MASTER THESIS | MASTER'S THESIS

Titel | Title

The Calculation of Damages in Armed Conflict: An Assessment of Legal Standards and Methodological Approaches in International Investment Law

verfasst von | submitted by

Eva Catherine O'Sullivan LLB

angestrebter akademischer Grad | in partial fulfilment of the requirements for the degree of

Master of Laws (LL.M.)

Wien | Vienna, 2025

Studienkennzahl lt. Studienblatt | Degree programme code as it appears on the student record sheet:	UA 999 082
Universitätslehrgang lt. Studienblatt | Postgraduate programme as it appears on the student record sheet:	Europäisches und Internationales Wirtschaftsrecht (LL.M.)
Betreut von | Supervisor:	Mag. Dr. Gabriel Lentner

TABLE OF CONTENTS:

List of Abbreviations

AF - Additional Facility (ICSID)

ARSIWA - Articles on Responsibility of States for Internationally Wrongful Acts
BIT - Bilateral Investment Treaty
DCF Discounted Cash Flow
ECHR - European Convention on Human Rights
ECtHR - European Court of Human Rights
ECJ - European Court of Justice
ECN+ Directive - Directive (EU) 2019/1 to empower competition authorities and ensure the proper functioning of the internal market
ECT - Energy Charter Treaty
EU - European Union
FET - Fair and Equitable Treatment
FPS - Full Protection and Security
FMV - Fair Market Value
GATS - General Agreement on Trade in Services
GATT - General Agreement on Tariffs and Trade
ICC - International Chamber of Commerce
ICJ - International Court of Justice
ICSID - International Centre for Settlement of Investment Disputes
IIA - International Investment Agreement
ILC - International Law Commission
ISDS - Investor-State Dispute Settlement
MFN - Most-Favoured Nation
NAFTA - North American Free Trade Agreement
OJ - Official Journal of the European Union
PCA - Permanent Court of Arbitration
TFEU - Treaty on the Functioning of the European Union
TRIMs - Trade-Related Investment Measures
TRIPS - Trade-Related Aspects of Intellectual Property Rights
UNCITRAL - United Nations Commission on International Trade Law
UNCTAD - United Nations Conference on Trade and Development
VCLT - Vienna Convention on the Law of Treaties
WTO - World Trade Organisation

Introduction, Scope, Methodology

The interaction between international investment law and armed conflict presents one of the most complex and unsettled intersections in contemporary public international law. While the foundational objective of investment treaties is to create a predictable and secure environment for foreign capital, the outbreak of armed hostilities disrupts both the factual and legal landscape in which these protections operate. Armed conflict can destabilise investment, regulatory regimes, and impair a host State's ability, or willingness, to comply with treaty commitments. In such circumstances, arbitral tribunals are called upon to interpret and apply investment treaty provisions within the extraordinary factual matrix of armed conflict.

The thesis proceeds the observation that the law in this area remains under-theorised and that the resulting jurisprudence is often inconsistent, particularly in relation to the calculation of damages. This inconsistency is partly structural, arising from the inherently decentralised nature of the Investor-State Dispute Settlement (ISDS) regime, and partly doctrinal, reflecting the open-textured nature of substantive protection standards and the absence of codified rules governing the quantification of compensation in situations of armed conflict. Although the ICJ decision in *Chorzów Factory* and Article 31 of the ICL Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA) provide a general framework for reparation, these norms leave wide discretion to tribunals in applying them to concrete facts, especially where losses arise in conflict zones involving multiple causative factors.[1]

This study aims to clarify how investment law's substantive standards, such as fair and equitable treatment (FET), full protection and security (FPS), and guarantees against expropriation, are interpreted and applied in times of armed conflict, and to analyse the approaches tribunals take in assessing damages under these extraordinary conditions. It will also examine ongoing reform discussions within The United Nations Commission on International Trade Law (UNCITRAL) Working Group III (Investor-State Dispute Settlement Reform) on damages quantification, situating these debates in the broader policy context of ISDS legitimacy and reform.

Methodology

The research adopts a doctrinal and comparative methodology, supplemented by an interdisciplinary engagement with economics and valuation theory. The doctrinal analysis involves a systematic examination of treaty texts, arbitral awards, and secondary legal literature to distill principles and trends relevant to the treatment of investments during armed conflict. Sources

[1] *Factory at Chorzów (Germany v Poland)* (Merits) PCIJ Series A No 17 (1928) 47;
International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts, UN Doc A/56/10, Annex (2001) (ARSIWA) art 31.

include bilateral investment treaties (BITs), free trade agreements (FTAs) with investment chapters, multilateral instruments such as the ICSID Convention, and customary international law as codified in ARSIWA.[2] Jurisprudence from both ICSID and ad hoc tribunals, as well as awards administered under ICC and UNCITRAL Rules, is analysed for patterns in reasoning, with a particular focus on how tribunals articulate the standard of protection and engage with armed conflict exceptions or security clauses.

The comparative dimension is twofold. First, it examines how different treaty formulations of substantive standards, especially regarding FPS and essential security clauses affect tribunal reasoning. Second, it explores how tribunals in different institutional settings (ICSID versus non-ICSID) handle similar factual scenarios, including the extent to which procedural rules influence substantive outcomes.

A brief economic analysis from a non-economist perspective is integrated in the assessment of damages calculation methodologies, including discounted cash flow (DCF), market comparables, and cost-based approaches. This component draws on valuation literature, expert testimony in arbitral proceedings, and critiques from both practitioners and academics, notably the work of Juan Carlos Boué and Bonnitcha et al., to evaluate the suitability of each method in conflict-affected contexts.[3]

The study also engages in normative analysis, assessing whether current tribunal practice aligns with underlying principles of international law, including the full reparation standard, and whether UNCITRAL Working Group III's (WG III) reform proposals address the structural vulnerabilities identified in the jurisprudence.[4] This involves an examination of primary documents from WG III, including Secretariat Notes, State submissions, and observer commentary.

Scope

Chapter 1 provides a conceptual and legal introduction to international investment law and its interaction with armed conflict. Section 1.2 surveys the sources of international investment law, including treaty law, customary international law, and general principles. Section 1.3 analyses the

[2] ibid.

[3] J Boué ,'The Investor-State Dispute Settlement Damages Playbook: To Infinity and Beyond', (2023) Journal of World Investment & Trade (24) 373

[4] UNCITRAL. (2017). The Commission entrusted Working Group III with a broad mandate to work on the possible reform of investor-State dispute settlement (ISDS)..

reasoning of tribunals in relevant disputes, focusing on interpretative methodologies and the weight accorded to contextual factors such as hostilities, State capacity, and investor conduct. Section 1.4 outlines the principal standards of protection: FET, FPS, expropriation clauses, and war clauses sets the foundation for later examination of how these are applied in conflict situations.

Chapter 2 examines the application of investment protection standards during armed conflict. This includes analysis of jurisprudence where tribunals have upheld investor claims despite hostilities (e.g., *AAPL v Sri Lanka*, *Ampal-American v Egypt*)[5], contrasted with cases where security exceptions or customary defences have shielded the host State from liability. The discussion situates these cases within broader debates over the scope of due diligence obligations, the threshold for necessity and force majeure, and the balance between investor protection and State sovereignty.

Chapter 3 turns to damage calculation in investment arbitration, beginning with an introduction (3.1) that situates the issue within the legitimacy debates surrounding ISDS. Section 3.2 sets out the legal basis for compensation, tracing the principle of full reparation from *Chorzów Factory*[6] through its codification in the ILC Draft Articles[7], and examining its application in arbitral jurisprudence. Section 3.3 analyses valuation methods, critically assessing tribunal practice in selecting and applying DCF, market-based, and asset-based approaches, with a focus on conflict-affected contexts where evidence is fragmentary or projections highly speculative.

Section 3.4 addresses standards of causation, foreseeability, and mitigation, exploring how tribunals attribute loss in complex conflict scenarios involving multiple actors and intervening events. Section 3.5 assesses UNCITRAL WG III's ongoing work on damages quantification, drawing on Brouwer's 2024[8] analysis, Secretariat documentation, and scholarly commentary to

---

[5] *AAPL v Republic of Sri Lanka*, ICSID Case No ARB/87/3, Award (1990); *Ampal-American Israel Corporation and others v Arab Republic of Egypt*, ICSID Case No ARB/12/11, Award (2017).
[6] *Factory at Chorzów (Germany v Poland)* (Merits) PCIJ Series A No 17 (1928) 47
[7] International Law Commission, *Articles on Responsibility of States for Internationally Wrongful Acts*, UN Doc A/56/10, Annex (2001).
[8] E. W. Brouwer, 'A Fair (?) Quantification of Damages in Investor-State Arbitration Proceedings: Reflections from the UNCITRAL Working Group III ISDS Reform Process'(2024) International Investment Law Journal 4, no. 2

evaluate reform options and their potential impact on consistency, transparency, and fairness in damages awards.

Analytical Framework

The analysis throughout the thesis is guided by three interrelated questions:

1. **Interpretation of Substantive Standards in Armed Conflict**

   How do tribunals interpret and apply FET, FPS, expropriation clauses, and war clauses when the host State is affected by armed conflict? To what extent are these interpretations influenced by treaty wording, contextual factors, and the tribunal's approach to evidence?

2. **Interaction between Treaty Protections and Defences**

   How do customary defences such as necessity and force majeure interact with treaty-based security exceptions? When both are raised, do tribunals treat treaty clauses as lex specialis displacing customary law, or do they apply cumulative reasoning? How do these interactions affect findings on liability?

3. **Damages Quantification and Methodological Discipline**

   What methodologies are most commonly used to quantify damages in conflict-affected investment disputes? Are these methods applied consistently and appropriately given the evidentiary constraints of such cases? What lessons can be drawn from landmark cases regarding methodological suitability and arbitral reasoning?

The framework is informed by the dual imperatives of doctrinal coherence and systemic legitimacy. Doctrinal coherence requires that tribunals apply established legal standards consistently and with reference to credible evidence. Systemic legitimacy requires that awards are perceived as fair and reasonable by both States and investors, which is especially critical in the politically charged context of post-conflict reconstruction.

Significance of the Study

This thesis contributes to the scholarly and policy discourse in three ways. First, it aims to offer a comprehensive doctrinal synthesis of how investment protection standards operate in armed conflict, and contributing to existing literature which often treats such cases in isolation. Second, it provides a critical evaluation of damages quantification methodologies in these disputes, highlighting both best practices and recurrent shortcomings. Third, it situates this evaluation within the ongoing reform process at UNCITRAL Working Group III, thereby linking case-based analysis to institutional and policy developments that may reshape the field in the coming years. By integrating doctrinal, comparative, and policy perspectives, the study aims to equip arbitrators and counsel with a deeper analytical framework for approaching investor–State disputes arising from armed conflict. This involves not only a more rigorous application of substantive standards and defences, but also a disciplined selection and application of damages valuation methodologies that reflect the evidentiary realities of conflict situations. The research emphasises that methodologically sound decision-making can enhance the legitimacy, predictability, and fairness of awards, particularly in cases where causation and valuation are inherently complex. At the same time, the study is intended to guide treaty negotiators and institutional reform bodies by identifying the risks and opportunities involved in clarifying or revising damages standards. Clearer drafting, more precise definitions, and integration of good faith and proportionality safeguards can reduce inconsistency, protect regulatory space, and ensure that future treaty frameworks balance investor protection with the sovereign imperatives of States during crises

Chapter. 1 International Investment Law and Armed Conflict

For the purposes of this thesis, the term "armed conflict" will be understood in accordance with the definition by the International Committee of the Red Cross (ICRC), which characterises it as a "situation involving a resort to armed force between States, or a protracted resort to armed force between governmental authorities and organised armed groups, regardless of the intensity of the violence or the duration of hostilities, provided that the parties involved exhibit a sufficient degree of organisation." [9] This definition is echoed in Draft Article 2(b) of the International Law Commission's Draft Articles on the Effects of Armed Conflicts on Treaties, which defines armed conflict as "a situation in which there is resort to armed force between States or protracted resort to armed force between governmental authorities and organised armed groups." While the author has acknowledged that no central authority exists under international law to classify a given situation as armed conflict. Such classifications are often context-dependent, contested, and may vary across institutional or legal frameworks. Against this background, the ICRC definition has been selected for its widespread recognition in both treaty law and customary international humanitarian law, as well as for its analytical clarity in distinguishing between international and non-international armed conflicts. The scope of this study is intentionally confined to the treatment of armed conflict within the framework of ISDS and excludes broader debates under international humanitarian law. This narrower focus enables a more precise examination of how armed conflict interacts with substantive investment protections, treaty-based exceptions, and damages assessment in the specific context of international investment agreements with a focus on investor perspective.[10] [11]

The existence of armed conflict does not *ipso facto* result in the termination or suspension of the treaty, there is an underlying presumption of continuity.[12] This is highlighted in Draft Article 7 of the ILC Draft Articles which states that such treaties imply that they continue to operate, in

[9] Prosecutor v Duško Tadić (Appeals Chamber), Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction (ICTY, 2 October 1995) para 70, cited in ICRC Casebook.

[10] International Committee of the Red Cross, 'How is the term "armed conflict" defined in international humanitarian law? ICRC opinion paper' (2024) 106(925) International Review of the Red Cross 497.

[11] Article 2(b) Draft Articles on the Effects of Armed Conflicts on Treaties (International Law Commission)

[12] C Schreuer, 'Investment Protection in Times of Armed Conflict' (2022) 23 Journal of World Investment & Trade 23(5-6), 701-715

whole or in part, during armed conflict.[13] Moreover, Article 9 clarifies this presumption of continuity in stating that any termination or suspension would not be automatic but would be subject to a defined procedure.[14] There are codified provisions which specify the the impossibility of performance and fundamental changes of circumstances or *rebus sic stantibus*; therefore resulting in the suspension or termination of the treaty, namely, in Article 61 and 62 of the Vienna Convention on the Law of Treaties (VCLT), subject to Articles 65 to 68 VCLT. [15]

1.2 Sources of international investment law

The distinction between domestic and international law can prove contentious within the field of international investment law, as agreements concluded between States frequently incorporate elements of both public and private law, thereby subjecting investors to obligations and protections derived from each legal order.[16] The governing law may be mutually agreed by the contracting parties The sources of international investment law include: BITs; the International Centre for Settlement of Investment Disputes (ICSID) Convention; multilateral treaties; customary international law; general principles; unilateral statements. This multi-faceted area of law is further contoured based on case law from arbitration tribunal interpretation and rulings i.e. ICSID, as well as customary international law and standards. These standards of protection include non-discrimination, most commonly: most-favoured-nation (MFN) principle, national treatment principle; war clauses, and; fair and equitable treatment (FET), collectively form the foundation of investor protection. There are three types of provisions which address armed conflict: compensation-for-loss clauses, extended war clauses and security clauses.[17] Clauses which envelop situations of violence, such as, full protection and security are supplemented by principles of international law, specifically: necessity and *force majeure*.

The first BIT was concluded between Germany and Pakistan in 1959, marking the beginning of the modern treaty-based investment protection regime. Notably, it incorporated a non-discrimination war clause, reflecting post-World War II concerns over safeguarding

---

[13] Draft Articles on the Effects of Armed Conflicts on Treaties, art 7.

[14] Ibid, art 9.

[15] Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 arts 61-62, 65-68.

[16] Jeswald W Salacuse, *The Law of Investment Treaties* (2nd edn, Oxford University Press 2015). [17] Schreuer (n 12) 701-715.

economic activity during armed conflict. Such clauses aimed to ensure that, even in wartime, foreign investors would receive treatment no less favourable than that accorded to nationals or investors from third States. Initially, their principal objective was to guarantee the continued supply of essential non-military goods to civilian populations.[18] In more recent times, these clauses have been included to provide protection and security to investors.[19] This chapter examines the scope of protection afforded to investors during armed conflict, the extent to which the doctrines of force majeure, necessity, and essential security interests affect treaty compliance, and the implications of conflict on the survival of treaty obligations. [20]

Compensation-for-loss clauses are included when the contracting parties to an investment agreement expressly recognise a non-discrimination obligation to compensate investors for damage suffered as a consequence of situations of violence. This non-discrimination obligation refers to the fact that while these clauses do not confer absolute rights to compensation, restitution or other settlement, they promise non-discrimination.[21] These clauses typically provide investors of one contracting party who have incurred losses due to war, armed conflict, revolution, state of emergency or rebellion taking place in the territory of the other contracting party, entitlement, in codified instances, to treatment with respect to restitution, indemnification, compensation or other forms of reparation that is no less favourable than that afforded by the host State to its own investors or to investors from any third State, whichever is more advantageous.[22] Compensation-for-loss clauses should not be interpreted within the meaning of a wrongful act in terms of the law of State responsibility; these clauses operate "independently of any illegality that may have led to the losses." [23] This simply refers to a State's duty to pay compensation regarding private property. International investment arbitration tribunals have interpreted compensation‑for‑losses clauses as *lex specialis*, requiring their application in conjunction with the full protection and security standard rather than as mutually exclusive

---

[18] L Deroche War Clauses in International Investment Law: A Need For Clarity 2020 7(2) McGill Journal of Dispute Resolution 37-67.

[19] Agreement between the Federal Republic of Germany and the Islamic Republic of Pakistan for the Promotion and Protection of Investments (25 November 1959) (Germany-Pakistan BIT).

[20] Jose Gustavo Prieto Muñoz, 'Awarding Damages in Times of Armed Conflict: An Emerging Standard of "Economic Capacity" for the Host State' in Erika de Wet and Jure Vidmar (eds), *International Investment Law and the Law of Armed Conflict* (Springer 2019) 363.

[21] UNCTAD, 'Annotations to the Model Clauses for the Bilateral Investment Agreement (BIA)' (2023) 9-10.

[22] Tobias Ackermann Armed Conflict Clauses in *The Effects of Armed Conflict on Investment Treaties* Cambridge Studies in International and Comparative Law 2022 Cambridge University Press;117-145. [23] Schreuer (n 12)

instruments.[24] Three notable cases illustrate this interpretive approach, in which tribunals have carefully balanced distinct treaty provisions to provide comprehensive investor protection.

In *Cengiz İnşaat Sanayi ve Ticaret AŞ v. Libya*, the ICC tribunal addressed a compensation‑for‑losses clause triggered by events occurring during Libya's civil conflict.[25] The tribunal held that the clause operates alongside the full protection and security standard under the Libya-Turkey BIT, emphasising that each provision addresses different dimensions of state responsibility.[26] Although detailed reasoning from the tribunal on this specific interpretive point is not publicly accessible, commentators note that the tribunal viewed the compensation‑for‑losses clause as supplementing, rather than displacing, obligations under full protection and security.[27] Similarly, in *Strabag SE v. Libya*, the tribunal confronted the interplay between a war‑losses clause which concerns loss due to armed conflict, and the FPS standard under the Austria-Libya BIT.[28] The tribunal declined to construe the war‑losses clause as excluding the FPS obligation. Instead, it held that both provisions needed to be applied cumulatively, recognizing the FPS standard's role in imposing a state's due diligence obligations even during conflict situations.[29] This articulation reflects the understanding that compensation-for-loss provisions are not a substitute for broader protection obligations but rather a tailored response to particular risks such as armed hostilities.[30] In *Öztaş v. Libya*, the tribunal likewise held that the compensation-for-loss clause does not preclude the invocation of full protection and security obligations.[31] Even where the BIT contains a war-loss provision, this tribunal maintained that investors retain their right to rely on FPS standards, especially in cases where violent conduct or instability imposes additional duties on the host state. These decisions demonstrate an increasingly sophisticated interpretive practice: tribunals will treat

[24] K Greenman, 'Of War and International Investment Law' (2024) 73 International & Comparative Law Quarterly 579

[25] *Cengiz İnşaat Sanayi ve Ticaret AŞ v Libya* (Final Award) ICC Case No 21537/ZF/AYZ (7 November 2018) paras 350 ff; *Strabag SE v Libya* (Award) ICSID Case No ARB(AF)/15/1 (29 June 2020) paras 221-25; *Öztaş Construction v Libya*(Final Award) ICC Case No 21603/ZF/AYZ (14 June 2018) para 167.

[26] Agreement between the Republic of Turkey and the Great Socialist People's Libyan Arab Jamahiriya concerning the Reciprocal Promotion and Protection of Investments (Libya-Turkey BIT).

[27] Damien Charlotin, '2019 Developments in Investment Arbitration' in Lisa E Sachs, Lise Johnson and Jesse Coleman (eds), *Yearbook on International Investment Law & Policy 2019* (Oxford University Press 2021) 203–205

[28] Agreement between the Republic of Austria and the Great Socialist People's Libyan Arab Jamahiriya for the Promotion and Protection of Investments (Austria-Libya BIT).

