsey and David Schneiderman, ‘Phase 2 of the UNCITRAL ISDS Review: Why “Other Matters” Really Matter’ (2019) *Osgoode Legal Studies Research Paper 2* and Malcolm Langford, Gabrielle Kaufmann-Kohler, Michele Potestà and Daniel Behn, ‘UNCITRAL and Investment Arbitration Reform: Matching Concerns and Solutions – An Introduction’ (2020) 21(2–3) *Journal of World Investment and Trade* 167.

¹¹ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WGIII/WP.163, Submissions from the Governments of Chile, Israel and Japan, 2–3; UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WGIII/WP.162, Submission from the Government of Thailand, paras 28–29; UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WGIII/WP.161, Submission from the Government of Morocco, paras 1, 6–7, 34.

¹² Alessandri Arcuri and Federica Violi, ‘Human Rights and Investor-State Dispute Settlement: Changing (Almost) Everything, So that Everything Stays the Same?’ (2019) 3 *Diritti Umani e Diritto Internazionale* 579.

¹³ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-seventh session (New York, 1–5 April 2019), UN Doc No A/CN.9/970, paras 26–28.

¹⁴ *ibid* para 38. It was also noted that the ‘high amount of damages’ could contribute to regulatory chill, in which states were ‘discouraged States from undertaking measures aimed to regulate economic activities and to protect economic, social and environmental rights’; *ibid* para 36.

¹⁵ *ibid* para 38.

concern under various topics: for example, the claim that third party funding of ISDS claims exacerbates frivolous compensation claims.¹⁶ Again, the issue of ‘calculation’ of damages returned and many states have suggested ‘that it would be useful to carefully examine the phase when the tribunal calculated damages, evidentiary requirements, untested applicable accounting and financial standards, and the relationship with cost allocation.’¹⁷ Other states have made concrete reform suggestions. Indonesia proposed that there should be a ‘check-and-balances mechanism for claims, an established method for the valuation of businesses in accordance with internationally recognized standards in financial reporting, a code of conduct for arbitrators in appraising such valuation, and a mechanism to dismiss frivolous claims at an early stage.’¹⁸

The upshot of this procedural turn in the discussion on damages is the consensus that the WG III could, in a conditional manner, address explicitly the topic. States have asked formally the UNCITRAL Secretariat to ‘consider how possible work on damages could be undertaken in light of its limited resources and to inform the Working Group when such work could be undertaken’.¹⁹ However, as some states delegates have questioned whether ‘such matters would fall under the mandate of the Working Group to address procedural aspects of ISDS’, the Secretariat was asked to bear this in mind.²⁰

Since then, the Secretariat has worked on assessing on the concerns with damages with a focus on consistency and correctness, and, to a certain degree, possible reform options, as revealed in its 21 July 2021 initial concept paper.²¹ Our paper, prepared by Academic Forum members, seeks to make three contributions to the discussion and the emerging discussion on damages reform. It provides an overview of empirical trends, a scholarly attempt to address the issue of damages in ISDS in the context of the WG III process, asking whether damages raise any of the six identified *concerns* and what *reforms* might alleviate them, and a set of possible procedural and substantive reform options.

The article proceeds as follows. In Section 2, we examine statistically the general trends in damages awards. The predominant methods used to calculate damages in ISDS are briefly reviewed in Section 3. This provides important context for the analysis in Section 4, which addresses four of the six procedural concerns with ISDS as they relate to damages: consistency, correctness, legal costs, and independence and impartiality. This analysis demonstrates significant variation in approaches adopted by ISDS tribunals, highlights ongoing questions about correctness, and provides some insight into the scale of legal costs associated with the damages phase of ISDS proceedings. In Section 5, we examine reforms that could address these concerns and discuss their advantages and limitations. We begin with concrete procedural reforms to the damages phase that could be easily integrated in the proposed Multilateral Procedural Reform instrument and finish with proposals for substantive treaty reform.

2. TRENDS IN COMPENSATION AWARDS

Multiple studies across different periods suggest a rising trend in damages awards. For example, in 2007 Franck put the average award size for the period 1990 to May 2006 at USD 25

¹⁶ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-eighth session (Vienna, 14–18 October 2019), UN Doc No A/CN.9/1004, para 80.

¹⁷ *ibid* para 102.

¹⁸ Submission from the Government of Indonesia, A/CN.9/WG.III/WP.156, paras 8–9.

¹⁹ UNCITRAL (n 17) para 104.

²⁰ *ibid* para 102.

²¹ *Possible Reform of Investor-State Dispute Settlement (ISDS): Assessment of Damages and Compensation*, Note by the Secretariat, UNCITRAL, 21 July 2021 <https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/assessment_of_damages_and_compensation.pdf> accessed 8 July 2021, and on file.

million,²² which rose to USD 76 million for the period 1990 to 2012 according to Hodgson. In 2017, Hodgson and Campbell found that the average award size for the period 2013 to May 2017, excluding the *Yukos* cases, was USD 171 million.²³ (With a combined value of over USD 50 billion, the *Yukos* awards have a significant impact on average award size.) In 2021, Hodgson, Kryvoi and Hracka put the average award size for the period June 2017 to May 2020 at USD 315 million.²⁴

In this section, we present a comprehensive overview of the historical trends which shows that there has been a consistent trend towards larger damages awards in ISDS claims under investment treaties over time. However, before turning to this statistical overview, it is first necessary to say something about the challenges and choices that one confronts when compiling data on ISDS damages awards.

A. Methodology

All statistical studies involve choices and limitations. Here, we draw attention to four such issues that arise in compiling even the simplest statistics on ISDS damages awards. The purpose of drawing attention to these issues is both to explain the potential for divergence between studies, and to warn against the misleading impression of precision that the reporting of quantitative data can create. Statistics are useful in that they provide a *rough* sense of what is at stake in ISDS disputes.

First, there is the challenge of data collection. Despite recent reforms, some ISDS proceedings take place without the existence of the dispute being publicly reported. The outcome of such cases may subsequently become public knowledge at a much later stage—for example, as a result of enforcement proceedings through national courts—which means that statistics only reflects what is known at the time they were compiled.²⁵

Secondly, one must decide whether to count nominally distinct awards arising out of the same fact scenario as separate cases—for example, whether the three awards obtained by different shareholders in *Yukos* in 2014 should be recorded as a single case, or as three separate cases. Recording such awards as separate cases, as seems to be normal practice, suggests that states have suffered a larger number of ‘losses’ with a lower average award size.

Thirdly, there is the question of comparability across awards. The normal practice is to exclude post-award interest. But what about pre-award interest in cases where the date of valuation pre-dates the date of the final award? For simplicity, the data on the UNCTAD’s Investment Dispute Settlement Navigator seems to exclude pre-award interest where this is listed in the award as a distinct, additional sum to be paid on top of ‘damages’.²⁶ This practice avoids the need for more complex adjustments but understates the adjusted amount of damages (which can be significant) to which the investor would be entitled if the state paid up on the date of the award. Issues of comparability also arise in the choice of whether to use historic or current exchange rates when converting awards into a common currency, normally USD. The two datasets presented later in this section differ in this respect.

²² Susan Franck, ‘Empirically Evaluating Claims about Investment Treaty Arbitration’ (2007) 86 *North Carolina Law Review* 1, 17, 60.

²³ Matthew Hodgson and Alastair Campbell, ‘Damages and Costs in Investment Treaty Arbitration Revisited’ (14 December 2017) *Global Arbitration Review* 4.

²⁴ Matthew Hodgson, Yarik Kryvoi and Daniel Hracka, ‘2021 Empirical Study: Costs, Damages and Duration in Investor-State Arbitration’ (2021) *British Institute of International and Comparative Law* 1, 28. <<https://www.biicl.org/publications/empirical-study-costs-damages-and-duration-in-investor-state-arbitration>> accessed 8 July 2021.

²⁵ It has estimated that approximately 100 cases are missing: see Daniel Behn, Ole Kristian Fauchald and Malcolm Langford, ‘The International Investment Regime and Its Discontents’ in Daniel Behn, Ole Kristian Fauchald and Malcolm Langford (eds), *The Legitimacy of Investment Arbitration: Empirical Perspectives* (CUP 2021) 39–81.

²⁶ See *Novenergia II – Energy & Environment (SCA), SICAR v Kingdom of Spain*, SCC Case No 063/2015, Final Award, 15 February 2018, para 860, as reported in <<https://investmentpolicy.unctad.org/investment-dispute-settlement/cases/782/novenergia-v-spain>> accessed 8 July 2021.

Table 1. Median and average award size by decade— UNCTAD/ITALAW (nominal USD)

	Median award value (USD millions)	Average award value (USD millions)	Average award value excluding <i>Yukos</i> cases (USD millions)
Awards rendered 1990–99 (<i>n</i> = 6)	2.0	3.8	n/a
Awards rendered 2000–09 (<i>n</i> = 51)	16.7	67.1	n/a
Awards rendered 2010–19 (<i>n</i> = 142)	32.9	597.3	246.1

Fourth, should one include awards which were set aside or annulled? Excluding such cases provides a better sense of the eventual financial liability of the state, whereas including such cases provides a better sense of trends in the calculation of damages by tribunals in the first instance. The two datasets presented later also differ in this respect. The UNCTAD/ITALAW data does not include awards that have been finally set aside or annulled; whereas the PITAD database does. It should be noted that this difference is one driver of difference between the two studies: 35 of the 265 cases in the PITAD dataset were set aside or annulled.

Finally, a distinct choice arises in relation to how findings are reported—particularly, the question of whether emphasis is placed on the size of the average or the median award. In the context of ISDS, the average award is several times larger than the median award, due to a long tail of very large awards. Focusing on the median award gives a more accurate impression of a ‘typical’ case but fails to convey the real possibility of awards many hundreds of times larger than those in a ‘typical’ case and the actual burden on states. Average figures better communicate the reality that a significant minority of awards in ISDS are exceptionally large but can give a misleading impression of the size of a ‘normal’ or ‘typical’ case. We deal with this issue by reporting both figures.

B. UNCTAD/ITALAW Data

In this statistical overview, we report from two different datasets. We begin with Bonnitca and Brewin, who originally compiled data on all publicly known awards in treaty-based ISDS up through end of 2019 (recently supplemented up through November 2020 using publicly available data sources.²⁷ They identified 204 ISDS damages awards. Damages are presented in historical USD (which are nominal, not adjusted for inflation).

