Compensation Under Investment Treaties

IISD Best Practices Series – November 2020

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Jonathan Bonnitcha
Sarah Brewin

November 2020

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Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700
Website: www.iisd.org
Twitter: @IISD_news

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Written by Jonathan Bonnitcha and Sarah Brewin

The authors gratefully acknowledge comments on an earlier draft of this paper provided by Simon Batifort, Christina Beharry, Nathalie Bernasconi-Osterwalder, Elisa Botero, Blanca Gómez de la Torre, and Howard Mann. Any remaining errors or omissions are our own.

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1.0 Introduction

The vast majority of investment treaties allow foreign investors to bring claims that the host state has breached the treaty to international arbitration. If the arbitral tribunal concludes that the host state has breached the treaty, it will invariably order the host state to compensate the foreign investor. The legal principles governing compensation—and the way tribunals have interpreted and applied these principles—then determine the amount the host state must pay. In this way, the principles governing compensation have direct, practical implications for states, investors, and other participants in the investment treaty regime.

1.1 Why the Issue of Compensation Deserves the Attention of Policy-Makers

Arbitral jurisprudence on compensation has developed over the past two decades, driven by the rapid growth of investment treaty arbitration. In other areas where arbitral jurisprudence has evolved in unexpected directions—for example, in the case of expansive interpretations of fair and equitable treatment provisions—states have responded by reconsidering the drafting and inclusion of such provisions in their treaties. However, the issue of compensation has not received the same attention. Because arbitral jurisprudence on compensation can be technical, an impression seems to have developed that questions of compensation are best left to arbitrators.

The principles governing compensation are too important to be left to arbitrators. Hundreds of millions—or even billions—of dollars are often at stake. States should consider whether existing jurisprudence governing compensation reflects the way they intended the investment treaty system to function. If it does not, they should consider options for reform. For several reasons, we suggest that existing jurisprudence governing compensation may not reflect what state parties to investment treaties intended.

1.1.1 The Amounts of Compensation Being Awarded Are Large—and Are Increasing

In the early 2000s, awards of compensation in the tens of millions of USD were considered large. These sums seem quaint in retrospect. Today, the largest award of compensation in investment treaty arbitration is the USD 40 billion awarded in *Hulley v. Russia*. This was the largest of several related claims arising out of the nationalization of Yukos, in which a total of USD 50 billion was awarded. There are now 50 known cases in which a tribunal has awarded compensation in excess of USD 100 million. These cases are listed in Appendix A.

Large awards pose serious challenges for developing countries. For example, the USD 4 billion award (excluding interest) in the *Tethyan Copper v. Pakistan* in July 2019 was almost as large as the International Monetary Fund's (IMF) bailout that had been agreed two months earlier with the intention of saving the Pakistani economy from collapse.[1]

[1] Masood, S. (2019, May 12,). Pakistan to accept $6 billion bailout from I.M.F. *The New York Times*. https://www.nytimes.com/2019/05/12/world/asia/pakistan-imf-bailout.html

The possibility of large compensation awards has systemic implications. Investors with long-shot claims are more likely to proceed to arbitration if they expect to receive a large payout should their case succeed. The possibility of a large award also encourages third-party funding.

1.1.2 Large Amounts of Compensation Are Being Awarded in a Wide Variety of Fact Scenarios

Existing jurisprudence on compensation has its roots in the controversies of the 1960s and 1970s. This was the era of decolonization. At that time, the assumption was that investment disputes normally involved the seizure of foreign-owned assets by the host state. With such disputes in mind, developed countries took the view that compensation should equal the fair market value of an expropriated investment, while developing countries argued for a lower standard of compensation. Developed countries sought to resolve this controversy by embedding the fair market value standard in investment treaties, at least insofar as compensation for expropriation was concerned.[2] Investment treaties failed to specify the relevant standard of compensation in regulatory disputes or other forms of mistreatment falling short of expropriation. The possibility of investors invoking the treaties in such disputes was not foreseen at the time.

Box 1. "Compensation" or "damages": A word on terminology

Investment treaty tribunals sometimes use the term "damages" rather than "compensation." In some cases, the choice of terminology is used to distinguish the principles governing payment of *compensation for expropriation*, which are explicitly enumerated in the treaties, from arbitral jurisprudence governing damages for the breach of other provisions of investment treaties, such as the guarantee of fair and equitable treatment. In Section 2 we explore this distinction and argue that it is of little consequence in practice.

Other tribunals appear to use the terms "compensation" and "damages" interchangeably. In this paper, we use the term "compensation" generally to describe any order by a tribunal that the host state pay money to the investor, aside from orders that relate to reimbursement of the costs of the litigation proceedings themselves.

Although existing principles governing compensation were developed with disputes about direct expropriation in mind, these principles are now being applied in a much wider array of disputes. For example, in *Tethyan Copper v. Pakistan*, the foreign investor was awarded USD 4 billion plus interest for Pakistan's failure to grant the necessary approvals for an investor to build and operate a mine, even though the mine was never built. In *Unión Fenosa Gas v. Egypt*, a foreign investor was awarded USD 2 billion plus interest for Egypt's failure to supply an agreed volume of gas to the investor's liquified natural gas terminal for export. Egypt had argued that the gas was needed for domestic consumption.

[2] Bonnitcha, J., Poulsen, L. N. S., & Waibel, M. (2017). *The political economy of the investment treaty regime*. Oxford University Press, 199.

1.1.3 Tribunals' Practice Departs From Previously Accepted Principles of International Law

Although several factors are responsible for the increase in the amount of compensation being awarded in investment treaty arbitrations, the most significant factor is probably tribunals' increasing willingness to use projections of an investment's expected future income across its entire life cycle as a basis for awarding compensation. The most common valuation technique used to calculate compensation on this basis is the discounted cash flow (DCF) method, which is discussed in more detail in Section 3.2 of this paper.

Tribunal practice in this regard departs from previously accepted principles of international law. In 2001, the International Law Commission's (ILC's) Articles on State Responsibility purported to restate the principles of customary international law on compensation. The ILC Articles note that DCF models are based on "a wider range of inherently speculative elements, some of which have a significant impact upon the outcome." They caution that the use of DCF models is only appropriate in a narrow range of circumstances, such as when an investor has a contractual entitlement to a defined income stream.[3]

1.1.4 Tribunals' Practice Differs From the Practice of Other National and International Courts

Arbitral practice also differs from comparable practice of other international courts and tribunals. It is well known that the World Trade Organization (WTO) dispute settlement system does not ordinarily lead to compensation for successful claimants. A state that has breached the WTO agreements must first bring its laws and policies into compliance with its obligations under those agreements within a "reasonable period of time," though non-compliance can eventually lead either to a negotiated agreement on compensation or to the Dispute Settlement Body eventually authorizing a state to "suspend […] concessions or other obligations under the covered agreements" for the other party, up to an approved level.[4,5] The European Court of Human Rights (ECtHR) is an example of an international legal regime which, like the investment treaty regime, does allow private actors to sue states for monetary compensation. Nevertheless, compensation awards accorded in such disputes are far lower than those under investment treaties.[6] For example, in 2004, the shareholders of Yukos brought a case against Russia to the ECtHR.[7] The case arose out of the events surrounding the nationalization of Yukos that gave rise to *Hulley v. Russia* and involved essentially the same legal claims. In the ECtHR, they were awarded EUR 1.87 billion (USD 2.3 billion), in what remains the largest award of compensation ever made by the ECtHR. In parallel, the Yukos shareholders were awarded a total of USD 50 billion in compensation in treaty-based investor-state dispute settlement (ISDS) claims.

[3] International Law Commission. (2001). *Text of the articles on the responsibility of states for internationally wrongful acts*. Yearbook of the International Law Commission, 2001, II (Part Two). UN Doc. A/56/10 , art. 36, cmt. 26 [Hereinafter the ILC Articles].

[4] Trebilcock, M., Howse, R., & Eliason, A. (2012). *The regulation of international trade* (4th Ed.). Routledge, 217.

[5] World Trade Organization. (1994). Understanding on rules and procedures governing the settlement of disputes. https://www.wto.org/english/tratop_e/dispu_e/dsu_e.htm.

[6] Shelton, D. (2015). Remedies in international human rights law. Oxford University Press, 338; Allen, T. (2006). Compensation for property under the European Convention on Human Rights. *Michigan Journal of International Law, 28*(2), 330. https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1176&context=mjil

[7] *OAO Neftyanaya Kompaniya Yukos v. Russia*, Eur. Ct. H.R., Application no. 14902/04, Judgment, Just Satisfaction, (July 31, 2014). http://hudoc.echr.coe.int/sites/eng/pages/search.aspx?i=001-145730

Research by the Organisation for Economic Co-operation and Development (OECD) also shows that the principles governing compensation under investment treaties differ from those that are commonly applied in similar disputes concerning state interference with private property rights in national legal systems.[8,9]

1.1.5 Arbitral Jurisprudence Is Inconsistent

Arbitral jurisprudence on compensation is also inconsistent, particularly insofar as it concerns:

- The circumstances in which it is appropriate to calculate compensation based on an investment's expected future income.
- The quality of evidence required to substantiate the multi-year future business projections that underpin any calculation of compensation based on expected future income.
- The way in which tribunals account for various foreseeable and unforeseeable risks to an investment's expected income stream across its entire life cycle.

Although these debates can be technical, there can be billions of dollars at stake in the choice of one approach over another.

Box 2. Compensation under German law vs. compensation under investment treaties

In the case brought by Swedish nuclear energy company Vattenfall to the German Constitutional Court, the court found violations of constitutional property rights and left it to the legislature to remediate those violations by passing a law providing for compensation. In May 2018, news outlets reported that the German cabinet had approved a law providing for compensation limited to hundreds of millions of euros – a figure that would not be calculated and awarded until 2023. By contrast, in the ISDS proceedings it launched in 2012, Vattenfall is claiming over USD 5 billion in damages.

[8] Gaukrodger, D., & Gordon, K. (2012/03). *Investor-state dispute settlement: A scoping paper for the investment policy community*. OECD Working Papers on International Investment. https://www.oecd.org/daf/inv/investment-policy/WP-2012_3.pdf

[9] References for Box 2: Chambers, M. (2018, May 23). German cabinet agrees compensation for utilities due to nuclear exit. *Reuters Business News*. https://www.reuters.com/article/us-germany-utilities-compensation/german-cabinet-agrees-compensation-for-utilities-due-to-nuclear-exit-idUSKCN1IO1HD; German Federal Constitutional Court. (2016, Dec. 6). The thirteenth amendment to the Atomic Energy Act is for the most part compatible with the basic law (Press Release No. 88/2016). https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2016/bvg16-088.html; Graupner, H. (2018, May 23). German government approves nuclear phase-out compensation. *Deutsche Welle*. https://www.dw.com/en/german-government-approves-nuclear-phaseout-compensation/a-43892394; *Vattenfall AB and others v. Federal Republic of Germany*, ICSID Case No. ARB/12/12. https://investmentpolicy.unctad.org/investment-dispute-settlement/cases/467/vattenfall-v-germany-ii-

Box 3. An example of inconsistency: Bear Creek v. Peru compared to Tethyan Copper v. Pakistan

- Both cases involve mining projects in the exploration/approval stage.
- Both tribunals found indirect expropriation:
  - In *Bear Creek*, the state had cancelled the investor's approval.
  - In *Tethyan Copper*, the state had failed to issue a mining lease required for the project.
- In both cases the mines were never built.
- In both cases, there were genuine questions about whether or not the mines would have been viable if they had been built.
- In both cases, the tribunal held that damages should reflect the "fair market value" of the expropriated investment, but
  - The *Tethyan Copper* tribunal used a novel variant of the discounted cash flow (DCF) method to arrive at a figure of USD 4.087 billion compensation.
  - The *Bear Creek* tribunal held that the DCF method was inappropriate and awarded compensation of USD 18 million, reflecting the investor's actual expenditure in making the investment. The investor had claimed that it was entitled to USD 500 million compensation, based on the DCF method.