[29] *Strabag SE v Libya* (Award) ICSID Case No ARB(AF)/15/1 (29 June 2020). [30]
Schreuer (n 12)

[31] *Öztaş Construction v Libya* (Final Award) ICC Case No 21603/ZF/AYZ (14 June 2018).

compensation-for-loss clauses as *lex specialis* in the sense that they provide specific remedies tailor-made for conflict settings: such as destruction or requisition of property due to armed conflict, while upholding the full protection and security standard as a broader, general obligation of vigilance, prevention, and protection of investors. By applying both measures together, tribunals acknowledge that even war-loss provisions cannot displace the general norms of conduct owed under FPS. This layered application ensures that compensation addresses both tangible loss from conflict and systemic obligations of state protection and security, thus safeguarding investors comprehensively under treaty law.[32]

1.3 Reasonings of Tribunals

Reasonings of Tribunals have held that compensation-for-loss clauses were an addition to the other provisions of the BIT.[33] These clauses may however extend further than guaranteeing non-discrimination treatment and may offer compensation or restitution for losses under armed conflict, an example of this may be illustrated in Korea-Russia BIT (1990).[34] However, in the context of clauses without reference to compensation and restitution raises the question as to whether such clauses may operate in addition to the treaty's other obligations, as formerly illustrated or whether it displaces them.

Extended war clauses include a compensation-for-loss clause coupled with specified absolute standards. Under extended war clauses, losses suffered at the hands of the Host State's armed forces or authorities through requisitioning or destruction which are *not* required by necessity must promptly, adequately and effectively be compensated. However, this does not apply to losses suffered as a result of rebel forces or by foreign military forces. At present, extended war clauses are included in many BITs with Ukraine, for example, United Kingdom-Ukraine BIT (1993), Article 5, paragraph (1) states that "[i]nvestors of one Party whose investments in the other Party suffer losses due to war, armed conflict, revolution, insurrection, riot, or national

---

[32] A Kinda, 'The Loss Compensation Clause and the Protection and Security Clause: Two Risky Provisions Neglected by Investment Treaty Reform? 2022 Investment Treaty News

[33] Cengiz İnşaat Sanayi ve Ticaret AŞ v Libya, ICC Case No 21537/ZF/AYZ, Final Award (7 November 2018) paras 350 ff; Strabag v Libya, ICSID Case No ARB (AF) /15/1, Award (29 June 2020) paras 221-25. In Öztaş v Libya, ICC Case No 21603/ZF/AYZ, Final Award (14 June 2018) para 167.

[34] Agreement between the Government of the Republic of Korea and the Government of the Union of Soviet Socialist Republics for the Promotion and Reciprocal Protection of Investments (1990) (Korea, Republic of Russian Federation BIT).

emergency are entitled to treatment no less favorable than that accorded to domestic investors or investors of third states, including restitution, compensation, indemnification, or other settlement. Payments must be freely transferable".[35] [36] This is then followed paragraph two, clarifying specificity with regards to (a) "[r]equisitioning of property by the host state's authorities or armed forces, or; (b) [d]estruction of property by such authorities that was not caused by combat action nor required by necessity, shall be accorded restitution or adequate compensation, with payments that are freely transferable." In this example, the compensation is required if the destruction was *not* caused by combat action or required by necessity, therefore reliance on military excess is covered within this clause. Losses suffered as a result of military necessity will not be compensated.

However, the evidentiary burden placed on investors is significant: they must demonstrate a causal link between the loss and the actions of the State, prove that the destruction was not required by military necessity, and establish that the loss did not occur during combat action.[37] Given the fluidity and complexity of armed conflict, satisfying these requirements is often extremely difficult. This high threshold has led to limited success for investors relying solely on extended war clauses. According to the extended war clause in Article 4(2) of United Kingdom-Sri Lanka BIT, the Tribunal in *AAPL v Sri Lanka* held that the investor must prove that (i) the government forces had caused the destruction; (ii) the destruction occurred as a result of combat; and, (iii) there was no military necessity for the destruction.[38] [39] The Tribunal dismissed the claim on the basis that the criteria of the extended war clause were not fulfilled. In the case of *AMT v Zaire*, the Tribunal applied Article IV 2(b) of the US-Zaire BIT, an extended war clause, and found that the soldiers in uniform had acted individually and did not represent the country's armed forces and therefore the destruction could not be attributed to the host State.[40] This case illustrates that the interpretation of the clause by tribunals can entirely change the outcome due to its extensive interpretability. In *Strabag v Libya,* the Tribunal evaluated and applied the extended

[35] Agreement between the Government of the United Kingdom and the Government of Ukraine for the Promotion and Reciprocal Protection of Investments (1993) (UK-Ukraine BIT).
[36] ibid, art 5(1).
[37] Greenman (n 25) 579.
[38] Agreement between the Government of the United Kingdom and the Government of the Democratic Socialist Republic of Sri Lanka for the Promotion and Protection of Investments.
[39] *AAPL v Republic of Sri Lanka* (Award) ICSID Case No ARB/87/3 (27 June 1990).
[40] *American Manufacturing & Trading Inc v Zaire* (Award) ICSID Case No ARB/93/1 (21 February 1997).

war clause in Article 5 of the Austria-Libya BIT.[41] Strabag alleged that during the civil war, a significant quantity of its property had been requisitioned by Libyan Government forces. On the basis of the clause, the Tribunal awarded compensation to Strabag for lost equipment.[42] The scope and reliability of extended war clauses is limited and places the burden of proof on the investors. In this sense, it is difficult for investors to gain a sense of security and predictability.

Tribunals have adopted divergent approaches on the permissible scope of MFN clauses. While some tribunals have allowed MFN clauses to apply to substantive protections and dispute settlement provisions, others have drawn a distinction, holding that procedural rights cannot be imported absent explicit treaty language. The uncertainty surrounding the reach of MFN clauses is particularly pronounced during armed conflict, where the stakes for both investors and States are high.[43] The lack of uniformity in arbitral practice adds to the unpredictability of investment law's application in conflict settings. The principle of FET also assumes a complex dimension in situations of armed conflict. FET is often interpreted broadly by arbitral tribunals to encompass obligations such as transparency, consistency, and the protection of investors' legitimate expectations. However, during armed conflict States may be compelled to adopt extraordinary measures that deviate from previously established legal and regulatory frameworks.[44] The question then arises as to whether such measures constitute a breach of FET. Tribunals have generally recognised that States retain a degree of regulatory flexibility during crises, including armed conflict, particularly where measures are taken in good faith and for legitimate public purposes. Nonetheless, the threshold for finding an FET violation in conflict settings remains context-specific, with tribunals balancing investor expectations against the exigencies of national security and public order.[45]

Doctrines derived from customary international law occupy a central role in assessing whether, and to what extent, a State's investment treaty obligations continue to operate during periods of armed conflict. These doctrines, many of which are codified in the International Law Commission's Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA),

[41] *Strabag SE v Libya* (Award) ICSID Case No ARB(AF)/15/1 (29 June 2020).

[42] P Dumberry, State Responsibility and Rebels: An Analysis of the Strabag Award in the Context of Libya's Civil War (2021) Transnational Dispute Management

[43] Rudolf Dolzer and Christoph Schreuer, *Principles of International Investment Law* (2nd edn, OUP 2012) 205-217

[44] C Brown, Investment Protection in Times of Armed Conflict (2022) 23 Journal of World Investment & Trade 701. [45] Y Levashova, Fair and Equitable Treatment and Investor's Due Diligence under International Investment Law (2020) Netherlands International Law Review.

establish narrowly defined circumstances in which the wrongfulness of a State's conduct may be precluded. Among the most significant is the doctrine of force majeure, which recognises that a State may be excused from performing its obligations when an unforeseen event, beyond its control, renders performance materially impossible.[46] Armed conflict can, in certain circumstances, precisely constitute the type of exceptional and unforeseeable events contemplated by the doctrines of *force majeure* and necessity: events so disruptive that they may fundamentally impede a State's ability to perform its international obligations. Such conflicts often involve sudden and severe breakdowns of law and order, large-scale destruction of infrastructure, and the diversion of resources to urgent national defence measures. In the context of investment law, they may trigger complex interactions between a State's treaty commitments and its imperative duty to protect its population, territory, and political integrity. Yet, the fact that armed conflict is capable of qualifying as such an extraordinary circumstance does not mean that its mere existence automatically relieves a State from liability. However, tribunals have been reluctant to accept force majeure as a blanket defence, instead requiring States to demonstrate that performance was truly impossible and that they did not contribute to the occurrence of the conflict.

The doctrine of necessity, codified in Article 25 of the ILC Draft Articles on State Responsibility, allows a State to preclude the wrongfulness of an act if it is the only means of safeguarding an essential interest against a grave and imminent peril.[47] The conditions for necessity are narrowly defined and require that the measure taken does not seriously impair an essential interest of the international community. This narrow interpretation significantly limits the ability of States to rely on necessity in the context of investment arbitration. The concept of essential security interests, often included as a treaty exception, further complicates the picture. Many BITs include clauses that permit States to take measures necessary to protect essential security interests, including during armed conflict. These clauses can operate as self-judging provisions, allowing States to determine for themselves what constitutes a threat to essential security, or they can be subject to arbitral review. Where these self-judging clauses are present in the BIT, investors face a formidable barrier in challenging State measures, as tribunals may lack jurisdiction to scrutinise the invocation of the clause. In *Continental Casualty v Argentina*, the tribunal upheld Argentina's reliance on its essential security clause during the 2001-2002 financial crisis, finding the provision self-judging and largely deferring to the State's assessment.[48] By contrast, in *CMS Gas Transmission v Argentina*, the tribunal acknowledged the clause but subjected Argentina's invocation to a good faith review, signalling that even self-judging clauses are not entirely immune from scrutiny.[49] In contrast, where the clause is subject to review, tribunals assess whether the State's actions were necessary and proportionate. The broader question is whether armed conflict can lead to the suspension or termination of investment treaties altogether. Investment treaties, by nature, are not considered incompatible with armed conflict, as they do not impose obligations that are directly related. As a result, tribunals have generally held that investment treaty obligations remain in force even during periods of armed conflict, as echoing from Article 4 ARSIWA.[50]

Nonetheless, the practical ability of States to comply with these obligations may be severely impaired, and arbitral tribunals are often called upon to balance the rights of investors with the

46 Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331.

47 International Law Commission, *Articles on Responsibility of States for Internationally Wrongful Acts* (ARSIWA), art 25.

realities faced by host States under extreme circumstances. The doctrines of force majeure and necessity play a significant role in shaping the extent to which States remain bound by their international investment treaty obligations during armed conflict. The interaction of these doctrines with core substantive protections, particularly the standards of FET and FPS, demonstrates the tension between safeguarding investor rights and recognising the exigencies of State action during armed conflict.

1.4 Principle standards of protection

Force majeure is a well-established doctrine that excuses a State's non-performance of treaty obligations if certain strict conditions are satisfied. The ILC's Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA) provide for Circumstances Precluding Wrongfulness in Articles 20 to 27. Necessity according to Article 25 ARSIWA may provide justification for actions of States during armed conflict, subject to limitations: (a) the

[48] *Continental Casualty Company v Argentine Republic*, ICSID Case No ARB/03/9, Award (5 September 2008).
[49] *CMS Gas Transmission Company v Argentine Republic*, ICSID Case No ARB/01/8, Award (12 May 2005). [50] International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA), art 4.

international obligation in question excludes the possibility of invoking necessity; or (b) the State has contributed to the situation of necessity."[51]

Codified in Article 23 ARSIWA, *force majeure* applies when an unforeseeable event occurs beyond the control of the State and was not self-induced, thereby rendering the performance of obligations materially impossible.[52] In the context of armed conflict, this could involve situations where government authorities lose control over parts of their territory, or infrastructure essential to investment is destroyed by circumstances outside the State's control. However, tribunals have interpreted the threshold for *impossibility* narrowly. Mere difficulty or increased burden in fulfilling treaty obligations is insufficient; the State must demonstrate that compliance was objectively impossible.[53] The doctrine therefore offers only a limited reprieve to States whose investment treaty obligations remain technically capable of performance, even under severe disruption caused by armed conflict. Moreover, tribunals have required that the invoking State must not have contributed to the situation of *force majeure*, which further narrows the scope of this defence.[54]

The essential security interests, frequently enshrined as an exception in BITs, provides States with an additional degree of protection in situations of armed conflict due to the fact that necessary military action could be permitted.[55] These clauses allow States to take measures they consider necessary to protect their essential security interests, including actions taken during periods of war or civil disturbance. Essential security clauses vary in their drafting: some are self-judging, granting the State significant discretion to determine the existence of a threat and the appropriateness of its measures, while others are subject to arbitral review. Where the clause is self-judging, it is more difficult for investors to challenge the invocation of the exception, as tribunals may be reluctant to reevaluate the State's assessment of its security needs. Where the

[51] ibid*,* articles 20-27, 25.
[52] ibid, art 23.
[53] M Augenblick and A Rousseau, Force Majeure in Tumultuous Times: Impracticability as the New Impossibility - It's Not as Easy to Prove as You Might Believe (2012) Journal of World Investment & Trade 13.
[54] ibid.
[55] S Schill and R Briese, "If the State Considers": Self‐Judging Clauses in International Dispute Settlement (2009) 13 Max Planck Yearbook of United Nations Law Online 61.

clause is subject to review, tribunals assess whether the State's actions were necessary and proportionate in light of the security threat. [56]

The variation in treaty drafting has led to divergent outcomes, creating uncertainty for both States and investors.[57] The VCLT provides a further interpretative framework through Articles 61 and 62, which relate to the suspension or termination of treaties in circumstances of fundamental change. Article 61, concerning supervening impossibility of performance, largely overlaps with the force majeure doctrine, requiring that performance be rendered impossible by the permanent disappearance or destruction of an object indispensable for execution of the treaty.[58] Article 62 addresses the doctrine of *rebus sic stantibus,* permitting a party to terminate or withdraw from a treaty where an unforeseen fundamental change of circumstances has occurred, radically transforming the extent of obligations still to be performed. In the context of armed conflict, States may attempt to invoke Article 62 by arguing that hostilities have radically altered the conditions under which the treaty was concluded.[59] However, the application of Article 62 is narrow. The change must be both fundamental and unforeseen, and it cannot be invoked to terminate treaties establishing boundaries or where the change results from a breach by the invoking State.[60] Given the importance of stability in international investment relations, arbitral tribunals have been reluctant to accept that armed conflict satisfies the demanding criteria of Article 62.[61] These doctrines, although available to States, have not displaced the core substantive protections enshrined in investment treaties. Obligations such as FET and FPS continue to bind States unless the treaty itself provides explicit derogations.[62] The FET standard, in particular, has been interpreted broadly by arbitral tribunals to shield investors from unreasonable, discrimination or bad faith conduct, including conflict-related violence where the State fails to act with due diligence.[63] While tribunals acknowledge that States enjoy a margin of appreciation during armed conflict, this does not absolve them from taking reasonable measures

[56] M Du, Challenging National Security Decisions Before Investment Tribunals (2022) Emory International Law Review.
[57] ibid.
[58] Schreuer (n 12).
[59] ibid. [60] ibid.
[61] *Russia - Measures Concerning Traffic in Transit* (Panel Report, WT/DS512/R, WTO, 5 April 2019).
[62] A Reinisch and C Schreuer, 'Fair and Equitable Treatment' and 'Full Protection and Security' in *International Protection of Investments: The Substantive Standards* (Cambridge University Press 2020) ch 2; ch 3. [63] Schreuer (n 12).

to protect foreign investments or from refraining from arbitrary interference. Similarly, the FPS standard obliges States to exercise due diligence in safeguarding investments against harm, including harm arising from third-party actors.[64] Although compliance may be more challenging during armed conflict, tribunals have generally held that States cannot evade this obligation solely by invoking the existence of hostilities. The practical effect of these doctrines is that States face a high evidentiary burden when seeking to justify derogations from their treaty obligations.[65] This burden reflects the investment law system's underlying objective of maintaining stability and predictability for foreign investors, even in times of crisis. While the doctrines of force majeure, necessity and essential security interests recognise that States must retain a degree of flexibility to respond to existential threats, the restrictive conditions attached to these defences mean that they seldom relieve States of liability.[66] Armed conflict may disrupt the performance of treaty obligations, but it does not automatically suspend or extinguish them. Tribunals must therefore navigate a delicate balance between enforcing investor rights and acknowledging the extraordinary pressures States face during armed conflict. Moreover, it could allow for the analysis of what legal standards are to be considered in the calculation of damages.[67]

The standard of Full Protection and Security (FPS), are in most BITs and multilateral treaties and are important standards to uphold, it may be included as 'constant protection and security' or just simply 'security and protection'. This imposes a duty for the Host State to protect the investment against violence by other actions and a duty to refrain from use of armed force.[68] These clauses are generally interpreted as an effort to ensure that the treaty continues to apply during e.g. armed conflict while allowing for the temporary inapplicability of certain substantive provisions.[69] These standards do not offer absolute liability and are not objective, the Tribunal must assess how this is fulfilled to the extent of the reasonable use of the Host State's

[64] Dolzer and Schreuer (n 43) 149; E De Brabandere, 'Host States' Due Diligence Obligations in International Investment Law' (2015) 42 Syracuse Journal of International Law and Commerce (2) art 4.
[65] International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries (2001) UN Doc A/56/10, arts 23–25.
[66] *AAPL v Sri Lanka* (Award) ICSID Case No ARB/87/3, 27 June 1990, 4 ICSID Rep 246.
[67] For the purpose of this paper, the terms "damages" and "compensation" are understood to be synonymous.
[68] Dolzer and Schreuer (n 43) 161-164.
[69] Ursula Kriebaum, 'Full Protection and Security' in August Reinisch (ed), *Standards of Investment Protection* (OUP 2008) 153-180.

capabilities.[70] Rather, this standard imposes that the State will exercise due diligence.[71] In the case of *AAPL v. Sri Lanka*, where, despite the tribunal's finding that there was no reliable evidence to clarify the exact circumstances of the destruction of the investor's property during hostilities, it nonetheless concluded that the host State had breached its international obligations as established under the applicable investment treaty.[72] The reasoning of the Tribunal was the respondent had violated its obligation of due diligence by failing to take all reasonable measures to prevent the destruction and that the force deployed by the armed forces was excessive and unwarranted by the circumstances. In some instances such provision of protection and security is followed by '... in accordance with international law.' In other treaties, the standards are independent.

The case of *AMT v Zaire* provides one of the earliest and most instructive applications of the FPS standard in situations of armed conflict and internal instability. In that dispute, the claimant's investment suffered extensive looting and destruction at the hands of Zaire's own armed forces.

The arbitral tribunal, applying the United States-Zaire BIT, found that Zaire had breached its FPS obligation by failing to adopt reasonable measures to ensure the physical protection and security of the investment. The tribunal stressed that the FPS standard imposes a positive obligation of due diligence on the host State, requiring active steps to safeguard foreign investments against harm caused by both State and non-State actors. This reasoning was echoed in *Ampal-American Israel Corporation and others v. Egypt*, where the claimants' gas pipeline was repeatedly targeted by attacks in the Sinai Peninsula.

The tribunal held that Egypt's failure to prevent or respond adequately to these foreseeable attacks constituted a violation of the FPS standard. These decisions confirm that, while FPS is not expressly drafted to address belligerent conduct, it remains the most vital substantive protection available to investors during armed conflict, particularly where the host State retains some capacity to act preventively.[73] The analysis provides an added layer of complexity when a

[70] Elettronica Sicula SpA (ELSI) (*US v Italy*) (Judgment) [1989] ICJ Rep 15, para 108; AAPL v Sri Lanka (n 5) para 53; Tecmed v Mexico, ICSID Case No ARB(AF)/00/2, Award (29 May 2003) para 177; Noble Ventures v Romania, ICSID Case No ARB/01/11, Award (12 October 2005) para 164; Saluka v Czech Republic, UNCITRAL, PCA Case No 2001-04, Partial Award (17 March 2006) para 484.

[71] *Noble Ventures Inc. v Romania* [Award of 12 October 2005] para 164.

[72] *AAPLv Republic of Sri Lanka*, ICSID Case No. ARB/87/3, Final Award (27 June 1990)

[73] UNCTAD, Full Protection and Security: UNCTAD Series on Issues in International Investment Agreements II (United Nations 2009).

treaty also contains an explicit security clause, as these provisions can, in principle, operate to justify measures that would otherwise breach the FPS obligation.[74] Security clauses are drafted to give States discretion to take protective action during times of war, public emergency, or threats to essential security interests. For example, Article IX(1) of the United States-Ukraine BIT (1994) states that the treaty does not preclude "the application by either Party of measures necessary for the maintenance or restoration of international peace or security, or the protection of its own essential security interests."