As Table 1 shows, six of these awards were rendered prior to 2000, 51 in the decade 2000–2009, and another 142 in the decade 2010–2019. Comparing the three periods gives a sense of the magnitude of the increase in awards over time. The nominal median increased by 97 per cent and the nominal mean by 790 per cent between the 2000–2009 period and 2010–2019 period, providing also a sense of how ISDS is functioning today. Excluding the *Yukos* awards from 2014 reveals an increase in the average by 267 per cent, providing a sense of how much these cases skew the data.²⁸ A further five awards from 2020 are not included

²⁷ Jonathan Bonnitca and Sarah Brewin, ‘Compensation under Investment Treaties’ [2020] IISD Best Practices Series, drawing on data from UNCTAD’s Investment Dispute Navigator and italaw.com

²⁸ The three *Yukos* cases from 2014 are: *Yukos Universal Limited (Isle of Man) v The Russian Federation*, PCA Case No AA 227, Final Award, 18 July 2014; *Hulley Enterprises Limited (Cyprus) v Russian Federation*, PCA Case No AA 226, Final Award, 18 July 2015; and *Veteran Petroleum Limited (Cyprus) v Russian Federation*, PCA Case No AA 228, Final Award, 18 July 2014. The combined value of the awards in these cases was slightly over USD 50 billion. The 2010 award of USD 3.5 million in

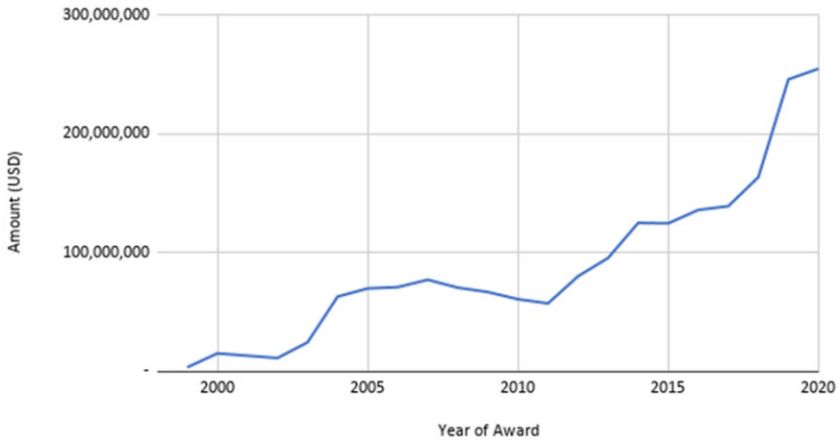


Figure 1. Historical 10-year averages (excluding *Yukos* cases). Figure based on Jonathan Bonnitca and Sarah Brewin, ‘Compensation under Investment Treaties: What are the problems and what can be done?’ (IISD 2020) <<https://www.iisd.org/system/files/2020-12/compensation-investment-treaties-en.pdf>> accessed 10 November 2021.

in [Table 1](#) but are reflected in the rolling average shown in [Figure 1](#)—which again shows the historical trend in nominal award values.

As a general conclusion, then, we can say that a median or ‘typical’ award of compensation/damages in ISDS remains in the range USD 10–100 million, even as the frequency of awards in the hundreds of millions and billions of USD increases (see [Figure 2](#) below). From 2010 to 2019, there were 43 awards over USD 100 million. Eleven of these awards exceeded USD 1 billion, only three of which were connected with the *Yukos* litigation.

C. PITAD Data

Similar but more muted trends can be observed in a second dataset, provided by Behn and Langford as part of the PluriCourts Investment Arbitration Database (PITAD). It covers the period up to May 2021 and includes 263 damages awards. This dataset is larger primarily due to the fact that it includes all treaty-based ISDS damages awards and all ICSID contract-based and FDI-law based awards. It also includes the 19 cases (excluded from the first dataset) where a violation was determined but no injury was found and thus no damages to award. Additionally, all damages awards include awards of pre-award interest in cases where that amount is not calculated in the award but is only given as a percentage. No post-award interest is included in any of the damages awards. Furthermore, all final damage awards have been adjusted to current USD values as at January 2021 to ensure comparability over time ([Table 2](#)).

As can be seen, expanding slightly the database and adjusting for inflation, the magnitude of the increase in the median and mean of damages awards is less over time as compared with the previous dataset. The rise in the median in the last two periods is 30 per cent and the mean is 188 per cent. Excluding the *Yukos* cases reveals only a 16 per cent increase in the averages. Looking more closely at the PITAD data, we see that the largest jump in award values occurred in the early 2000s and has steadily increased since then. This is apparent when we examine moving 10-year historical trends: see [Figure 3](#). The average award—

RosInvestCo UK Ltd v The Russian Federation, SCC Case No V079/2005, Final Award, 12 September 2010, which also relates to the *Yukos* company, is not excluded from our calculations in Section 2B.

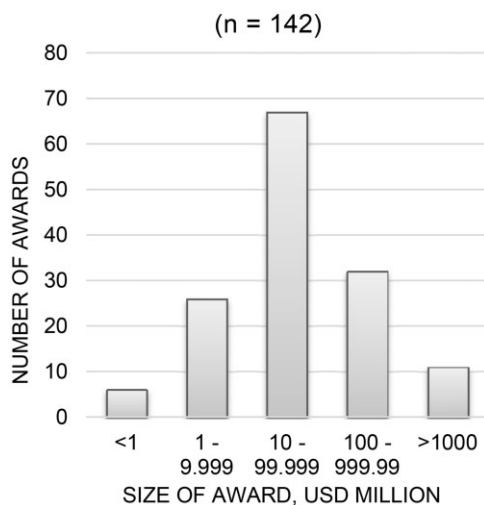


Figure 2. Distribution of Arbitral Awards 2010–19.

Table 2. Median and average award size by decade—PITAD (current 2021 USD)

	Median award value (USD millions)	Average award value (USD millions)	Average award value excluding <i>Yukos</i> cases (USD millions)
Awards rendered 1980–99 (<i>n</i> = 14)	4.2	11.5	n/a
Awards rendered 2000–09 (<i>n</i> = 73)	21.3	178.1	n/a
Awards rendered 2010–19 (<i>n</i> = 147)	27.8	513.7	207.6

looking back a decade at a point in time—stabilizes in 2005 at 148 USD million and by 2021 is 218 million USD. Including *Yukos* cases though increases this average to 482 million USD.

3. PREDOMINANT APPROACHES TO THE CALCULATION OF DAMAGES

Most investment treaties address explicitly the amount of compensation a state must pay in the event of expropriation of an investment, normally by reference to the standard of ‘fair market value’.²⁹ However, investment treaties rarely address the remedy that should be

²⁹ See, UK/Colombia: Bilateral Agreement for the Promotion and Protection of Investments [CS Colombia No.1/2014], art VI.3: ‘The compensation shall amount to the fair market value of the investment immediately before the expropriatory measures were adopted or immediately before the expropriatory measures became public knowledge, whichever is the earlier (hereinafter the “date of value”). For the sake of clarity, the date of value shall be applied to assess the compensation to be paid regardless of whether the criteria specified in paragraph 1 of this Article have been met’; Where a treaty refers to ‘genuine’, ‘actual’, ‘true’ or other value, tribunals normally interpret this to mean fair market value, see Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law* (2nd edn, OUP 2017) 28–9; Sergey Ripinsky and Kevin Williams, *Damages in International Investment Law* (BIICL 2008) 182, 183; Rudolf Dolzer and Christoph Schreuer, *Principles of International Investment Law* (2nd edn, OUP 2012) 100; Cf. José Alberro, ‘What Should the Standard of Compensation Be – Fair Market Value or Fair Value?’ (2017) 4 *Journal of Damages in International Arbitration* 1, 3.

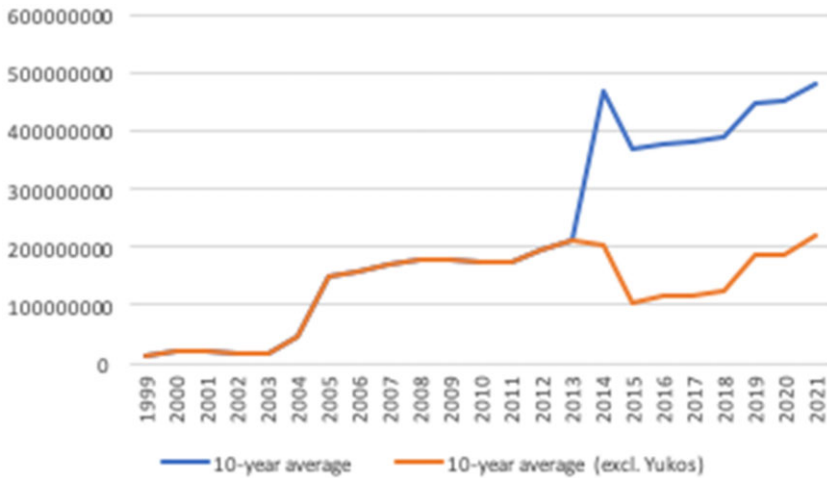


Figure 3. Historical 10-year averages—PITAD (current 2021 USD).

provided for breach of the treaties' other provisions,³⁰ or the amount of compensation/damages due if the expropriation of an investment is not carried out in accordance with the treaties' terms.³¹

In this context, tribunals have looked to principles of customary international law and, in particular, the Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA). According to Article 31 of ARSIWA, states are under a general obligation to provide 'full reparation' for internationally wrongful acts.³² More specifically, Article 36 of ARSIWA provides that:

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.

³⁰ Provisions dealing with compensation for losses due to war, insurrection, revolution, etc are on exception, see, eg the Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Republic of Argentina for the Promotion and Protection of Investments (11 December 1990), art 4.

³¹ Investment treaties normally set out mandatory criteria for carrying out of expropriations, these include that the expropriation is carried out in accordance with due process, along with the prompt payment of the fair market value compensation to which the investor is entitled, see, eg the Treaty Between the United States of America and the Republic of Turkey Concerning the Reciprocal Encouragement and Protection of Investments (3 December 1985), art III. As noted in Section 4A, there is a degree of inconsistency between ISDS tribunals as to whether the 'full market value' standard of compensation should be applied in the event of an 'unlawful' expropriation.

³² 'Articles on Responsibility of States for Internationally Wrongful Acts' *Yearbook of the International Law Commission 2001: Volume II Part 2* UN Doc A/CN.4/SER.A/2001/Add.1 (Part 2)

Article 31

Reparation

1. The responsible State is under an obligation to make full reparation of 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.

While the relevant Part of ARSIWA is specifically addressed to state–state—rather than investor–state—disputes,³³ tribunals have applied these principles by way of analogy to guide the calculation of damages in ISDS.³⁴

Investment treaties generally do not provide guidance on how these high-level principles governing compensation/damages should be operationalized in specific disputes. In response, tribunals have used a variety of different valuation techniques to calculate the amount owing to the investor.³⁵ The choice depends on a range of factors including, the facts of the dispute, the way the case is presented by legal counsel and expert witnesses, and tribunals' own views about the appropriateness of various techniques.³⁶

Valuation techniques can be divided in a number of different ways.³⁷ Here, we draw a common distinction between three different types of approaches. These different approaches are not mutually exclusive, in the sense that valuations arrived at by different methods can be used as a cross-check against one another.³⁸

A. Income-based Approaches

Income-based approaches 'convert anticipated economic benefits into a single present value amount'³⁹ and might refer to discounted cash flow (DCF) analysis, or adjusted present value and capitalized cash flow.³⁹ DCF is by far the most widely used income-based valuation method in ISDS. DCF is based on the premise that 'an income-producing asset's value is equal to the present value of its expected future cash flows'.⁴⁰ It uses projections of an investment's expected future cashflows (ie revenues minus costs) discounted to account for risks to that projected cash flow and the time value of money to derive an investment's value.⁴¹ The value of an investment implied by a DCF approach is sensitive to the assumptions and projections that are fed into the model as

³³ *ibid.*

Article 33

Scope of international obligations set out in this part

1. The obligations of the responsible State set out in this part may be owed to another State, to several States, or to the international community as a whole, depending in particular on the character and content of the international obligation and on the circumstances of the breach.
2. This part is without prejudice to any right, arising from the international responsibility of a State, which may accrue directly to any person or entity other than a State.

³⁴ For discussion, Martins Paparinskis, 'Investment Treaty Arbitration and the (New) Law of State Responsibility' (2013) 24 *European Journal of International Law* 617, 635–40; cf. *Gold Reserve Inc v Bolivarian Republic of Venezuela*, ICSID Case No ARB(AF)/09/1, Award, 22 September 2014, paras 678–80.

³⁵ Yarik Kryvoi, 'Part III: ICSID Arbitration Mechanism', in *International Centre for Settlement of Investment Disputes (ICSID)* (4th edn, Wolters Kluwer 2020), 'The decision on how to calculate damages normally rests with the tribunal unless a relevant treaty or contract provides otherwise. Tribunals employ various approaches to conduct this assessment'.

³⁶ Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law* (2nd edn, OUP 2017) 186.