1.2 Structure of This Paper

This paper is divided into four further sections. Section 2 provides a review of the basic principles governing compensation under investment treaties. This section considers treaty provisions that explicitly deal with compensation for expropriation, as well as the basic principles that tribunals apply in circumstances where the treaty is silent about the appropriate level of compensation. Section 3 provides an overview of the various valuation techniques that tribunals use to quantify the amount of compensation that a host state must pay to a successful foreign investor. Section 4 reviews some newer treaty language that has been developed in an attempt to clarify the principles governing compensation and the use of valuation techniques outlined in Sections 2 and 3. In light of this review and the limitations of newer treaty language, Section 5 identifies some further policy concerns with existing arbitral jurisprudence. Section 6 presents various options for reform.

2.0 Basic Principles Governing Compensation Under Investment Treaties

Section 2.1 explores the principles governing compensation for expropriation. Almost all investment treaties specify that compensation for an expropriation should equal the fair market value of the expropriated investment. Investment treaties do not, however, specify the amount of compensation required for breaches of other provisions of the treaty. In the absence of textual guidance, arbitral tribunals have applied the principle of "full reparation" for other treaty breaches. Section 2.2 examines this principle. Section 2.3 considers whether tribunals have interpreted the "fair market value" and "full reparation" principles differently. It suggests that they have not treated them differently in most circumstances. Section 2.4 briefly reviews additional principles that might be invoked to consider when determining the amount of compensation, or other appropriate remedies.

2.1 Principles Governing Compensation for Expropriation

Investment treaties deal explicitly with compensation for expropriation. Such provisions either specify that compensation must equal the fair market value of the expropriated investment or use terminology that has been interpreted as equivalent to the fair market value standard. Most treaties also deal with the date on which the fair market value of the investment is to be ascertained, the timeliness of the payment of compensation and the requirement that interest be paid for any delay in compensation. Such provisions are notable in their relative lack of variation from treaty to treaty, and their relatively minimal evolution over time, with some exceptions highlighted below and in Section 4.

2.1.1 Standard of Compensation

Typical treaty language requires the payment of compensation that is "prompt, adequate, and effective." This is the Hull formula, which has its roots in U.S. diplomatic correspondence with Mexico in the 1930s. This formulation is widely understood as referring to the fair market value of the expropriated property.[10] There are older treaties that deviate somewhat from this formula, requiring, for example, compensation that is "just and immediate"[11] or simply "full."[12] From the late 1970s, however, the "prompt, adequate, and effective" standard came into widespread usage.[13] Where investment treaties use other formulations—such as "value,"[14] "market value,"[15] "genuine value,"[16] or "real value"[17]—these have also been interpreted as referring to the fair market value of the expropriated investment.[18]

[10] Sornarajah, M. (2010). *The international law on foreign investment* (3rd Ed). Cambridge University Press, 209.

[11] Kuwait–Iraq BIT (1964), art.4.

[12] South Korea–Belgium-Luxembourg Economic Union BIT (1974), art. 5, para. c.

[13] See, for example Kazakhstan–Singapore BIT (2018), art. 6, para. 2.

[14] U.K.–Jordan BIT (1979), art. 4, para. 2.

[15] South Korea–Poland BIT (1989), art. 6, para. 1.

[16] Netherlands–Sri Lanka BIT (1984), art. 6, para. 1.

[17] Turkey–Sudan BIT (1999), para 2.

[18] Ripinsky, S., & Williams, K. (2008). *Damages in international investment law*. British Institute of International and Comparative Law, 79.

Although most investment treaties do not provide a definition of "fair market value," the standard is widely understood as reference to "the price that a willing buyer would pay a willing seller" for the expropriated investment in an arm's-length transaction.[19]

Most investment treaties also fail to specify how the fair market value of an investment is to be ascertained, as a practical matter. (This is the question of the appropriate valuation technique and is addressed in more detail in Section 3 of this paper.) A notable exception is the language found in the investment chapter of the North American Free Trade Agreement (NAFTA) and in Canadian BITs, that "valuation criteria must include going concern value, asset value including the declared tax value of tangible property, and other criteria, as appropriate, to determine fair market value." The Argentina–Philippines bilateral investment treaty (BIT) of 1999 provides for compensation at "market value," and provides further guidance that "Where that value cannot be readily ascertained, the compensation may be determined in accordance with generally recognised equitable principles of valuation taking into account the capital invested, depreciation, capital already repatriated, replacement value, and other relevant factors."

2.1.2 Date of Valuation

Most investment treaties stipulate the date at which the value of the expropriated investment should be determined. The basic principle, common to almost all investment treaties, is that the investment should be valued at the date of the expropriation.[20] The date of valuation is important in practice because the value of investments fluctuates over time due to changing market conditions, among other factors.

Around the mid-1980s, treaty language began to add the clarification that the date of valuation should be "immediately before the expropriation," or before the impending expropriation "became public knowledge,"[21] or before the expropriation was "publicly announced."[22] In each case, the purpose of the clarification was to prevent compensation reflecting reductions in the market value of an investment resulting from public knowledge that the investment was about to be expropriated (and, therefore, about to become significantly less valuable from the perspective of potential buyer).[23] This purpose is made explicit in recent treaties providing that the valuation of the investment shall "not reflect any change in value occurring because the expropriation had become publicly known earlier."[24]

2.1.3 Timeliness of Compensation

Treaty language typically requires that compensation be paid "without delay," with some treaties tempering this requirement by stipulating that there shall not be "unreasonable delay"[25] or "undue

[19] *CMS Gas Transmission Company v. Republic of Argentina*, ICSID Case No. ARB/01/8, Final Award, para. 402 (May 12, 2005) ; Sloane, R. D., & Reisman, W. M. (2004). Indirect expropriation and its valuation in the BIT generation. *British Yearbook of International Law, 75*, 138.

[20] See, e.g., Germany–Gabon BIT (1969), art. 3, para. 2.

[21] See, e.g., Netherlands–Sri Lanka BIT (1984), art. 6, para. 1; U.K.–Pakistan BIT (1994), art. 5, para. 1 (Nov. 30, 1994).

[22] See, e.g., Framework Agreement on Comprehensive Economic Cooperation between the Association of Southeast Asian Nations and India, ASEAN–India (2014), art. 8, para. 4(b); Kazakhstan–Singapore BIT (2018), art. 6, para. 2.

[23] This principle is discussed in *Renta 4 S.V.S.A, Ahorro Corporacionemergentes F.I., Quasar de Valors SICAV S.A., Orgor de Valores SICAV S.A., GBI 9000 SICAV S.A., ALOS 34 S.L. v. the Russian Federatio*n, SCC No. 24/2007, Award, para. 199 (July 20, 2012).

[24] See, e.g., Canada–Côte d'Ivoire BIT (2014), art. 10, para. 2.

[25] See, e.g., China–Ghana BIT (1989), art. 4, para. 2.

delay."[26] The use of the word "prompt" in the Hull formula also indicates that compensation should be paid without unreasonable delay. The investment treaty between the Association of Southeast Asian Nations (ASEAN) and India from 2014 contains an explanatory note on the words "without delay," clarifying that "there may be legal and administrative processes that need to be observed before payment can be made."

2.1.4 Interest

In the mid-1980s, treaty provisions on compensation began including provisions requiring the payment of interest where there is a delay between the date of expropriation and the date of compensation. Language as to the applicable interest rate continues to vary, including the "normal commercial rate,"[27] "current international rates,"[28] simply "interest,"[29] "appropriate market rate,"[30] "usual bank interest,"[31] "normal commercial banking rate,"[32] and "commercially reasonable rate."[33] Tribunals have understood references to a "commercial" or "market" interest rate as implying compound interest, rather than simple interest.[34] However, there remains considerable divergence as to the appropriate rate of interest (see Box 4). Given the lengthy duration of ISDS proceedings, divergences in the rate of interest applied from date of expropriation through to the date of payment can lead to very significant differences in the amount which a state is ultimately required to pay.

The ASEAN–India investment treaty provides for "appropriate interest at the prevailing commercial rate" but provides in an explanatory note that for Cambodia, Malaysia, Myanmar, Philippines, Thailand, and Viet Nam that "in the event of delay, the rate and payment of interest of compensation for expropriation of investments of investors of another Party shall be determined in accordance with their laws, regulations, and policies provided that such laws, regulations, and policies are applied on a non-discriminatory basis."

2.2 Principles Governing Compensation for Breach of Investment Provisions Other Than Expropriation

Aside from a few exceptions of limited practical relevance,[35] most investment treaties do not contain provisions dealing with compensation for breaches of the treaty's other provisions. In the absence of textual guidance from the treaties themselves, tribunals initially struggled to articulate a consistent approach to compensation. Some took a conservative approach, limiting compensation to expenditure

[26] See, e.g., Kazakhstan–Singapore BIT (2018), art. 6, para. 2.

[27] See, e.g., Netherlands–Sri Lanka BIT (1984), art. 6, para. 1; U.K.–Pakistan BIT (1994) art. 5, para. 1.

[28] See, e.g., U.S.–D.R.C BIT (1984), art. III, para. 1(e).

[29] See, e.g., Romania–Egypt BIT (1994), art. 5, para. 1.

[30] See, e.g., Philippines–Argentina BIT (1990), art. IV, para. 2.

[31] See, e.g., Germany–Libya BIT (2004), art. 4, para. 2.

[32] See, e.g., Ethiopia–Sweden BIT (2004), art. IV, para. 3.

[33] See, e.g., Kazakhstan–Singapore BIT (2018), art. 6, para. 2; Canada–Côte d'Ivoire BIT (2014), art. 10, para. 3.

[34] E.g. *Tidewater v. Venezuela*, ICISD Case No. ARB/10/5, Award, 13 March 2015, para. 208.

[35] Many investment treaties contain provisions requiring compensation for damage resulting from war, armed conflict or national emergencies, e.g., Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United Republic of Tanzania for the Promotion and Protection of Investments, U.K.–Tanz., art. 4, (Jan. 7, 1994). https://investmentpolicy.unctad.org/international-investment-agreements/treaties/bilateral-investment-treaties/3024/united-republic-of-tanzania---united-kingdom-bit-1994-. Such provisions play little role in investment disputes in practice. It should be noted, however, that they generally require foreign investors to be compensated on a non-discriminatory basis, which could entail compensation well below "full reparation" or the fair market value of a damaged investment.

actually incurred by the foreign investor, and implying that compensation for interferences falling short of outright expropriation should logically be less than the compensation required for expropriation.[36] Others took the view that the principles governing compensation for expropriation should be extended to the breach of other treaty provisions.[37]

For over a decade, the prevailing view has been that tribunals should apply principles of international law governing reparation for internationally wrongful acts to determine the amount of compensation owed for breach of an investment treaty.[38] The basic principle is that "the responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act."[39] In other words, the responsible state must endeavour to "wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed."