The breadth of such clauses means that, in certain cases, they may displace or qualify the FPS standard or other protections, such as those against uncompensated expropriation, provided that there is an establishable causal link to the stated security interests.[75] The scope of this discretion varies depending on treaty drafting. The Japan-Ukraine BIT contains especially broad wording, allowing a Party to "take any measure which it considers necessary" for the protection of its essential security interests.[76] This "self-judging" formulation leaves the determination of necessity entirely to the invoking State, creating significant uncertainty for investors. Such clauses may weaken the foreseeability and stability of the protections offered, which are central to the investment treaty regime. When both the FPS obligation and a security clause are in play, arbitral tribunals have typically engaged in a two-stage analysis.[77]

First, they assess whether the FPS standard has been breached, applying the due diligence test to determine whether the State took reasonable steps to protect the investment in the circumstances. Second, if a breach is established, the tribunal considers whether the State can rely on the security clause as a defence. This often involves an examination of whether the clause is self-judging or subject to objective review, whether it requires good faith, and whether the measures in question bear a plausible connection to the stated security interest.[78]

---

[74] M Krajewski, 'Human Rights and the FPS Standard in International Investment Law: The Potential Impact of Security Exceptions' (2013) 13(2) Journal of World Investment & Trade 86, 102-105.

[75] Kriebaum (n 69) 176-178.

[76] Agreement between Japan and Ukraine for the Promotion and Protection of Investment (signed 5 February 2015, entered into force 26 November 2015) art 15(1).

[77] W Burke-White and A von Staden, Investment Protection in Extraordinary Times: The Interpretation and Application of Non-Precluded Measures Provisions in Bilateral Investment Treaties (2008) 48 Virginia Journal of International Law 307

[78] *ibid.*

Tribunals have shown a willingness to uphold FPS obligations even in situations of conflict, unless the State can demonstrate that the measures taken were genuinely necessary for the protection of its essential security interests and that they were implemented in good faith. This balancing exercise reflects a broader principle that, while investment treaty protections are not absolute, they do not vanish entirely in times of crisis. Instead, their scope may be adjusted to account for the extraordinary circumstances, but only where the treaty's security clause clearly supports such a limitation and the facts substantiate its invocation. [79]

[79] Argentina-United States BIT (1991) art XI; Finland-Ukraine BIT (2004) art 4(1); Israel-Ukraine BIT (2010) art 7(1); Hungary-Russia BIT (1995) art 2(3).

Chapter. 2 Investment Protection Standards during Armed Conflict

The protection of investments during armed conflict continues to test the resilience and adaptability of international investment law. The legal framework is principally built upon a network of BITs, multilateral investment agreements, and customary international law standards, namely, full protection and security, protection against arbitrary and discrimination treatment, national treatment and most-favoured-nation treatment. While these instruments are designed to protect investors from arbitrary or discrimination conduct by host States, the eruption of armed conflict often forces States to adopt measures that would otherwise be inconsistent with their treaty obligations. The balancing act between safeguarding foreign investment and allowing States sufficient latitude to maintain national security and public order becomes increasingly complex in such situations. A central feature of most investment treaties is the FET standard, which operates as a benchmark for the conduct of host States towards foreign investors. This standard, although ubiquitous, is notoriously difficult to define with precision. The terms "fair" and "equitable" are inherently broad and subject to interpretation, leaving significant discretion to arbitral tribunals.[80] While the FET standard was initially perceived as a general obligation of good faith and non-discrimination, it has evolved in arbitral jurisprudence to encompass various aspects of State conduct, including transparency, consistency, the protection of investors' legitimate expectations, and procedural fairness.[81]

In situations of armed conflict, the application of the FET standard continues to be applied and interpreted broadly as a rule of international law.[82] The interpretation for this standard is broad and is to be understood as unfair and inequitable treatment that that of an investor of the Host State. There are some principles to be maintained in parallel: transparency, consistency, stability and protection of interests, compliance with contractual obligations, action in good faith. This is a non-exhaustive list which aims to illustrate the breadth of which this standard may reach and protect. Host States are often compelled to adopt emergency measures that deviate from previously established legal frameworks, disrupt economic activity, or even target foreign investments directly. In the absence of precise treaty definitions, arbitral tribunals are tasked with

[80] F Gu and X Qian, 'Reconstruction of the Evaluation of Legitimate Expectations within Investor-State Dispute Settlement: A Vantage Point from Fuller's Interactional Theory' (2025) World Trade Review [81] Schreuer (n 12).
[82] Dolzer and Schreuer (n 43) 134-140.

determining whether such measures constitute breaches of FET.[83] This inquiry often requires a delicate balance between acknowledging the extraordinary circumstances facing the State and ensuring that investors are not subjected to arbitrary or discrimination treatment. One significant challenge is the absence of explicitly defined legal consequences for breaches of the FET standard in many treaties. Unlike expropriation clauses, which typically provide for compensation based on fair market value, FET provisions do not usually specify the remedies available in case of violation.[84] This lacuna has resulted in the development of jurisprudence where tribunals, applying principles of international law, have crafted their own approaches to damages assessment. The lack of a standardised mechanism for calculating damages in cases of FET breaches has led to significant variability in outcomes, further contributing to the unpredictability of the investment law regime. The inclusion of armed conflict clauses in BITs is intended to provide guidance on the treatment of investments during periods of hostilities. However, these clauses do not operate as blanket suspensions of State obligations. Many such clauses include provisions concerning requisitioning, which refers to the temporary or permanent seizure of investor property for public use, often justified by the host State as necessary for security or defence.[85] Requisitioning provisions are not inherently incompatible with international investment law, but their legality depends heavily on the specific language of the treaty and the implementation of safeguards.[86]

2.1 Safeguard Principles

Among the principal safeguards governing the treatment of foreign investments in situations of armed conflict are the principles of non-discrimination, proportionality, and compensation. These principles, though distinct in their operation, form an interconnected set of obligations that together define the limits of lawful State conduct vis-à-vis foreign investors.

The principle of non-discrimination requires that foreign investors be treated at least as favourably as domestic investors and investors from third States.[87] This principle operates both

[83] A Reinisch, *The Protection of Investment in Armed Conflict* (CUP 2023) 132-137; *CMS Gas Transmission Company v Argentine Republic* (Award) paras 273-282.
[84] Salacuse (n 16) 252.
[85] Schreuer (n 12).

[86] Dumberry (n 42) 210-213.
[87] Dolzer and Schreuer (n 43) 119-146.

formally, prohibiting express differential treatment in law, and substantively, prohibiting measures that, in practice, place foreign investors at a disadvantage without a legitimate and objective justification. In the context of armed conflict, non-discrimination clauses in investment treaties ensure that emergency measures adopted by the host State do not single out foreign investments for adverse treatment, whether through targeted confiscation, requisition, or the withholding of protection and assistance.[88] Tribunals have read such clauses broadly, extending them to the interpretation of war-loss provisions and other *lex specialis* rules in order to maintain equal treatment among affected investors.[89] Proportionality operates as a further safeguard, ensuring that the measures taken by a host State are both suitable for achieving the public interest objective pursued and necessary in light of the circumstances. In investment treaty jurisprudence, proportionality has emerged as a means of reconciling investor protections with a State's right to regulate, including in emergency situations. A measure must be rationally connected to its purpose; it must impair the investor's rights no more than is required to achieve that purpose; and the benefits of the measure to the public interest must outweigh the harm to the investor.[90] This standard is particularly significant in armed conflict situations, where States may adopt measures such as expropriation of facilities for military use, requisitioning of transport fleets, or the suspension of project operations for security reasons. In such cases, tribunals assess whether the State could have pursued less restrictive means or mitigated the measure's impact on the investment while still achieving the public objective. [91]

2.2 Requisition clauses

The principle of compensation, though sometimes absent from the text of requisition clauses, has long been entrenched in customary international law. Its most authoritative expression remains the Permanent Court of International Justice's judgment in *Chorzów Factory*.[92] The Court's reasoning in *Chorzów Factory* established two foundational principles. First, that any

[88] S Batifort and J Benton Heath, 'The New Debate on the Interpretation of MFN Clauses in Investment Treaties: Putting the Brakes on Multilateralization' (2017) Vol. 111, 4 American Journal of International Law 873.
[89] Schreuer (n 12).
[90] Benedict Kingsbury and Stephan Schill, 'Public Law Concepts to Balance Investors' Rights with State Regulatory Actions in the Public Interest - The Concept of Proportionality' in Stephan Schill (ed), *International Investment Law and Comparative Public Law* (OUP 2010) 75-76.

[91] *Tecnicas Medioambientales Tecmed SA v Mexico* (Award) ICSID Case No ARB(AF)/00/2, 29 May 2003, para 122.
[92] *F actory at Chorzów (Germany v Poland)* (Merits) PCIJ Series A No 17 (1928) 47.
International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts, art 31.

internationally wrongful act gives rise to an obligation to make reparation, even if the applicable treaty is silent on this point. Second, that reparation must, as far as possible, eliminate all the consequences of the wrongful act and restore the situation that would have existed had the act not occurred. The principle of "full reparation" articulated in that case has been cited repeatedly in modern investment arbitration as the standard for determining the quantum of damages.[93]

This standard is codified in Article 31 of the International Law Commission's Draft Articles on State Responsibility, which states that a State responsible for an internationally wrongful act is under an obligation to make full reparation for the injury caused, including both material and moral damage.[94] The ILC Articles also set out the forms that reparation may take: restitution, compensation, and satisfaction. In the investment context, restitution is frequently impracticable, particularly in post-conflict environments where the investment has been destroyed, nationalised, or fundamentally altered.[95] As a result, compensation is the most common form of reparation ordered by tribunals. The assessment of compensation in armed conflict disputes raises complex issues.[96] Tribunals must address causation, determining whether the loss is attributable to the State's wrongful act or to the general hazards of conflict. They must also consider foreseeability and whether contributory fault by the investor should reduce the award. Distinguishing between losses directly caused by State measures and those caused by conflict-related events beyond the State's control is especially difficult in multi-actor conflicts, such as civil wars involving non-State armed groups.[97] The obligation to provide full protection and security (FPS) plays a central role in this analysis. FPS is a separate substantive standard from fair and equitable treatment and imposes a positive duty on host States to take reasonable measures to safeguard investments from harm. This duty applies to harm caused by State agents and, importantly, to harm inflicted by private actors, including insurgent groups.[98] While FPS does not guarantee absolute security which is an impossible standard in conflict zones as it requires that the State act with due diligence to prevent foreseeable harm and to respond effectively when threats

[93] *Case Concerning the Factory at Chorzów* (Germany v Poland) (Merits) PCIJ Rep Series A No 17, 47.
[94] International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries (2001) UN Doc A/56/10, art 31.

[95] *Ibid*, arts 34-36; see also Christoph Schreuer, *The ICSID Convention: A Commentary* (2nd edn, CUP 2009) 1136-1137.
[96] *Ibid* arts 34-36
[97] Ackermann (n 22).
[98] Dolzer and Schreuer (n 43) 149-151.

materialise.[99] Arbitral tribunal jurisprudence illustrates the application of FPS in conflict situations. In *AAPL v. Sri Lanka*, the ICSID tribunal found that Sri Lanka breached its FPS obligation when the claimant's shrimp farm was destroyed during military operations against insurgents.[100] The tribunal acknowledged the operational difficulties faced by the government but concluded that the State had failed to take reasonable preventive measures. This decision established that States are expected to exercise a degree of vigilance even when engaged in armed conflict.

The *Cengiz İnşaat Sanayi ve Ticaret AŞ v. Libya* case further demonstrates this principle. The ICC tribunal found that Libya had failed to meet its due diligence obligations under the Libya-Turkey BIT when the claimant's construction projects suffered extensive destruction and looting during the civil war.[101] The tribunal awarded approximately USD 50 million, holding that Libya's failure to protect the worksites, even in a deteriorating security environment, violated the FPS standard. Similarly, in *Strabag SE v. Libya*, the ICSID tribunal examined the State's FPS obligations in the context of protracted civil unrest. It found that although the standard of due diligence must be assessed against the prevailing conditions, Libya could not entirely abdicate its protective duties. The tribunal acknowledged that continuous protection of foreign investments may be impossible in such circumstances, yet emphasised that some measures to mitigate harm were both feasible and required. Other cases from conflict-affected jurisdictions reinforce these findings. In *Desert Line Projects LLC v. Yemen*, the tribunal held Yemen liable for breaches of FPS when armed tribesmen attacked the claimant's construction sites during unrest.[102] The State's failure to take effective measures to secure the area was considered a violation despite Yemen's broader security challenges. In *Olin Holdings Ltd. v. Libya*, the tribunal found Libya in breach of FPS for failing to protect a dairy production facility from looting and destruction in the chaos following the 2011 uprising.[103] These decisions reflect a nuanced balancing act. Tribunals recognise that armed conflict inevitably limits a State's capacity to protect investments, but they also affirm that conflict does not extinguish treaty obligations. Instead, the standard of due diligence adapts to the circumstances, taking into account the intensity of the conflict, the

[99] Reinisch (n 83) 112–115; *Wena Hotels Ltd v Arab Republic of Egypt* (Award) paras 84-95.

[100] *AAPL v Sri Lanka* (Award) ICSID Case No ARB/87/3, 27 June 1990, 4 ICSID Rep 246.
[101] *Cengiz İnşaat Sanayi ve Ticaret AŞ v Libya* (Award) ICC Case No 21537/ZF/AYZ, 7 November 2018.
[102] *Desert Line Projects LLC v Republic of Yemen* (Award) ICSID Case No ARB/05/17 (6 February 2008). [103] *Olin Holdings Ltd v State of Libya* (Award) ICSID Case No ARB/11/20 (25 May 2018).

geographical location of the investment, and the resources available to the State. States are afforded a degree of discretion where measures are taken in good faith to protect essential security interests or maintain public order, and where those measures are proportionate and non-discrimination.[104]

2.3 Force majeure, necessity and Security Clauses

The doctrine of *force majeure*, as reflected in Article 23 of the ILC's Draft Articles on State Responsibility and in Article 61 of the Vienna Convention on the Law of Treaties, provides a defence where an event beyond the control of the State renders compliance with its obligations materially impossible.[105]

The doctrine of necessity, codified in Article 25 of ARSIWA, offers a potential defence under even more stringent conditions. Necessity may be invoked where the breach of an international obligation constitutes the only means of safeguarding an essential interest against a grave and imminent peril. The measure adopted must be the sole means of addressing the peril, it must not seriously impair the essential interests of other States or of the international community, and it must not be a situation for which the State is responsible.[106] Even when these strict requirements are satisfied, necessity only precludes the wrongfulness of the conduct temporarily and does not extinguish the underlying obligation.

The narrow construction of these defences reflects a deliberate policy choice in international law to preserve the stability and predictability of the investment protection regime. Allowing States wide discretion to derogate from treaty obligations in periods of armed conflict would risk undermining investor confidence and discouraging capital flows into certain States. At the same time, the law recognises that exceptional circumstances may justify temporary departures from treaty commitments. Tribunals are therefore tasked with a delicate balancing exercise between

[104] Pascale Accaoui Lorfing, 'Screening of Foreign Direct Investment and the States' Security Interests in Light of the OECD, UNCTAD and Other International Guidelines' in Catharine Titi (ed), *Public Actors in International*

Investment Law (Springer 2021) 179-199

105 International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries (2001) UN Doc A/56/10, art 23; Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331, art 61.

106 Federica Paddeu, *State of Necessity* in Justification and Excuse in International Law: Concept and Theory of General Defences (Cambridge University Press 2018) 334-429.

preserving the rights of investors and acknowledging the sovereign prerogatives of States in times of crisis[107].

This interaction between treaty provisions, customary law doctrines, and arbitral jurisprudence underscores the complexity of protecting foreign investments during armed conflict. Armed conflict clauses, Fair and Equitable Treatment (FET) and Full Protection and Security (FPS) standards, requisitioning provisions, and the principles of reparation developed in *Chorzów Factory* and codified in the ILC Draft Articles together provide a framework for reconciling competing interests.[108] Nevertheless, the absence of uniform standards in damages assessment and the inherent vagueness of certain treaty terms leave arbitral tribunals with significant discretion. Outcomes in investment disputes arising from armed conflict therefore remain difficult to predict.[109]

Tribunals typically reach their conclusions through fact-specific analyses that weigh the particular circumstances of the case, the nature and scope of the hostilities, and the conduct of the State against the protections afforded to the investor. This case-by-case method has allowed international investment law to adapt to the practical realities of armed conflict, but it has also resulted in inconsistency and legal uncertainty.[110] One avenue for reducing such uncertainty would be the inclusion of clearer drafting in investment treaties, particularly in relation to the scope of armed conflict clauses and the legal consequences of breaches of the FET standard.

The relationship between investment protection standards and armed conflict remains one of the most unsettled areas in contemporary investment law. The cumulative doctrines and treaty provisions discussed above: force majeure, necessity, essential security interests, armed conflict clauses, and requisitioning provisions, operate in tandem with substantive protections such as FET and FPS. Yet the restrictive manner in which tribunals have interpreted these defences

[107] Vid Prislan, 'Investment Tribunals as Courts of Appeal? Determining State Responsibility for Substantive Denial of Justice', (2023) British Yearbook of International Law 1-67

[108] *Factory at Chorzów (Germany v Poland)* (Merits) PCIJ Series A No 17 (1928) 47. International Law Commission ARSIWA, art 31.

[109] Prislan (n 107)

[110] Katia Yannaca-Small (ed), *Arbitration Under International Investment Agreements: A Guide to the Key Issues* (2nd edn, OUP 2018) ch 15.

reflects an overarching principle: treaty obligations remain during conflict unless there is demonstrable and exceptional justification for derogation.[111]

An important dimension of this debate concerns the interpretation of "essential security interests" clauses. These treaty-based provisions, often termed "security exceptions," vary widely in their drafting, leading to significant interpretative divergence. Self-judging clauses, which appear in instruments such as the United States' 2004 Model BIT and subsequent agreements, permit the host State to determine unilaterally when action is necessary to safeguard its essential security.[112] While such clauses can shield State action from extensive external review, they also present a heightened risk of abuse from the invoking State by granting itself such discretion.[113] If a treaty contains a self-judging clause, there is generally an accompanying obligation to notify the other contracting party and to provide the reasons for invoking the clause.[114] An instance of such is seen in the ruling of the International Court of Justice in recognising the significance of this obligation in *Djibouti v. France* by linking it to the broader duty of mutual assistance and to the requirement in Article 72 of the Statute of the International Criminal Court to protect national security interests.[115]

The tribunal in *Continental Casualty v. Argentina* treated an essential security clause as a *lex specialis* provision, concluding that it operated independently of the customary necessity defence.[116] The tribunal emphasised that the inquiry under such a clause required an evaluation of whether the measures taken by the State were manifestly disproportionate in relation to the security interest pursued. By contrast, the tribunal in *El Paso v. Argentina* adopted a more searching approach, stressing that even in severe crises, State measures must comply with proportionality and must not nullify the investment protections at the core of the treaty.[117]

[111] Jürgen Kurtz, *The WTO and International Investment Law: Converging Systems* (Cambridge University Press 2016) 168-228.

[112] United States Department of State, 'Model Bilateral Investment Treaty' (2004).

[113] M Bahmaei and H Sabzevari, 'Self-Judging Security Exception Clause as a Kind of Carte Blanche in Investment Treaties: Nature, Effect and Proper Standard of Review' (2023) Asian Journal of International Law 13(1):1-27

[114] M Paulsen,' The Past, Present, and Potential of Economic Security' (2025) 50 Yale Journal of International Law

[115] Certain Questions of Mutual Assistance in Criminal Matters *(Djibouti v France)* [2008] ICJ Rep 177; Rome Statute of the International Criminal Court (adopted 17 July 1998, entered into force 1 July 2002) 2187 UNTS 90, art 72.

[116] *Continental Casualty Company v Argentine Republic* (Award).

[117] *El Paso Energy International Company v Argentine Republic* (Award) ICSID Case No ARB/03/15 (31 October 2011).

The interpretation of essential security interests clauses in investment law also invites comparison with the treatment of similar provisions in other branches of international economic law. The General Agreement on Tariffs and Trade (GATT)[118] contains a security exception in Article XXI[119], which has parallels in Article XIV of the General Agreement on Trade in Services (GATS)[120] and Article 73 of the Agreement on Trade-Related Aspects of Intellectual

Property Rights (TRIPS)[121]. In *Military and Paramilitary Activities in and against Nicaragua* (*Nicaragua v. United States*, 1986), the ICJ observed that bilateral investment treaties are not to be read as preventing a party from taking measures necessary to protect its essential security interests.[122] [123] The WTO panels' evolving jurisprudence on Article XXI of GATT has likewise grappled with whether, and to what extent, security exceptions are self-judging, particularly in *Russia - Traffic in Transit* (2019), where the panel held that while Members have discretion to determine their security interests, that discretion is not unlimited and is subject to good faith requirements.[124] This reasoning, although developed in the trade context, is increasingly referenced in investment disputes to inform the balance between sovereign security prerogatives and the protection of economic rights.