³⁷ Another categorization distinguishes between 'forward' and 'backward' looking approaches. Under this categorization, most of the 'income-based' and 'market-based' approaches we discuss would be grouped together as 'forward-looking' approaches, in contrast to 'backward-looking' asset based approaches, see, Noah Rubins, Vasuda Sinha and Baxter Roberts, *Approaches to Valuation in Investment Treaty Arbitration* in Christina L. Beharry (eds), *Contemporary and Emerging Issues on the Law of Damages and Valuation in International Investment Arbitration* (Brill Nijhoff 2018) 169–204, 171.

³⁸ Mark Kantor, *Valuation for Arbitration: Compensation Standards, Valuation Methods and Expert Evidence* (Kluwer Law International 2008) 27; Thomas Wälde and Borzu Sabahi, 'Compensation, Damages and Valuation in International Investment Law' (2007) 4(6) *Transnational Dispute Management* 1, 14; *Crystallex International Corporation v Bolivarian Republic of Venezuela*, ICSID Case ARB(AF)/11/2, Award, 4 April 2016, paras 916–17.

³⁹ Mark Kantor, *Valuation for Arbitration: Compensation Standards, Valuation Methods and Expert Evidence* (Kluwer Law International 2008) 9, 10.

⁴⁰ Christina L Beharry, *Contemporary and Emerging Issues on the Law of Damages and Valuation in International Investment Arbitration* (Brill Nijhoff 2018) 186.

⁴¹ Rubins, Sinha and Roberts (n 37) 208, discounting takes into account factors such as political risk, industry risk, interest rates, liquidity risk and time value of money.

inputs—for example, minor changes in the discount rate can have a major impact on the supposed value of long-term investments.⁴²

For decades, international tribunals were reluctant to apply the income-based approach and rejected it because they considered that ‘prognoses about the future are inherently speculative’ and claimants and respondents could not properly be compared to buyers and sellers as in economic real life.⁴³ The Commentary to ARSIWA characterized DCF methods as based on ‘wider range of inherently speculative elements, some of which have a significant impact upon the outcome’.⁴⁴ One of the biggest changes in ISDS over the past two decades has been the increased use of DCF valuation methods, which the UNCITRAL Secretariat also underscores.⁴⁵ While use of DCF methods is common in ISDS nowadays, tribunals are still often cautious about adopting this approach in situations where an investment is not a going concern,⁴⁶ or where it has a limited operating history.⁴⁷

B. Market-based Approaches

Market-based approaches estimate an investment’s value by comparing ‘the business or business interest to similar businesses or business interests’⁴⁸ using information from established markets.⁴⁹

The value of a public-traded company may be assessed by market capitalization using the prices of its own shares in the stock market prior to the expropriation or relevant breach of the investment treaty. Advantages of this method are that it has based on historical data that can be relatively easily obtained and reflects perceptions of the value of the company by market actors. Challenges associated with this method include the difficulty in assessing damages when it is not clear when the government’s measures took place (as opposed to a situation where a specific measure was introduced unexpectedly at a specific point in time).⁵⁰

The comparable company’s method can be used when a company is privately held, and no current stock market price is available. In this case, the company can be compared with similar publicly traded companies. However, the comparison may be controversial if used in companies outside the natural resource sector; in the resource sector this method is considered ‘more reliable because the value of these companies or assets is driven largely by the volume, price, and quality of the underlying commodity’.⁵¹ There are also challenges in using this method to value companies engaged in projects in the natural resource sector that are still in the development phase. This is for several reasons, including uncertainty about the volume and quality of the underlying resource, the company’s cost structure and access to

⁴² The sensitivity to assumptions about future commodity prices that drive future revenue projections is another example, as illustrated in *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan*, ICSID Case No ARB/12/1, Award, 12 July 2019, paras 1518–21.

⁴³ *Marboe* (n 36) 207.

⁴⁴ ARSIWA (n 32), commentary to art 36, para 26.

⁴⁵ UNCITRAL (n 21) para 36.

⁴⁶ Kai F. Schumacher and Henner Klönne, ‘Discounted Cash Flow Method’ in Christina L Beharry (eds), *Contemporary and Emerging Issues on the Law of Damages and Valuation in International Investment Arbitration* (Brill Nijhoff 2018) 210–11, (A recent study found that in about one-third of the investment disputes analyzed where the DCF method was the primary quantification method proposed, the tribunal rejected the methodology based on the perception that the DCF-based damages were ‘too uncertain’ and/or ‘speculative’.)

⁴⁷ *Técnicas Medioambientales Tecmed, SA v United Mexican States*, ICSID Case No ARB(AF)/00/2, Award, 29 May 2003, paras 194–95; *Southern Pacific Properties (Middle East) Ltd v Arab Republic of Egypt*, ICSID Case No ARB/84/3, Award, 20 May 1992, paras 188–89; *Bilcon of Delaware et al v Government of Canada*, PCA Case No 2009-04, Award of damages, 10 January 2019, paras 277–78.

⁴⁸ *Kantor* (n 39) 9.

⁴⁹ *Marboe* (n 36) 170.

⁵⁰ This issue was analysed in *Rusoro Mining Ltd v Bolivarian Republic of Venezuela*, ICSID Case No ARB(AF)/12/5, Award, 22 August 2016, paras 752–57.

⁵¹ Rubins, Sinha and Roberts (n 37) 192.

financing, and access to liquid markets in which the project's output can be commercialized in comparable terms.

There is also the comparable transactions method, by which one estimates the value of an investment by examining transactions that occurred near the valuation date involving comparable assets or enterprises.⁵² A major challenge with this method is in finding sufficiently similar transactions to provide a basis for comparison. For this reason, the method is used rarely, although it is sometimes used as 'reality check' for valuations obtained by other methods. The method was, however, used in *Windstream Energy v Canada*.⁵³

C. Asset-based Approaches

Asset-based approaches rely on the book value or the replacement value of affected assets; the valuation of the affected investment is then the sum of the value of each of its assets and liabilities.⁵⁴ In the book value method, valuers will rely on the sums for the assets and liabilities provided on balance sheet. Book value might be adjusted by replacing some of the balance sheet sums, or all, with alternative assessment value. This could be described as the adjusted book approach. However, not all assets and liabilities reported on book value may reflect their historical costs which depends on the relevant accounting standards and its application. Despite this, the method is usually used when the company is not a going concern or is an early-stage project based on the sunk costs of the investment.

The costs incurred or sunk invested costs is an even simpler approach. It offers the advantage of relative certainty as expenditure that an investor has actually incurred will normally be clear and the method does not require forecasts or assumptions. A modified sunk-costs approach may be used assuming that the value of an investment will tend to increase over time.⁵⁵

4. CONCERNS WITH DAMAGES CALCULATIONS

A. Consistency

Ensuring consistency across awards is one of the six central concerns in the WG III investment arbitration reform process. A 'coherent and consistent ISDS regime' with 'predictable outcomes' would enhance 'confidence in the investment environment and legitimacy of the ISDS regime'.⁵⁶ State delegates have been at pains to emphasize that there were 'instances of unjustifiable inconsistency' due to differences in facts and underlying treaties.⁵⁷ Examples of inconsistency in award outcomes for similar facts and treaties have been traversed in WG III and scholarship.⁵⁸ However, inconsistency in damages awards has not been the subject of specific discussion in WG III.

At the level of abstract principle, there is a relatively high level of agreement across decisions concerning the basic principles governing damages in ISDS. As explained in Section 3, in the case of expropriation, most investment treaties either explicitly require compensation equal to the fair market value of the expropriated investment, or contain language that

⁵² *ibid* 193.

⁵³ *Windstream Energy LLC v The Government of Canada*, PCA Case No 2013-22, Award, 17 September 2016.

⁵⁴ Based on the International Valuation Standard, some experts claim that asset-based approach does not represent a valuation approach, such as the market, income and cost approaches, which are based on economic principles of price equilibrium, anticipation of benefits and substitution. See more comprehensively, Mark Bezant and David Rogers, 'Asset-Based Approach and Other Valuation Methodologies' in John A. Tenor (eds), *The Guide to Damages in International Arbitration* (2nd edn, Law Business Research Ltd 2017) 219–20.

⁵⁵ Rubins, Sinha and Roberts (n 37) 197.

⁵⁶ UNCITRAL (n 7) para 28.

⁵⁷ *ibid* para 40.

⁵⁸ Julian Arato, Chester Brown and Federico Ortino, 'Parsing and Managing Inconsistency in Investor-State Dispute Settlement' (2020) 21 *The Journal of World Investment and Trade* 627.

tribunals have interpreted as equivalent to the fair market value standard.⁵⁹ To determine the amount of damages owing for breach of investment treaties' other provisions, tribunals have generally applied the customary international law standard of 'full reparation'.

Significant concerns relating to consistency do arise, however, in the interpretation and application of these abstract principles in practice. One challenge in mapping the extent of such inconsistency is the variety of underlying factual scenarios in ISDS disputes. Such disputes relate to investments in different sectors in different host states; they arise from different forms of state interference with investments at different stages in their life cycle. These differences complicate comparisons between cases. For this reason, this section illustrates concerns around consistency in tribunals' approach to damages through a series of comparisons between otherwise similar cases. Each comparison points to a different dimension of inconsistency. The discussion here is not exhaustive. Other examples of inconsistency that might have been mentioned include:

- the debate about whether damages for an 'unlawful' expropriation should be calculated according to the fair market value standard (normally specified in the text of investment treaties' expropriation provisions) or the full reparation standard (derived from customary international law),⁶⁰
- the related controversy about the valuation date used to determine damages⁶¹; and
- tribunals' varied approaches to questions of causation, including the question of when a supervening event should be understood as breaking a chain of causation between the host state's breach of an investment treaty and a loss suffered by the investor.⁶²
- tribunals' inconsistent approaches to whether, and to what extent, States and investors can contract around treaty or customary damages rules—or the uncertainty attending them—by adopting specialized damages provisions in their investment contracts.⁶³
- variance in the approach to burden of proof in assessing different elements of the parties' damages claims.⁶⁴

⁵⁹ Eg *Compañía de Aguas del Aconquija and Vivendi Universal SA v Argentine Republic*, ICSID Case No ARB/97/3, Award, 20 August 2007 [8.2.10]; *Siemens AG v Argentine Republic*, ICSID Case No ARB/02/8, Award, 6 February 2007 [353].

⁶⁰ Compare *Guaracachi America, Inc and Rurelec PLC v The Plurinational State of Bolivia*, PCA Case No 2011-17, Award, 31 January 2014, paras 612–13, with *ADC Affiliate Limited and ADC & ADMC Management Limited v Republic of Hungary*, ICSID Case No ARB/03/16, Award, 2 October 2006, paras 481–83.

⁶¹ For discussion, see Steven Ratner, 'Compensation for Expropriation in a World of Investment Treaties: Beyond the Lawful/Unlawful Distinction' 111 (2017) *American Journal of International Law* 1.

⁶² Borzu Sabahi, *Compensation and Restitution in Investor-State Arbitration: Principles and Practice* (OUP 2011) 172–73, discussing *CME Czech Republic BV v The Czech Republic*, UNCITRAL, Partial Award, 13 September 2001, paras 580–85 and *Ronald S Lauder v The Czech Republic*, UNCITRAL, Final Award, 3 September 2001, para 235.