In practical terms, this means that tribunals will:

> ask what the financial position of the injured [investor] would in all probability be like if the unlawful act or omission by the state had not been committed. The difference between [this] hypothetical [position] and the actual financial situation [in which the investor finds itself following the breach of the treaty] is equal to the damage caused which, according to the principle of full reparation, has to be compensated in its entirety.[40]

2.2.1 Interest Under the Principle of "Full Reparation"

Historically, there was deep disagreement about whether compensation for breaches of international law should include the award of interest and, if so, the basis on which interest should be calculated. As recently as the year 2000, the commentary to the ILC Articles explained that:

> Although the trend of international decisions and practice is toward greater availability of interest as an aspect of full reparation, an injured State has no automatic entitlement to the payment of interest. … [Insofar as interest has been awarded,] [t]he general view of courts and tribunals has been against the award of compound interest …[41]

The past two decades have seen a dramatic shift in these views in investment treaty arbitration. There is now near-universal consensus among investment tribunals that the principle of "full reparation" requires interest to be added to the amount of compensation owing from the date of valuation until the date of payment, with the vast majority of tribunals awarding compound interest.[42] This

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[36] *Marvin Roy Feldman Karpa v. United Mexican States*, ICSID Case No. ARB(AF)/99/1, Award, paras. 194–198 (Dec. 16, 2002). https://www.italaw.com/cases/435; Pope & Talbot Inc. v. Government of Canada, UNCITRAL, Award in Respect of Damages, para. 85 (May 31, 2002). https://www.italaw.com/cases/863

[37] *CMS Gas Transmission Company, supra* note 19, para. 410 (May 12, 2005). https://www.italaw.com/cases/288

[38] See, e.g., S.D. Myers, Inc. v. Government of Canada, UNCITRAL, Partial Award, para. 310 (Nov. 13, 2000). https://www.italaw.com/cases/969; *ADC Affiliate and ADC & ADMC Management Ltd v. Republic of Hungary*, ICSID Case No. ARB/03/16, Award, para. 521 (Oct. 2, 2006). https://www.italaw.com/cases/41

[39] 2001 ILC Draft Articles, art 31(1); similarly, Case concerning certain German interests in Polish Upper Silesia (Germany v. Poland), PCIJ Rep Series A No. 17, Claim for Indemnity, p. 47 (July 26, 1927).

[40] Marboe, I. (2017). *Calculation of compensation and damages in international investment law* (2nd Ed.). Oxford University Press, 87.

[41] International Law Commission. (2001). *Text of the articles on the responsibility of states for internationally wrongful acts*. Yearbook of the International Law Commission, 2001, II (Part Two). UN Doc. A/56/10, art. 38, para. 7, p. 109.

[42] Beeley, M. (2018). Approaches to the award of interest. In C. Beharry (Ed.) *Contemporary and emerging issues on the law of damages and valuation in international investment arbitration*. Brill Nijhoff. For discussion of the minority of recent cases in which investment tribunals have awarded simple interest, see, Marboe, *supra* note 40, 390–392.

established practice means that any state that still adheres to the traditional view that an arbitral tribunal should only award simple interest needs to explicitly preclude the award of compound interest in the text of their investment treaties.[43]

Box 4. An example of inconsistency: Interest rates[44]

While the vast majority of investment tribunals have agreed that the principle of "full reparation" entails the award of compound interest, there is no agreement on the appropriate rate of interest. A comparison of three cases discussed elsewhere in this paper illustrates this inconsistency.

In *Bilcon v. Canada*, the tribunal awarded compound interest at the one-year U.S. Treasury bill yield. To put this figure in perspective, at the time of the award in January 2019, this was approximately 2.6%. In Tethyan Copper v. Pakistan the tribunal awarded compound interest at the U.S. prime rate plus an additional 1%. To put this figure in perspective, in July 2019 at the time of the award the US prime rate was 5.25%, implying an interest rate of 6.25%.

In *Funekotter v. Zimbabwe*, the tribunal awarded compound interest at the claimant's proposed rate of 10% "based on the LIBOR [London Interbank Offered Rate] rate plus a political risk." The tribunal did not explain how this 10% figure was derived. It does not seem to have been aware that, in April 2009 when the award was rendered, the Euro LIBOR rate for one-month maturity (the relevant benchmark rate) was only 1%.

As can be seen, each of these tribunals based the interest rate on a market rate for borrowing in hard currency (either USD or Euro), thereby giving their decision an air of objectivity. However, each used a rate from a different type of financial market, in which a different type of borrower obtains funds from a different type of lender. Each of these tribunals also took a different view on whether some additional margin should be added to the benchmark rate. Because the effects of these divergences compound over time, they can have significant practical implications on the amount the government has to pay.

2.3 Is There Any Difference Between the "Fair Market Value" Principle and the "Full Reparation" Principle?

We have seen that current arbitral jurisprudence on compensation is organized according to two basic principles: the principle of fair market value compensation for expropriation and the principle of "full reparation" for the breach of investment treaties' other provisions. In theory, the choice between the two principles could lead to different outcomes based on the same facts.

[43] For discussion, see, Rosert, D. (2014). T*he stakes are high: A review of the financial costs of investment treaty arbitration*. International Institute for Sustainable Development. https://www.iisd.org/publications/stakes-are-high-review-financial-costs-investment-treaty-arbitration

[44] References for Box 4: Information on US Treasury Bill rate obtained from Macrotrends LLC. (2020). *1 Year Treasury Rate - 54 year historical chart*. https://www.macrotrends.net/2492/1-year-treasury-rate-yield-chart. Information on US Prime Rate obtained from JP Morgan Chase. (2020). *Historical prime rate*. https://institute.jpmorganchase.com/about/our-business/historical-prime-rate. Information on LIBOR obtained from Triami Media BV. (2009). *Euro LIBOR rates 2009*. https://www.global-rates.com/en/interest-rates/libor/european-euro/2009.aspx

One situation in which a tribunal could be faced with a choice between the two principles is in the event of an "unlawful" expropriation.[45] On one view, the fair market value principle should be used to calculate compensation for all expropriations. However, on another view, the fair market value standard applies only if an expropriation is carried out in conformity with treaty requirements. U.S. BITs, for example, require expropriations to be carried out:

(a) for a public purpose;

(b) on a non-discriminatory basis;

(c) on payment of prompt, adequate, and effective compensation; and

(d) in accordance with due process of law.[46]

According to the second view, an expropriation that was not carried out in accordance with due process of law should be characterized as an "unlawful" expropriation in breach of the treaty, triggering an entitlement to compensation according to the principle of full reparation. The debate between these views has fascinated lawyers and legal academics, distracting attention from more important questions about the principles that should govern compensation under investment treaties.

In practice, tribunals have repeatedly emphasized that the application of either principle—the fair market value principle or the full reparation principle—will lead to similar, even identical, outcomes based on the same facts.[47] The reasons for the similarity are easy to understand. If a state's breach of the treaty leads to the destruction of an investment, then the principle of "full reparation" requires compensation that puts the investor in a position equivalent to that in which it would have been if the investment had not been destroyed—i.e., to provide compensation equal to the fair market value of the investment. This has led many tribunals to treat the two sets of principles as essentially interchangeable, thereby avoiding the need to resolve theoretical debates about which set of principles applies.[48]

This section briefly considers when the choice between the fair market value principle and the full reparation principle could have practical consequences. These are:

1) situations where the foreign investor continues to own and operate the investment

2) situations in which the breach of the treaty is procedural in character

3) the choice of the date of valuation.

This discussion is somewhat technical, as is Section 2.4. Readers interested in the key policy-relevant insights of this paper can safely skip ahead to Section 3.

The most obvious situation in which the two principles diverge is where the foreign investor continues to own and operate the investment, notwithstanding the host state's breach of the investment treaty. In these situations, the award of compensation equal to the full market value of the investment would

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[45] Ratner, S. R. (2017). *Compensation for expropriations in a world of investment treaties: beyond the lawful/unlawful distinction*. Am. J. Int'l L., 111, 7.

[46] United States Model BIT (2012), article 6.

[47] Sabahi, B. (2011). *Compensation and restitution in investor-state arbitration: Principles and practice*. Oxford: University Press, 102; *Waguih Elie George Siag and Clorinda Vecchi v. The Arab Republic of Egypt*, ICSID Case No. ARB/05/15, Award, para. 542 (May 11, 2009). https://www.italaw.com/cases/1022.

[48] *Tethyan Copper Company Pty Limited v. Islamic Republic of Pakistan*, ICSID Case No. ARB/12/1, Award, para. 278 (July 12, 2019). https://www.italaw.com/cases/1631; *Bear Creek Mining Corporation v. Republic of Peru*, ICSID Case No. ARB/14/21, Award, para. 596 (Nov 30, 2019). https://www.italaw.com/cases/2848.

result in a situation where there is no causal connection between the breach and the amount of compensation awarded—the investor would receive compensation for the full value of the investment, while still possessing ownership of the investment and the benefit of any residual value that it retains.[49]

A second situation in which the principles diverge occurs when the breach of the treaty is procedural in character. The principle of full reparation focuses a tribunal's attention on the magnitude of loss to the investor caused by the host state's breach of the investment treaty. The requirement of causation is logically implied by the principle that the compensation should put the investor in a position equivalent to that it would have been in "but for" the state's breach of the treaty. On this basis, tribunals have recognized that the "full reparation" principle provides a more flexible basis for determining compensation in cases where the host state's breach of the investment treaty was procedural in character.

Consider the case of *Bilcon v. Canada*. In that case, the tribunal held that the environmental assessment process of the investor's proposed gravel quarry was conducted in a way that was unfair to the investor, thereby breaching NAFTA's fair and equitable treatment provision in its investment chapter. In its award on compensation, the tribunal emphasized that the investment would not necessarily have been approved even if the environmental assessment process had been conducted fairly. Instead, the tribunal explained that the investor had lost the opportunity to have the investment assessed fairly and the associated possibility that the investment might be approved. On this basis, it calculated compensation by determining the "value of the opportunity to have the environmental impact of the [investment] assessed in a fair and non-arbitrary manner."[50]

A third practical difference between the two principles relates to the date of valuation. The terms of investment treaties specify that, in calculating compensation for expropriation, the date of valuation is the date of the expropriation.[51] In contrast, tribunals have held that the date of valuation under the principle of full reparation is the date of the arbitral award.[52] One potential consequence of this difference is that determination of compensation under the principle of "full reparation" reflects new information and changes in circumstances that occur between the date that the treaty was breached and the date of the award. In principle, taking new information and changed circumstances into account up to the date of the award could work in favour of either the host state or the foreign investor. In practice, however, arbitral tribunals seem much more willing to take account of changes that occur after the date on which the treaty is breached when their effect is to increase the compensation owed to the investor.[53] In the case of Yukos, the tribunal made this practice explicit, allowing the claimant to choose the more favourable of the date of the expropriation and the date of the award as the date of valuation.[54]

[49] Tribunals have occasionally dealt with this problem by awarding compensation on a "full market value" basis in combination with an order that the investor transfer the ownership of the investment to the state, see e.g., CMS Gas Transmission Company v. Republic of Argentina, ICSID Case No. ARB/01/8, Final Award, para. 469 (May 12, 2005). https://www.italaw.com/cases/288

[50] *Bilcon of Delaware et al. v. Government of Canada*, PCA Case No. 2009-04, Award on Damages, para 280. https://www.italaw.com/cases/1588

[51] See section 2.1.2 above. Marboe, *supra* note 40, para. 148; ADC, *supra* note 38, 499.

[52] Marboe, *supra* note 40, para. 148; ADC, *supra* note 38, 499.

[53] See, e.g., ADC, *supra* note 38, paras. 496–497.

[54] Yukos, *supra* note 7, para 1763

2.4 Doctrines Applied to Reduce Compensation

In addition to the basic principles governing compensation under investment treaties, there are principles that can be invoked by a host state to reduce compensation, as well as the possibility (in theory) that a tribunal might award a non-monetary remedy in lieu of compensation. This section reviews three such principles:

- Contributory negligence on the part of the investor.
- Breach of a legal obligation owed to the host state by the investor which can, in limited circumstances, form the basis of a counterclaim by the host state.
- Restitution as an alternative remedy to compensation.

It is important to emphasize that these doctrines play a peripheral role in arbitral practice. They have been applied in only a handful of cases and supplement, rather than displace, the basic principles outlined above. They do not adequately address concerns about the basic principles governing compensation, for reasons explained further below.