In a landmark judgement *Russia - Traffic in Transit,* the first dispute in which a WTO dispute settlement panel interpreted Article XXI, especially paragraph (b) and its subparagraph (iii). The panel addressed two important matters: (i) whether the panel had jurisdiction to review a WTO member's invocation of Article XXI(b)(iii) of GATT 1994; and, (ii) how and to what extent the invocation of the "national security exceptions" under Article XXI(b)(iii) could be reviewed. At issue was the meaning of the wording of both of Article XXI(b) and its subparagraphs. This became the first dispute in which a WTO dispute settlement panel interpreted Article XXI, especially paragraph (b) and its subparagraph (iii).[125] This decision adopted an objective standard

[118] General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187, 33 I.L.M. 1153 (1994).
[119] GATT 1994, Article XXI(b)(iii).
[120] General Agreement on Trade in Services, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S.183, 33 I.L.M. 1167 (1994), Article XIV.
[121] Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, 15 April 1994, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994), Article 73.
[122] *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America)* (Merits) [1986] ICJ Rep 14.
[123] ibid.
[124] *Russia - Measures Concerning Traffic in Transit* (Panel Report) WT/DS512/R (5 April 2019). [125] Schill and Briese (n 55) 99.

for assessing whether a State's invocation of the security exception was justified and emphasised that States must act in *good faith* and that a genuine link between the perceived security threat and the measures taken must exist. Arbitral tribunals in the investment law context have borrowed from this reasoning, increasingly assessing whether States have made a rational connection between the emergency and the measures, rather than accepting declarations at face value.[126] This landmark decision demonstrates a broader trend: public international law mechanisms are providing tribunals with analytical tools to prevent overreach while respecting legitimate security concerns.[127]

Furthermore, notwithstanding the aftermath of a successful invocation of necessity or security exceptions. Article 27(b) of the Draft Articles on State Responsibility stipulate that a State invoking necessity is not absolved from the duty to compensate for any material damage resulting from its actions.[128] Yet, in *LG&E v Argentina:* the tribunal acknowledged the timeline of the crisis: pre-, peak-, and post-necessity phases, holding Argentina not-liable during the peak of necessity but responsible for losses outside that period.[129] Similarly, the *Sempra v. Argentina* annulment committee accepted that necessity could *reduce* rather than eliminate liability by excusing only those damages directly caused by strictly necessary emergency measures, provided they are proportional and indispensable.[130]

This nuanced approach of partial liability reflects the nature of necessity as a temporary shield rather than a complete justification resulting in immunity. Tribunals increasingly adopt a phased analysis to separate losses attributable to conflict itself, losses caused by lawful defensive measures, and those caused by conduct exceeding what was strictly required.[131] This methodology allows tribunals to maintain fidelity to the principle of full reparation while

[126] T Voon, 'Russia - Measures Concerning Traffic in Transit' (2020) 114 American Journal of International Law 96.
[127] S Hartmann, 'Russia - Measures Concerning Traffic in Transit (WTO)' (2019) 58(5) International Legal Materials 899.
[128] Federica Paddeu, 'Investment Tribunals, the Duty of Compensation in Cases of Necessity: A Customary Law Void?' in Custom and Its Interpretation in International Investment Law: The Rules of Interpretation of Customary International Law (Cambridge University Press 2024) 151-178.
[129] *LG&E Energy Corp, LG&E Capital Corp and LG&E International Inc v Argentine Republic* (Award) ICSID Case No ARB/02/1 (25 July 2007).
[130] *Sempra Energy International v Argentine Republic* (Award) ICSID Case No ARB/02/16 (28 September 2007).
[131] Reinisch (n 83) 146-150; *AAPL v Sri Lanka* (Award) ICSID Case No ARB/87/3, 27 June 1990, 4 ICSID Rep 246; *Cengiz İnşaat Sanayi ve Ticaret AŞ v Libya* (Award) ICC Case No 21537/ZF/AYZ, 7 November 2018.

acknowledging that the law must adapt to the practical realities of armed conflict.[132] Ergo, causation plays a pivotal role in determining compensation. Armed conflict typically generates a complex web of harm, making it difficult to distinguish losses attributable to State conduct from those caused by broader hostilities or by third-party actors.[133] Tribunals apply rigorous standards of proof, placing the burden of proof on the investor to establish a clear causal link between the wrongful act and the alleged harm.[134] In *Ampal-American Israel Corporation and others v. Egypt*, while the tribunal found that Egypt bore a degree of responsibility for failing to take adequate measures to safeguard the pipeline, it also considered the broader security context, which included ongoing insurgent activity in a region characterised by instability and limited state control.[135] Evidence presented in the proceedings demonstrated that certain attacks were executed with a level of sophistication and persistence that made their complete prevention unrealistic, even with heightened security measures. The tribunal concluded that Egypt had not met the standard of due diligence required under the applicable treaty, but it recognised that this standard did not amount to a guarantee of absolute security. Consequently, the damages awarded were significantly reduced to reflect the conclusion that some of the losses sustained were attributable to factors beyond the host State's reasonable control, particularly in light of the persistent and unpredictable nature of the attacks.[136]

Similarly, in *AAPL. v. Sri Lanka*, the tribunal considered claims arising from the destruction of the claimant's shrimp farming operation during military operations conducted by government forces against the Liberation Tigers of Tamil Eelam (LTTE). Sri Lanka argued that the loss resulted directly from hostilities in an armed conflict and that it could not reasonably be held liable for damage caused in the course of legitimate counter-insurgency operations.[137] The tribunal accepted that the security situation in the region was volatile and that the State faced significant challenges in ensuring protection for investments located in conflict-affected areas.

However, it emphasised that the full protection and security standard under the applicable bilateral investment treaty required the State to exercise due diligence to prevent foreseeable harm, even in the context of armed conflict. On the facts, the tribunal concluded that Sri Lanka had failed to take adequate preventive measures, such as timely warnings or evacuation arrangements, which could have mitigated the loss.[138] This finding illustrates how causation analysis in investment arbitration is closely connected to the assessment of due diligence, with tribunals scrutinising not only the immediate cause of the damage but also the adequacy of the host State's protective measures.[139]

Quantification of investments in armed conflict scenarios introduces further complexity. Traditional valuation methods, such as discounted cash flow (DCF), market value, often require adaptation because they presuppose a level of economic stability absent in conflict zones.[140] Tribunals increasingly use scenario-based modelling or apply higher discount rates to account for heightened risk. For example, the *Ampal* tribunal adjusted the discount rate upwards, reflecting the uncertainty associated with conflict. This pragmatic approach acknowledges that speculative projections cannot form the sole basis of valuation where armed conflict disrupts revenue streams and alters the broader economic environment.

The principle of contributory fault, codified in Article 39 of ARSIWA, has emerged as a key instrument for attributing damages in cases where the investor's own actions contributed to the loss.[141] Tribunals are increasingly willing to reduce compensation where investors failed to take reasonable precautions in volatile contexts. In *Bear Creek v Peru*, damages were reduced by 25 percent because the investor failed to heed repeated warnings about escalating social unrest, aggravating the situation that led to the loss.[142] Similar reasoning could apply in armed conflict

[132] P Crivelli and M Pinchis-Paulsen, 'Separating the Political from the Economic: The Russia-Traffic in Transit Panel Report' (2021) World Trade Review 20, 582-605.

[133] Sergey Ripinsky and Kevin Williams, *Damages in International Investment Law* (2008) British Institute of International and Comparative Law 135-148, 309-315.

[134] *AAPL v Sri Lanka* para 84

[135] *Ampal-American Israel Corporation and others v Arab Republic of Egypt* (Award) ICSID Case No ARB/12/11, 21 February 2017.

[136] *Ampal-American Israel Corporation and Others v Arab Republic of Egypt* paras 254, 283–291. [137] *AAPL v Sri Lanka* paras 56-57, 72-74.

settings: investors that disregard security advisories, fail to insure adequately, or otherwise act diligently may see awards reduced. This approach reflects a balanced allocation of risk, reinforcing the underlying fact that investment treaties cannot foresee or mitigate all risk via self-judging clauses or and Interpretative Notes.[143] The relationship between investment law and international humanitarian law (IHL) also adds a layer of complexity. While tribunals generally resist the notion that IHL displaces investment obligations, they recognise that the conduct of hostilities may justify certain actions under the doctrine of military necessity. However, this recognition does not amount to blanket immunity. In *Chevron v Ecuador*, the tribunal noted that compliance with IHL does not necessarily exonerate a State from breaching investment obligations; both regimes can apply concurrently. Tribunals often resort to proportionality analysis, asking whether the military necessity was genuinely compelling and whether less destructive alternatives existed.[144] The emerging "economic capacity" standard, as proposed by scholars such as Prieto Muñoz, raises normative questions about whether the principle of full reparation is always appropriate in post-conflict settings.[145] Tribunals have occasionally tailored payment schedules to avoid undermining the host State's recovery efforts. In *Tethyan Copper v Pakistan*, for instance, the tribunal allowed installments over an extended period in view of the respondent's fiscal constraints.[146] Yet arbitrators are wary of reducing the principal amount owed purely on capacity grounds, fearing that such an approach could weaken investor confidence and incentivise strategic non-compliance.[147] The current jurisprudential trend underscores a dual commitment: ensuring that investor rights remain meaningful even in crisis conditions, while recognising that States must retain a measure of flexibility to navigate existential threats. This duality, however, has produced inconsistency: tribunals rely heavily on case-specific factual analyses, leading to unpredictability in outcomes.[148] Investors and States face uncertainty about how doctrines like necessity, force majeure, and security exceptions will be interpreted and about how damages will be calculated if breaches are found. This uncertainty has prompted calls for more precise treaty drafting. Treaty

---

[138] *AAPL v Sri Lanka* paras 85-90.
[139] Dumberry (n 42).
[140] Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law* (2nd edn, OUP 2017) 217-223; S Ripinsky and K Williams, Damages in International Investment Law (BIICL 2008) 275-280. [141] M Burgstaller and D Galagan, Contributory Fault in International Investment Arbitration (2024) 41(4) Journal of International Arbitration 397.
[142] *Bear Creek Mining Corporation v Republic of Peru* (Award) ICSID Case No ARB/14/21 (30 November 2017).
[143] Bahmaei (n 113)

negotiators could mitigate ambiguity by clearly defining the scope and effect of security exceptions, articulating whether they are self-judging, and setting out procedural safeguards such as consultation or notification requirements.[149] Additionally, treaties could incorporate indicative guidelines for damages assessment in armed conflict scenarios,

[144] *Chevron Corporation and Texaco Petroleum Corporation v Ecuador* (Partial Award on the Merits) PCA Case No 34877 (30 March 2010).

[145] Muñoz (n 20)

[146] *Tethyan Copper Company Pty Ltd v Islamic Republic of Pakistan* (Award) ICSID Case No ARB/12/1 (12 July 2019).

[147] J Marcoux and A Bjorklund, 'Foreign investors' responsibilities and contributory fault in investment arbitration' (2020) 69(4) International & Comparative Law Quarterly 877.

[148] S Franck and L Wylie, 'Predicting Outcomes in Investment Treaty Arbitration' (2015) 65 Duke Law Journal 459.

[149] A Reinisch, 'The Rule of Law in International Investment Law and Arbitration as Reflected in the Work of the ILA' (2024) 27 Zeitschrift für europarechtliche Studien 463.

addressing questions of causation, valuation, contributory fault, and payment modalities. Without such reforms, arbitral tribunals will continue to resolve disputes on a case-by-case basis, developing incremental jurisprudence that adapts general principles of international law to the realities of armed conflict.[150] While this judicial creativity allows for flexibility, it also perpetuates inconsistency. Greater textual clarity in future investment treaties could harmonise the balance between investor protection and sovereign discretion, making the regime more predictable and sustainable in the long term.[151] Finally, a growing number of commentators advocate for the integration of resilience-based considerations into investment protection standards. This approach would explicitly account for the socio-economic vulnerabilities of post-conflict States when determining damages, without undermining the core investor rights enshrined in treaties.[152] For instance, tribunals could be empowered to link damages payments to specific reconstruction or development projects, thereby aligning compensation with broader public interest goals.[153] Such innovations remain largely theoretical but reflect a broader recognition that the intersection of investment law and armed conflict cannot be divorced from humanitarian and developmental considerations.[154]

According to Article 31 of the VCLT, a treaty "shall be interpreted in good faith in accordance with the ordinary meaning to be given"[155]. This is to prevent derogation from international law obligations based on their subjective evaluation of the circumstances under a self-judging clause. *Ergo*, self-judging clauses must be expressly included in the BIT notwithstanding the scope and applicability of a provision granted to the Contracting Parties. The language and specificities in drafting such clauses can in general be identified by the wordings "if the State determines…", "if the State determines…", measures that the State "considers necessary".[156] In the Convention on Mutual Assistance in Criminal Matters between Djibouti and France, Article 2 states that judicial assistance may be refused if (c) "if the requested state considers that execution of the request is likely to impair its sovereignty, public policy or other essential interests." [157] This self granted discretion allows States to decide on the application of norms that are related to national security interests which hold significant risk of states abusing this in order to opt-out of international responsibilities. [158] The basis on which self-judgement provision has been laid down in Article XXI (b) of the GATT which states that "[n]othing in this Agreement shall be construed to prevent any party from taking any action which it considers necessary for the protection of its essential security interest." The judicialisation of self-judgment in international law is paramount in understanding the role in which international judicial bodies play in international relations. This is an interesting shift in accountability by States in situations of armed conflict: the geopolitical dependence and circumstantial facts result in this conceptual pendulum between judicialisation and resistance against these international judicial bodies.[159] Self-judging clauses that employ terms such as "vital interests," "sovereignty," or "domestic jurisdiction" are typically drafted with the specific purpose of insulating certain measures from arbitral review, and it is the aim of the drafters that their invocation is a matter for the contracting parties themselves to determine.

In *Nicaragua v. United States*, the Treaty on Friendship, Commerce and Navigation (FCN Treaty) in Article XXI(1)(d) stated that the treaty "shall not preclude the application of measures (…) necessary to protect [a party's] essential security interests". However, in this judgement it was held

[150] ibid.

[151] Joshua Paine, 'Beyond Investment Protection and ISDS: Towards an Investment Law Research Agenda Focusing on Investment Facilitation and Liberalization Commitments' (2025) World Trade Review 1-17.

[152] Reinisch (n 149)

[153] T Marzal, 'Quantum (In)Justice: Rethinking the Calculation of Compensation and Damages in ISDS' (2021) Journal of World Investment & Trade 22 (2021) 249-312

[154] ibid.

[155] Vienna Convention on the Law of Treaties, 23 May 1969, 1155 UNTS 331, Article 31.

[156] Agreement between the Government of the French Republic and the Government of the Republic of Djibouti on the Reciprocal Promotion and Protection of Investments (signed 13 December 2007, entered into force 15 June 2010) (Djibouti-France BIT); Agreement between Japan and the Islamic Republic of Iran on Reciprocal Promotion and Protection of Investment (signed 5 February 2016, entered into force 26 April 2017) (Japan-Iran BIT)

that while the Treaty itself provided for such exception, it does not remove the interpretation and application of the article from the jurisdiction of the Court ergo the Court has jurisdiction to determine whether such measures fall within such exception and it was not merely a "question for the subjective judgement of the party". Moreover, this provision lacked the self-judgement language outlined in Article XXI of GATT i.e. *considers* necessary. In response to this judgement the United States have increasingly moved towards including explicit self-judgement as standard practice.[160] The move toward explicit self-judging provisions reflects

[157]Convention on Mutual Assistance in Criminal Matters between the Government of the French Republic and the Government of the Republic of Djibouti (signed 27 September 1986, entered into force 1 September 1987). [158] Fabian Eichberger, 'Self-judgment in International Law: Between Judicialization and Pushback' (2024) 37 Leiden Journal of International Law 915.

[159] ibid.

[160] 1995 Treaty between the Government of the United States of America and the Government of the Republic of Honduras Concerning the Encouragement and Reciprocal Protection of Investment (Honduras-US BIT), Art. XIV; 1995 Treaty between the Government of the United States of America and the Government of the Republic of

a pendulum swing away from the judicialisation of such clauses, yet their operation remains constrained by the foundational requirement of good faith, which demands that States, when invoking them under bilateral investment treaties, consider both the reasonable expectations of other members of the international community and the need to exercise their discretion in a manner consistent with that principle.[161] The principle of good faith, when applied to self-judging clauses, has been viewed as a promising mechanism for subjecting such provisions to judicial scrutiny.[162] In *Norwegian Loans*, Norway relied on reciprocity to justify a reservation, but the International Court of Justice clarified that any such reservation must be interpreted consistently with good faith. The Court further indicated that a government cannot invoke a self-judging clause as an instrument to shield itself from judicial review where the dispute does not genuinely fall "essentially within the domestic jurisdiction" of the State, as doing so would constitute an abuse of rights and fail to preclude the Court's jurisdiction.[163]

The second potential avenue to judicialisation of self-judgement clauses is national security exceptions under the GATT.[164] Under Article XIV *bis* of the GATS, Article XXI of GATT 1994: the latter reads as follows "[n]othing in this Agreement shall be construed (b) to prevent any contracting party from taking any action which it *considers* necessary for the protection of its essential security interests".[165] Viewed through the lens of the good faith limitation, the WTO panel in *Russia - Traffic in Transit* addressed Russia's reliance on the national security exception in Article XXI(b)(iii) of the GATT as a defence for measures taken during heightened tensions. Russia maintained that the self-judging nature of the provision conferred upon the invoking Member exclusive discretion to determine when its essential security interests were implicated,

---

Nicaragua Concerning the Encouragement and Reciprocal Protection of Investment (Nicaragua-US BIT), Art. XIV and Protocol (1); 1998 Treaty between the Government of the United States of America and the Government of the Republic of Lithuania for the Encouragement and Reciprocal Protection of Investment (Lithuania-US BIT), Art. IX; 1998 Treaty between the United States of America and the Republic of Mozambique Concerning the Encouragement and Reciprocal Protection of Investment (Mozambique-US BIT), Art. XIV(1); 1999 Treaty between the Government of the United States of America and the Government of the Republic of El Salvador Concerning the Encouragement and Reciprocal Protection of Investment (El Salvador-US BIT), Art. XIV.

[161] Markus Kotzur, 'Good Faith (Bona Fide)', in R. Wolfrum (ed.), Max Planck Encyclopedia of Public International Law Online (2009), para. 4.

[162] ibid.

[163] Certain Norwegian Loans (*France v. Norway*), Preliminary Objections submitted by Norway, ICJ Pleadings, vol. 1, at 119, 131.

[164] T Chen, 'To Judge The "Self-Judging" Security Exception Under The Gatt 1994 - A Systematic Approach' (2017) 12(2) Asian Journal of WTO & International Health Law and Policy 311.