⁶³ Julian Arato, 'The Private Law Critique of International Investment Law' (2019) 113 *American Journal of International Law* 1, 22–24 (demonstrating how tribunals have, without much reasoning, fluctuated from viewing international damages as mere *default* rules which States and investors may contract around, to *sticky defaults* which can only be avoided through specific drafting exercises, to *mandatory rules* from which opt out is impossible), discussing, for example: *Venezuela Holdings BV and others v Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/27, Award, 9 October 2014, para 225 (finding that a contractual damages cap cannot opt out of the treaty-based rule); *Ioannis Kardassopoulos v Georgia*, ICSID Case Nos ARB/05/18 and ARB/07/15, Award, 3 March 2010, paras 480–81 (allowing that opt-out from the treaty-based FMV rule is possible, but that the default is very sticky—meaning there is a strong presumption against opt-out, which would require extremely clear language); and *Waguih Elie George Siag and Clorinda Vecchi v Arab Republic of Egypt*, ICSID Case No ARB/05/15, 1 June 2009, paras 577–84 (treating FMV as an ordinary default, which parties are free to contract around). Note that the tribunal's award in *Venezuela Holdings BV and others v Bolivarian Republic of Venezuela* was subsequently annulled on account of the tribunal's failure to address the relevance of contractual limitations on the investor's right to compensation on the investment's fair market value—ie the amount a willing buyer would have paid for the investment in an arm's length transaction: *Venezuela Holdings BV and others v Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/27, Decision on Annulment, 9 March 2017, para 184.

⁶⁴ UNCITRAL (n 21) paras 40–44. ('43. When addressing the standard of proof, common law systems usually apply the standard of the balance of probabilities, which requires that a claim is more likely to be true than not. By contrast, civil law systems apply the standard of the inner conviction of the adjudicator, which is sometimes argued to set higher standards than the common law standard of balance of probabilities. 44. In practice, tribunals have not adopted a unified approach but rather a variety of different standards of proof.')

A first dimension of inconsistency concerns tribunals' choice of valuation method. Investment treaties rarely provide guidance on the choice of valuation method, so the choice between valuation methods is generally within the discretion of arbitral tribunals.⁶⁵ This choice can lead to vastly different outcomes on the same facts. One example is the debate around the use of income-based valuation methods—and the discounted-cash flow (DCF) method in particular—to value early-stage investments with no established record of profitable operation. As a matter of international law, the traditional view is that the DCF method should not be used in such cases.⁶⁶

The practical implications of the choice of valuation method can be seen through a comparison of *Bear Creek v Peru* and *Tethyan Copper v Pakistan*. Both cases involved proposed mining projects that never proceeded beyond the planning stage. In both cases, this was because the host state refused to issue approvals or leases necessary for the projects to go ahead. In each case, the tribunal held that the state had indirectly expropriated the investor's investment and that damages should be based on the fair market value of the expropriated investment. In both cases, the investor argued that the investment should be valued using the DCF method. In *Tethyan Copper*, the investor sought USD 8.5 billion in damages plus interest on this basis; in *Bear Creek*, the investor sought USD 500 million plus interest. Despite these similarities, the tribunals in the two cases took different views about the appropriateness of the DCF method, leading to vastly different outcomes. In *Tethyan Copper*, the tribunal endorsed the use of DCF method and awarded USD 4.1 billion in damages (plus interest). In contrast, the tribunal in *Bear Creek* held that the proposed mine 'remained too speculative and uncertain' for the DCF method to be used.⁶⁷ The tribunal instead awarded USD 18.2 million in damages (plus interest) based on the amount actually invested by the investor.

One possible justification for this apparent discrepancy might be differences between the strength of the evidence led to support the use of the DCF method in this case. In particular, the tribunal in *Bear Creek* held that, given the extent of community opposition to the proposed mine, the investor had failed to prove that the mine would have been viable even if Peru had granted the approvals that it wrongfully withheld.⁶⁸ In contrast, in *Tethyan Copper*, the tribunal held that the project would have been viable if Pakistan had granted the lease that was wrongfully denied. However, if one delves deeper into the facts of the two cases, this justification for the inconsistency becomes difficult to sustain. There were many very significant obstacles facing the proposed mine in *Tethyan Copper*,⁶⁹ most obviously the fact that the commercial viability of the project would have required a further agreement between the investor and the Pakistani government governing the fiscal treatment of the investment,⁷⁰ and that Pakistan was under no legal obligation to conclude such an agreement with the investor, let alone to give the investor favourable fiscal treatment through any such agreement that might (hypothetically) have been negotiated.⁷¹ Instead, these cases are better seen as evincing different views about the appropriateness of the use of DCF method for valuing early-stage investments, given the high degree of uncertainty this exercise necessarily entails.

A second dimension of inconsistency relates to the way in which tribunals construct the counter-factual that is used as a point of reference in the damages calculation. Tribunals have

⁶⁵ For general discussion, see Marboe (n 36).

⁶⁶ ARSIWA (n 32) paras 26–27; General Counsel of the World Bank, *Legal Framework for the Treatment of Foreign Investment: Volume II* (World Bank 1992), 26.

⁶⁷ *Bear Creek Mining Corporation v Republic of Peru*, ICSID Case No ARB/14/21, Award, 30 November 2019, para 604.

⁶⁸ *ibid* para 599.

⁶⁹ The arbitral award devotes over 300 pages to discussing these potential obstacles, see *Tethyan* (n 42) 113–470.

⁷⁰ *ibid* para 402.

⁷¹ *ibid* para 407.

disagreed about the extent to which this counter-factual—ie the hypothetical ‘but for’ scenario that would have existed if the state had not breached the investment treaty—should reflect lawful regulatory changes that the host state would or could have made if it had not breached the investment treaty. This is an issue that straddles the merits-damages divide, as differences in the way the breach of the treaty is characterized by a tribunal at the merits stage will often have implications for the set of assumptions that underpin the ‘but for’ scenario.

Inconsistent approaches to this issue play out in different ways across different cases. The issue is illustrated most clearly by a comparison between substantially identical disputes arising from the changes to the tariff regime governing investment in Spain’s solar energy sector. In *Novenergia v Spain*, the tribunal held that Spain violated the investor’s legitimate expectations by radically altering the tariff regime governing the investment.⁷² While the tribunal recognized that the FET standard was not a guarantee that a state’s laws and regulations will never change, it accepted the investor’s argument that the appropriate ‘but for’ scenario was a hypothetical scenario in which the change in question had not been made and that the fore-going tariff regime had been maintained.⁷³ In contrast, in *RREEF v Spain*, the majority of the tribunal held that Spain violated the investor’s legitimate expectations by altering the tariff regime governing the investment in a way that failed to ensure a reasonable rate of return.⁷⁴ Accordingly, the appropriate ‘but for’ scenario was a hypothetical scenario that included reasonable modifications to the tariff regime. For this reason, the majority concluded that

the Claimants cannot claim full compensation for the total decrease in their profits as a result of the adoption of the new regime by the Respondent; they can only get compensation to the extent that such decrease is below the threshold of a reasonable return.⁷⁵

A third, closely related, dimension of inconsistency relates to accounting for other risks that the investment might have faced in the counter-factual that is used as a point of reference in the damages calculation. This dimension is illustrated by the well-known controversy relating to a series of disputes involving Venezuela. In a series of five awards rendered between September 2014 and March 2015, tribunals set the country risk premium associated with investment in Venezuela, ranging from 4 per cent (*Gold Reserve v Venezuela*) to 14.75 per cent (*Tidewater v Venezuela*). This led to the overall discount rates applied in these cases ranging from 10 per cent (*Gold Reserve v Venezuela*) to 24.5 per cent (*Tidewater v Venezuela*).⁷⁶ One of the reasons for the discrepancy was differences between tribunals as to whether the general risk of expropriation in Venezuela should be reflected in the country risk premium, given that this is a factor that a prudent investor would consider when making or acquiring an investment in Venezuela.

⁷² *ibid* para 695.

⁷³ *Novenergia II – Energy & Environment (SCA), SICAR v Kingdom of Spain*, SCC Case No 063/2015, Final Award, 15 February 2018, paras 805–43. To be clear, the tribunal in *Novenergia v Spain* included the detrimental effect of earlier measures on the investment—including a new, 7 per cent tax—in the ‘but for’ scenario, on the basis that these earlier measures did not breach the FET standard. The crucial point for our purposes, however, is that the ‘but for’ scenario was based on a hypothetical scenario that would have existed if the new ‘Specific Regime’ introduced by Royal Decree Law 9/2013 had not been adopted in July 2013. For discussion, see, Sergey Ripinsky, ‘Damages Assessment in the Spanish Renewable Energy Arbitrations: First Awards and Alternative Compensation Approach Proposal’ (2020) 2 *Transnational Dispute Management* 8.

⁷⁴ *RREEF Infrastructure (GP) Ltd and RREEF Pan-European Infrastructure Two Lux Sàrl v Kingdom of Spain*, ICSID Case No ARB/13/30, Decision on Responsibility and on the Principles of Quantum, 30 November 2018, para 398.

⁷⁵ *ibid* para 523.

⁷⁶ These figures are summarized in José Alberro, ‘Should Expropriation Risk Be Part of the Discount Rate?’ (2016) 33 *Journal of International Arbitration* 525, 547.

These cases have been extensively analysed in the academic literature.⁷⁷ Some commentators have argued that some of the apparent discrepancies between the cases can be explained by differences between them.⁷⁸ For example, *Tidewater v Venezuela* concerned a lawful expropriation, and the tribunal was at pains to ‘abid[e] by the definition of market value’, which included an allowance for expropriation risk within the country risk premium.⁷⁹ In contrast, *Gold Reserve v Venezuela* concerned a breach of the investment treaty.⁸⁰ However, even allowing for such differences between cases, considerable inconsistency remains. For example, focusing only on cases involving unlawful expropriation, the *Flughafen Zurich v Venezuela* tribunal partially excluded expropriation risk from the country risk premium,⁸¹ whereas the tribunal in *OI European Group v Venezuela* fully included expropriation risk.⁸²

A fourth dimension of inconsistency relates to the choice of interest rate. At the conceptual level, there is divergence between tribunals as to whether the chosen interest rate should be a risk-free rate, reflecting the fact that an arbitral award is not subject to any commercial risks during the period while interest compounds,⁸³ or a commercial rate equivalent to the interest the investor would have had to pay to borrow the equivalent funds while the award remains unpaid.⁸⁴ The expropriation provisions of some investment treaties specify that a commercial rate should be used but, outside this context, the question is left to the discretion of arbitral tribunals. To pick two extreme examples, in *NextEra Energy v Spain* the tribunal opted, in principle, for a risk free rate and selected the 5-year rate on Spanish sovereign bonds.⁸⁵ This gave an interest rate of 0.2 per cent.⁸⁶ In contrast, in *Funnekotter v Zimbabwe*, the tribunal awarded interest of 10 per cent, which it explained was based on the London Interbank Offered Rate (then about 1 per cent) plus an ad hoc adjustment for ‘political risk’.⁸⁷ Even among tribunals that use the same benchmark rate to determine interest, there is significant inconsistency in practice. For example, among tribunals that have used the EURIBOR benchmark rate, interest has been set at EURIBOR,⁸⁸ EURIBOR + 2 per cent,⁸⁹ and EURIBOR + 6 per cent.⁹⁰ These inconsistencies can have a deeply significant effect in practice, given that differences between interest rates compound over time.

⁷⁷ Markus Burgstaller and Jonathan Ketcheson, ‘Should Expropriation Risk Be Taken into Account in the Assessment of Damages?’ (2017) 32(1) *ICSID Review – Foreign Investment Law Journal* 193; Luis Bergolla, ‘The Venezuela Awards: Tribunals Should Not Rule Out Expropriation Risk’ (2016) 34(1) *Arizona Journal of International and Comparative Law* 123; Marcos D García Domínguez, ‘Calculating Damages in Investment Arbitration’ (2016) 34(1) *Arizona Journal of International and Comparative Law* 95.

⁷⁸ eg Alberro (n 76).

⁷⁹ *ibid* 540; *Tidewater Investment SRL and Tidewater Caribe, CA v Bolivarian Republic of Venezuela*, ICSID Case No ARB/10/5, Award, 13 March 2015, para 186.