2.4.1 Contributory Negligence

The principle of contributory negligence (also known as contributory fault) has been applied by investment tribunals to reduce the amount of damages awarded to a claimant, where the claimant's own conduct contributed to the loss suffered. In applying this principle, tribunals have typically been guided by the ILC Articles and have used a two-pronged test, requiring the conduct of the claimant to have been "wilful or negligent,"[55] and to have caused a "material and significant"[56] contribution to their own loss. Tribunals have recognized that the application of this principle is highly discretionary.[57]

In *MTD v. Chile*, the tribunal made a 50% deduction to the compensation owed by Chile due to the investor's failure to investigate adequately pre-existing regulations in the country that prevented the investor from using its land the way it had hoped.[58] In *Occidental v. Ecuador*, the tribunal reduced compensation by 25% on account of Occidental's contributory fault in transferring its rights in a concession contract to a third party, in breach of an explicit prohibition on such transfer of rights without Ecuador's consent.[59] In *Yukos v. Russia* (and in related cases arising out of the Yukos nationalization, including *Hulley v. Russia*), the tribunal reduced the compensation by 25% due to the claimant's aggressive tax avoidance strategies which were found to be abusive and unlawful.[60]

Paradoxically, the possibility of adjusting compensation downwards on account of investors' negligence may make tribunals more likely to find that the treaty has been breached in the first place. This is because the doctrine of contributory negligence encourages tribunals to see the investor's

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[55] This is inspired by art. 39 of the 2001 ILC Articles: "In the determination of reparation, account shall be taken of the contribution to the injury by wilful or negligent action or omission of the injured State or any person or entity in relation to whom reparation is sought."

[56] From the commentary to 2001 ILC Articles, art. 39, as cited in *Occidental Petroleum Corporation and Occidental Exploration and Production Company v. The Republic of Ecuador*, ICSID Case No. ARB/06/11, para. 670 (Award, Oct. 5, 2012). https://www.italaw.com/cases/767

[57] Ibid.

[58] *MTD Equity Sdn. Bhd. and MTD Chile S.A. v. Republic of Chile*, ICSID Case No. ARB/01/7, Award, paras. 243–246 (May 25, 2004). https://www.italaw.com/cases/717

[59] *Occidental Petroleum Corporation and Occidental Exploration and Production Company v. The Republic of Ecuador*, ICSID Case No. ARB/06/11, Award, para. 687, (Oct. 5, 2012). https://www.italaw.com/cases/767

[60] *Yukos Universal Limited (Isle of Man) v. The Russian Federation*, UNCITRAL, PCA Case No. AA 227, Award, paras. 1633–1637 (July 18, 2004). https://www.italaw.com/cases/1175

conduct as an issue relating to the assessment of compensation, rather than an issue relating to the claim's merits.[61] For example, even after a 25% reduction due to the investor's contributory negligence, the compensation awarded in *Hulley v. Russia* still amounted to USD 4o billion.

2.4.2 Counterclaims

A host state may also counterclaim that the investor has breached the legal obligations owed to the host state. For example, in *Burlington v. Ecuador*,[62] Ecuador raised counterclaims for harm to the environment and failure to maintain investment-related infrastructure, in breach of Ecuadorian law. The tribunal ordered Burlington to pay USD 41 million in compensation to Ecuador for the environmental and infrastructure damage. For Ecuador's breach of the investment treaty, Burlington was separately awarded damages of USD 380 million.

Under most existing investment treaties, the right of the state to bring a counterclaim is not assured. In several cases, tribunals have declined jurisdiction on the grounds that the state's counterclaim was outside the scope of the parties' consent to jurisdiction.[63] Even once this jurisdictional hurdle is surmounted, there are other grounds on which states' counterclaims have failed.[64]

The right of states to bring counterclaims is currently an important topic in the context of ongoing reform processes designed to rebalance asymmetries in the investment treaty regime. However, as with the principle of contributory negligence, the possibility of counterclaims against foreign investors does not resolve more fundamental concerns with the basic principles governing compensation under investment treaties.

2.4.3 Restitution

According to the ILC Articles, "restitution" is the preferred remedy for a breach of international law, and compensation is only owed when the damage from the wrongful act has not been made good by restitution.[65] Restitution, as the term is used in the ILC Articles, is a general concept that refers to remedies that re-establish the situation that existed prior to the state's breach of international law. In an investment treaty context, restitution could include a tribunal's order that a state return wrongfully expropriated property to an investor, or that a state issue a licence that it wrongfully refused to issue to an investor, or that a state repeal legislation that wrongfully changed the regulatory regime governing an investment.

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[61] Similarly, in *Copper Mesa Mining Corporation v. Republic of Ecuador*, PCA No. 2012-2, Award para 6.100 (15 March 2016) the tribunal treated the fact that the investor's "senior personnel in Quito were guilty of directing violent acts committed on its behalf, in violation of Ecuadorian criminal law" as entailing the investor's contributory negligence, thereby confining the issue to the assessment of compensation, rather than the merits of the dispute.

[62] *Burlington Resources Inc. v. Republic of Ecuador*, ICSID Case No. ARB/08/5, Decision on Ecuador's counterclaims, para. 1075 (Feb. 7, 2017). https://www.italaw.com/cases/181

[63] See, e.g., *Spyridon Roussalis v. Romania*, ICSID Case No ARB/06/1, Award, para. 864 (7 December 2011).

[64] For example, requiring that the counterclaim be closely connected between the investor's primary claim and the counterclaim, per *Saluka Investments B.V. v. The Czech Republic*, UNCITRAL, Decision on Jurisdictions over the Czech Republic's Counterclaim, paras. 37–39 (May 7, 2004). https://www.italaw.com/cases/961; or holding that, in the absence of express investor obligations, the state cannot raise a substantive right or obligation on which it can rely as a legal basis for a counterclaim under the treaty, per *Teinver S.A., Transportes de Cercanías S.A. and Autobuses Urbanos del Sur S.A. v. The Argentine Republic*, ICSID Case No. ARB/09/1, Award, paras. 1059–1067 (July 21, 2017). https://www.italaw.com/cases/1648

[65] ILC Articles, *supra* note 3, Article 36: '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."

States have been exceedingly reluctant to encourage the use of restitution in investment treaty arbitration, and rightly so. A tribunal's order that a state repeal legislation would be a deep intrusion into that state's internal system of government. It would probably also be unworkable in practice due to constitutional considerations relating to the separation of powers. For this reason, existing treaty language relating to restitution generally limits the possibility of restitution to orders that the state return an investor's property, with the option for the respondent state to opt to pay damages in lieu of restitution.[66]

[66] See for e.g., Singapore–Myanmar BIT (2019), which provides in article 18(1):

> Where a tribunal makes a final award against a respondent Party, the tribunal may award, separately or in combination, only:
>
> (a) monetary damages and any applicable interest; and
>
> (b) restitution of property, in which case the award shall provide that the respondent Party may pay monetary damages and any applicable interest in lieu of restitution.
>
> A tribunal may also award costs and attorney's fees in accordance with this Section and the applicable arbitration rules.

3.0 Valuation Techniques

The basic principles governing compensation under investment treaties do not, in themselves, determine the precise amount of compensation owed by the host state in any given dispute. In the case of the principle of full reparation, there is still the challenge of determining the financial position that the investor would have been in if the state had not breached the investment treaty—i.e., valuing the loss caused by the breach of the treaty. In the case of the principle of fair market value compensation for expropriation, there is still the challenge of determining what the fair market value of the investment was immediately prior to the expropriation. Neither task is straightforward. Tribunals rely on a variety of valuation techniques to perform these tasks.

The many possible valuation techniques that tribunals could use can be divided into three main categories:

- Market-based valuation techniques
- Income-based valuation techniques
- Asset-based valuation techniques.[67]

Investment treaties rarely instruct tribunals to use a particular technique. As such, the choice of an appropriate valuation technique—and the various assumptions and adjustments made in the application of any given valuation technique—is left to the discretion of arbitral tribunals. This discretion is not completely unconstrained. The way tribunals use particular techniques is shaped by their interpretation of basic principles governing compensation. For example, the widespread view among tribunals that the principle of full reparation requires a tribunal to re-establish the situation that would have existed if the investment treaty had not been breached has contributed to the growing use of income-based valuation techniques.

Trends in tribunals' choice of valuation technique are a key factor driving the increase in compensation in investment treaty disputes over the past two decades. Tribunals' increasing willingness to use income-based valuation techniques (and, to a lesser extent, market-based valuation techniques) in preference to asset-based techniques has led to much larger awards of compensation.

This section briefly reviews the use of the three main types of valuation techniques by arbitral tribunals. Tribunals sometimes use more than one valuation technique to cross-check the reliability of a figure reached by another technique. Multiple valuation techniques should not, however, be used cumulatively, as this leads to double-counting of the same loss.[68] In particular, it is now widely accepted that the practice of some early tribunals of awarding compensation for both past expenditures and lost future profits is untenable.[69] This is because, if an investment had continued to

[67] Marboe, *supra* note 40, 148.

[68] Marboe, *supra* note 40, 298.

[69] For the same reason, the Roman law concepts of damnum emergens and lucrum cessans no longer play a significant role in arbitral practice. One exception is the decision of the tribunal in *Mohamed Abdulmohsen Al-Kharafi & Sons Co. v. Libya and others*, Final Arbitral Award, 365, 392 (March 22, 2013), in which the tribunal awarded compensation for both past expenditure and lost future profits. The decision is unusual in several respects and was annulled by the Cairo Court of Appeal on June 3, 2020.

operate commercially, the future income stream would have been the only source of revenue available to recover the past expenditure the investor incurred in making the investment.[70]

3.1 Market-Based Valuation

Market-based valuation techniques refer to the use of actual prices or transaction data to determine compensation. Consider the principle of fair market value compensation. This principle requires compensation equal to the price that a willing buyer would pay a willing seller for the expropriated investment in an arm's length transaction. The best possible evidence of this hypothetical value is the price a willing buyer has actually paid a willing seller for the investment in an arm's length transaction on or around the valuation date (assuming that this price was not affected by a perceived risk of expropriation). For the same reason, the actual purchase price of an investment prior to a breach of the investment treaty provides a benchmark for calculating compensation according to the principle of full reparation. However, it is rare that such evidence will exist unless an investment has changed hands on the open market immediately prior to an unanticipated breach of the treaty.

In the absence of direct evidence of this sort, some tribunals have used other market-based techniques to infer an investment's value. For example, in *Crystallex v. Venezuela*, shares in the claimant were widely traded on a public stock exchange prior to the expropriation.[71] The claimant company did not own any significant assets aside from its investment in Venezuela. On this basis, the tribunal held that the price at which the shares were being traded reflected market participants' perceptions of the value of its investment in Venezuela.

In *Yukos v. Russia*, the claimant presented data on the value of Russian and international oil companies aside from Yukos. It used this data to infer:

> ratios between the . . . value of these companies and relevant operating or financial metrics [Earnings before interest, tax, depreciation and amortization, EBITDA], [oil and gas] reserves and [oil and gas] production), and then applie[d] these ratios to the relevant metrics of Yukos in order to estimate the latter's enterprise value.[72]

In other words, information on the value of other companies, adjusted for relevant differences between the companies, was used to estimate the value of Yukos. The tribunal held that this was the most reliable technique for valuing the investment.

These two examples illustrate a growing willingness of tribunals to use market-based techniques to determine compensation. However, the challenge of finding comparable assets or transactions means that the use of market-based techniques is still confined to a minority of cases.

[70] Wells, L. T. (2003). Double dipping in arbitration awards? An economist questions damages awarded to Karaha Bodas Company in Indonesia. *Arbitration International, 19*(4), 477.