[165] General Agreement on Trade in Services (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 183, art XIV bis; General Agreement on Tariffs and Trade (adopted 30 October 1947, entered into force 1 January 1948) 55 UNTS 194, art XXI.

without the need to satisfy any externally imposed legal criteria. Ukraine, however, contested this interpretation, arguing that such an approach would effectively grant unreviewable authority and undermine the balance of rights and obligations under the GATT. Ukraine urged the panel to adopt an "objective assessment of good faith," contending that it was necessary to examine whether Russia's measures were genuinely directed toward the protection of essential security interests or whether they were, in reality, designed to serve protectionist purposes or to impose unjustifiable restrictions on trade.[166] The WTO panel in *Russia - Traffic in Transit* determined that the circumstances enumerated in sub-paragraphs (i)-(iii) of Article XXI(b) of the GATT: namely, measures "relating to fissionable materials," those "relating to the traffic in arms," and those "taken in time of war or other emergency in international relations": are subject to an objective determination. The panel further concluded that the self-judging language in Article XXI(b) qualifies only the assessment of the "necessity" of a measure and the definition of "essential security interests." It does not, however, remove the panel's jurisdiction or render the matter non-justiciable. The designation of essential security interests and their relationship to the measures adopted remain subject to a review grounded in the principle of good faith. For the panel, good faith review carries two key implications.[167]

First, the invoking Member must substantiate its claims by providing reasoned justifications for reliance on the provision. Second, and described by the panel as the "most important" element, any measure adopted must satisfy a "minimum requirement of plausibility" in relation to the stated essential security interests. This plausibility requirement ensures that the invocation of Article XXI is not a mere pretext for protectionism or for circumventing the obligations of the multilateral trading system. The two-step good faith test articulated by the panel in *Russia - Traffic in Transit* represents a significant development in the judicialisation of explicit self-judging clauses. This framework was subsequently applied in *Saudi Arabia - Measures Concerning the Protection of Intellectual Property Rights IPR*, a dispute brought by Qatar.[168] Qatar alleged that Saudi Arabia had adopted a series of measures designed to prevent a Qatari state-owned company from securing legal representation in Saudi domestic proceedings intended

[166] *Russia - Measures Concerning Traffic in Transit* (Panel Report, WT/DS512/R, WTO, 5 April 2019).
[167] D Boklan and A Bahri, 'The First WTO's Ruling on National Security Exception: Balancing Interests or Opening Pandora's Box?' (2020) 19(1) World Trade Review 123.
[168] *Saudi Arabia Measures Concerning the Protection of Intellectual Property Rights* (Panel Report) WT/DS567/R (16 June 2020).

to address widespread copyright infringements committed by a piracy broadcaster. Qatar further claimed that Saudi Arabia had declined to initiate criminal proceedings against the same infringer. In response, Saudi Arabia invoked Article 73 of the TRIPS Agreement, asserting that these measures were justified because the severance of diplomatic relations with Qatar constituted an "emergency in international relations" within the meaning of the provision.[169]

Applying the good faith test, the panel first accepted that the severance of diplomatic ties met the objective threshold to qualify as an emergency in international relations. It also determined that Saudi Arabia satisfied the plausibility requirement in relation to denying beIN Media legal representation, characterising the measure as part of a broader policy of ending or preventing any form of interaction with Qatari nationals.[170] However, with respect to the refusal to take enforcement action against the piracy broadcaster, the panel found that the "minimum requirement of plausibility" was not met.[171] Moreover, the panel could not discern any plausible link between the proffered essential security interests and the failure to pursue legal remedies against copyright infringement. Consequently, the panel held that this conduct did not constitute a good faith measure under Article 73. This was the first ruling to confirm that the invocation of an explicit self-judging provision does not guarantee the lawful application of the substantive exception in the manner envisaged by the invoking State. [172]

International law has experienced two distinct State responses to the increasing judicialisation of self-judging clauses in treaties, particularly in the fields of investment and trade, revealing sharply different attitudes toward the preservation of unilateral State discretion.[173] The first group of States has demonstrated conditional acceptance by incorporating express limitations into self-judging provisions, such as requirements that they not be applied in an arbitrary manner or that they be exercised in good faith.[174] This reflects the growing willingness to permit judicial oversight over State discretion, thereby preserving a measure of legal accountability while retaining diplomatic flexibility. The second group of States has resisted this trend by introducing treaty provisions that remove, in explicit terms, the ability of an arbitral tribunal or panel to

[169] Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) art 73. [170] *Saudi Arabia* Panel Report (n 168) [171] TRIPS Agreement, art 73(b)(iii).
[172] *Saudi Arabia* Panel Report Addendum (n 168), para. 9.
[173] Eichberger (n 158) 916-918. [174] Schreuer (n 17)

review a State's invocation of a self-judging clause. This technique, described in the literature as "reinforced self-judgment," is characterised by the inclusion of unilateral footnotes or annexes that instruct the adjudicatory body to uphold the State's invocation without examining its substantive merits, thereby precluding any possibility of judicial scrutiny.[175]

An early example of reinforced self-judgment is found in the Peru - United States Trade Promotion Agreement. Article 22(b) of this treaty contains an essential security exception that is self-judging in nature, but its accompanying footnote states that if a Party invokes the provision in arbitral proceedings, "the tribunal or panel hearing the matter shall find that the exception applies."[176] This language obligates the tribunal to accept the State's determination and foreclose any inquiry into whether the measures genuinely relate to the protection of essential security interests. A similar approach is evident in India's treaty practice. The Belarus-India BIT, concluded in 2018, follows the structure of India's 2016 Model BIT and reflects the substance of the Joint Interpretative Notes agreed between the parties. Article 33 of the Belarus-India BIT, accompanied by an annex, provides that when a Party invokes the essential security interest defence, its decision "shall be non-justiciable" and shall not be subject to review by any arbitral tribunal, even where the tribunal is determining claims for damages or compensation.[177] Decisions such as the WTO panel report in *Russia - Traffic in Transit* and the International Court of Justice's judgment in *Djibouti v France* demonstrate a willingness by adjudicatory bodies to apply a good-faith test to explicit self-judging provisions, introducing an objective element into the interpretation of clauses that States had previously assumed would remain entirely within their own discretion.[178] Reinforced self-judgment can thus be seen as part of a broader dialogue between States and adjudicatory bodies over control of exceptional treaty provisions, functioning as a legislative reaffirmation of sovereignty in politically sensitive domains such as national security and public order, and operating as a corrective to what some States perceive as unwarranted judicial encroachment.[179] The implications of reinforced self-judgment for the rule-of-law function of international adjudication are significant. By directing tribunals to accept

[175] Schill and Briese (n 55).
[176] Peru-United States Trade Promotion Agreement (signed 12 April 2006, entered into force 1 February 2009) art 22.2(b).
[177] Agreement between the Republic of India and the Republic of Belarus on the Promotion and Protection of Investments (signed 24 September 2018, entered into force 5 March 2020) art 33.
[178] Bahmaei (n 113)
[179] *Djibouti v France* (Jurisdiction and Admissibility) [2008] ICJ Rep 177.

a State's invocation of a self-judging clause without inquiry, such provisions risk turning adjudication into a purely formal exercise, undermining the expectation which has been reinforced by cases such as *Russia - Traffic in Transit* that even security-related exceptions are subject to minimal review to ensure they are not invoked as a pretext for protectionism or to avoid treaty obligations.[180] At the same time, reinforced self-judgment clauses create greater transparency by eliminating ambiguity about the drafters' intentions. When a treaty explicitly states that an exception is non-justiciable, all parties, including potential investors, are on notice that certain disputes will fall outside the jurisdiction of arbitral bodies, reducing the risk of jurisdictional surprises during proceedings.[181] Nevertheless, this clarity also signals to investors that their treaty protections may be significantly curtailed in matters touching on essential security, which could influence investment decisions.[182]

The divergence between States that accept judicial oversight and those that entrench unilateral discretion through reinforced self-judgment reflects a deeper contest over the balance between sovereign autonomy and legal accountability.[183] The former approach aligns with an international legal order in which States accept some measure of external scrutiny to maintain the legitimacy of treaty-based regimes, while the latter approach prioritises sovereign control even at the cost of weakening adjudication's ability to prevent abuse.[184] The effectiveness of reinforced self-judgment in re-establishing State control over exceptional treaty provisions will depend on whether arbitral and judicial bodies are willing to respect the exclusionary language of these clauses, as well as on the interpretative strategies adopted in future disputes. Some tribunals may still find ways to apply overarching principles such as good faith or abuse of rights to limit the effect of reinforced self-judgment, particularly in extreme cases where invocation of the clause is manifestly unrelated to the protection of essential security interests.[185] In sum, reinforced self-judgment represents a significant development in the ongoing interplay between treaty drafting and judicial interpretation. Some States embrace judicialisation by embedding objective

[180] *Russia - Measures Concerning Traffic in Transit* (Panel Report) WTO Doc WT/DS512/R (5 April 2019).
[181] Schill and Briese (n 55).
[182] D Gaukrodger, The Balance Between Investor Protection And The Right To Regulate In Investment Treaties: A Scoping Paper (2017) OECD Working Papers on International Investment.
[183] Eichberger (n 158).
[184] C Bradley and J Goldsmith, 'Treaties, Human Rights, and Conditional Consent' (2000) 149 University of Pennsylvania Law Review 399, 444-448.
[185] Fabian Eichberger, When Reinforced Self-Judgment Meets Judicial Review: Insights from Seda v Colombia (*EJIL: Talk!,* 10 September 2024).

limitations within self-judging clauses, while others respond by closing the door to review altogether. This dual trend demonstrates both the adaptability of treaty design and the enduring role of sovereignty in shaping the architecture of international economic law. [186]

[186] Schill and Briese (n 55).

Chapter. 3 Damage Calculation in Investment Arbitration

3.1 Introduction

The damages phase of investment arbitration represents one of the most consequential aspects of the international investment law regime. While jurisdictional and liability determinations are important, they do not necessarily translate into tangible results for the investor or meaningful consequences for the host State.[187] Damages, by contrast, carry both immediate and systemic significance. They represent the practical remedy for the investor, compensating for the harm suffered, while for the host State, the size and enforceability of the award can have far-reaching implications for public finances and, in some cases, for national economic stability.[188]

The stakes are particularly pronounced in disputes arising from armed conflict. Armed conflict introduces conditions of volatility, uncertainty, and destruction that magnify the complexity of calculating damages. Investments may be wholly or partially destroyed, markets may collapse, and entire sectors of the economy may be rendered dysfunctional.[189] Record-keeping systems may break down, leaving investors unable to substantiate their losses with precision, while host States may be unable to produce counter-evidence. The task of a tribunal is to determine, often with incomplete information, the amount necessary to place the investor in the financial position it would have occupied had the wrongful act not occurred.[190]

This exercise involves the application of a number of interlocking legal and economic principles. Tribunals must first establish the legal basis for compensation, which is rooted in the customary international law principle of full reparation as set out in the *Chorzów Factory* judgment and codified in the ILC's Draft Articles on State Responsibility.[191] They must then select an appropriate valuation methodology. A range of methodologies is available, including discounted

[187] Marboe (n 140).

[188] Borzu Sabahi, *Compensation and Restitution in Investor-State Arbitration: Principles and Practice* (OUP 2011).
[189] Christina L Beharry (ed), *Contemporary Issues in International Arbitration and Mediation 2018* (Brill 2019) 205-261.
[190] *Case Concerning the Factory at Chorzów* (Claim for Indemnity) (Merits) (*Germany v Poland*) PCIJ Rep Series A No 17 (13 September 1928). [191] Marzal (n 153).

cash flow (DCF), market value, book value, and replacement cost, each of which has its own strengths, limitations, and evidentiary requirements.[192]

In addition, tribunals must consider legal standards that delimit the scope of recoverable damages.[193] These include the requirements of causation, which ensures that damages are attributable to the wrongful act, foreseeability, which excludes damages for remote or extraordinary losses, and mitigation, which obliges the investor to take reasonable steps to minimise harm. The role of uncertainty is also central, particularly in conflict zones: tribunals must decide how to approach evidentiary gaps, market distortions, and the speculative nature of future earnings projections in volatile environments.[194] [195]

This chapter provides a comprehensive analysis of these issues. It begins with a discussion of the legal basis for compensation, including a detailed examination of the *Chorzów Factory* principle, the ILC Draft Articles, and the evolution of arbitral practice in applying these principles to investment disputes. It then turns to valuation methodologies, exploring how tribunals select and apply these methods, especially in cases where the investment has been impaired by armed conflict. The chapter then examines the standards of causation, foreseeability, and mitigation, drawing on case law to illustrate how these doctrines function in practice. Finally, it considers the role of uncertainty, both as a practical challenge in quantifying damages and as a normative consideration in ensuring that awards strike a fair balance between the investor's right to reparation and the host State's capacity to pay.

3.2 The Legal Basis for Compensation

The principle of full reparation, articulated in the Permanent Court of International Justice's 1928 judgment in *Chorzów Factory*, remains the foundational standard in international law for determining the quantum of damages. The Court famously declared that reparation must, as far as possible, "wipe out all the consequences of the illegal act and re-establish the situation which

192 I Marboe, 'Compensation and Damages in International Law: The Limits of "Fair Market Value"' (2006) 7(1) Journal of World Investment & Trade 723.

193 *Yukos Universal Ltd v Russian Federation* (PCA Case No AA 227, Final Award, 18 July 2014) paras 1779-1783; *Amoco International Finance Corp v Iran* (1987) 15 Iran-US Cl Trib Rep 189, 259-262.

194 M Kantor, 'Valuation for Arbitration in Complex Political Environments' (2008) 24(2) Arbitration International 191, 194-200.

195 M Waibel, Compensation and Valuation in Investment Arbitration (Analytical Report, ICSID Reports 2025) 15-22.

would, in all probability, have existed if that act had not been committed".[196] This formulation captures the restorative nature of international responsibility. It seeks to undo, to the extent possible, the harm caused by the wrongful act rather than to punish the wrongdoing State.

The *Chorzów Factory* principle has been consistently affirmed by investment tribunals. In *Santa Elena v Costa Rica*, the tribunal cited it as the "standard applicable under international law," holding that compensation must correspond to the value of the investment at the date of expropriation, including expected profits.[197] Similarly, in *Amoco International Finance Corporation v Iran*, the tribunal described the *Chorzów Factory* standard as the "guiding principle" in quantifying damages.[198]

The ILC Draft Articles codify the principle as a matter of customary international law.[199] Article 31 establishes that a State responsible for an internationally wrongful act is under an obligation to make full reparation for the injury caused, which includes material and moral damage.[200] Article 34 identifies restitution, compensation, and satisfaction as the forms of reparation.

Restitution is the preferred form because it most directly re-establishes the "s*tatus quo ante*."[201] Yet, as the Commentary to Article 35 notes, restitution is often impractical, particularly when the investment has been destroyed or when the investor no longer wishes to operate in the host State. Compensation therefore becomes the principal form of reparation in the majority of investment disputes.

Article 36 of the ILC Draft Articles provides that compensation "shall cover any financially assessable damage including loss of profits insofar as it is established."[202] This provision is critical because it confirms that compensation is not limited to the sunk costs of the investment but extends to future profits, provided they can be established with reasonable certainty.[203]

Tribunals have applied this principle in a number of landmark cases. In *Yukos v Russia*, the

196 *Case Concerning the Factory at Chorzów* (n 6) 47.

[197] *Santa Elena v Costa Rica* (Award) ICSID Case No ARB/96/1 (17 February 2000).
[198] *Amoco International Finance Corporation v Iran* (1987) 15 Iran-US Cl Trib Rep 189, para 238.
[199] ibid.
[200] International Law Commission, 'Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries' in *Report of the International Law Commission on the Work of its Fifty-Third Session* (2001) UN Doc A/56/10, art 34.
[201] ibid, Commentary to art 35, para 1.
[202] ibid, art 36.
[203] Brigitte Stern, 'The Obligation to Make Reparation' in James Crawford, Alain Pellet, Simon Olleson and Kate Parlett (eds), *The Law of International Responsibility* (Oxford University Press 2010) 563, 572-574.

tribunal awarded over USD 50 billion in damages, relying on future earnings projections derived from market multiples and DCF analysis.[204] The award, one of the largest in investment arbitration history, illustrates the expansive potential of the full reparation principle when applied to large, profit-generating enterprises.[205]

However, the application of full reparation is tempered by the requirement that damages must be causally linked to the wrongful act. As the ILC Commentary to Article 31 emphasises, full reparation is not intended to place the injured party in a better position than it would have occupied absent the breach.[206] [207] This limitation assumes particular significance in armed conflict contexts, where losses may be caused by a range of factors, some of which fall outside the host State's control.[208]

Tribunals have struggled to operationalise the *Chorzów Factory* standard in cases involving armed conflict. In *AAPL v Sri Lanka*, the tribunal awarded damages for the destruction of the claimant's shrimp farm during military operations against insurgents, but it declined to award lost future profits on the grounds that projecting earnings in the volatile security environment would be too speculative.[209] Similarly, in *Ampal-American Israel Corporation v Egypt*, the tribunal awarded damages for the destruction of a gas pipeline but adjusted the quantum downward to reflect uncertainty and the difficulty of attributing the entirety of the loss to Egypt's breach of its full protection and security obligations.[210] These cases demonstrate that while the *Chorzów Factory* standard remains the guiding principle, tribunals adapt its application to the evidentiary and methodological challenges posed by conflict.

[204] *Yukos Universal Ltd v Russian Federation* (Final Award) PCA Case No AA 227 (18 July 2014).
[205] Irmgard Marboe, "The Calculation of Damages by the Tribunal in *Yukos v Russian Federation* Is Not Only Remarkable for the Result of US $50 Billion, the Highest Amount Ever" (2015) 30 ICSID Review 326, 327–331.
[206] International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries* (2001) UN Doc A/56/10, commentary to art 31, para 10.
[207] Stern (n 203).
[208] Alain Pellet, 'The ILC's Articles on State Responsibility for Internationally Wrongful Acts and Related Texts' in James Crawford and others (eds), *The Law of International Responsibility* (Oxford University Press 2010) (Oxford Public International Law online edition).
[209] *AAPL v Sri Lanka* (Award) ICSID Case No ARB/87/3, 27 June 1990, 4 ICSID Rep 246.
[210] *Ampal-American Israel Corporation and others v Arab Republic of Egypt* (Decision on Liability and Heads of Loss) ICSID Case No ARB/12/11, 21 February 2017, paras 288-289.

3.3 Valuation Methods

The choice of valuation method can have a decisive impact on the quantum of damages. Each method: discounted cash flow (DCF), market value, book value, and replacement cost, embodies different assumptions about value and has different evidentiary requirements. The selection of a particular method depends on the characteristics of the investment, the availability of reliable data, and the degree of uncertainty surrounding future earnings.[211]

The DCF method is one of the most widely used valuation tools in investment arbitration. It estimates the present value of an investment by projecting future cash flows and discounting them using a rate that reflects the risk profile of the enterprise. Tribunals have applied DCF in cases where the investment was a going concern with a stable track record of profitability. In *Occidental Petroleum v Ecuador*, for example, the tribunal used DCF to calculate damages because the investment was generating predictable revenue streams.[212]

The DCF method's strength lies in its ability to capture the future profitability of an enterprise, but its reliability is highly sensitive to the assumptions underlying the projections. Small changes in projected revenue or discount rates can produce large differences in valuation. In armed conflict contexts, where the investment's future performance is highly uncertain, tribunals have often declined to apply DCF.[213] In *Metalclad v Mexico*, the tribunal rejected DCF because the investment was not yet operational and future profits were too speculative.[214] Similarly, in *Gold Reserve v Venezuela*, the tribunal adopted a conservative approach, using DCF only for the period in which future cash flows could be projected with reasonable certainty.[215]

The market value approach seeks to determine the price at which the investment would have been sold in an open and competitive market immediately prior to the breach. This method is most appropriate when the investment is a publicly traded company or when comparable transactions are available.[216] It can be advantageous that this method is grounded in observable

[211] J Trenor (ed), *The Guide to Damages in International Arbitration* (Law Business Research 2016).
[212] *Occidental Petroleum Corporation v Republic of Ecuador* (Award) ICSID Case No ARB/06/11 (5 October 2012).
[213] Marzal (n 153)
[214] *Metalclad Corporation v United Mexican States* (Award) ICSID Case No ARB(AF)/97/1 (30 August 2000). [215] *Gold Reserve Inc v Bolivarian Republic of Venezuela* (Award) ICSID Case No ARB(AF)/09/1 (22 September 2014).
[216] Marboe (n 140)

market data, which reduces reliance on speculative assumptions. However, in armed conflict scenarios, market prices are often distorted or unavailable, limiting the applicability of the method.[217]

The book value method, which is based on the accounting records of the investment, is generally viewed as a conservative measure of value. It reflects the historical cost of assets as recorded in the company's financial statements but does not capture intangible assets or future profitability. Tribunals have tended to use book value as a floor rather than as the primary measure of damages. In *AAPL v Sri Lanka*, the tribunal relied on book value because the investor's projections of future earnings were deemed overly speculative in the context of civil war.[218]

Replacement cost, which calculates the cost of acquiring equivalent assets, is another method that can be appropriate when tangible assets are destroyed. It can be particularly useful in conflict contexts where physical destruction is the primary cause of loss. However, replacement cost does not capture goodwill, brand value, or anticipated future profits, and tribunals generally use it as a supplementary measure.

In practice, tribunals often employ multiple valuation methodologies to cross-check the reasonableness of their calculations. In *Vivendi v Argentina*, for example, the tribunal used both DCF and market multiples to arrive at a balanced valuation.[219] This hybrid approach can help mitigate the risk of error, particularly in conflict scenarios where data is incomplete and future prospects uncertain.