⁸⁰ *Gold Reserve Inc v Bolivarian Republic of Venezuela*, ICSID Case No ARB(AF)/09/1, Award, 22 September 2014, para 615.

⁸¹ *Flughafen Zürich AG and Gestión e Ingeniería IDC SA v Bolivarian Republic of Venezuela*, ICSID Case No ARB/10/19, Laudo, 18 November 2014, para 905.

⁸² *OI European Group BV v Bolivarian Republic of Venezuela*, ICSID Case No Arb/11/25, Award, 10 March 2015, paras 773–83.

⁸³ *Eg NextEra Energy Global Holdings BV and NextEra Energy Spain Holdings BV v Kingdom of Spain*, ICSID Case No Arb/14/11, Decision on Jurisdiction, Liability and Quantum principles, 12 March 2019, paras 672–74.

⁸⁴ *Eg Tethyan* (n 42) para 1792.

⁸⁵ *NextEra Energy* (n 83) para 674.

⁸⁶ *NextEra Energy Global Holdings BV and NextEra Energy Spain Holdings BV v Kingdom of Spain*, ICSID Case No Arb/14/11, Award, 31 May 2019, para 37.

⁸⁷ *Bernardus Henricus Funnekotter and others v Republic of Zimbabwe*, ICSID Case No Arb/05/6, Award, 22 April 2009, para 143.

⁸⁸ *Les Laboratoires Servier, SAS, Biofarma, SAS and Arts et Techniques du Progres SAS v Republic of Poland*, UNCITRAL, Award (Redacted), 14 February 2012, para 663.

⁸⁹ *Hassan Awdi, Enterprise Business Consultants, Inc and Alfa El Corporation v Romania*, ICSID Case No ARB/10/13, Award, 2 March 2015, para 518.

⁹⁰ *UP (formerly Le Chèque Déjeuner) and CD Holding Internationale v Hungary*, ICSID Case No ARB/13/35, Award, 9 October 2018, para 599.

B. Correctness

Correctness has not gone unnoticed in the discussions at WGIII in UNCITRAL for the reform of ISDS.⁹¹ The existence of incorrect arbitral decisions⁹² and the limited mechanisms to ensure correctness⁹³ are on the agenda for the reform, as is the growing view that reforms should seek also to preclude the award of speculative and uncertain damages.⁹⁴ For the purposes of the following discussion, we put to one side errors in arithmetic in the calculation of damages⁹⁵ and related inconsistencies between the losses for which a tribunal decides damages should be awarded and the losses for which damages are awarded.⁹⁶ Such errors may have a significant impact on the parties and can be corrected through rectification processes. We focus instead on deeper concerns about the way in which ISDS tribunals have approached questions of damages.

Empirical research has revealed potential arbitrariness in the determination of damages, through the so-called practice of ‘splitting the baby’.⁹⁷ There is a concern that arbitrators might be using the investor’s initial damages claim as an envelope—an ‘anchor’ in behavioural psychology terms—and then make an ad hoc proportionate reduction that does not take account of the facts of the case or the strength of the damages calculations. Langford and Behn created a compensation ratio, for successful cases up to 1 August 2017, which compares the claim with the actual award.⁹⁸ It covered 148 cases out of 178 successful cases in which information on both amounts was available. While the ratio had a large amount of annual variation, it is largely stable over time at 39 per cent. That the ratio of damages claimed to damages awarded has remained relatively constant over decades, even as the amount of damages claimed has dramatically increased (in both median and average terms) and the range of valuation techniques being used has evolved, is consistent with an underlying tendency to splitting the baby.

This practice can also be perceived in particular cases, in *Tethyan Copper v Pakistan*, for example, the tribunal acknowledged a USD 10 billion discrepancy between the valuation of the investment implied by the investor’s forecasts of consistently rising gold prices over the next

⁹¹ UNCITRAL, ‘Report of Working Group III (Investor–State Dispute Settlement Reform) – Part I’, Thirty-fourth session (Vienna, 27 November–1 December 2017), UN Doc No A/CN.9/930/Rev.1, para 59; UNCITRAL, ‘Report of Working Group III (Investor–State Dispute Settlement Reform) – Part II’, Thirty-fourth session (Vienna, 27 November–1 December 2017), UN Doc No A/CN.9/930/Rev.1, para 29.

⁹² UNCITRAL (n 7) para 54.

⁹³ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-fourth session, (Vienna, 27 November–1 December 2017), A/CN.9/WG.III/WP.142, para 20.

⁹⁴ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WG.III/WP.180, Submission from the Government of Bahrain, 24 and UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WG.III/WP.181, Submission from the Government of Mali, 3.

⁹⁵ See *ConocoPhillips Petrozuata BV, ConocoPhillips Hamaca BV and ConocoPhillips Gulf of Paria BV v Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Decision on the rectification of the Award, 29 August 2019, where the respondent asked the tribunal to rectify the damages award in light of mathematical mistake of \$US227,100,863 against the respondent. The award was reduced by this amount after a summary exchange of memorials between the parties in the rectification proceedings.

⁹⁶ Errors based on damages not accepted by the tribunal were also made in *Infrastructure Services Luxembourg Sàrl and Energia Termosolar BV (formerly Antin Infrastructure Services Luxembourg Sàrl and Antin Energia Termosolar BV) v Kingdom of Spain*, ICSID Case No ARB/13/31, Rectification Award, 29 January 2019, The Tribunal declined to award to the claimant any historical losses arising prior June 2014 but it included those on its final Award, paras 667, 668, 674, 691. As requested by respondents, the tribunal corrected this error in the Rectification Award of 28 January, 2019, reducing damages by 11 million Euros.

⁹⁷ Malcolm Langford and Daniel Behn, ‘Managing Backlash: The Evolving Investment Arbitrator’ (2018) 29(2) European Journal of International Law 551, 568–69; Mark Kelman, Yuval Rottenstreich and Amos Tversky, ‘Context-Dependence in Legal Decision Making’ [1996] 25(2) Journal of Legal Studies 287; Sergio Puig, ‘Blinding International Justice’ [2016] 56(3) Virginia Journal of International Law 647, 661, 672–75; Sergio Puig and Anton Strezhev, ‘Testing Cognitive Bias: Experimental Approaches and Investment Arbitration’ in Daniel Behn, Ole Kristian Fauchald and Malcolm Langford (eds), *The Legitimacy of Investment Arbitration: Empirical Perspectives* (CUP 2021) 85.

⁹⁸ Malcolm Langford and Daniel Behn, ‘Managing Backlash: The Evolving Investment Arbitrator’ (2018) 29(2) European Journal of International Law 551, 568–69.

56 years and the valuation implied by the respondent's forecasts of relatively stable gold prices.⁹⁹ The tribunal accepted the investor's assumptions as the basis for the investment's valuation using the DCF method. It then applied an *ad hoc* adjustment to the valuation implied by the investor's forecasts, reducing this final amount by 25 per cent of the roughly USD 10 billion differences between the two valuations.¹⁰⁰ (In this regard, it is important to highlight that *ad hoc* adjustment of a final valuation figure will often lead to a substantially different result than apparently similar adjustments to the inputs to a DCF model—eg a reduction to the investor's predicted trajectory of future gold prices by 25 per cent of the difference between the investor's and the respondent's assumed price trajectories.)

Another concern among states is ISDS tribunals' choice and use of valuation techniques, which is said to be 'a factor contributing to the increase in compensation under investment treaties'.¹⁰¹ While this view seems to be widely shared, particularly among developing states participating in the WG III process, there are different views about whether this concern raises issues of correctness as such. On the one hand, Indonesia suggests that the use of inappropriate valuation techniques creates a risk of 'monumental economic mistakes and [that] states are often the ones paying the price for such mistakes'.¹⁰² On the other hand, Burkina Faso has observed that the current system 'does not rule out the possibility of vast differences between the amounts invested and the amounts awarded as compensation. Those differences arise from the rules governing compensation'.¹⁰³ The latter view characterizes concerns about damages as raising more foundational issues with the rules governing compensation,¹⁰⁴ rather than concerns that existing rules are being interpreted and applied incorrectly.

The lack of textual guidance on damages and valuation techniques in investment treaties creates a challenge in determining whether existing approaches to damages are 'correct'.¹⁰⁵ One point of reference is the Commentary to ARSIWA. The Commentary explains that the DCF should be used rarely and with caution:

The discounted cash flow (DCF) method has gained some favour, especially in the context of calculations involving income over a limited duration, as in the case of wasting assets. Although developed as a tool for assessing commercial value, it can also be useful in the context of calculating value for compensation purposes. But difficulties can arise in the application of the DCF method to establish capital value in the compensation context. The method analyses a wide range of inherently speculative elements, some of which have a significant impact upon the outcome (e.g. discount rates, currency fluctuations, inflation figures, commodity prices, interest rates and other commercial risks). This has led tribunals to adopt a cautious approach to the use of the method. Hence, although income-based methods have been accepted in principle, there has been a decided preference for asset-based methods.¹⁰⁶

⁹⁹ *Tethyan* (n 42) paras 1506–21.

¹⁰⁰ *ibid* para 1521.

¹⁰¹ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-ninth session, (Vienna, 5–9 October 2020), A/CN.9/WGIII/WP.199, Submission from the Government of Burkina Faso, para 8.

¹⁰² UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-seventh session, (New York, 1–5 April 2019), A/CN.9/WGIII/WP.156, Submission from the Government of Indonesia, para 8.

¹⁰³ UNCITRAL (n 101) para 7.

¹⁰⁴ Cf Marzal, who characterizes concerns as relating to the 'questionable assumptions' on which existing valuation practices are built, Toni Marzal, 'Quantum (In)Justice: Rethinking the Calculation of Quantum and Damages in ISDS' (2021) 22 *Journal of World Investment and Trade* 249, 253.

¹⁰⁵ Similarly, 'Rules in IIAs often are expressed in open-textured terms, Article 31 of the Vienna Convention on the Law of Treaties considers a number of factors that might result in similar or even identical provisions in two different treaties might be applied differently, identifying applicable law under IIAs and content of customary international law rules, among other'. Anna De Luca and others, 'Responding to Incorrect Decision-Making in Investor-State Dispute Settlement: Policy Options' (2020) 21(2–3) *Journal of World Investment and Trade* 374, 377.

¹⁰⁶ ARSIWA (n 32).

The commentary goes on to explain:

lost profits have not been as commonly awarded in practice as compensation for accrued losses. Tribunals have been reluctant to provide compensation for claims with inherently speculative elements. When compared with tangible assets, profits (and intangible assets which are income-based) are relatively vulnerable to commercial and political risks, and increasingly so the further into the future projections are made. In cases where lost future profits have been awarded, it has been where an anticipated income stream has attained sufficient attributes to be considered a legally protected interest of sufficient certainty to be compensable. This has normally been achieved by virtue of contractual arrangements or, in some cases, a well-established history of dealings.¹⁰⁷

If one accepts that this commentary remains a correct statement of customary international law, it seems to follow that at least some ISDS awards are not correct, such as those that use the DCF method to value investments that are still in the early stages of planning and in relation to which the investor has no contractual entitlement to a specified future revenue stream. For example, the approach to compensation in *Tethyan Copper v Pakistan*, discussed in Section 4A is plainly inconsistent with the more cautious approach to the use of income-based valuation techniques embodied in the Commentary to ARSIWA.

Concerns about correctness relate not just to the *choice* of valuation technique but also to a range of more technical issues that arise in the *application* of particular valuation techniques to the facts of a case. For example, a key step in valuing damages using the DCF method is the construction of a future counter-factual 'but for' scenario, which then provides the basis for estimates of the future net cashflows an investment would have generated if the host state had not breached the investment treaty. However, in constructing such a scenario (or adopting such a scenario on the basis of expert evidence presented by the parties), a tribunal necessarily makes a set of assumptions about the regulatory environment that would have existed in the host state.