[71] *Crystallex International Corporation v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB(AF)/11/2, Award, para. 890 (April 4, 2016). https://www.italaw.com/cases/1530

[72] *Yukos Universal Limited (Isle of Man) v. The Russian Federation*, UNCITRAL, PCA Case No. AA 227, Award, paras. 1715 (July 18, 2004). https://www.italaw.com/cases/1175

3.2 Income-Based Valuation

Income-based valuation techniques use the expected future income of an investment as a basis for determining its current value. Income-based valuation techniques are forward looking, in the sense that the value of the investment is determined on the basis of assumptions about the future, not on the basis of the amount spent by the investor in creating or acquiring the investment. Over the past decade, investment treaty tribunals have increasingly used income-based valuation techniques to quantify the amount of compensation required by the "full reparation" principle, on the basis that this principle requires a tribunal to determine the financial position a foreign investor would be in if the investment treaty had not been breached. Tribunals have also seen income-based techniques as appropriate for quantifying the amount of compensation required under the fair market value principle, arguing that the amount a commercial buyer would pay for an investment depends largely on expectations about the stream of future profits that the investment would be capable of generating.[73]

International tribunals were traditionally very cautious in using income-based valuation techniques to calculate compensation. However, these techniques are now widely used in investment treaty arbitrations, especially in cases where the investment was already in operation prior to the breach of the investment treaty.[74] By far the most common method for valuing an investment on the basis of expectations about future income is the DCF method.

The DCF method requires a set of forecasts of the net cash flow—i.e., expected revenue minus expected costs—for every year into the future that the investment would have continued to exist if the treaty had not been breached. (It is more precise to say "net cash flow" than "profits" because past expenditures do not enter into the calculation.) The predicted cash flow for each year is then discounted using a "discount rate" to arrive at a present value. The discount rate is based on allowances for the time value of money and for the various risks associated with the business.[75] The time value of money is the concept that an expected return on investment of USD 1 in 10 years' time is worth less than USD 1 now, based on the potential earning capacity of the USD 1 now. The total present value of an investment is the sum of the present values of the risk-adjusted predicted cash flows for each year of operation in the future.

Beyond these basic parameters, there is disagreement among tribunals about how to account for the range of risks facing an investment when using the DCF method. Some tribunals review multiple DCF calculations provided by the parties, to try to understand the sensitivity of the implied valuation of an investment to plausible variations in predicted future cash flows and in the discount rate. Others, however, appear to accept the figures proposed by the investor's experts at face value, subject only to minor ad hoc adjustments.[76] Either way, tribunals rely heavily on evidence led by the parties when calculating compensation using the DCF method. The expert witnesses who provide this evidence, therefore, play a central role.

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[73] Lieblich, W.C. (1990). Determinations by International Tribunals of the Economic Value of Expropriated Enterprises. J. I*nt'l Arb., 7*, 47.

[74] Marboe, *supra* note 40, 234–239.

[75] Ripinsky & Williams, *supra* note 18, 197.

[76] In *Tethyan Copper v. Pakistan*, the tribunal went a step further and argued that there was no need to consider the implications of uncertainty about predicted future cash flows, as these risks had been fully accounted for in the cash flow predictions themselves on which the valuation was based. No other investment treaty tribunal has endorsed this so-called "modern" DCF approach. The use of this approach raises issues that go beyond the scope of this paper. *Tethyan Copper Company*, *supra* note 48.

Box 5. An example of inconsistency: The country risk premium in claims against Venezuela[77]

The "country risk premium" is one component of the discount rate in DCF valuation. It reflects the fact that making an investment in, say, Libya is inherently riskier that making an equivalent investment in, say, Germany. Riskier countries are associated with higher country risk premiums. The effect of a higher country risk premium is to reduce the present value of forecast future cash-flows. As with all components of this discount rate, small changes in the country risk premium can make a huge difference in the calculation of compensation using the DCF method, because the discount rate compounds over each additional year into the future.

In a series of five awards rendered against Venezuela between September 2014 and March 2015, tribunals took radically divergent views about the country risk premium associated with investment in Venezuela, ranging from 4% (Gold Reserve v. Venezuela) to 14.75% (Tidewater v. Venezuela). This led to the overall discount rates applied in these cases ranging from 10% (Gold Reserve v. Venezuela) to 24.5% (Tidewater v. Venezuela). 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 prudent investor would consider when making or acquiring an investment in Venezuela.

The inconsistency between these cases has been discussed in several recent articles by both practitioners and academics.

As will be clear from this explanation, the DCF method relies on a complex series of interlocking assumptions about the future of an investment. Valuations arrived at through the DCF method are highly sensitive to variations in these assumptions.

[77] References for Box 5: Searby, J. (2018). Measuring country risk in international arbitration. In C. Beharry (Ed.) *Contemporary and emerging issues on the law of damages and valuation in international investment arbitration* (pp. 231–261). Brill Nijhoff. For the view that these apparent inconsistencies can be partially justified due to differences between the cases, see Alberro, J. (2016). Should expropriation risk be part of the discount rate? *Journal of International Arbitration 525*.

Box 6. The sensitivity of the valuation of an investment obtained via the DCF method to variation in the underlying assumptions: The example of *Tethyan Copper v. Pakistan*[78]

The dispute in *Tethyan Copper v. Pakistan* concerned a proposed copper mine in the Balochistan province in Pakistan. Pakistan failed to issue a mining lease required for the project to go ahead, a decision that breached the investment treaty, according to the tribunal. The tribunal agreed with the claimant that it was appropriate to use the DCF method to determine the value that the mine would have had if it had been allowed to go ahead, and to award compensation equal to this value.

The tribunal's decision on compensation is over 600 pages long and summarizes several points of disagreement between the investor and the host state. One point of disagreement concerned the expected future trajectory of the prices for copper, gold, and oil, which formed the basis for assumptions about the future revenues and ongoing operating costs of the mine. The tribunal was faced with a choice between using the following two sources of information to estimate these prices:

- The price of futures contracts in copper, gold, and oil
- An average of the forecasts made by various commercial and academic institutions for the future trajectory of the price of copper, gold, and oil.

Using the former set of assumptions, the DCF method valued the investment at USD 8.5 billion; using the latter set of assumptions, the DCF method valued the investment at less than zero—i.e., it implied that the investment would not be able to operate profitably.

The tribunal relied primarily on the former set of assumptions, subject to an ad hoc 25% reduction, reflecting the risk that these assumptions might prove optimistic.

Overall, the DCF method is more reliable in valuing investments with shorter expected lifespans and relatively certain streams of future revenues and costs; it is less reliable in valuing investment with longer expected lifespans, investments with uncertain future revenue and cost streams, and investments that are subject to risks that are difficult to quantify, such as geopolitical risks or vulnerability to technological obsolescence. Partly for these reasons, investment tribunals in the early 2000s consistently rejected the use of the DCF method in cases in which an investment had no established record of profitability.[79] In 2007, the tribunal in Vivendi v. Argentina (II) explained:

> the net present value provided by a DCF analysis is not always appropriate and becomes less so as the assumptions and projections become increasingly speculative. And, as Respondent points out, many international tribunals have stated that an award based on future profits is not appropriate unless the relevant enterprise is profitable and has operated for a sufficient period to establish its performance record.[80]

[78] *Tethyan Copper Company*, *supra* note 49.

[79] Ripinsky & Williams, *supra* note 18, paras. 206–207; *PSEG Global, Inc., The North American Coal Corporation, and Konya Ingin Electrik Üretim ve Ticaret Limited Sirketi v. Republic of Turkey*, ICSID Case No. ARB/02/5, Award, para. 313 (Jan. 19, 2007). https://www.italaw.com/cases/880

[80] *Compañia de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic* (Viven-di II), ICSID Case No. ARB/97/3, Award, para. 8.3.3 (Aug. 20, 2007). https://www.italaw.com/cases/309

For the same reasons, the 1992 World Bank Guidelines on the Treatment of Foreign Investment are clear that the DCF method should only be used to value going concerns. Even in the case of going concerns, the Guidelines recommend that "particular caution should be observed in applying this method as experience shows that investors tend to greatly exaggerate their claims of compensation for lost future profits."[81]

Many tribunals continue to reject the use of the DCF method in valuing early-stage investments.[82] However, one of the biggest changes in arbitral practice over the past decade has been the growing willingness of some tribunals to use the DCF method to value investments like the proposed mine in *Tethyan Copper* that have no record of profitability and that have never proceeded beyond the planning stage.

3.3 Asset-Based Valuation

Asset-based valuation techniques are backward-looking approaches that value an investment based on historical data rather than information about contemporaneous market value or expected future earnings. One historically common asset-based valuation technique adopts the accounting concept of book value.[83] The book value of an individual asset is generally its purchase price, adjusted for inflation and depreciation. The book value of more complex investments is determined by individually valuing the assets and liabilities of which the investment is comprised.

In contemporary arbitral practice, the most widely used asset-based valuation technique simply values the investment on the basis of the investor's actual expenditure in making the investment, without writing down the value of assets for depreciation.[84] This technique has the advantage that evidence of the investor's actual expenditure in the past is relatively uncontroversial and easy to obtain. One drawback of this approach from the state's perspective is that the investor's actual expenditure could be higher than the assets' fair market value where the investor made a bad investment.

Two recent cases are illustrative of the use of this approach. In *Bear Creek v. Peru*, the host state cancelled the investor's approval to proceed with the development of a silver mine due to opposition from the local Indigenous community. The mine was never built. The tribunal rejected the investor's argument that compensation should be determined via the DCF method on the grounds that the investor had not obtained other regulatory approvals required to proceed with the project and that the local community continued to oppose the mine. These factors created real doubts about whether the investment would have been profitable.[85] In these circumstances, the tribunal held that the actual amounts invested by the investor provided the best evidence of the project's value.[86]

In *Bilcon v. Canada* the tribunal held that the environmental assessment of the investor's proposed gravel quarry was unfair. In determining compensation, the tribunal emphasized that it could not be sure that the quarry would have been approved if the environmental assessment process had

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[81] 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

[82] e.g., *Copper Mesa v. Ecuador*, *supra* note 61, para. 7.24.

[83] Sabahi, *supra* note 47, 130.

[84] Marboe, *supra* note 40, 283.

[85] *Bear Creek Mining Corporation*, *supra* note 48.

[86] Ibid., para. 605.

been conducted fairly and that, even if the quarry had been approved, the tribunal could not be sure it would have been profitable. For both reasons, it declined to use the DCF method to calculate compensation.[87] Instead, it looked to both the amount the investor had invested in the project and also to past transactions regarding the quarry site—including the amount that Bilcon had paid to its former business partner to buy out the partner's share in the project, prior to the environmental assessment process—as evidence of the value of the lost opportunity to have the investment's environmental impact assessed fairly.[88]

[87] *Bilcon v. Canada*, *supra* note 50, paras. 276– 279 (Jan. 10, 2019).

[88] Ibid., paras. 281, 288–300.

4.0 New Treaty Practices

Most investment treaties do not materially diverge from the standard set of provisions governing compensation for expropriation set out in Section 2 above, but there are new treaty practices emerging to respond to states' concerns relating to the principles governing compensation under investment treaties and the valuation techniques used by tribunals to give effect to these principles.

4.1 Balancing Approaches for Expropriation; Provisions on simple interest and burdensome awards

The South African Development Community (SADC) Model BIT, the Common Market for Eastern and Southern Africa (COMESA) Common Investment Area Agreement (the CCIA) and the Pan-African Investment Code (PAIC) each contain similar treaty language that aims to reorient tribunals' approaches to determining compensation for expropriation.

In a significant deviation from the "fair market value" standard, the SADC Model BIT instead provides for "fair and adequate" compensation, with three different options for how this is to be determined. Two of those three options provide for a "balancing approach." This requires compensation to reflect "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."[89]

The PAIC[90] and the CCIA take the same approach, with the latter also providing that "[c] ompensation may be adjusted to reflect the aggravating conduct by a COMESA investor or such conduct that does not seek to mitigate damages."[91] The SADC and COMESA texts also provide for awards that are "significantly burdensome" on the host state to be paid over a period of three years or otherwise as agreed by the parties.[92] All three texts require only simple interest, from the date of expropriation to the date of payment of compensation.[93]

This language represents an innovative new practice in treaty language around compensation emerging from Africa; however, two major limitations should be noted. The first is that these provisions relate only to compensation for expropriation; the principles of compensation for other treaty breaches are left unspecified as in most other treaties. The second is that none of these three instruments is a binding legal instrument that has been tested before an arbitral tribunal. As such there remains ambiguity around how a tribunal would interpret this language and how it would exercise the wide discretion afforded to it in applying the balancing factors.