3.4 Standards of Causation, Foreseeability and Mitigation

The calculation of damages is not simply a matter of selecting a valuation method; it is also constrained by legal standards that define the scope of compensable loss. Causation, foreseeability, and mitigation serve as filters that ensure that damages awarded bear a sufficient

[217] T Schultz and C Dupont, 'Investment Arbitration: Promoting The Rule Of Law Or Over-Empowering Investors? A Quantitative Empirical Study' (2014) 25(4) European Journal of International Law 1147- 1168.
[218] *AAPL v Sri Lanka* (Award) ICSID Case No ARB/87/3, 27 June 1990, 4 ICSID Rep 246, para 103.
[219] *Compañía de Aguas del Aconquija SA and Vivendi Universal SA v Argentine Republic* (Award) ICSID Case No ARB/97/3 (20 August 2007).

relationship to the wrongful act and that investors are not compensated for losses that are remote, unforeseeable, or avoidable.[220]

Causation is the primary threshold. Tribunals must establish that the investor's loss was caused by the host State's wrongful act. This requirement can be particularly challenging in armed conflict contexts, where losses often result from a combination of State measures, insurgent activity, and generalised violence. Tribunals have adopted different tests to address this complexity. The "but-for" test asks whether the loss would have occurred absent the wrongful act, while the "proximate cause" test asks whether the wrongful act was sufficiently direct and foreseeable.[221]

In *Ampal v Egypt*, the tribunal reduced damages because it found that insurgent attacks on the gas pipeline could not have been entirely prevented by the host State, illustrating the difficulty of attributing losses to State breaches in conflict scenarios.[222] [223] Similarly, in *Chevron v Ecuador*, the tribunal applied a proximate cause analysis to exclude losses that were too remote from the wrongful act.[224]

The foreseeability principle further narrows the scope of recoverable damages. This principle, rooted in the law of contracts, requires that damages be limited to losses that were reasonably foreseeable at the time of the breach. Tribunals have applied foreseeability to exclude damages arising from extraordinary or highly speculative events. However, applying this principle in armed conflict contexts is particularly difficult because conflict often produces cascading and unpredictable consequences.[225]

Mitigation imposes a duty on investors to take reasonable steps to mitigate their losses. Investors cannot passively allow losses to accumulate and then claim full compensation. Tribunals have

[220] Ripinsky and Williams (n 133) 305-310.
[221] ibid, 137-143.
[222] *Ampal-American Israel Corporation and others v Arab Republic of Egypt* (Decision on Liability and Heads of Loss) ICSID Case No ARB/12/11 (21 February 2017)
[223] *Ampal-American Israel Corporation and others v Arab Republic of Egypt* (Award) ICSID Case No ARB/12/11, 21 February 2017, paras 285-289.
[224] *Chevron Corporation and Texaco Petroleum Corporation v Ecuador* (Partial Award on the Merits) PCA Case No 34877 (30 March 2010) [225] Kantor (n 194) 201-203.

reduced damages where investors failed to act with due diligence.[226] In *Mera v Serbia*, the tribunal considered whether the claimant had taken reasonable steps to mitigate its losses and adjusted the damages award accordingly.[227]

3.5 The Role of Uncertainty in Conflict Zones

Uncertainty is an inherent feature of damages calculation, but it is magnified in armed conflict scenarios. Armed conflict disrupts markets, destroys infrastructure, displaces populations, and undermines the reliability of financial data. These conditions make it difficult for tribunals to assess the value of investments and to project future earnings with confidence.[228]

Tribunals have responded to uncertainty in different ways. Some adopt conservative approaches, applying higher discount rates or rejecting claims for future lost profits when such profits cannot be established with reasonable certainty.[229] In *Metalclad v Mexico*, for example, the tribunal declined to award damages for lost future profits on the grounds that such profits were too speculative.[230] Other tribunals have been more willing to draw inferences from incomplete evidence, particularly where evidentiary gaps are attributable to the conflict itself.[231]

Uncertainty also raises broader questions about the adequacy of compensation. Awards that systematically discount investment values or deny recovery for future profits may undercompensate investors, undermining the principle of full reparation.[232] Conversely, awards that overcompensate investors can impose unsustainable burdens on host States, particularly those emerging from armed conflict with fragile economies.[233] Tribunals must strike a balance between these competing concerns, a balance that is often difficult to achieve in practice.[234] The evidentiary burden presents an additional challenge. Armed conflict often disrupts

[226] M Jarrett, S Puig, S R Ratner, 'Towards greater investor accountability: indirect actions, direct actions by states and direct actions by individuals' (2023) 14(2) Journal of International Dispute Settlement 259-280.
[227] *Mera Investment Fund Ltd v Republic of Serbia* (Award) ICSID Case No ARB/17/2 (30 October 2020)
[228] J Zrilič, 'The Effects of Armed Conflicts on Investment Treaties' in *The Protection of Foreign Investment in Times of Armed Conflict* (Oxford University 2019), 57-87
[229] Government of Canada, 'Possible Reform of Investor-State Dispute Settlement (ISDS): Assessment of Damages and Compensation' (Submission, November 2021).
[230] *Metalclad Corporation v United Mexican States* (Award) ICSID Case No ARB(AF)/97/1 (30 August 2000). [231] Jarrett, Puig, Ratner (n 226)
[232] Marzal (n 153)
[233] P Leepipatpiboon, C Castrovillari, T Mineyama, 'Macroeconomic Shocks and Conflict' (2023), IMF Working Paper 2023/068, International Monetary Fund.
[234] A Redfern, C Reymond, A Reiner, B Hanotiau, E Eveleigh and I W Menzies, 'The standards and burden of proof in international arbitration' (1994) 10(3) Arbitration International 317.

record-keeping, making it difficult for investors to produce documentary evidence to substantiate their claims.[235] Tribunals must decide how to allocate the burden of proof in such circumstances. Some tribunals have drawn adverse inferences against investors who fail to produce evidence, while others have taken a more flexible approach, recognising the difficulties inherent in proving loss in conflict zones.[236]

The calculation of damages in investment arbitration lies at the intersection of legal principle, economic methodology, and judicial discretion. The *Chorzów Factory* principle and the ILC Articles provide the normative foundation of full reparation, but their application in armed conflict scenarios requires careful adaptation. The choice of valuation methodology, the application of causation and foreseeability standards, and the handling of uncertainty all shape the quantum of damages.

In armed conflict contexts, these challenges are magnified. Investments may be destroyed, future earnings may be uncertain, and evidence may be sparse. Tribunals must balance the need to provide adequate compensation with the imperative of avoiding speculative awards that could destabilise fragile economies.[237] While existing jurisprudence has developed tools to address these challenges, inconsistency remains a defining feature. Greater coherence in the application of valuation methods and legal standards would enhance the predictability and legitimacy of damages awards, benefitting both investors and host States.[238]

The CJEU in *Factory at Chorzow* elaborated on the principle of 'full reparation' under Article 31 ARSWIA, while in most instances the automatic outcome is a calculation of monetary sum of 'appropriate' damages to be awarded without regard for potential investment value but for the wrongful act. [239] Tribunals commonly refer to this case in determining the sum of monetary

[235] Frédéric Gilles Sourgens, Kabir Duggal and Ian A Laird, 'Situating Evidence in the Process of Investor–State Arbitration' in Frédéric Gilles Sourgens, Kabir Duggal and Ian A Laird (eds), *Evidence in International Investment Arbitration* (Oxford University Press, 2018).
[236] Michael Hwang and Aloysius Chang, 'Corruption in International Investment Arbitration' in Nobumichi Teramura, Luke Nottage and Bruno Jetin (eds), *Corruption and Illegality in Asian Investment Arbitration* (Springer 2024) 149-184.
[237] Leepipatpiboon, Castrovillari, Mineyama (n 233)
[238] I T Cate, 'The Costs of Consistency: Precedent in Investment Treaty Arbitration' (2013) 51 Columbia Journal of Transnational Law 418.
[239] E Brouwer, A Fair (?) Quantification of Damages in Investor-State Arbitration Proceedings: Reflections from the UNCITRAL Working Group III ISDS Reform Process, International Investment Law Journal 4, no. 2 (July 2024): 165-183.

damages in order to restore the *ex ante* position i.e. the position it would have enjoyed but for the breaches.[240]

International arbitration tribunals repeatedly invoke the concept of "fair market value" as the benchmark for determining compensation following breaches of investment obligations. This includes circumstances that arise in the context of armed conflicts, where the effects on investments may be sudden and severe. Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law*, explains that fair market value is most commonly determined by means of three principal economic methodologies: cost or asset-based approaches, market-based approaches, and income-based methods.[241] Each approach captures a distinct dimension of value, and none is applied in isolation from the others in a strictly prescriptive manner. Tribunals frequently employ more than one methodology in order to cross-check results and to ensure that their conclusions are not dependent on a single set of assumptions. The combination of methods allows for a more balanced assessment and can help correct distortions that may arise when one technique is relied upon exclusively.[242]

Cost or asset-based methods are grounded in tangible financial information or in an assessment of the present economic reality of an investment.[243] In many cases, the starting point is the book value of the investment as reflected in the company's balance sheet.[244] Book value can provide a useful reference point, but it often reflects historical accounting figures that may not align with current market realities.[245]

An alternative within this category is the replacement cost method, which seeks to determine the present cost of reproducing or replacing the investment's assets.[246] This may involve assessing the prevailing market price for physical infrastructure, machinery, and other equipment, as well as evaluating the value of intangible assets such as licences and permits. Tribunals may also consider the sunk costs of an investment, which are the actual expenditures incurred by the investor in establishing and operating the business up to the valuation date.[247] While these cost-based measures provide a concrete and verifiable baseline, they do not always capture the intangible elements of an investment's worth or its potential to generate profits in the future. For this reason, tribunals rarely rely on cost or asset-based approaches alone, but instead use them as one of several reference points.[248]

Market-based approaches seek to establish value by reference to observable market transactions.[249] When the investment is in a publicly traded company, this may involve taking the prevailing market price of its shares immediately prior to the adoption of the challenged measure.[250] The assumption underlying this method is that the market price reflects the collective judgement of informed participants about the company's worth.[251] However, such prices may be distorted by market volatility, liquidity constraints, or macroeconomic shocks, and tribunals often adjust for such factors.[252] In the case of privately held entities, market-based approaches look to comparable

[240] Z Liu and R Avraham, 'Ex ante versus ex post expectation damages' (2012) 32(4) International Review of Law and Economics 339-355.
[241] Marboe (n 140).
[242] ibid.
[243] Wolfgang Alschner, 'Aligning Loss and Liability - Toward an Integrated Assessment of Damages in Investment Arbitration' in Theresa Carpenter, Marion Jansen and Joost Pauwelyn (eds), *The Use of Economics in International Trade and Investment Disputes* (Cambridge University Press 2017) 283-318.
[244] ibid.
[245] Marboe (n 140).
[246] J D Makholm, 'The discounted cash flow method of valuing damages in arbitration' in Barton Legum (ed), The Investment Treaty Arbitration Review (3rd edn, Law Business Research 2018) 239-247.

transactions or similar businesses for guidance. This can involve identifying companies of similar size, operating in the same sector and geographical region, and with comparable financial profiles, and then applying valuation multiples such as price-to-earnings. [253] These methods can be persuasive when reliable comparables exist, but their utility is limited when the sector is highly specialised, when there are no truly similar transactions, or when the market is affected by instability or conflict.[254]

Income-based methodologies, in particular the discounted cash flow (DCF) approach, represent the most forward-looking form of valuation.[255] The DCF method involves projecting the future cash flows that the investment is expected to generate and discounting them back to their present

[247] J Alberro, G D Ruttinger, '"Going concern" as a limiting factor on damages in investor-state arbitrations' (2015) 2(1) Journal of Damages in International Arbitration 1-22.
[248] Marboe (n 140).
[249] J M Cox, 'Methods of Valuation' in *Expropriation in Investment Treaty Arbitration* (Oxford International Arbitration Series, Oxford University Press 2019).
[250] Alexander Davie, The Use of Relative Valuation Methods in Investment Arbitration 2020 Global Arbitration Review.
[251] ibid.
[252] Leepipatpiboon, Castrovillari and Mineyama (n 233).
[253] N Brennan,'Valuing Businesses in a Legal Context. Commercial Law Practitioner' (2001) Commercial Law Practitioner, 8(5) 270-274.
[254] J Simmons, 'Valuation in investor–state arbitration: toward a more exact science', (2012), 30(1) Berkeley Journal of International Law, 196. [255] Marboe (n 140).

value. This requires an explicit forecast period, often five to ten years, followed by a terminal value that represents the worth of the investment beyond that period.[256] Determining the appropriate discount rate is critical, as it must reflect both the time value of money and the risks specific to the investment, including country risk, industry volatility, and project-specific uncertainties. The terminal value may be calculated by applying a perpetual growth rate to the final forecast year's cash flow or by using an exit multiple derived from comparable companies.[257] Although DCF is capable of capturing the investment's profit-generating capacity in a way that asset- or market-based methods cannot, it is highly sensitive to its underlying assumptions. Even small variations in projected revenues, growth rates, or discount rates can produce significantly different results. For this reason, tribunals tend to apply DCF where the investment is a mature, revenue-generating enterprise with a track record that supports reliable
forecasting.[258]

In practice, tribunals rarely confine themselves to a single method. They often employ multiple approaches in a process sometimes referred to as triangulation.[259] This involves calculating values under each method and comparing the results to identify convergence or divergence. If the different approaches produce similar valuations, the tribunal can be more confident in its assessment.[260] Where they diverge, the tribunal must examine the underlying assumptions and data to determine which method better reflects the true value of the investment. In some cases, a tribunal may implicitly give greater weight to one method over another, depending on the characteristics of the investment and the quality of available data.[261]

The determination of the valuation date is a further crucial element.[262] In cases of lawful expropriation, international law generally requires that fair market value be assessed immediately before the expropriation, in accordance with the standard of prompt, adequate, and effective

[256] ibid.

[257] Simmons (n 254).

[258] Noah Rubins, Vasuda Sinha and Baxter Roberts, *Approaches to Valuation in Investment Treaty Arbitration* in Christina L Beharry (ed), Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration (Brill Nijhoff 2018) 169-204.

[259] A Charlton, The applicable valuation approach in The Guide to Damages in International Arbitration (6th edn, Law Business Research 2024).

[260] ibid.

[261] ibid.

[262] Cox (n 249).

compensation.[263] The tribunal in *Tidewater Inc v Venezuela* followed this approach, assessing value as at the date just prior to the taking, and awarded compensation of approximately USD 46.4 million plus interest, significantly below the claimant's request of USD 234 million. In unlawful expropriation or other treaty breach cases, the appropriate valuation date may differ. Tribunals have sometimes chosen a later date, such as the date of the award, particularly where doing so better reflects the losses actually suffered.[264] Although evidence of subsequent events may be considered, it is typically used to confirm or challenge the reasonableness of the assumptions made as of the valuation date, rather than to replace the valuation date entirely.[265]

The principles set out by Silke Noa Elrifai in *Equity-Based Discretion and the Anatomy of Damages Assessment in Investment Treaty Law* focus primarily on lawful expropriation of equity interests. Nonetheless, tribunals have applied her reasoning by analogy to unlawful expropriation and to other forms of breach, including violations of fair and equitable treatment and denial of justice.[266] This adaptation often involves adjusting variables such as the valuation date and the types of damages considered. For instance, in non-expropriation cases, tribunals may award consequential damages such as lost profits, business interruption, or costs incurred in mitigating losses.[267]

Several leading cases illustrate these principles in operation. In *Rockhopper Italia S.p.A. v Italy*, the tribunal found that Italy had unlawfully expropriated the claimant's investment by denying a production concession.[268] The valuation relied on the claimant's own pre-acquisition DCF model, resulting in an award of approximately EUR 184 million. In *Yukos Universal Limited v The Russian Federation*, the Permanent Court of Arbitration awarded over USD 50 billion to former shareholders, using a combination of market and income-based approaches to determine the value of the company immediately before the alleged expropriation.[269] In *Smurfit Westrock v Venezuela*, an ICSID tribunal awarded Smurfit approximately USD 468.7 million plus costs and interest for the unlawful expropriation of paper plant assets, again combining methods to arrive at its figure.[270] These cases demonstrate that while tribunals may prefer a particular approach in a given context, they continue to verify results by reference to alternative methodologies.[271]

The *Chorzów Factory* principle, which requires restoration of the situation that would have existed but for the wrongful act, underpins the choice and application of valuation methodologies.[272] This counterfactual analysis aligns naturally with methods that project both actual and hypothetical future financial performance, such as DCF, as well as those that estimate value by comparison to unaffected market transactions.[273] Scholarly critique, such as that of Toni Marzal, has cautioned against over-reliance on DCF and similar methods in situations where assumptions may be unrealistic, particularly in politically unstable or conflict-affected

[263] ibid.

[264] J Paterson, M Rwashdeh, 'Economic damages: a reconsideration of retrospective valuation' (2023) The Middle Eastern and African Arbitration Review.

[265] ibid.

[266] S N Elrifai, 'Equity-based discretion and the anatomy of damages assessment in investment treaty law' (2017) 34(5) Journal of International Arbitration 835.

[267] ibid.

[268] *Rockhopper Exploration plc, Rockhopper Italia S.p.A. and Rockhopper Mediterranean Ltd v Italian Republic*, ICSID Case No ARB/17/14, Award (23 August 2022).

[269] *Yukos Universal Limited (Isle of Man) v Russian Federation*, PCA Case No AA 227, Final Award (18 July 2014).

contexts.[274]

When these valuation frameworks are applied in the context of armed conflict, additional considerations arise.[275] The reliability of market-based data may be compromised, comparable transactions may be unavailable, and forecasting may require heightened risk adjustments.[276] In such cases, asset-based methods can provide a valuable baseline, while income-based models must incorporate substantial risk premiums and adopt conservative projections. The selection of the valuation date may require careful analysis, sometimes focusing on the period immediately before the outbreak of conflict to avoid distortions caused by wartime volatility.[277] Furthermore, the adaptation of Elrifai's equity-focused approach can be particularly useful in accounting for conflict-related consequential losses, such as the destruction of infrastructure or prolonged business interruption.[278]

---

[270] *Smurfit Holdings B.V. v Bolivarian Republic of Venezuela* (Award) ICSID Case No ARB/18/49, 28 August 2024.
[271] Prislan (n 107).
[272] I Marboe, 'Damages in Investor-State Arbitration: Current Issues and Challenges' in Christina L Beharry (ed), *Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration* (Brill Nijhoff 2018) 1-86.
[273] ibid.
[274] Marzal (n 153).
[275] Ackermann (n 22).
[276] A Bougias, A Episcopos and G Leledakis, 'Valuation of European firms during the Russia-Ukraine war' (2022) 218 Economics Letters.
[277] Ackermann (n 22). [278] Elrifai (n 266).

Juan Carlos Boué, offers a pointed critique of the valuation methodologies used by investment tribunals, identifying inconsistency in their application and unpredictability in their results as persistent structural flaws.[279] He notes that these defects are most visible in cases involving large-scale damages claims, where methodological choices, evidentiary standards, and the discretionary reasoning of tribunals interact to produce widely divergent awards. Among the methods available, the DCF approach has become emblematic of these difficulties.[280] Although the DCF method is designed to estimate the present value of an investment based on its projected future cash flows, its reliability is fundamentally dependent on the availability of robust evidence and reasonable assumptions.[281] In situations where such evidence is weak or speculative, the method risks producing valuations that are not only inaccurate but also detached from economic reality.[282]

Boué's critique aligns closely with the observations of Bonnitcha in *Damages and ISDS Reform*, who emphasise that tribunals have, in certain cases, applied DCF in contexts where the evidentiary record did not support the accuracy of the projections, thereby undermining the credibility of the award.[283]

The debate is not merely technical: the selection of a valuation method shapes the quantum of compensation, sometimes by orders of magnitude, and can influence perceptions of the fairness and legitimacy of the ISDS system itself.[284] When tribunals apply DCF to projects that are incomplete, speculative, or at an early stage of development, they are, in effect, placing a market valuation on a hypothetical venture rather than on an existing economic asset.[285] This methodological leap becomes particularly controversial when the assumed cash flows are based on optimistic feasibility studies, preliminary licensing processes, or untested resource estimates.[286] It can be argued that this practice can lead to an overcompensation of investors, distorting the balance between the protection of foreign investment and the sovereign right of states to regulate in the public interest.[287]

The award in *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan* exemplifies these concerns.[288] The dispute arose when Pakistani authorities refused to issue a mining licence for the Reko Diq project in Balochistan, a venture led by the Australian mining company. The tribunal found that the refusal breached the investor's legitimate expectations under the fair and equitable treatment standard of Article 3 of the 1998 Australia-Pakistan BIT, which guarantees non-discrimination treatment to covered investments.[289] Having found a breach, the tribunal turned

[279] Boué (n 3).
[280] ibid.
[281] Gervase MacGregor and Michael Smith, 'Best practices and issues that arise in DCF models' in *The Guide to Damages in International Arbitration* (6th edn, Law Business Research 2024).
[282] ibid.
[283] J Bonnitcha et al, 'Damages and ISDS Reform: Between Procedure and Substance' (2023) *Journal of International Dispute Settlement* 14, 224.
[284] Marzal (n 153).
[285] ibid.
[286] B Gessel-Kalinowska vel Kalisz, 'The DCF standard in the calculation of compensation - some comments in connection with the standard of compensation adopted by the tribunal in the Rockhopper v Italy Award' (2025) Arbitration International.

to the assessment of damages and ultimately awarded approximately six billion United States dollars, inclusive of accrued interest. This was considerably lower than the claimant's original demand of over eight billion United States dollars, yet it remains one of the largest awards in the history of investment arbitration. The tribunal's choice of the DCF method was central to the quantum determination.[290] In applying DCF, the tribunal based its calculations on projected revenues over the anticipated operational life of the mine, even though the mine had not yet been constructed and had not entered production.