To return to the example of *Tethyan Copper v Pakistan*, at the time that the investor was refused the mining lease, the investor had not yet concluded a Mineral Agreement with Pakistan dealing with issues such as the rates of royalties applied to the project. As such, even if Pakistan had complied with its obligations under the investment treaty to issue the mining lease required for the project to proceed, there was still an open question as to the fiscal terms on which the project would have proceeded. The tribunal treated this uncertainty about the regulatory arrangements that would have governed the project as a question of *fact*. It endorsed the view of the investor's expert witness that in a future, hypothetical scenario in which Pakistan had issued the investor the mining lease it would also likely have concluded a Mineral Agreement with the investor on terms that were favourable to the investor.¹⁰⁸ In approaching the question in this way, the tribunal was arguably incorrect as a matter of *law*.¹⁰⁹ In a hypothetical future in which Pakistan had not breached the investment treaty, it would nevertheless have retained a very wide margin of discretion under both international and Pakistani law to set the fiscal terms governing the project.¹¹⁰ The tribunal's construction of the counter-factual in this case is difficult to reconcile with the view that, in

¹⁰⁷ *ibid* para 27.

¹⁰⁸ *Tethyan* (n 42) paras 415, 418–31; similarly *Perenco Ecuador Limited v Republic of Ecuador*, ICSID Case No ARB/08/6, Award, 27 September 2019, paras 207–12. This part of the award was subsequently annulled in *Perenco Ecuador Limited v Republic of Ecuador (Petroecuador)*, ICSID Case No ARB/08/6, Decision on Annulment, 8 May 2021, para 467.

¹⁰⁹ Compare the tribunal's approach, for example, to the extract from ARSIWA (n 32) para 27, quoted above,

¹¹⁰ Similarly, Marzal (n 104) 306–7.

order to be compensable, expectations of future income must constitute a ‘legally protected interest of sufficient certainty’.¹¹¹

A related concern is whether estimates of future net cashflows in the ‘but for’ scenario meet the standard of ‘sufficient certainty’ to justify the award of damages.¹¹² For example, in *ConocoPhillips v Venezuela*, the tribunal grappled with the fact that the productivity of oil fields declines dramatically towards the end of their operating life span, raising questions about the length of time a field would have been able to continue profitable operation in a hypothetical ‘but for’ scenario. More specifically, considering the period beyond the two fields’ respective expected productivity ‘cliffs’, the tribunal acknowledged that:

The available volumes until the end of the concessions’ lifetime are difficult to ascertain on a reasonably certain basis. The numbers provided by the experts are not supported by testimony or actual documentary evidence.¹¹³

Nevertheless, the tribunal assumed that in, a counter-factual ‘but for’ scenario, production would still be profitable, albeit at a reduced level, for several years beyond the fields’ respective productivity cliffs.¹¹⁴

A wider conception of correctness relates to the quality of reasoning of awards.¹¹⁵ The challenge in assessing this concern is that investment treaties do not provide a benchmark against which the quality of tribunals’ reasoning on damages can be assessed. Nor have states provided authoritative guidance as to the way that ISDS tribunals should organize the damages inquiry. In this context, so long as a tribunal has stated *some* intelligible reasons, discussion about the quality of the reasoning often ends up reverting to discussion of the correctness of the various competing approaches reviewed in Section 4A on Consistency.

In annulment proceedings within the ICSID system, ad hoc Committees have generally focused on whether ISDS tribunals have provided reasons to support their conclusions on damages:¹¹⁶ ‘the correctness of the reasoning or whether it is convincing is not relevant’.¹¹⁷ This is consistent with ad hoc Committees’ general approach to Article 52(1)(e) of the ICSID Convention.¹¹⁸ In the case of damages specifically, it also reflects the lack of textual guidance on damages and valuation techniques in investment treaties, and the related perception that tribunals have broad discretion in this regard.¹¹⁹ Questioning the arbitrator’s

¹¹¹ ARSIWA (n 32) para 27, emphasis added.

¹¹² *ibid.*

¹¹³ *ConocoPhillips* (n 95) para 518.

¹¹⁴ *ibid* para 518.

¹¹⁵ Wolfgang Alschner, ‘Correctness of Investment Awards: Why Wrong Decisions Don’t Die’ (2020) 18 *The Law & Practice of International Courts and Tribunals* 345, 345 ‘Correctness, in turn, relates to the substantive quality of arbitrator’s reasoning and the accuracy of outcomes’; Wolfgang Alschner, ‘Ensuring Correctness or Promoting Consistency? Tracking Policy Priorities in Investment Arbitration through Large-scale Citation Analysis’ in Daniel Behn, Ole Kristan Fauchald and Malcolm Langford (eds), *The Legitimacy of Investment Arbitration: Empirical Perspectives* (CUP 2021) 230.

¹¹⁶ The State claimed that the Tribunal failed to state its reasons in calculating the quantum of the damages awarded, but the ad-hoc committee said that Award was abundant in its reasoning as regards matters related to the calculation of damages. *OI European Group BV v Bolivarian Republic of Venezuela*, ICSID Case No ARB/11/25, Decision on Application for Annulment, 6 December 2018, para 356.

¹¹⁷ *ibid* para 316.

¹¹⁸ ‘In the Committee’s view, the requirement to state reasons is satisfied as long as the award enables one to follow how the tribunal proceeded from Point A. to Point B. and eventually to its conclusion, even if it made an error of fact or of law’. *Maritime International Nominees Establishment v Republic of Guinea*, ICSID Case No ARB/84/4, Decision of the Ad hoc Annulment Committee, 22 December 1989, para 509; *Wena Hotels Limited v Arab Republic of Egypt*, ICSID Case No ARB/98/4, Decision on Annulment, 5 February 2002, para 91; *Azurix Corp v Argentine Republic*, ICSID Case No ARB/01/12, Decision on Annulment, 1 September 2009, para 36.

¹¹⁹ ‘The estimation of damages is not an exact science. It is of the essence of such an exercise that the tribunal has a measure of discretion, since the final figure must of its nature be an approximation of the claimant’s loss. There may in that context be real limitations on the extent of reasoning which can reasonably be expected’, *Rumeli Telekom AS and Telsim Mobil Telekomunikasyon Hizmetleri AS v Republic of Kazakhstan*, ICSID Case No ARB/05/16, Decision of the ad hoc Committee, 25 March 2010, para 179(5); *Gold Reserve* (n 80) para 686.

discretion and the reasons within that margin of action for their chosen and application of the methodology to assess the loss do not form part of the causes of annulment for the award in the ICSID system. Only those errors that are manifest provide a basis for correction;¹²⁰ and only the absence of reasons provides a basis for annulment.¹²¹

The recent decision of the ad hoc Committee in *Perenco v Ecuador* provides a useful illustration. The Annulment Committee largely upheld the award, explaining that ‘To meet the duty of stating the reasons for its decisions [in relation to damages], an arbitral tribunal need not reveal or explain each mathematical calculation that supports its conclusions.’ However, tribunals must show the premises leading to their conclusion.¹²² The ad hoc Committee went on to uphold most of the tribunal’s award as it related to damages. It did, however, annul the part of the award that dealt with the valuation of Perenco’s loss of an opportunity to have its contract extended. The tribunal had acknowledged the problems with the comparative scenarios that Perenco had put forward, before setting damages for this head of loss at a nominal value of USD 25 million (an amount considerably less than the investor had argued for). In annulling this part of the award, the ad hoc Committee observed that ‘[n]o explanation whatsoever is given as to what is the concept of a nominal value or the reason to award a nominal value [of USD 25 million] as opposed to any other value.’¹²³

C. Legal and Expert Costs Associated with Determination of Damages

After a period of sharp increases, the legal and expert costs associated with ISDS seem to have plateaued over the past four years.¹²⁴ However, there is anecdotal evidence that the increasing complexity of the quantum phase of ISDS proceedings and the increase in the average size of awards is driving up the portion of costs that are specifically associated with the quantum phase of proceedings. Most arbitral awards do not disaggregate costs by phase of proceedings, which poses a challenge to research on this question. One exception is the award in *Tethyan Copper v Pakistan*. In that case, the claimant spent USD 22 million on legal fees and financial experts associated with the quantum phase of proceedings.¹²⁵ Pakistan spent almost USD 10 million associated with the quantum phase.¹²⁶

To be sure, *Tethyan Copper* is an outlier, given that the costs associated with the quantum phase in that case are substantially higher than the average costs of the entire arbitral proceedings for cases concluded in the period 2013–May 2017.¹²⁷ This is an important area for further research.

D. Independence and Impartiality—Conflict of Interests

In recent years, concerns have also emerged about independence and impartiality of the ISDS process as it relates to calculation of damages. In particular, concerns have been raised about the potential for conflicts of interests between arbitrators and the expert witnesses, such as valuation experts, that are heavily involved in the damages phase of ISDS proceedings. These concerns relate to the wider practice of ‘double-hatting’ in ISDS, whereby some arbitrators also act as counsel or expert witnesses in other ISDS disputes and a few damages

¹²⁰ See *ConocoPhillips* (n 95).

¹²¹ See: *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador*, ICSID Case No ARB/06/11, Decision on Annulment, 2 November 2015.

¹²² *Perenco Ecuador Limited v Republic of Ecuador (Petroecuador)*, ICSID Case No ARB/08/6, Decision on Annulment, 8 May 2021, para 367.

¹²³ *ibid* para 466.

¹²⁴ Hodgson, Kryvoi and Hracka (n 24) 10.

¹²⁵ *Tethyan* (n 42) para 1824.

¹²⁶ *ibid* para 1831.

¹²⁷ Hodgson and Campbell (n 23), Hodgson and Campbell put average party costs over this period at USD 7.4 million for claimants and USD 5.2 million for respondents.

experts dominate.¹²⁸ Legally, these concerns tend to result in challenges to *arbitrators* on the grounds of lack of impartiality, rather than challenges to the involvement of the expert witnesses on the grounds of partiality,¹²⁹ as ISDS lacks a procedural framework to regulate the independence of expert witnesses.

These concerns are illustrated by three recent challenges to Stanimir Alexandrov in cases in which he was acting as an arbitrator. Dr Alexandrov was previously a partner at the law firm Sidley Austin, in which capacity he acted as counsel in various ISDS disputes. All three challenges relate to his professional association with the Brattle Group, an economic consultancy that regularly provides valuation evidence in ISDS disputes. Of the three challenges, only the ICSID Annulment Committee's decision in *Eiser v Spain* is publicly available. However, that decision discusses earlier challenges in *Tethyan Copper v Pakistan* and *SolEs Badajoz v Spain*, shedding some light on those decisions.

In the *Eiser v Spain* annulment proceedings, Spain argued that Dr Alexandrov's undisclosed professional association with the Brattle Group meant that he lacked the requisite impartiality to serve as an arbitrator. The Annulment Committee agreed that a lack of impartiality on the part of the arbitrator could provide a basis for the annulment of an award under Article 52(1)(a) and Article 52(1)(d) of the ICSID Convention.¹³⁰ The decisive question for the Annulment Committee was whether 'a third party would find that there is an evident or obvious lack of impartiality or independence based on a reasonable evaluation of the facts.'¹³¹

The Annulment Committee observed that it was uncontested that there were at least eight cases in 'which Dr Alexandrov was engaged as counsel by the party that engaged the Brattle Group as its expert'.¹³² Two of these cases overlapped with the *Eiser* arbitration and in one of these two cases the Brattle Group's testifying expert was Mr Lapuerta, who was also the testifying expert in the *Eiser* arbitration.¹³³ In other words, Dr Alexandrov was evaluating the evidence of the Brattle Group and Mr Lapuerta in *Eiser v Spain* while simultaneously working with the Brattle Group as counsel in other ISDS disputes. There were also other connections between Dr Alexandrov and the Brattle Group, including four cases (in addition to *Eiser*, itself) in which Dr Alexandrov had been appointed as an arbitrator by a disputing party that also engaged the Brattle Group as an expert witness. On this basis, the Annulment Committee concluded 'that to an independent third party observer, based on an objective assessment of all the facts, it would be manifestly apparent that Dr. Alexandrov lacked impartiality'.¹³⁴

¹²⁸ See the statistical analysis in: Malcolm Langford, Daniel Behn and Runar Lie, 'The Revolving Door in International Investment Arbitration' (2017) 20(2) *Journal of International Economic Law* 301.