[89] SADC Model Bilateral Investment Treaty (2012), art. 6.2.

[90] Pan African Investment Code (2016), art. 12(2).

[91] The Common Market for Eastern and Southern Africa (COMESA) Common Investment Area Agreement (the CCIA) (2017), art. 20.

[92] SADC Model BIT (2012), art. 6.4; CCIA, art. 20(6).

[93] SADC Model BIT (2012), art. 6.3 ; CCIA, art. 20(4) ; PAIC, art. 12(3).

4.2 Mitigating Factors to Offset Damages

Another new approach is found in India's model BIT, published in 2015. This text provides for wider circumstances to be taken into account by a tribunal when making an award, similar to "relevant circumstances" provided for in the African balancing approach outlined above. In the Indian model, however, these circumstances are "mitigating factors" which must be taken into account to reduce the amount of damages awarded to the claimant. Article 23.3 of the Indian Model provides:

> For the calculation of monetary damages, the Tribunal shall also reduce the damages to take into account any restitution of property or repeal or modification of the measure, or other mitigating factors . . . . Mitigating factors can include current and past use of the investment, the history of its acquisition and purpose, compensation received by the investor from other sources, any unremedied harm or damage that the investor has caused to the environment or local community or other relevant considerations regarding the need to balance public interest and the interests of the investor.

This language is also found in the India–Belarus BIT of 2018.[94] Unlike in the African texts, this language does not aim to change the principles of compensation (which remains fair market value for expropriation and silent for other breaches, per most treaties). It would instead require that a tribunal, after arriving at its award, to consider whether mitigating factors warrant a discount.

Similarly, the Dutch Model BIT[95] provides that, in determining compensation owed by the state, a tribunal is "expected to take into account" any non-compliance by the claimant with the UN Guiding Principles on Business and Human Rights, and the OECD Guidelines for Multinational Enterprises.

The Indian and Dutch approaches go further than the African approach in requiring tribunals to take account of a broader range of circumstances in determining compensation for all breaches of an investment, not just the amount of compensation owing for expropriations. A key limitation of the Indian and Dutch approaches is that, as with the doctrine of contributory negligence, they might encourage tribunals to see investor misconduct as an issue relating to the assessment of compensation and not an issue relating to the merits of the investor's claim. The Dutch text also does not explicitly require, like the Indian text, that the investor's conduct potentially reduce the award, but simply that it be "take[n] into account."

4.3 Language Specifying That Damages Shall not Exceed "Loss Suffered" and Shall Account for Any Restitution

Another strain of new treaty language relating to compensation is a clause stating that "monetary damages shall not be greater than the loss suffered by the investor." This formulation is found in several European treaties, including the Comprehensive and Economic Trade Agreement between the EU and Canada (CETA),[96] the Dutch Model BIT,[97] the EU–Vietnam Investment Protection

[94] India–Belarus BIT (2018), art. 26.3.

[95] The Netherlands Model BIT (2019), art. 23.

[96] CETA (2016), art. 8.12(3).

[97] The Netherlands Model BIT (2019), art. 22(4).

Agreement,[98] the EU–Singapore Investment Protection Agreement,[99] as well as the Indian Model BIT, [100]and India's 2019 BIT with Kyrgyzstan[101] and 2018 BIT with Belarus.[102]

The extent to which this language represents a reform, rather than simply a restatement or codification of existing jurisprudence, is unclear. It is unlikely that a tribunal would interpret this language excluding or modifying the application of the full reparation principle, given that the largest awards of compensation to date have been made by tribunals that explicitly accept that compensation is limited to the loss suffered by the investor while interpreting the concept of "loss" broadly. For example, the tribunal in *Tethyan Copper* accepted that it was limited to awarding compensation for the loss suffered by the investor and considered that the investor's "loss" was equal to the value that the investment would have had but for the state's breach of the investment treaty.[103]

Most of these examples of treaty language also provide that a tribunal's award of compensation shall be reduced in light of any previous compensation, damages, or restitution of property provided by the state. The Dutch Model text also provides that damages shall be reduced to account for any "repeal or modification of the measure." Again, this language may represent less of a reform and more of a restatement of the obvious fact that a claimant should not receive double compensation for the same loss.

4.4 Targeted Rules to Address Discrete Issues

Another set of new treaty approaches to compensation sets targeted rules to address narrow issues related to determining compensation. In Box 7, we highlighted concerns arising from "anchoring effects"—specifically, investors' practice of making exaggerated claims for compensation, with the objective of making less-exaggerated but still unjustifiably large awards of compensation seem reasonable. In its new model BIT, Colombia seeks to discourage this practice by making the investor liable for a fraction of the difference between the amount of compensation sought and the amount of compensation awarded in certain circumstances. The relevant provision reads:

> The Tribunal shall not award more than the Claimant Investor's estimated amount of monetary damages sought, unless it reflects damages suffered or interest accrued from the moment the claim was submitted to arbitration. Should the estimated amount identified by the Claimant Investor exceed the proven amount by fifty percent (50%) or more, the Tribunal shall allocate fifteen percent (15%) of the resulting difference as costs in favour of the Respondent State.[104]

An additional set of concerns, highlighted in Section 3.2, relates specifically to the use of the DCF method. These concerns include tribunals' inappropriate use of the DCF method to value early-stage

[98] EU–Vietnam Investment Protection Agreement (2019), art. 3.53.

[99] EU–Singapore Investment Protection Agreement (2018), art. 3.18(2).

[100] India Model BIT (2015), art. 26.3.

[101] India–Kyrgyzstan BIT (2019), art. 23(3).

[102] India–Belarus BIT (2018), art. 26.3.

[103] "The Tribunal affirms its previous finding that Respondent's conduct has deprived Claimant of the value of its investment and has thereby caused a loss that is equal to the value that Claimant's investment would have had if Respondent had not denied TCCP's Mining Lease Application in violation of its obligations under the Treaty." *Tethyan Copper Company*, *supra* note 48.

[104] Colombia Model BIT (2017), p.21.

investments and the sensitivity of values calculated using the DCF method to minor variations in the underlying assumptions. The Colombian model BIT contains language that provides:

In its final assessment of monetary damages, the Tribunal shall take into account:

a. a comparison of multiple valuation methods; and
b. the monetary values that the claimant reported in Economic Declarations, required by the Host Party for the making and operation of the Covered Investment.[105]

This language seeks to prevent tribunals from determining compensation via the DCF method, without regard to the often much lower valuations implied by the use of other valuation techniques. This language does not, however, preclude the use of the DCF method either in general terms or in relation to particular categories of cases—e.g., in assessing compensation for a state's interference with investments that have no proven record of generating positive cash flows.

These new treaty practices show that states have recognized the need for reform of compensation under investment treaties. However, the limitations of each of these new approaches suggest that there is a need for new thinking to develop holistic, unambiguous, and effective reforms.

[105] Ibid.

5.0 Key Policy Concerns with the Status Quo

In Section 1, we identified several general concerns with the status quo. These included the large sums of compensation being awarded in investment treaty arbitration and the inconsistency of arbitral jurisprudence. The review of the principles governing compensation under investment treaties and tribunals' use of valuation techniques in Sections 2 and 3 allows us to identify some more specific concerns with existing jurisprudence. These concerns are not fully addressed by the new developments in treaty practices described in Section 4.

5.1 Discrepancy Between the Amounts Invested and the Amounts Awarded in Compensation

Sections 2 and 3 show that tribunals have regularly awarded compensation that vastly exceeds the expenditure of the investor in making the investment. For example, in *Tethyan Copper v. Pakistan*, the investor was awarded over USD 4 billion in compensation, despite having spent only USD 200–300 million making its investment. In *Crystallex v. Venezuela* the investor had spent somewhere between USD 200 million and USD 645 million in making the investment (the tribunal held that the exact amount was irrelevant) and was awarded USD 1.2 billion in compensation, plus interest.[106] Section 2 shows that this discrepancy is rooted in basic principles governing compensation under existing investment treaties, which tribunals have interpreted as requiring compensation that puts the investor in the financial position it would have been in if the host state had not breached the investment treaty. Section 3 shows that this discrepancy has been exacerbated by shifts in the way that arbitral tribunals are using valuation techniques in practice, particularly the growing use of income-based valuations techniques to value investments that have no demonstrated record of profitability. While several of the developments in treaty language reviewed in Section 4 are presumably motivated by a need to address this concern, none of these developments tackle the issue directly.

[106] *Crystallex International Corporation*, *supra* note 72.

Box 7. Anchoring effects? The implications of exaggerated compensation claims[107]

One possible explanation for the growth in large compensation awards is the increase in the amounts of compensation claimed by foreign investors. George Kahale III—a lawyer who acts for states in investment treaty arbitrations—argues that foreign investors routinely make vastly exaggerated claims. This legal tactic seeks to take advantage of the cognitive bias known as "anchoring," whereby people use the first number that they are provided with as a point of reference in estimating what the correct number should be. In making exaggerated claims, investors "hope that a less exaggerated, but still indefensible amount will seem reasonable by comparison."

Such litigation tactics are not unique to investment treaty arbitration. So, one might expect that arbitrators would be savvy enough to detect exaggerated claims. Yet, there are several structural characteristics of investment treaty arbitration that make it more likely that exaggerated claims will be effective as a cognitive anchor. One such characteristic is that much of the information necessary to value an investment is held privately by the investor—notably, the information necessary to predict an investment's future cash flows, which underpins the DCF method. It is easy for an investor to construct a self-serving valuation by selectively drawing on the information that is available to it. In contrast, a host state, with the information available to it, cannot easily generate rival estimates of an investment's future cash flows. This makes it hard for a state to build an alternative DCF valuation from the ground up, leaving it in the position of trying to contradict the exaggerated valuation proposed by the investor. In this context, tribunals often accept the investor's claims as the starting point for their decision on compensation, subject to various downward adjustments that partially accommodate the host state's criticisms of the investor's inflated figures.

In a 2018 article, Langford and Behn show that the amount of compensation awarded in investment treaty arbitrations, if expressed as a percentage of the amount originally claimed by the foreign investor, has remained surprisingly constant at around 40% throughout the period from 2000 to 2017. These figures are remarkable, given that the average amount of compensation claimed by investors increased significantly over the same period. These figures suggest that arbitrators do indeed use investors' initial claims as an anchor and that they tend, on average, to award a seemingly reasonable fraction of those initial claims—roughly 40% of the amount claimed—in compensation.

5.2 Discrepancy Between Host State's Benefit From the Investment and the Compensation Awarded

A closely related concern is the discrepancy between the benefit the host state has received from the investment and the amount being awarded in compensation. Consider the example of an investor that has acquired a concession contract from the host state for a small fraction of its fair market value—perhaps because the investor was politically well-connected or just because the state lacked the bureaucratic capacity to negotiate the terms of a complex contract. Under some existing jurisprudence, such an investor is entitled to fair market value compensation if that investment is subsequently renationalized, notwithstanding the terms on which the investment was acquired.