The use of DCF in *Tethyan Copper* was controversial because it relied on modelling the future performance of a project that existed only on paper and in preliminary geological surveys. Proponents of the decision might argue that the project's feasibility studies, resource estimates, and contractual arrangements with suppliers and contractors provided a sufficient evidentiary foundation to justify the projection of future cash flows.[291] From this perspective, the tribunal's role was to estimate the value of the lost opportunity as accurately as possible, given the available data. Critics, however, contend that the speculative nature of such projections rendered them too uncertain to form the basis of an award of this magnitude. They argue that, in such circumstances, alternative methodologies for example cost-based valuation reflecting the actual

[287] Marzal (n 153).

[288] *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan* (Award) ICSID Case No ARB/12/1, 12 July 2019.

[289] Agreement between the Government of Australia and the Government of the Islamic Republic of Pakistan on the Promotion and Protection of Investments (signed 7 February 1998, entered into force 14 October 1998) art 3. [290] *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan* (Award) ICSID Case No ARB/12/1, 12 July 2019, para 2818.

[291]Charlotin (n 27) 10.14-10.15.

investments made up to the valuation date, would have produced a figure more closely tied to proven economic reality.[292]

A contrasting approach can be seen in *Bear Creek Mining Corporation v Republic of Peru*.[293] The dispute concerned a silver mining project in the Puno region, which was halted when the Peruvian government revoked the investor's licence in response to significant local opposition and social unrest. The tribunal found that this amounted to an unlawful expropriation. However, in considering the appropriate quantum of compensation, it determined that the project was still at a preliminary stage and lacked critical regulatory approvals. In these circumstances, the tribunal concluded that there was insufficient evidence to apply the DCF method, given the absence of production history, market sales data, or a fully secured legal and operational framework.[294] Instead, it opted for a cost-based valuation that reflected the actual expenditures incurred by the investor.[295] This approach resulted in an award of just over eighteen million United States dollars, a sum dramatically lower than the claimant's demand of more than five hundred million United States dollars.[296]

The juxtaposition of *Tethyan Copper* and *Bear Creek Mining* is instructive for the broader methodological debate. In both cases, the projects were at pre-production stages, yet the tribunals took divergent approaches to valuation. In *Tethyan Copper*, the tribunal considered the feasibility studies and development plans sufficiently advanced to permit the projection of future cash flows. In *Bear Creek*, by contrast, the tribunal found that the absence of key approvals and the early stage of development precluded such projections. The result was a difference in awarded compensation that cannot be explained solely by the underlying value of the projects, but rather by the methodological choices made by the respective tribunals. This reinforces Boué's point that the application of DCF in unsuitable contexts creates unpredictability in outcomes and opens the door to inconsistent awards.[297]

The implications of this inconsistency extend beyond the specific cases. For investors, the possibility of securing a substantial award based on future cash flows may incentivise aggressive

[292] ibid.
[293] *Bear Creek Mining Corporation v Republic of Peru* (Award) ICSID Case No ARB/14/21 (30 November 2017).
[294] ibid, paras 603-607.
[295] Gessel-Kalinowska vel Kalisz (n 286).
[296] ibid.
[297] Boué (n 3).

claims, even where projects have not reached maturity. [298]For states, the risk of such awards may translate into a reluctance to regulate or intervene in projects, even where legitimate public policy concerns exist. This dynamic can create what some commentators describe as a "regulatory chill," whereby the threat of large damages awards influences state behaviour in ways that undermine democratic decision-making.[299]

From a legal standpoint, the inconsistent application of DCF raises questions about the standard of proof required for future earnings in ISDS.[300] In principle, tribunals should require that future profits be proven with a reasonable degree of certainty, which means that they must be more than hypothetical or speculative. The *Chorzów Factory* standard, often cited in investment arbitration, demands that reparation must wipe out all the consequences of the illegal act and re-establish the situation that would have existed had the act not been committed. When applied to projects that are not yet operational, this standard requires a careful balance between recognising the value of lost opportunities and avoiding overcompensation for unproven expectations. Bonnitcha *et al.* proposed reforms aimed at addressing these methodological shortcomings. One recommendation is that the use of DCF should be limited to cases where the investment has an established record of profitability, supported by audited financial statements and market performance data.[301] Another suggestion is to enhance transparency in the reasoning of tribunals when selecting valuation methods, so that parties and observers can better understand the basis for the chosen approach and the reasons for rejecting alternatives. Such measures could contribute to greater consistency and predictability in awards, thereby improving the legitimacy of the ISDS system.

Tribunals must retain the ability to tailor their valuation approach to the circumstances of each case, yet they must also avoid the perception that similar cases are being treated in fundamentally different ways without adequate justification while fostering legal certainty.[302] The comparison between *Tethyan Copper* and *Bear Creek Mining* highlights the stakes of this balancing act,

---

[298] K Tienhaara, 'Regulatory chill and the threat of arbitration: a view from political science' in Chester Brown and Kate Miles (eds), *Evolution in Investment Treaty Law and Arbitration* (Cambridge University Press 2011) 606-628.

[299] L Johnson and L Sachs The TPP's Investment Chapter: Entrenching, Rather than Reforming, a Flawed System 2015 Columbia Center on Sustainable Investment [300] Bonnitcha (n 283).

[301] ibid.

[302] D Sushama, 'Appellate Structure and Need for Legal Certainty in Investment Arbitration' (*Kluwer Arbitration Blog*, 1 May 2014).

particularly in high-value disputes involving natural resources and infrastructure projects, where the difference between cost-based and income-based valuations can amount to billions of dollars.

The concerns articulated by Juan Carlos Boué, and reinforced by the analysis of Bonnitcha, Poulsen, and Waibel, reveal an enduring and systemic vulnerability embedded within the current

ISDS framework.[303] At the heart of this critique lies the observation that although valuation methodologies such as the DCF method possess theoretical rigour and can yield reliable results when applied in circumstances that meet certain well-defined conditions, their deployment in unsuitable factual contexts undermines both the integrity of individual arbitral awards and the broader legitimacy of the ISDS system.[304] The challenge is not the existence of these methods per se but rather the tendency of tribunals to apply them in cases where the evidentiary record cannot sustain their underlying assumptions. The theoretical appeal of the DCF method is well known. By converting projected future cash flows into a present value through an appropriate discount rate, the method seeks to capture the forward-looking value of a going concern.[305] In contexts where a business has an established track record of operations, reliable historical data, stable regulatory conditions, and foreseeable market circumstances, DCF can produce a defensible approximation of fair market value.[306] However, where these preconditions are absent as such in the case of greenfield projects, early-stage ventures, or politically volatile environments: the application of DCF risks transforming an exercise in reasoned valuation into one of speculative extrapolation.[307] The fragility of such calculations is magnified in disputes arising from armed conflict or other forms of political instability, where projections of future performance are inherently uncertain.[308]

Tribunals that nonetheless proceed to apply DCF in such contexts not only expose their awards to methodological critique, but also erode confidence in ISDS as a coherent and predictable

[303] Juan Carlos Boué, *Oil and Governance: State-Owned Enterprises and the World Energy Supply* (OUP 2010) 742-745; Jonathan Bonnitcha, Lauge N Skovgaard Poulsen and Michael Waibel, *The Political Economy of the Investment Treaty Regime* (OUP 2017) 198-202.

[304] Sushama (n 302).

[305] K F Schumacher, H Klönne, 'Discounted Cash Flow Method' in Christina L Beharry (ed), *Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration* (Brill Nijhoff 2018) 205-230.

[306] ibid.

[307] Marboe (n 140) 192-197.

[308] Schumacher and Klönne (n 305).

system of adjudication.[309] This danger is not hypothetical. The contrasting outcomes in *Tethyan Copper Company Pty Limited v Pakistan* and *Bear Creek Mining Corporation v Republic of Peru* illustrate the profound implications that methodological choice can have for both the quantum of compensation and perceptions of arbitral legitimacy.[310] In *Tethyan Copper*, the tribunal awarded approximately USD 6 billion in damages, relying heavily on DCF calculations to quantify the value of a mining project that had yet to commence production. The tribunal treated projected revenues over the anticipated operational life of the mine as sufficiently reliable to form the basis of its valuation, notwithstanding the absence of operational history. It can be argued that this approach stretched the boundaries of DCF's suitability, given the speculative nature of the assumptions required.[311]

By contrast, in *Bear Creek Mining*, the tribunal confronted a similarly early-stage mining project, but reached a different conclusion on methodology.[312] Observing the absence of key regulatory approvals and the preliminary state of development, it determined that the evidentiary record could not sustain the assumptions necessary for a DCF valuation. Instead, it opted for a cost-based approach, awarding just over USD 18 million, an amount significantly below the claimant's original demand of more than USD 500 million.[313] While the outcome in *Bear Creek* may be criticised for potentially undercompensating the investor relative to the project's prospective value, it nonetheless demonstrates a more cautious application of methodological choice, aligned with the evidentiary limitations of the case.[314]

These contrasting decisions underscore a broader point: methodological discretion in damages assessment is both a source of flexibility and a potential vector for arbitrariness. On one hand, the ability to tailor valuation methods to the specific circumstances of a dispute allows tribunals to accommodate the diversity of factual patterns presented in ISDS. On the other hand, absent

[309] T Marzal, 'Against DCF valuation in ISDS: on the inflation of awards and the need to rethink the calculation of compensation for the loss of future profits' (*EJIL: Talk!*, January 26, 2021)

[310] *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan* (Award) ICSID Case No ARB/12/1, 12 July 2019, paras 1738–1744; *Bear Creek Mining Corporation v Republic of Peru* (Award) ICSID Case No ARB/14/21, 30 November 2017, paras 603–607.

[311] Christoph Schreuer, Loretta Malintoppi, August Reinisch and Anthony Sinclair, *The ICSID Convention: A Commentary* (2nd edn, CUP 2009) 1126-1128.

[312] *Bear Creek Mining Corporation v Republic of Peru* (Award) ICSID Case No ARB/14/21, 30 November 2017, paras 603-607.

[313] ibid, para 669.

[314] Marzal (n 309).

clear and consistently applied criteria for the selection of methodology, the choice between, for example, DCF and asset-based valuation can yield dramatically different results, with little in the way of principled justification.[315] The perception that such choices are driven by intuition, opportunism, or a predisposition toward one party's position risks undermining the normative authority of the award.[316]

Boué's critique, echoed in the work of Bonnitcha et al., thus speaks to the need for greater methodological discipline within ISDS. One potential avenue is the articulation of a framework that specifies, in advance, the factual preconditions for the use of certain valuation techniques.[317] This could take the form of soft-law guidance, perhaps developed under UNCITRAL or ICSID, that identifies benchmarks for the application of DCF, such as the existence of several years of stable operational history, the availability of reliable audited financial data, and a market environment free from extraordinary volatility.[318] Where such conditions are not met, tribunals could be encouraged to adopt alternative approaches, such as replacement-cost valuation or the use of market comparables, which, while less ambitious in projecting future value, rest on firmer evidentiary ground. In parallel, tribunals must also be attentive to the evidentiary burden that accompanies the selection of a given method.[319] In the context of DCF, this means requiring claimants to substantiate projected revenues and costs with credible, contemporaneous data rather than post hoc expert reconstructions. It also entails rigorous scrutiny of discount rates, commodity price forecasts, and other variables that can significantly influence the ultimate valuation. The aim is not to eliminate the use of DCF, but to ensure that when it is applied, it rests on a foundation that meets the standard of proof appropriate to high-stakes international adjudication.[320]

[315] ibid.

[316] C H Brower II, 'Politics, Reason, and the Trajectory of Investor-State Dispute Settlement' (2017) 49 Loyola University Chicago Law Journal 271.

[317] ibid.

[318] Bonnitcha (n 283).

[319] Marboe (n 140).

[320] P Bekker, F Bello, 'Reimagining the damages valuation framework underlying fair and equitable treatment standard violations through a three-stage contextualized approach' (2021) 36(2) ICSID Review - Foreign Investment Law Journal 339.

Furthermore, methodological transparency should be regarded as integral to the legitimacy of ISDS damages awards.[321] Tribunals ought to provide detailed reasoning for their selection of a particular valuation method, explaining why it is suited to the circumstances of the case and why alternative methods were rejected.[322] Such reasoning not only strengthens the intellectual coherence of the award, but also facilitates external review by commentators, scholars, and, where applicable, annulment committees.[323]

The cautionary tales of *Tethyan Copper* and *Bear Creek Mining* therefore illustrate divergent approaches to valuation, moreover; they reveal the broader stakes of methodological choice in ISDS.[324] In a regime already subject to criticism for inconsistency and perceived bias, the risk that damages assessments will be viewed as arbitrary is particularly flawed.[325] Disputes over valuation methods may never be eliminated entirely, given the inherently fact-intensive and context-specific nature of damages calculations.[326] However, by developing and applying clearer criteria for methodological selection, tribunals can mitigate this risk and bolster confidence in the fairness and predictability of ISDS outcomes.[327]

Ultimately, the lesson is that valuation methodologies are not merely technical tools, but instruments that shape the distributive outcomes of investment disputes and influence the perceived legitimacy of the ISDS system itself.[328] When applied with discipline, in contexts that meet their evidentiary and conceptual prerequisites, methods like DCF can produce credible and defensible valuations that serve the goals of compensation under international law. When applied indiscriminately, they risk producing awards that are vulnerable to methodological criticism and that erode the very legitimacy they are meant to uphold.[329] The challenge for the future of ISDS

---

321 A Roberts, Z Bouraoui, 'UNCITRAL and ISDS Reforms: Concerns about Costs, Transparency, Third Party Funding and Counterclaims' (*EJIL: Talk!,* June 6 2018).
322 Ripinsky and Williams (n 133) 73-75.
323 Roberts and Bouraoui (n 321).
324 *Tethyan Copper Company Pty Limited v Islamic Republic of Pakistan* (Award) ICSID Case No ARB/12/1, 12 July 2019, paras 1738-1744; *Bear Creek Mining Corporation v Republic of Peru* (Award) ICSID Case No ARB/14/21, 30 November 2017, paras 603-607, 669.
325 Mavluda Sattorova, *The Impact of Investment Treaty Law on Host States: Enabling Good Governance?* (Hart Publishing 2018) 145-148.
326 M Waibel, 'Principles of Economic Analysis of International Investment Law' (2010) 10(4) International Economic Law Review 507, 530-533.
327 Jeffrey Commission and Rahim Moloo, Procedural Issues in International Investment Arbitration (OUP 2018) 341-343.
328 Roberts and Bouraoui (n 321). 329 Marzal (n 309).

lies in ensuring that tribunals have both the guidance and the resolve to distinguish between these two scenarios and to act in a manner that upholds the integrity of the system as a whole.[330]

3.5 Assessment of UNCITRAL Working Group III: Quantification of Damages

UNCITRAL Working Group III has placed the quantification of damages at the centre of its reform agenda in response to long-standing concerns about inconsistency in awards, the perceived escalation of quantum, and the opacity of methodological choices made by tribunals, and the record now shows a concerted attempt to move from diffuse practice toward a more disciplined framework that preserves the principle of full reparation while improving predictability and legitimacy.[331] Erik W. Brouwer's recent analysis captures this pivot by noting that increasingly, damages reform is framed around two linked objectives, namely: the articulation of clearer criteria for the use of core valuation methods and; the tempering of outlier outcomes that appear disconnected from the evidentiary record.[332] Brouwer warns that proposals must avoid sliding into disguised caps or equity-based ceilings that would erode full reparation under general international law, a tension that WG III must manage carefully if it is to deliver both coherence and fidelity to legal principle. [333] [334] This is reflected in a series of papers and meeting reports that identify divergent expert calculations, uneven standards of proof, and uncertain interfaces between accounting practice and legal doctrine as core drivers of unpredictability.[335] The Secretariat's Note on the assessment of damages and compensation maps these fault lines and proposes a structured examination of when and how tribunals choose among income, market, and asset approaches, the evidentiary thresholds that should guide those choices, and the role of discount rates, risk premia, and country risk in cases where forward-looking models are used, while also linking quantum work to other pillars of the reform programme such as adjudicator ethics and a standing mechanism, thereby situating damages within a broader

[330] Marboe (n 272).

[331] UNCITRAL Working Group III (Investor-State Dispute Settlement Reform), Possible Reform of Investor-State Dispute Settlement (ISDS): Assessment of Damages and Compensation (Note by the Secretariat, A/CN.9/WG.III/WP.220, July 2022).

[332] Brouwer (n 8).

[333] Ibid. [334] Ibid.

[335] G Ünüvar, 'The Mandate Conundrum: Reflections on the 46th Session of the UNCITRAL Working Group III on ISDS Reform' (*EJIL: Talk!,* November 21 2023).

architecture of systemic legitimacy.[336] A further step is visible in the draft guidelines on the calculation of damages and compensation, which crystallise the WG concern that inconsistent applications of legal principles have impaired coherence and which illuminate a path towards nonbinding guidance that would assist tribunals and parties in selecting methods that fit the factual posture of the case, in stating assumptions transparently, and in presenting sensitivity analyses that illuminate the effect of key variables on the final figure; although still provisional, the draft illustrates a willingness to operationalise reform through practical tools rather than purely aspirational statements.[337] Parallel policy commentary has reinforced this technical turn, with the International Institute for Sustainable Development emphasising that the assessment of damages cannot be treated as an isolated technical exercise because it interacts with adjudicator selection, advisory support for respondent States, and transparency, and with IISD urging WG III to seize the opportunity for concrete improvement rather than dilute the initiative through incrementalism that would leave entrenched practices largely intact.[338] Recent external datasets indicate sustained growth in amounts claimed and awarded and underscore that even when extreme outliers are excluded the trend lines remain upward, which in turn fuels political uncertainty with regards to the regulatory space and fiscal exposure in host States and highlights the importance of principled and evidence-sensitive quantum determinations that can withstand public scrutiny. Within this environment Brouwer's central contribution is to distinguish constructive standard-setting from proposals that would compromise the core of reparations law; he endorses guidance that clarifies when discounted cash flow is appropriate, for instance in mature enterprises with stable operating histories and reliable audited data, and he supports guardrails that require tribunals to justify method selection and to explain the rejection of alternatives, yet he is sceptical of innovations that would allow tribunals to reduce compensation in light of a respondent's fiscal capacity or general equity because such moves risk reintroducing uncertainty in another guise and could be read as tacit departures from the *Chorzów* principle and Article 31 of the Draft Articles on State Responsibility.[339] The Secretariat's notes reveal

---

336 UNCITRAL Working Group III (Investor–State Dispute Settlement Reform), Possible Reform of Investor-State Dispute Settlement (ISDS): Assessment of Damages and Compensation (Note by the Secretariat, A/CN.9/WG.III/WP.220, July 2021) paras 5-11.

337 UNCITRAL Working Group III (Investor-State Dispute Settlement Reform), Draft Guidelines on the Calculation of Damages and Compensation (A/CN.9/WG.III/WP.240, 20 March 2024) paras 5-12.

338 International Institute for Sustainable Development, Compensation and Damages in Investor-State Dispute Settlement: Options for Reform Report (2024) 7-8.

339 Brouwer (n 8) 172.

awareness of the same fault line, since they catalogue States' worries about both high quantum and inconsistent legal reasoning but simultaneously call for careful examination of evidentiary requirements, valuation standards, and the relationship between damages doctrine and other reform tracks, an invitation to craft guidance that is prescriptive enough to influence practice while remaining compatible with the diversity of treaty texts and sectoral contexts that tribunals face.[340] Academic work beyond WG III has also encouraged a focus on method selection and proof rather than on headline outcomes; Bonnitcha et al, writing within and alongside the WG process, show that problems often framed as substantive are tightly bound to procedure and can be addressed through process-oriented tools, including earlier and more structured engagement with quantum experts, disclosure and testing of model assumptions, and clearer articulation of the standard of proof for future profits, all of which are consistent with WG III's agenda and would likely improve the intelligibility and reproducibility of awards.[341] The Organisation for Economic Co-operation and Development's earlier mapping of ISDS issues points in the same direction by identifying consistency concerns and by treating remedies as a system variable that affects perceptions of level playing fields and regulatory freedom, thereby underscoring why quantum reform cannot be siloed from the rest of the institutional design.[342] If one turns from policy to doctrine the legal analysis sharpens, since any guidelines must mediate among three anchors, namely the principle of full reparation, the contract and treaty language that channels the tribunal's mandate, and the economic techniques that translate qualitative findings into numbers; a sound framework therefore begins by affirming that full reparation remains the baseline absent express treaty derogation, then requires tribunals to articulate why a particular method best captures the loss in light of the record, and finally insists on transparent modelling that permits scrutiny of sensitivities, including the effects of discount rates, terminal growth, and price cycles in commodity cases, a structure that matches the Secretariat's stated concerns and the empirical critiques raised in the literature.[343] Within this blueprint there is room for carefully framed soft law that does not hardwire outcomes but that does create principled defaults; for

---

340 UNCITRAL Working Group III (Investor–State Dispute Settlement Reform), Possible Reform of ISDS: Assessment of Damages and Compensation (Note by the Secretariat, A/CN.9/WG.III/WP.220, July 2022) paras 4-10.