¹²⁹ Cf the investor's unsuccessful attempt to exclude Venezuela's valuation expert, on the grounds that the expert had earlier been in discussions with the investor's lawyers about being engaged as an expert by the investor in the same arbitration and that, in the course of those discussions, the investor's lawyers had shared documents relating to the investment: *Flughafen Zürich AG and Gestión e Ingeniería IDC SA v Bolivarian Republic of Venezuela*, Decision sobre la inhabilitación del Sr. Ricover como experto en este procedimiento, sobre la exclusión del Informe Ricover-Winograd y sobre la Petición Documental, 29 August 2012, para 46.

¹³⁰ *Eiser Infrastructure Limited and Energía Solar Luxembourg Sà rl v Kingdom of Spain*, ICSID Case No Arb/13/36, Annulment Proceeding, 11 June 2020, paras 167–68, 238–42. Art 52(1) of the ICSID Convention reads as follows:

(1) Either party may request annulment of the award by an application in writing addressed to the Secretary-General on one or more of the following grounds:

(a) that the Tribunal was not properly constituted; . . .

(d) that there has been a serious departure from a fundamental rule of procedure;

¹³¹ *Ibid* para 199, citing, *inter alia*, *Suez, Sociedad General de Aguas de Barcelona SA and others v Argentine Republic*, ICSID Case Nos ARB/03/19 and ARB/03/17, Decision on the Proposal for the Disqualification of a Member of the Arbitral, 22 October 2007, para 41.

¹³² *Ibid* para 205.

¹³³ *Ibid*.

¹³⁴ *Ibid* para 240.

In the course of its reasoning, the *Eiser* Annulment Committee discussed two earlier decisions in which states had unsuccessfully sought to disqualify Dr Alexandrov as an arbitrator on account of his associations with the Brattle Group. Both cases involved attempts to disqualify Dr Alexandrov during the course of the arbitration, rather than attempts to annul the award following the conclusion of proceedings, so were resolved through a different process to the annulment proceedings in *Eiser*. Although these two decisions on disqualification are not publicly available, it seems that they were made available to the Committee by the disputing parties.

In *Tethyan Copper v Pakistan*, the two unchallenged arbitrators decided that Dr Alexandrov should not be disqualified, having obtained an Opinion from the Secretary-General of the Permanent Court of Arbitration to that effect. The *Eiser* Annulment Committee distinguished the decision in *Tethyan Copper v Pakistan* on the basis that the other two arbitrators in that case were aware of Alexandrov's association with Brattle and also on the questionable assumption that there were no interactions between Dr Alexandrov in his capacity as counsel and the Brattle Group that were concurrent with his role as arbitrator in *Tethyan Copper*.¹³⁵ In *SolEs Badajoz*, the two unchallenged arbitrators were divided on whether Dr Alexandrov should be disqualified and Dr Alexandrov subsequently resigned.¹³⁶ The *Eiser* Annulment Committee also sought to distinguish this fact scenario as 'Dr. Alexandrov was not simultaneously acting, as counsel, with Mr. Lapuerta, as damages expert.'¹³⁷

5. POSSIBLE REFORM OPTIONS

A. Procedural

The UNCITRAL WG III reform process has demonstrated that procedural concerns with investment arbitration are numerous. Issues that at first blush appear substantive often have a procedural dimension and/or solution. The issues of damages calculation is no exception: It is possible to identify at least four ways in which changes to the adjudicative process may increase the sociological and normative legitimacy of damages calculations.

The first concerns the competences of adjudicators to calculate damages, whether arbitrators or judges in a proposed Multilateral Investment Court. The neglect of certain competences in appointment processes in ISDS has been a focus of the WG III process. This applies particularly to knowledge and experience in public international law, which is viewed as addressing challenges with correctness in ISDS awards.¹³⁸ However, calculation of damages has also briefly featured as this summary of the discussion by the UNCITRAL Secretariat indicates:

Regarding competence, it was generally felt that ISDS tribunal members should be cognizant of public international law, international trade and investment law. It was said that consideration could be given to expertise in private international law. It was further suggested that they should have an understanding of the different policies underlying investment, of issues of sustainable development, of how to handle ISDS cases and of how governments operated. In addition, it was mentioned that specific knowledge might be required with regard to the dispute at hand, for example, industry-specific knowledge, knowledge of the relevant domestic legal system and *calculation of damages*.¹³⁹

¹³⁵ *ibid* paras 21–213.

¹³⁶ *SolEs Badajoz GmbH v. Kingdom of Spain*, ICSID Case No ARB/15/38, Award, 31 July 2019, paras 39–41.

¹³⁷ *Eiser* (n 130) para 216, emphasis in original.

¹³⁸ De Luca and others (n 105).

¹³⁹ UNCITRAL, Report of Working Group III (Investor–State Dispute Settlement Reform), Thirty-eighth session, (Vienna, 20–24 January 2020), UN Doc No A/CN.9/1004/Add.1, para 97 (emphasis added).

However, it is unclear how many existing arbitrators have sufficient competence to correctly calculate damages in ISDS. Such competence rests on a combination of legal and extra-legal expertise. It requires knowledge of the principles of international law governing damages, which are relevant, for instance, in determining when a claim for future loss is too uncertain to be recoverable as a legal matter,¹⁴⁰ as well as sufficient technical knowledge of valuation methods to critically evaluate the evidence of valuation experts. To be sure, requiring such competence could exclude some existing and potential arbitrators. Indeed, delegates noted that ‘caution was expressed that if the qualifications were too many or too strict, it could reduce the pool of qualified individuals, which would run against the aim of achieving diversity’.¹⁴¹ However, it is worth noting that the pool of arbitrators is large and reflecting on how such competence could be established amongst the broader group of arbitrators. Including it as a *formal demand* or *element* in appointment criteria could incentivize adjudicators to undertake further education to refine their skills.

The second approach is to acknowledge that ISDS adjudicators may not attain the necessary competence and instead create processes that permit effective and quality-assured delegation. A quick fix could be to strengthen the role of the tribunal-appointed expert (which is clearer and stronger in the UNCITRAL Arbitration Rules (Article 29) than the ICSID Arbitration Rules (Article 34), for example, by granting tribunals a stronger power to appoint their own experts and not be limited by the disputing parties’ consent. Indeed, ICSID recently found an increasing use of tribunal-appointed experts and has proposed a new rule in order to reflect this change.¹⁴² A more institutional approach that could enhance consistency would be to create a *standing commission* for damages calculation, which could be established for both ISDS arbitration and judicial adjudication. Adjudicators could delegate the initial calculation and receive a more impartial assessment than the competing evidence of the two parties’ experts. While such an approach may increase the overall legal costs of the reform or an individual case, if parties pay, it may increase the legitimacy of the resulting damages award, especially in cases where the burden of the award is significant. To be sure, there are very few precedents in international law for such an approach; even the UN Compensation Claims Commission—for claims after the Gulf War—must first establish liability. Moreover, while it may be easier to incorporate such a commission within a charter for a multilateral investment court, it may be difficult to square such approach with the strong focus on party autonomy and adversarialism in ISDS arbitration. An alternative for arbitration could therefore be to establish a roster of experts that would work directly for the tribunal. Whatever the possible model, given the paucity of expertise it may be prudent to institutionalize this competence and ensure that some valuation experts are commissioned to work in a fully neutral environment.

A third approach complements the above two and would constitute the adoption by states of a set of principles that would guide the calculation of damages. Such a proposal partly falls within the substantive category—see Section 5B below. At the same, it falls also within the procedural category and proposals by delegates for a range of different soft law documents to guide appointment and adjudicative processes. Guidelines are one envisaged element in the Multilateral Instrument on ISDS Reform.¹⁴³ Such guidelines could be general guidelines that

¹⁴⁰ Marzal (n 104) 285.

¹⁴¹ UNCITRAL (n 139) para 99.

¹⁴² Proposals for Amendment of the ICSID Rules — Working Paper, Volume 1, ICSID Secretariat, 2 August 2018, p 6; *ibid.*, Proposals for Amendment of the ICSID Rules — Working Paper, Volume 3, ICSID Secretariat, 2 August 2018, p. 204; see discussion in UNCITRAL (n 21) para 83. See also the final version for approval: Proposals for Amendment of the ICSID Rules - Working Paper 5, Volume 1, ICSID Secretariat, June 2021, p. 133 (Rule 49(1)). (“Unless the parties agree otherwise, the Tribunal may appoint one or more independent experts to report to it on specific matters within the scope of the dispute.”)

¹⁴³ UNCITRAL, Working Group III (Investor-State Dispute Settlement Reform) Thirty-ninth session, (New York, 30 March–3 April 2020), UN Doc No A/CN.9/WG.III/WP.194, para 13.

arbitrators could avail themselves of, or states could bilaterally agree on the guidelines through the envisaged opt-in procedure for each element of the reform. The wording of the guidelines could be put either in discretionary ('may') or mandatory ('should') terms.

A fourth approach would focus on the potential conflict of interests amongst arbitrators and valuation experts. In May 2020, as part of the WG III process, UNCITRAL and ICSID distributed the first draft of a code of conduct for public comment.¹⁴⁴ Article 6, entitled 'Limit on Multiple Roles', provided as follows:

Adjudicators shall [refrain from acting]/[disclose that they act] as counsel, expert witness, judge, agent or in any other relevant role at the same time as they are [within X years of] acting on matters that involve the same parties, [the same facts] [and/or] [the same treaty].

The intent was to include a provision of double hatting and the inclusion of witness would cover some of the areas of concern discussed above in Section 4D. However, the plethora of double brackets reflects the lack of a concrete consensus amongst states on the degree of regulation. The commentary to the draft provision noted advantages and disadvantages.¹⁴⁵ On the one hand, 'An outright ban is easier to implement, by simply prohibiting any participation by an individual falling within the scope of the prohibition.'¹⁴⁶ On the other hand, an outright ban 'may exclude a greater number of persons than necessary to avoid conflicts of interest', 'would interfere with the freedom of choice of adjudicators and counsel by States and investors',¹⁴⁷ restrict the amount of 'available' expertise,¹⁴⁸ and constrain 'new entrants to the field'.¹⁴⁹ The organizations note that the latter concern could be addressed by introducing 'a phased approach so that an adjudicator may overlap in a small number of cases at the start of their adjudicator career' but they point out that even this 'is hard to justify if the mere fact of double-hatting is considered as creating a conflict of interest'. They also note that trying to limit the prohibition to cases concerning actual conflict of interests is extremely difficult in practice.¹⁵⁰

The range of possible options in regulating double hatting was narrowed though in the second version of the code of conduct, which was launched on 19 April 2021. Article 4 provides:

Unless the disputing parties agree otherwise, an Adjudicator in an IID proceeding shall not act concurrently as counsel or expert witness in another IID case [involving the same factual background and at least one of the same parties or their subsidiary, affiliate or parent entity].