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[107] Kahale, G. (2018). Rethinking ISDS. 44 *Brooklyn Journal of International Law, 11*. https://brooklynworks.brooklaw.edu/bjil/vol44/iss1/2; Langford, M., & Behn, D. (2018). Managing backlash: The evolving investment treaty arbitrator? *European Journal of International Law, 29*(2), 551–580. https://academic.oup.com/ejil/article-pdf/29/2/551/25197954/chy030.pdf

One case that raises such concerns is *Unión Fenosa Gas v. Egypt*. In that case, the investor entered into a contract for the purchase of gas from an Egyptian state-owned entity without a competitive tender process.[108] Although the majority and the dissenting arbitrator disagreed on whether they should infer that the transaction was corrupt,[109] the majority conceded that a representative of the investor had, at least, exercised non-corrupt forms of "influence ... over senior decision-makers at the Ministry of Petroleum and EGPC [the Egyptian General Petroleum Company]" in procuring the contract.[110]These facts raise questions about whether Egypt had obtained any benefit from entering into this key contract. Nevertheless, when Egypt failed to meet its obligations under the contract, the tribunal held that Egypt had thereby failed to comply with its treaty obligations and awarded compensation of USD 2 billion. This amount was calculated to reflect the loss of income that the investor would have earned from the on-sale of the gas that Egypt had failed to supply.[111]

5.3 The Complexity of the System

The discussion in Section 3 also illustrates the complexity of existing jurisprudence. Complexity increases costs and puts countries that lack the in-house capacity to engage in detailed arguments about the intricacies of particular valuation methods at a disadvantage.

Income-based valuation is especially complex. As we have seen, the DCF method relies on a complex set of interlocking forecasts and assumptions about the future of the investment for its entire lifespan. Foreign investors almost always argue for the use of this method, as it tends to lead to larger compensation awards. They ordinarily rely on specialized financial consultancies to provide expert evidence in support of their proposed valuations. Host states then retain financial experts of their own in order to rebut the valuation evidence of the investor. The complexity of the DCF method and the parties' reliance on expert witnesses drive up litigation costs.

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[108] *Unión Fenosa Gas, S.A. v. Arab Republic of Egypt*, ICSID Case No. ARB/14/4, Award, paras. 7.15, 7.39 (Aug. 31, 2018). https://www.italaw.com/cases/2456

[109] Ibid., Dissenting Opinion, para 5.

[110] Ibid., Award, para. 7.109.

[111] Ibid., para. 10.41–10.42; 10.106.

Box 8. Valuation experts as "repeat players" in investment treaty arbitration[112]

Foreign investors normally turn to one of a small number of valuation consultancies to provide expert evidence in investment treaty arbitrations. Respondent states sometimes also turn to these same firms for expert evidence. In this way, a handful of valuation consultancies play a major role in shaping valuation practice in investment treaty arbitration.

There is nothing inherently inappropriate about firms specializing in providing valuation evidence. However, the widespread practice of "double-hatting" in investment treaty arbitration raises concerns that relationships between valuation consultancies and lawyers could give rise to conflicts of interests. Some lawyers act as arbitrators, while simultaneously acting as counsel in other cases. Such a lawyer, when acting as counsel, might find themselves working closely with a particular consultancy to prepare the case for their client on Monday and then find themselves, on Tuesday, passing judgment on the quality of that same firm's evidence when acting as arbitrator in a different dispute.

This concern is beginning to receive attention after the decision of the ICSID Annulment Committee in *Eiser v. Spain*. The decision concerned the relationship between Stanimir Alexandrov—the claimant-appointed arbitrator in *Eiser*—and the Brattle group, who appeared as a witness for the claimant in that case. In at least eight other cases, Alexandrov had been engaged as counsel by a party that appointed the Brattle group as an expert; however, this association had not been disclosed. On this basis, the Annulment Committee decided that the tribunal's decision in *Eiser* should be annulled.

The case of Tethyan Copper v. Pakistan illustrates the relationship between complexity of existing approaches to valuation and litigation costs. In that case, the claimant spent USD 4.5 million on financial experts and USD 17.5 million on legal fees for the compensation phase of proceedings alone.[113] Pakistan spent almost USD 10 million defending the compensation phase, including both financial experts and legal fees.[114] Note that the expenses associated with arguing about the application of highly complex valuation techniques, such as the DCF method, are incurred even if a tribunal ultimately decides to rely on some other valuation technique as the basis for compensation.

None of the developments in treaty language reviewed in Section 4 directly address this concern and, to the extent that such language retains existing approaches to compensation while adding new factors to be considered in addition to such approaches, such language may even exacerbate concerns relating to complexity.

5.4 Irrelevance of Contextual Factors Under Existing Jurisprudence

Existing principles governing compensation under investment treaties have an "all or nothing" character. If a tribunal concludes that a host state's change in the regulatory arrangements governing investment does not breach an investment treaty, the investor receives no compensation. If the

[112] *Eiser Infrastructure Limited and Energia Solar Luxembourg S.à r.l. v. Kingdom of Spain*, ICSID Case No. ARB/13/36. Decision on the Kingdom of Spain's Application for Annulment, para. 205 (June 11, 2020). https://www.italaw.com/sites/default/files/case-documents/italaw11591.pdf.

[113] *Tethyan Copper Company Pty Limited*, *supra* note 48.

[114] Ibid., para. 1831

tribunal concludes that the change does breach the investment treaty, the investor is awarded compensation for all the loss to the investor caused by the regulatory change under the principle of "full reparation." Aside from a few minor exceptions discussed in Section 2.4, other contextual factors are not relevant in the determination of compensation. (Note that the developments in treaty practice discussed in Section [4.1] do seek to address this concern and may be partially effective in doing so.)

Specifically, existing jurisprudence fails to take into account the following contextual factors:

- The strength of the public interest justifying interference with the investment. For example, a German company is using an investment treaty to sue the Netherlands for its decision to shut down all coal power plants by 2030.[115] The Netherlands has justified its decision on environmental grounds.[116] If the tribunal rules that the shutdown breached the investment treaty, the environmental justification for the measure will not be relevant to the determination of compensation under existing jurisprudence.
- The host state's ability to pay, even in circumstances where payment of the amount of compensation in question would be crippling for the host state.[117] For example, in *Unión Fenosa Gas v. Egypt*, the state was ordered to pay USD 2.013 billion, plus interest. This figure represented just over 12% of Egypt's combined state budget for health and education in the 2018/2019 period, which was at EGP 257.7 billion, or USD 15.82 billion at today's exchange rate.[118] The country's population, meanwhile, numbers over 98.4 million, according to World Bank figures.[119]
- Investor misconduct, with the exception of the limited circumstances discussed in Section 2.4. For example, the fact that the foreign investor in *Unión Fenosa Gas v. Egypt* had obtained its gas supply contract through "influence ... over senior decision-makers at the Ministry of Petroleum and EGPC" was not taken into consideration in the calculation of compensation.

[115] Charlotin, D. (May 12, 2020). The Netherlands is put on notice of a treaty-based dispute. *Investment Arbitration Reporter*. https://www.iareporter.com/articles/netherlands-put-on-notice-of-a-treaty-based-dispute/

[116] Charlotin, D. (Sept. 7, 2019). Netherlands poised to face its first investment treaty claim over closure of coal plants. *Investment Arbitration Reporter*. https://www.iareporter.com/articles/netherlands-poised-to-face-its-first-investment-treaty-claim-over-closure-of-coal-plants/

[117] In a recent article, Paparinskis argues that states should not be required to pay an amount in compensation that would be "crippling" for the state in question. Paparinskis, M. (2020). A case against crippling compensation in the international law of state responsibility. *Modern Law Review, 83*(6), p. 1251.

[118] Ahram Online. (July 1, 2018). Egypt implements 2018/19 budget with more expenditures on health, education. *Ahram Online*. http://english.ahram.org.eg/NewsContent/3/12/305965/Business/Economy/Egypt-implements--budget-with-more-expenditures-on.aspx.

[119] World Bank. (2019). *Population, total - Egypt, Arab Rep. World Development Indicators*. https://data.worldbank.org/indicator/SP.POP.TOTL?locations=EG

6.0 Options for Reform

This is a critical time for states to consider whether existing jurisprudence on compensation reflects the way they intended the investment treaty system to function. If it does not, they should consider options for reform. Three general considerations should inform any attempt at reform:

- First, any revised treaty text should be as clear and explicit as possible. This will reduce the risk of tribunals interpreting the new text in ways that were not intended by the state parties.
- Second, any attempt at reform should address both the amount of compensation required for expropriation and the amount of compensation required for other breaches of investment treaties. Redrafting provisions governing compensation for expropriation would not be sufficient if jurisprudence regarding compensation for other breaches of investment treaties is left unchanged.
- Third, there is no valid reason why principles governing compensation under investment treaties should be more generous than what is common under national legal systems.

With these considerations in mind, this section reviews four possible options for reform. These options are not intended to be exhaustive, nor are they necessarily mutually exclusive; many other options are also possible, including new options that combine elements of multiple options considered below. Rather, they are intended to encourage new thinking around the issue of compensation.

For each option, states should also consider clarifying the circumstances in which tribunals should (or should not) add interest to unpaid compensation owed to the investor by the host state. In this respect, states should consider clarifying the rate of interest that should be applied and the question of whether interest should be calculated on a simple or compound basis.

6.1 Balancing Rules for Compensation

One option is for compensation to reflect a balance between a range of competing factors, rather than being determined solely by the value of the investor's loss. An example of this approach is found in SADC, COMESA, and PAIC text on compensation for expropriation, as described in Section 4. Insofar as existing treaties are concerned, adopting this option would require amendment of such treaties.

If this option were adopted, further clarification would be needed to ensure that this approach was applied in cases involving breaches of treaties' other provisions, aside from the expropriation provision. This would be straightforward. By way of further clarification, other factors that should be considered in the balancing exercise could also be explicitly acknowledged. The language on balancing used in the various African texts mentions, inter alia, the use of the investment, history of its acquisition, and purpose of government measure. An additional concern is that investment treaties might require payment of compensation for investors with "stranded assets" in fossil fuel investments if governments introduce new measures to phase out the use of fossil fuels. To address this concern, the language could be modified to provide that, in assessing compensation, a tribunal should also consider whether the measure of which the investor complains was foreseeable at the time the investment was made.

A balancing approach seeks to guide the development of new jurisprudence on compensation in a way that is more sensitive to a diverse range of interests. The key advantage of this approach is that it allows tribunals to take into account a range of contextual factors that are ignored in existing jurisprudence. Another advantage is that it does not require states to agree and articulate in advance a single principle governing compensation that is appropriate for all disputes. A corresponding disadvantage is that it leaves wide discretion to arbitral tribunals, both in identifying the "relevant circumstances" in any given dispute and in striking an "equitable balance" between them. It is difficult to predict how tribunals might exercise this discretion.

6.2 Capping Compensation at the Amount Actually Invested by the Investor

A second option is to cap compensation at the amount actually invested by the investor. For example, the following text could be inserted into existing treaties as an amendment or adopted by way of a binding joint interpretation:

> The compensation awarded by a tribunal, whether for expropriation of an investor's investment or for any other breach of this treaty, shall in no case exceed the total expenditure (adjusted for inflation) actually incurred by the investor in making its investment.

As formulated above, the approach implies that existing principles governing compensation continue to operate insofar as they lead to compensation below the cap set by the investor's total expenditure. However, existing principles governing compensation need not be retained below the cap. This option could, for example, be combined with the previous option with the result being a balancing approach to compensation capped at the level of the investor's expenditure (adjusted for inflation).

Capping compensation at the amount actually invested by the investor has several advantages. First, it is relatively simple and clear. Second, the evidence necessary to determine the amount of money actually invested by an investor is much easier to obtain than the evidence required to calculate compensation by forward-looking valuation techniques, such as the DCF method. The effect would be to reduce the complexity of litigation proceedings and of jurisprudence. Third, as Section 3.3 has shown, some tribunals already award compensation on the basis of expenditure actually incurred by the foreign investor, so there is at least some precedent for this approach in existing jurisprudence. Fourth, such a cap would dramatically reduce the amount of compensation in the multi-billion disputes discussed in this paper, such as the Yukos claims, *Tethyan Copper v. Pakistan*, and *Unión Fenosa Gas v. Egypt*.