The current version defers partly to concerns about limiting party autonomy by allowing investors and states in a case to consent to double hatting. However, it otherwise presents states in WG III with a stark choice: prohibition in a very narrow set of situations (actual conflict in cases concerning the same facts or parties which would at least address the concrete examples above on damages in Section 4D) or a simple outright prohibition (if the text

¹⁴⁴ *Code of Conduct for Adjudicators in Investor-State Dispute Settlement*, ICSID and UNCITRAL (May 2020).

¹⁴⁵ *Code of Conduct for Adjudicators in Investor-State Dispute Settlement - Annotated*, ICSID and UNCITRAL (May 2020).

¹⁴⁶ *ibid* para 67.

¹⁴⁷ *ibid* para 68.

¹⁴⁸ *ibid* para 69.

¹⁴⁹ *ibid* para 68.

¹⁵⁰ *ibid* para 72. ['Should it only apply when the same parties are present; when the same facts are addressed; when the same legal issues arise; or when a combination of these factors are present? In terms of legal instruments, should it include all international disputes, or only those pursuant to the same treaties?']

in the square brackets is deleted and would address the broader concerns). This discussion will occur in November 2021 and will likely be decisive for the final version. What is important from the perspective of this article is that, if independence and impartiality is viewed as important for damages calculation, then the code of conduct should address arbitrators as expert witnesses.

B. Substantive

Substantive reform of damages in ISDS raises two related questions. The first question is the substance of the reforms, which might range from clarification of the circumstances in which it is appropriate to use particular valuation techniques, to more fundamental reorientation of the principles that govern the determination of damages. The second question is the means by which those reforms are to be carried out—for example, by way of a joint interpretative declaration or amendment to underlying investment treaties. The two questions are obviously related, not least because more fundamental reforms are more likely to require amendment to the underlying treaties.

In relation to the substance of reforms options, there are a range of options available. Broadly, these can be divided into three categories. The purpose of the following paragraphs is to illustrate the variety of options for substantive reform that are available, rather than to evaluate their desirability.

A first set of options proceeds from the assumption that existing approaches to compensation and damages in ISDS are appropriate, so long as concerns relating to inconsistency can be resolved. Options falling into this category include technical clarifications about how damages should be calculated, such as:

- Clarification of the circumstances in which it is appropriate to use particular valuation methods.¹⁵¹
- Insofar as DCF is regarded as an appropriate valuation method, the form and strength of evidence that should be required to support projected future cash flows, and clarification of how discount rates should be determined.
- Clarification of whether post-award interest on damages should be calculated at a commercial rate or a risk-free rate.

A second set of options for reform proceeds from the assumption that existing approaches to compensation and damages in ISDS are largely appropriate, provided that greater attention is given to countervailing principles that allow tribunals to reduce compensation in certain circumstances. Options falling into this category might include:

- Clarification of the circumstances in which it is appropriate for a tribunal to reduce damages on account of contributory negligence on the part of the investor.¹⁵²
- Clarification of the circumstances in which a breach of a legal obligation by the investor which can form the basis of a counterclaim by the host state.¹⁵³

¹⁵¹ Eg the guidance on use of particular valuation techniques in 1 General Counsel of the World Bank (1992). Legal framework for the treatment of foreign investment: Volume II. World Bank, 26. [http:// documents1.worldbank.org/curated/en/955221468766167766/pdf/multi-page.pdf](http://documents1.worldbank.org/curated/en/955221468766167766/pdf/multi-page.pdf)> accessed 8 July 2021.

¹⁵² For example, *Occidental Petroleum Corporation and Occidental Exploration and Production Company v The Republic of Ecuador*, ICSID Case No ARB/06/11, Award, 5 October 2012, para 687; For general discussion, see Martin Jarrett, *Contributory Fault and Investor Misconduct in Investment Arbitration* (CUP 2019).

¹⁵³ For example, *Burlington Resources, Inc v Republic of Ecuador*, ICSID Case No ARB/08/5, Decision on Ecuador's Counterclaims, 7 February 2017, para 1075; Treaty Between the Republic of Belarus and the Republic of India on Investments (24 September 2018), art 26.3, provides a broader range of grounds on which compensation may be reduced, which are described as 'mitigating factors', rather than grounds for a counter-claim.

A third set of options for reform are animated by more fundamental concerns about the correctness and desirability of existing approaches to compensation and damages in ISDS.¹⁵⁴ The starting point for these options is the view that damages should not be determined primarily by reference to the lost opportunity to earn future income that an investor suffers as a result of the host state's breach of an investment treaty, as is common under existing practice. Options falling into this category might include:

- Standards that require damages to reflect a balance between competing interests, including the investor's interests and the public interest.¹⁵⁵
- Standards that require damages to be adjusted in light of a state's ability to pay.¹⁵⁶
- Standards that integrate consideration of whether the state has obtained any benefit from allowing the investment to proceed and subsequently breaching the investment treaty into the determination of damages.¹⁵⁷
- The capping of damages at the amount the investor has actually invested; and
- Prioritizing non-pecuniary remedies, such as those modelled on domestic systems of public law, over monetary damages.¹⁵⁸

As to the second question—ie the means by which reforms are to be carried out—modalities of reform have been discussed within UNCITRAL Working Group III and more broadly.¹⁵⁹ In general terms, modalities of substantive reform can be distinguished along several axes, including:

1. Whether they are focused on the drafting of new investment treaties (eg model provisions to be included in future investment treaties) or the reform of the existing treaty stock (eg mechanisms for amendment);

¹⁵⁴ The examples from recent treaty practice identified in the Note of Secretariat range along a spectrum between the first and the third set of options: UNCITRAL (n 21) para 23. The prohibition of punitive damages, for example, would fall within the first set of options, whereas 'providing for a number of mitigation factors in the calculation of compensation' is closer to the third set options.

¹⁵⁵ An example is art 12.2 of the Draft Pan-African Investment Code available at <<https://repository.uneca.org/ds2/stream/?#/documents/330c5c6a-9d23-50c0-bfa6-04dbbe4053c0/page/8>> accessed 8 July 2021, which provides that compensation should strike:

an equitable balance between the public interest and interest of those affected, having regard for all relevant circumstances and taking into account the current and past use of the property, the history of its acquisition, the fair market value of the property, the purpose of the expropriation, the extent of previous profit made by the foreign investor through the investment, and the duration of the investment.

¹⁵⁶ For example, Paparinskis has argued for a rule according to which states should not have to pay an amount in compensation that would be 'crippling' Martins Paparinskis 'A Case against Crippling Compensation in the International Law of State Responsibility' (2020) 83 *Modern Law Review* 1251; Martins Paparinskis, 'Crippling Compensation in the International Law Commission and Investor-State Arbitration' (2021) 36 *ICSID Review – Foreign Investment Law Journal*, forthcoming.

¹⁵⁷ Aisbett and Bonnitcha develop a proposal along these lines that disciplines opportunistic conduct by the host state, without limiting host states' ability to respond to new information or change their policy priorities. Emma Aisbett and Jonathan Bonnitcha, 'A Pareto Improving Compensation Rule for Investment Treaties' (2021) 24 *Journal of International Economic Law* 181.

¹⁵⁸ For early discussion, see David Gaukrodger and Kathryn Gordon, 'Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community' (2012) OECD Working Papers on International Investment, 2012/03, 24–29, Annex 4.

¹⁵⁹ UNCITRAL (n 143); For treatment by other international organizations, see UNCTAD, 'Phase 2 of IIA Reform: Modernizing the Existing Stock of Old-Generation Treaties' *IIA Issues Note*, June 2017: Issue 2. For academic discussion, see Wolfgang Alschner, 'The OECD Multilateral Tax Instrument: A Model for Reforming the International Investment Regime?' (2019) 45 *Brooklyn Journal of International Law* 1; Stephan W Schill and Geraldo Vidigal, 'Designing Investment Dispute Settlement à la Carte: Insights from Comparative Institutional Design Analysis' (2019) 18 *The Law and Practice of International Courts and Tribunals* 314; Lauge Poulsen and Geoffrey Gertz, 'Reforming the Investment Treaty Regime: A "Backward-Looking" Approach' Chatham House Briefing Paper, March 2021.

2. Whether they involve legally binding text (eg through amendment of existing treaties) or text that carries some lesser normative authority (eg guidelines or 'best practice' documents); and
3. Whether the focus is on the amendment/interpretation of a particular treaty or the wider universe of investment treaties.

In relation to this last axis, the fact that there are currently around 2,500 investment treaties in force means that recent discussions have focused on modalities for reform that do not require action on a treaty-by-treaty basis.

In relation to the first set of options for substantive reform—ie clarification of existing approaches to damages—formal amendment to existing investment treaties is unlikely to be necessary. Instead, such reforms could be adopted by way of a multilateral/plurilateral interpretative statement on the determination of compensation and damages under investment treaties. Such a statement would likely be effective, at least insofar as treaties between states that have endorsed the statement are concerned.¹⁶⁰ If widely endorsed, such a statement might also be followed by tribunals adjudicating disputes arising under treaties even if the relevant state parties have not explicitly endorsed the statement.

The fact that investment treaties rarely provide textual guidance on the determination of damages for breach of the treaty (with the exception of the amount of compensation due for expropriation), means that interpretative statements might also be effective way to implement reforms falling within the second and third set of options. This reflects the fact that, in the absence of explicit treaty text to the contrary, states have wide latitude to agree on how their own treaties should be interpreted.¹⁶¹

In contrast, fundamental reform to the principles governing compensation for expropriation would probably require express modification of the underlying treaties. Clarification of the circumstances in which a breach of a legal obligation by the investor which can form the basis of a counterclaim by the host state may also require express modification, as this engages foundational questions relating to the extent of tribunals' jurisdiction. The normal way to modify treaties is through the process of amendment. However, as Alschner has argued, this can also be done through a subsequent multilateral treaty relating to the same subject matter. The OECD's Multilateral Tax Instrument provides a useful model.¹⁶² Such an instrument relating to the reform of investment treaties could be designed with an 'opt in' structure and include a variety of reform options.

6. CONCLUSION

While the WG III investment arbitration agenda is crowded with different reform options, failure to address a headline issue such as damages could affect the legitimacy of the reform. In this article, we have argued that the current approaches to calculation of damages implicate four of the key procedural concerns of states. There is *inconsistency* in the use of valuation methods, concern over the *correctness* of the general approach in international investment treaty arbitration and specific applications in certain cases, indications that the complexity of the calculation process is driving up *legal costs*, and questions over the

¹⁶⁰ Lauge Poulsen and Geoffrey Gertz, 'Reforming the Investment Treaty Regime: A "Backward-looking" Approach' Chatham House Briefing Paper, March 2021.

¹⁶¹ Anthea Roberts, 'Power and Persuasion in Investment Treaty Interpretation: the Dual Role of States' (2010) 104 *American Journal of International Law* 179.

¹⁶² Wolfgang Alschner, 'The OECD Multilateral Tax Instrument: A Model for Reforming The International Investment Regime?' (2019) 45 *Brooklyn Journal of International Law* 1.

independence or impartiality of valuation experts—for example where arbitrators act as valuation experts in other cases concerning the same party.

Potential reforms that would address these concerns are of both a procedural and substantive nature. Procedural reforms to the first three concerns include competence demands on damages calculation for arbitrators and judges, independent standing commissions with valuation experts to help adjudicators directly, and adoption of guidelines on general principles of calculation that could apply to most or all underlying treaties. Addressing the last concern could be done by ensuring that expert witnesses are caught by the eventual code of conduct and its provision on double hatting. However, procedural reforms may only provide a half a solution. Substantive reforms to treaties are also likely to be necessary. This could include technical clarifications about how damages should be calculated (including countervailing principles that allow tribunals to reduce compensation in certain circumstances) or more fundamental changes that constrain damages calculations by reference to other principles such as a state's ability to pay, whether the state has obtained any benefit from allowing the investment, or the amount the investor has actually invested.

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