This approach also has potential disadvantages. One concern is that, if compensation is limited to the amount actually invested, the host state could have an incentive to expropriate investments after they have been made.[120] But this concern is overstated. It assumes that investment treaty disputes entail the nationalization of investments that then continue to operate under state control. In contrast, most investment treaty disputes involve regulatory interactions in which the state does not acquire ownership of the investment as a going concern. Moreover, there are other constraints outside the investment treaty system that discourage states from opportunistically seizing investors'

[120] This argument is made by supporters of the status quo, e.g., Marboe, *supra* note 40, 275.

assets.[121] These include reputation effects—put simply, states being aware that seizing investors' assets discourages future investment. Other constraints include protections for private property rights found in national laws and constitutions, as well as domestic political considerations.

6.3 Integrating Gain-Based Considerations Into the Calculation of Compensation

A third option is that advocated by Aisbett and Bonnitcha in a pair of recent papers.[122] Their proposal is similar to the second option, in that compensation cannot exceed the amount an investor has actually expended in making an investment. But it differs from the second option in that it also requires consideration of whether the host state has obtained any benefit from allowing the investment to proceed and then subsequently breaching its obligations under the investment treaty. They propose an approach that integrates these two elements.

The basic logic of the approach is that compensation should be determined by considering what would have happened if the measure of which the investor complains had been in place before the investment was made. In their view, compensation should generally be the lesser of the amount the investor has lost and the amount the host state has gained compared to this scenario. So, if the host state has not gained anything by allowing the investment to go ahead and then subsequently interfering with that investment, no compensation should be required. The basic rationale for this approach is to constrain opportunistic conduct by the host state, while still allowing the host state to respond to changing circumstances.

To adopt this approach, the following text could be inserted into existing treaties by way of amendment:

(1) To determine the amount of compensation due for a measure(s) that breaches this treaty, the tribunal shall first determine whether, if the measure(s) had been in place immediately prior to the time at which the investor made its investment, the investor would, nevertheless, have made the investment:

a. To determine whether the investor would have made the investment, the tribunal shall consider objective rather than subjective factors. In particular, the tribunal shall base its decision on whether, if the measure(s) had been in place immediately prior to the time at which the investor made its investment, the investment would, nevertheless, have generated a positive net return.

b. In the case of a measure(s) amounting to expropriation of an investment, a tribunal shall conclude that the investor would not have made the investment if the measure(s) had been in place immediately prior to the time at which the investor made its investment, unless the host state proves otherwise.

[121] Bonnitcha et al., *supra* note 2, 132–135.

[122] Aisbett, E., & Bonnitcha, J. (2018). A pareto-improving compensation rule for investment treaties. *UNSW Law Research Paper*, 18–80. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3281334. Bonnitcha, J. & Aisbett, E. (forthcoming, 2021). Against balancing: Revisiting the use/regulation distinction to reform liability and compensation under investment treaties. *Michigan Journal of International Law*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3637634

(2) If the tribunal determines that the investor would have made the investment, then no compensation is due to the investor.

(3) If the tribunal determines that the investor would not have made the investment, then the tribunal shall award the lesser of the following amounts as compensation to the investor:

a. The value of the loss the investor has suffered, as compared to the situation the investor would have been in if it had not made the investment; and

b. The value of the gain the host state has obtained, as compared to the situation the host state would have been in if the investor had not made the investment.

i. In assessing the value of 3(b) the tribunal shall take into account any payment the investor has made to the host state to acquire the investment, any physical assets owned by the investor that have been transferred into state ownership and any genuinely additive economic contribution of the investment to the host state's economy—for example, through the payment of wages to employees in the host state at a higher rate than the wages those employees would have earned if the investment had not been made. In assessing the value of 3(b), the tribunal shall deduct the value of any damage caused by the investment's operation to the host state.

When either amount 3(a) or 3(b) is zero, compensation shall be zero.

This option shares many of the advantages of the second option. A key additional advantage is that it is grounded in an analysis of the underlying policy problem that, in Aisbett and Bonnitcha's view, investment treaties are intended to solve. For this reason, this option is formulated more precisely than the second option and clarifies the amount of compensation that should be awarded in more complex fact scenarios, including those involving changes to permit conditions and tariff regimes in regulated industries. (These scenarios are not worked through here but are worked through in their papers.)

One of the disadvantages of the third option is that it requires a more fundamental reorientation of existing jurisprudence. Investment lawyers are not used to valuing the amount that a host state has gained from allowing an investment to take place. The third option is also more complex than the second option because it will sometimes require two valuation calculations. That said, because both calculations rely on historical data, the third option is almost certainly less complex than existing valuation techniques that depend on forecasts of future income, like the DCF method.

6.4 Requiring the Tribunal to Apply the Law of the Host State in Determining Compensation

A fourth option would be to require tribunals to determine the amount of compensation in accordance with the domestic laws of the host state. Under this option, foreign investors would take the content of domestic law on compensation as they find it, on the assumption that such principles reflect the host state's view about the appropriate balance to be struck between competing interests in the regulation of private property with respect to all investors. The basic rationale for this approach is that, if, as the argument goes, access to ISDS is intended to provide foreign investors with an impartial forum for the adjudication of investment disputes, this does not justify granting investors more generous compensation than they would be entitled to under the domestic law of the host state.

Many states have domestic legislation governing the valuation of real property compulsorily acquired by the state for a public purpose. It would be relatively straightforward for an international tribunal to apply such legislation in cases of a direct expropriation. Cases arising from regulatory disputes and cases involving allegations of unfair administrative treatment would sometimes demand a more detailed inquiry into the law of the host state. However, a key advantage of this option is that it means that treaty drafters would not need to specify in advance the principles that should govern compensation in diverse fact scenarios while, at the same time, avoiding a situation where these questions are left to the discretion of arbitrators.

One potential disadvantage of this approach is the unfamiliarity of arbitral tribunals with the content of domestic law. However, this issue has been dealt with in other contexts. For example, under principles of private international law, courts and tribunals are often called on to apply the law of a jurisdiction that they may not be familiar with. For example, India's model BIT and its BITs with Kyrgyzstan and Brazil require that, for cases of expropriation of land, compensation be determined in accordance with India's law relating to land acquisition.[123] Moreover, investment treaty tribunals already apply domestic law in a range of other contexts under existing jurisprudence—notably, in determining the legality and scope of an investor's initial investment.[124] Another potential objection arises from the possibility that a host state might deliberately change its own law, with the objective of defeating an investor's claim for compensation. However, this concern could be addressed through drafting—for example, a clarification that compensation should be determined according to the law of the host state as it stood immediately prior to the state conduct which gave rise to the investor's claim.

Variations of this fourth option are also possible. For example, the question of quantum of compensation could be referred back to the courts of the host state, once an arbitral tribunal has found the state to be in breach of the investment treaty. The rationale for this option is that the domestic courts of the host state are, themselves, best placed to weigh the range of contextual factors that ought to take into account in determining compensation. This variation of the fourth option would, in effect, be the reverse of the approach taken by China in its older BITs, which allowed for ISDS only to resolve the question of quantum of compensation for expropriation.[125]

[123] Article 5.1; Article 5.1 and Article 6.1 respectively.

[124] Hepburn, J. (2017). Domestic law in international investment arbitration. p. 106. Oxford University Press.

[125] See for example, China–Viet Nam BIT (1992), art.8.

7.0 Conclusion

The legal principles governing compensation in investment treaty arbitration—and the way tribunals have interpreted and applied these principles—have direct, practical implications for states, investors, and other participants in the investment treaty regime. Over the past two decades, the amount of compensation being awarded in investment treaty arbitrations has increased dramatically. However, the issue of compensation has not received the attention that it deserves.

States now have an opportunity to engage with concerns about compensation under investment treaties, including those outlined above—the large and increasing size of awards, the inconsistency of tribunal practice with accepted principles of international law, the internal inconsistency of arbitral jurisprudence on compensation, and the complexity and legal costs associated with the quantum phase of ISDS proceedings. The options outlined in Section 6 of this paper illustrate just some of the potential directions that reform could take.

Appendix A

Largest Awards in Investment Treaty Arbitration[126]

All awards over USD 100 million shown, in order from largest to smallest

Short case name	Amount claimed (USD)	Amount awarded (or settled for) (USD)	Year of award
Hulley Enterprises v. Russia	91,200 million	40,000 million	2014
ConocoPhillips v. Venezuela	30,305 million	8,446 million	2019
Veteran Petroleum v. Russia	18,700 million	8,203 million	2014
Tethyan Copper v. Pakistan	8,500 million	4,087 million	2019
Unión Fenosa Gas v. Egypt	3,219 million	2,013 million	2018
Yukos Universal v. Russia	4,100 million	1,846 million	2014
Occidental v. Ecuador (II)	1,000 million	1,769 million	2012
Mobil and others v. Venezuela	14,679 million	1,600 million	2014
Crystallex v. Venezuela	3,160 million	1,202 million	2016
Oschadbank v. Russia	680 million	1,111 million	2018
Rusoro Mining v. Venezuela	2,318 million	967 million	2016
Al-Kharafi v. Libya and others	1,144 million	935 million	2013 (award subsequently annulled in 2020)
CSOB. v. Slovakia	1,132 million	867 million	2004
Gold Reserve v. Venezuela	1,735 million	713 million	2014
Stati and others v. Kazakhstan	2,631 million	497 million	2013
Karkey Karadeniz v. Pakistan	2,000 million	490 million	2017
Sorelec v. Libya	Data not available	452 million	2018

[126] These figures were drawn from Italaw.com, UNCTAD's Investment Policy Hub, and IA Reporter, as appropriate. Please note that, to have round figures without decimal points, figures were rounded downward, rather than upward. This was also done to avoid overstating the level of the award.

Short case name	Amount claimed (USD)	Amount awarded (or settled for) (USD)	Year of award
Valores Mundiales and Consorcio Andino v. Venezuela	Data not available	430 million	2017
Perenco v. Ecuador	1,423 million	416 million	2019
Suez and Vivendi v. Argentina (II)	834 million	383 million	2015
Burlington v. Ecuador	1,515 million	379 million	2017
OIEG v. Venezuela	929 million	372 million	2015
Koch Minerals v. Venezuela	672 million	325 million	2017
NextEra v. Spain	586 million	323 million	2019
Teinver and others v. Argentina	1,590 million	320 million	2017
CME v. Czech Republic	495 million	270 million	2003
Total v. Argentina	940 million	269 million	2013
France Telecom v. Lebanon	952 million	266 million	2005
Siemens v. Argentina	462 million	237 million	2007
Suez and Interagua v. Argentina	257 million	225 million	2016 (rectification; award originally in Dec. 2015)
García Armas and García Gruber v. Venezuela	Data not available	214 million	2019
Mobil v. Argentina	513 million	196 million	2016
BG v. Argentina	238 million	185 million	2007
PL Holdings v. Poland	479 million	178 million	2017
Azurix v. Argentina (I)	685 million	165 million	2006
Eiser and Energía Solar v. Spain	279 million	139 million	2017 (award subsequently annulled in 2020)
Tenaris and Talta v. Venezuela (II)	Data not available	137 million	2016
EDF and others v. Argentina	270 million	136 million	2012
CMS v. Argentina	261 million	133 million	2005
EDF v. Hungary	100 million	132 million	2014
Antin v. Spain	229 million	115 million	2019 (rectification; award originally in 2018)
Everest and others v. Russia	220 million	130 million	2018
Sempra v. Argentina	209 million	128 million	2007
Rumeli v. Kazakhstan	458 million	125 million	2008

Short case name	Amount claimed (USD)	Amount awarded (or settled for) (USD)	Year of award
Hydro and others v. Albania	728 million	123 million	2019
Stans Energy v. Kyrgyzstan (I)	117 million	117 million	2014
Micula v. Romania (I)	832 million	116 million	2013
Tatneft v. Ukraine	2,400 million	112 million	2014
Enron v. Argentina	582 million	106 million	2007
Vivendi v. Argentina (I)	317 million	105 million	2000

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Published by the International Institute for Sustainable Development.

Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700
Website: www.iisd.org
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