341 J Bonnitcha, M Langford, J Álvarez-Zárate and D Behn, Damages and ISDS Reform: Between Procedure and Substance (2023) Journal of International Dispute Settlement 14(2) 213, 219-225.

342 Organisation for Economic Co-operation and Development, Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community (OECD Working Paper 2012/3, 2012) 18-19.

343 E Shirlow, 'Transparency in investment treaty arbitration: past, present, and future' (2025) 16(3) Journal of International Dispute Settlement.

example, guidance could state that discounted cash flow is presumptively inappropriate for projects that lack a meaningful operating history or for concessions that never entered production, absent an exceptional evidentiary showing, and that market comparables require rigorous adjustments for differences in scale, geography, and regulatory risk, while asset or replacement cost approaches may be more suitable in early-stage or conflict-affected contexts where income projections are inherently fragile, positions that mirror Brouwer's analysis and echo broader critiques of speculative quantification.[344] The WG can also improve intelligibility by recommending that tribunals disclose key drivers of value and present scenario analyses that reflect credible ranges rather than single point estimates, which would allow readers to see how legally relevant uncertainties map onto the numbers and would discourage the overconfidence that sometimes accompanies expert models.[345] The overall assessment is therefore cautiously optimistic; the WG has identified the right problems, has circulated draft guidance that points toward practice-changing clarity, and has a growing body of scholarship urging it to privilege method discipline and transparency over the direction of the outcome, and if that trajectory holds the result should be aiming to foster a culture and custom of full reparation while delivering awards that are more consistent, more intelligible, and more defensible in public and judicial fora.[346]

Conclusion

This thesis has undertaken a detailed and critical examination of the intersection between international investment law and armed conflict, with a particular focus on how arbitral tribunals interpret and apply substantive investment protection standards, address treaty-based and customary defences, and quantify damages in disputes arising from situations of armed hostilities, and it has done so against the backdrop of ongoing institutional reform debates, notably those within UNCITRAL Working Group III on damages quantification. Beginning from the premise that investment treaties are designed to provide stable and predictable legal environments for foreign investors, the research has shown that armed conflict presents a

344 ibid.

[345] UNCITRAL Working Group III (Investor–State Dispute Settlement Reform), Draft Guidelines on the Calculation of Damages and Compensation (A/CN.9/WG.III/WP.240, 20 March 2024), annex, paras 8-12.

[346] S McInerney-Lankford and M Corredor Vasquez, 'UNCITRAL WGIII and human rights: towards a more balanced ISDS system?' (*EJIL: Talk!*, 8 October 2020).

profound challenge to these objectives, not only through the physical destruction of investments but also by disrupting regulatory frameworks, impairing State capacity, and creating factual uncertainty that complicates both the determination of liability and the assessment of quantum. The doctrinal analysis demonstrates that the outbreak of armed conflict does not suspend or extinguish investment treaty obligations by default; rather, core standards such as fair and equitable treatment (FET), full protection and security (FPS), and guarantees against unlawful expropriation continue to apply, although tribunals often adapt their application to the realities of conflict, assessing due diligence in light of operational constraints while still requiring States to take reasonable measures to protect investments. Cases such as *AAPL v Sri Lanka* and *Ampal-American v Egypt* illustrate that tribunals have found breaches of the FPS obligation even in the midst of hostilities, signalling that conflict does not operate as a blanket defence. The study has further explored the operation of treaty-based war clauses and essential security interest provisions, which in some circumstances operate as lex specialis displacing other substantive obligations, but whose drafting varies significantly across treaties, from narrowly framed clauses subject to objective review to broadly worded self-judging clauses granting States unilateral discretion to determine necessity. Jurisprudence reveals inconsistent interpretive approaches: while the tribunal in *Continental Casualty v Argentina* adopted a deferential stance towards State determinations under a self-judging clause, other tribunals, as in *El Paso v Argentina*, have imposed good faith and proportionality tests, limiting the scope of such clauses. This diversity in application highlights both the importance of precise treaty drafting and the continued relevance of customary international law defences such as necessity, codified in Article 25 of the ILC Articles, and force majeure, reflected in Article 23, in cases where treaty clauses are absent or ambiguous. The research also finds that quantification of damages represents one of the most acute structural vulnerabilities in the ISDS system, particularly in conflict-related disputes where evidence is often fragmentary, projections highly uncertain, and causation complicated by multiple contributing factors, including actions of non-State armed groups. While valuation methodologies such as discounted cash flow (DCF), market comparables, and asset-based approaches are theoretically sound when applied in appropriate circumstances, tribunal practice has at times extended them to situations where the evidentiary record could not credibly sustain the results, leading to awards susceptible to perceptions of arbitrariness. The stark contrast between *Tethyan Copper v Pakistan*, where the tribunal awarded approximately USD 6 billion using DCF despite the mine never having been constructed, and *Bear Creek Mining v Peru*, where the absence of key regulatory approvals led to the adoption of a cost-based approach yielding just over USD 18 million, underscores the methodological discretion tribunals wield and its decisive impact on outcomes. Such discrepancies erode the predictability and perceived legitimacy of ISDS, particularly when they cannot be readily reconciled by reference to legal principle or evidentiary difference. In light of this, the study has paid close attention to the work of UNCITRAL Working Group III on damages quantification, noting that its reform agenda directly engages with concerns about inconsistency, methodological opacity, and disproportionate quantum. The Working Group's discussions, Secretariat papers, and emerging draft guidelines emphasise linking method selection to clear evidentiary thresholds, requiring transparent disclosure of assumptions, and promoting sensitivity analyses to show the range of possible valuations, all of which aim to improve both the quality and credibility of damages determinations. While these proposals have considerable merit, some State submissions advocating for equity-based caps or adjustments based on the respondent's fiscal capacity risk undermining the principle of full reparation articulated in the *Chorzów Factory* judgment and codified in Article 31 of the ILC Articles, which requires that the injured party be placed, so far as possible, in the position it would have occupied but for the wrongful act. This thesis therefore recommends that reforms should prioritise methodological discipline and transparency over outcome-based constraints, in order to strengthen legitimacy without diluting substantive entitlements. Other recommendations arising from the research include that treaty negotiators should draft armed conflict and security clauses with greater precision, specifying whether they are self-judging, subject to objective review, or intended to operate as lex specialis in relation to customary defences; that any discretion granted to States in emergencies should be expressly conditioned on good faith, proportionality, and non-discrimination; that methodological guidance should be developed, preferably in a soft-law format, to set rebuttable presumptions against the use of DCF in early-stage or conflict-affected projects lacking an operational history; that tribunals should be encouraged to provide detailed explanations of valuation drivers, including discount rates, terminal values, and commodity price assumptions, as well as sensitivity analyses; and that respondent State capacity should be enhanced through the establishment of an advisory centre or similar mechanism to provide access to quantum expertise, thereby reducing the asymmetry that currently disadvantages many States in damages disputes. The study also situates these doctrinal and procedural issues within a broader policy context: the legitimacy of the ISDS system depends not only on accurate and principled determinations in individual cases, but on the perception that the system operates predictably, transparently, and fairly in even the most difficult circumstances, including armed conflict. Arbitrary or speculative awards risk fuelling political resistance to ISDS, eroding treaty networks, and discouraging the inclusion of robust investment protections in future agreements. Conversely, a system that can deliver well-reasoned, evidence-based awards in such cases will reinforce investor confidence while maintaining space for legitimate State action in crises. In sum, the thesis concludes that the resilience of the investment law regime in the face of armed conflict depends on three interlinked factors: first, doctrinal clarity that treaty obligations survive conflict and are applied with context-sensitive but principled adaptations; second, coherent integration of treaty-based exceptions with customary defences, ensuring neither an erosion of investor protections through overbroad State discretion nor an inflexible application that disregards the realities of war; and third, disciplined, transparent, and context-appropriate damages quantification that aligns method with evidence and adheres to the full reparation standard. The jurisprudence surveyed reveals that while tribunals have at times succeeded in balancing these imperatives, inconsistency remains a recurrent feature, particularly in the choice and application of valuation methods. The ongoing work of UNCITRAL Working Group III offers a timely opportunity to embed greater methodological discipline into the practice of damages assessment, provided that reforms avoid diluting the substantive right to full compensation and focus instead on improving evidentiary rigour, transparency, and procedural equality of arms. If such reforms are pursued alongside better treaty drafting and enhanced State capacity, the investment regime will be better positioned to address future disputes arising from armed conflict, delivering awards that are both legally sound and publicly defensible.

Ultimately, the normative goal remains unchanged since *Chorzów Factory*: to restore, so far as possible, the situation that would have existed but for the wrongful act. The challenge is to operationalise that goal under the extraordinary conditions of armed conflict, where causation is complex, evidence is scarce, and the stakes for both investors and States are exceptionally high. Meeting this challenge is essential not only for the coherence of international investment law but for its continued legitimacy in a turbulent international order, and the findings and recommendations of this thesis aim to contribute to that ongoing endeavour by mapping the existing jurisprudential landscape, identifying its strengths and weaknesses, and pointing toward a more disciplined, transparent, and balanced approach to the protection and compensation of foreign investments in times of armed conflict.

Bibliography

Primary Sources

International Treaties and Conventions

- Agreement between the Federal Republic of Germany and the Islamic Republic of Pakistan for the Promotion and Protection of Investments (Germany–Pakistan BIT) (25 November 1959)
- Agreement between the Government of the Republic of Austria and the Great Socialist People's Libyan Arab Jamahiriya for the Promotion and Protection of Investments (Austria–Libya BIT)
- Agreement between the Government of the Republic of Korea and the Government of the Union of Soviet Socialist Republics for the Promotion and Reciprocal Protection of Investments (Korea–Russia BIT) (1990)
- Agreement between the Government of the United Kingdom and the Government of Ukraine for the Promotion and Reciprocal Protection of Investments (UK–Ukraine BIT) (1993)
- Agreement between the Government of the United Kingdom and the Government of the Democratic Socialist Republic of Sri Lanka for the Promotion and Protection of Investments (UK–Sri Lanka BIT)
- Agreement between the Republic of Turkey and the Great Socialist People's Libyan Arab Jamahiriya concerning the Reciprocal Promotion and Protection of Investments (Libya–Turkey BIT)
- Agreement between Japan and Ukraine for the Promotion and Protection of Investment (Japan–Ukraine BIT) (2015)
- Agreement between the United States of America and the Republic of El Salvador for the Reciprocal Promotion and Protection of Investments (US–El Salvador BIT) (1999)
- Agreement between the United States of America and the Republic of Honduras for the Reciprocal Promotion and Protection of Investments (US–Honduras BIT) (1995)
- Agreement between the United States of America and the Republic of Lithuania for the Reciprocal Promotion and Protection of Investments (US–Lithuania BIT) (1998)
- Agreement between the United States of America and the Republic of Mozambique for the Reciprocal Promotion and Protection of Investments (US–Mozambique BIT) (1998)
- Agreement between the United States of America and the Republic of Nicaragua for the Reciprocal Promotion and Protection of Investments (US–Nicaragua BIT) (1995)
- Treaty between the United States of America and the Republic of Zaire concerning the Reciprocal Encouragement and Protection of Investment (US–Zaire BIT)
- Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331
- International Law Commission, Draft Articles on the Effects of Armed Conflicts on

Treaties (2011) 66 UN GAOR Supp (No 10) Annex, UN Doc A/66/10

- General Agreement on Trade in Services, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S.183, 33 I.L.M. 1167 (1994)
- General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187, 33 I.L.M. 1153 (1994)
- Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, 15 April 1994, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994)
  International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA), UNGA Res 56/83 (12 December 2001)
- Convention on Mutual Assistance in Criminal Matters between Djibouti and France, (1986), ICJ Reports 2008

Cases - International Court of Justice and PCIJ

- Certain Norwegian Loans (France v Norway) (Judgment) [1957] ICJ Rep 9
- Djibouti v France (Jurisdiction and Admissibility) [2008] ICJ Rep 177
- Factory at Chorzów (Germany v Poland) (Merits) PCIJ Series A No 17 (1928)
- Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America) (Merits) [1986] ICJ Rep 14

Cases - WTO Dispute Settlement Body

- Russia - Measures Concerning Traffic in Transit (Panel Report) WT/DS512/R (5 April 2019)
- Saudi Arabia - Measures Concerning the Protection of Intellectual Property Rights (Panel Report) WT/DS567/R (16 June 2020)

Cases - Investor–State and Other Arbitral Awards

- Amoco International Finance Corporation v Iran (Award) 15 Iran–US CTR 189 (14 July 1987)
- Ampal-American Israel Corporation and others v Arab Republic of Egypt (Decision on Liability and Heads of Loss) ICSID Case No ARB/12/11 (21 February 2017)
  American Manufacturing & Trading Inc v Zaire (Award) ICSID Case No ARB/93/1 (21 February 1997)
- Asian Agricultural Products Ltd v Republic of Sri Lanka (Award) ICSID Case No ARB/87/3 (27 June 1990)
- Bear Creek Mining Corporation v Republic of Peru (Award) ICSID Case No ARB/14/21 (30 November 2017)

- Cengiz İnşaat Sanayi ve Ticaret AŞ v Libya (Final Award) ICC Case No 21537/ZF/AYZ (7 November 2018)
- Chevron Corporation and Texaco Petroleum Corporation v Ecuador (Partial Award on the Merits) PCA Case No 34877 (30 March 2010)
- Compañía de Aguas del Aconquija SA and Vivendi Universal SA v Argentine Republic (Award) ICSID Case No ARB/97/3 (20 August 2007)
- Continental Casualty Company v Argentine Republic (Award) ICSID Case No ARB/03/9 (5 September 2008)
- Desert Line Projects LLC v Republic of Yemen (Award) ICSID Case No ARB/05/17 (6 February 2008)
- El Paso Energy International Company v Argentine Republic (Award) ICSID Case No ARB/03/15 (31 October 2011)
- Gold Reserve Inc v Bolivarian Republic of Venezuela (Award) ICSID Case No ARB(AF)/09/1 (22 September 2014)
- LG&E Energy Corp, LG&E Capital Corp and LG&E International Inc v Argentine Republic (Award) ICSID Case No ARB/02/1 (25 July 2007)
- Mera Investment Fund Ltd v Republic of Serbia (Award) ICSID Case No ARB/17/2 (30 October 2020)
- Metalclad Corporation v United Mexican States (Award) ICSID Case No ARB(AF)/97/1 (30 August 2000)
- Occidental Petroleum Corporation v Republic of Ecuador (Award) ICSID Case No ARB/06/11 (5 October 2012)
- Olin Holdings Ltd v State of Libya (Award) ICSID Case No ARB/11/20 (25 May 2018)
- Öztaş Construction v Libya (Final Award) ICC Case No 21603/ZF/AYZ (14 June 2018)
- Santa Elena v Costa Rica (Award) ICSID Case No ARB/96/1 (17 February 2000)
- Sempra Energy International v Argentine Republic (Award) ICSID Case No ARB/02/16 (28 September 2007)
- Strabag SE v Libya (Award) ICSID Case No ARB(AF)/15/1 (29 June 2020)

Tethyan Copper Company Pty Ltd v Islamic Republic of Pakistan (Award) ICSID Case No ARB/12/1 (12 July 2019)

- Yukos Universal Ltd v Russian Federation (Final Award) PCA Case No AA 227 (18 July 2014)
- Rockhopper Exploration plc, Rockhopper Italia S.p.A. and Rockhopper Mediterranean Ltd v Italian Republic, ICSID Case No ARB/17/14, Award (23 August 2022)

Secondary Sources

Books

- J. Bonnitcha, L. N. S. Poulsen and M. Waibel, *The Political Economy of the Investment Treaty Regime* (OUP 2017)
- R. Dolzer and C. Schreuer, *Principles of International Investment Law* (2nd edn, OUP 2012)
- U. Kriebaum, 'Full Protection and Security' in A. Reinisch (ed), *Standards of Investment Protection* (OUP 2008)
- I. Marboe, *Calculation of Compensation and Damages in International Investment Law* (2nd edn, OUP 2017)
- S. Ripinsky and K. Williams, *Damages in International Investment Law* (BIICL 2008)
- B. Sabahi, *Compensation and Restitution in Investor-State Arbitration: Principles and Practice* (OUP 2011)
- Christina L Beharry (ed), *Contemporary Issues in International Arbitration and Mediation 2018* (Brill 2019)
- M. Sattorova, *The Impact of Investment Treaty Law on Host States: Enabling Good Governance?* (Hart Publishing 2018)
- J. Kurtz, *The WTO and International Investment Law: Converging Systems* (Cambridge University Press 2016) 168-228
- Sergey Ripinsky and Kevin Williams, *Damages in International Investment Law* (British Institute of International and Comparative Law 2008)
- John A Trenor (ed), *The Guide to Damages in International Arbitration* (Law Business Research 2016).
- A. Charlton, *The applicable valuation approach* in The Guide to Damages in International Arbitration (6th edn, Law Business Research 2024).
- Alexander Davie, *The Use of Relative Valuation Methods in Investment Arbitration* (Global Arbitration Review, 2020).

Contributions to Edited Books

- M. Kotzur, 'Good Faith (Bona Fide)' in R. Wolfrum (ed), *Max Planck Encyclopedia of Public International Law* (OUP Online 2009)
- J.G.P Muñoz, 'Awarding Damages in Times of Armed Conflict: An Emerging Standard of "Economic Capacity" for the Host State' in K. Fach Gómez, A. Gourgourinis and C. Titi (eds), *International Investment Law and the Law of Armed Conflict* (Springer 2019)
- J. Salmon, 'Le concept de raisonnable en droit international public' in *Mélanges offerts à Paul Reuter* (Pedone 1981)
- SW. Schill and R. Briese, 'If the State Considers: Self-Judging Clauses in International Dispute Settlement' in C. Binder and others (eds), *International Investment Law for the 21st Century: Essays in Honour of Christoph Schreuer* (OUP 2009)

- D. Charlotin, ‘2019 Developments in Investment Arbitration’ in L. E Sachs, L. Johnson and J. Coleman (eds), *Yearbook on International Investment Law & Policy 2019* (Oxford University Press 2021)
- Christoph Schreuer, ‘The Protection of Investments in Armed Conflicts’ in Freya Baetens (ed), *Investment Law within International Law* (Cambridge University Press 2013)
- Federica Paddeu, ‘Investment Tribunals, the Duty of Compensation in Cases of Necessity: A Customary Law Void?’ in *Custom and Its Interpretation in International Investment Law: The Rules of Interpretation of Customary International Law* (Cambridge University Press 2024)
- J. Zrilič, ‘The Effects of Armed Conflicts on Investment Treaties’ in *The Protection of Foreign Investment in Times of Armed Conflict* (Oxford University 2019), 57-87.
- Frédéric Gilles Sourgens, Kabir Duggal and Ian A Laird, ‘Situating Evidence in the Process of Investor–State Arbitration’ in Frédéric Gilles Sourgens, Kabir Duggal and Ian A Laird (eds), *Evidence in International Investment Arbitration*(Oxford University Press, 2018).
- Michael Hwang and Aloysius Chang, ‘Corruption in International Investment Arbitration’ in Nobumichi Teramura, Luke Nottage and Bruno Jetin (eds), *Corruption and Illegality in Asian Investment Arbitration* (Springer 2024) 149-184.
- Wolfgang Alschner, ‘Aligning Loss and Liability - Toward an Integrated Assessment of Damages in Investment Arbitration’ in Theresa Carpenter, Marion Jansen and Joost Pauwelyn (eds), *The Use of Economics in International Trade and Investment Disputes* (Cambridge University Press 2017) 283-318.
- Noah Rubins, Vasuda Sinha and Baxter Roberts, Approaches to Valuation in Investment Treaty Arbitration in Christina L Beharry (ed), *Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration* (Brill Nijhoff 2018) 169-204.
- J D Makholm, ‘The discounted cash flow method of valuing damages in arbitration’ in Barton Legum (ed), *The Investment Treaty Arbitration Review* (3rd edn, Law Business Research 2018) 239-247.
- J M Cox, ‘Methods of Valuation’ in *Expropriation in Investment Treaty Arbitration* (Oxford International Arbitration Series, Oxford University Press 2019).
- I Marboe, ‘Damages in Investor-State Arbitration: Current Issues and Challenges’ in Christina L Beharry (ed), *Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration* (Brill Nijhoff 2018) 1-86.
- G MacGregor, M Smith, ‘Best practices and issues that arise in DCF models’ in *The Guide to Damages in International Arbitration* (6th edn, Law Business Research 2024).
- K Tienhaara, ‘Regulatory chill and the threat of arbitration: a view from political science’ in Chester Brown and Kate Miles (eds), *Evolution in Investment Treaty Law and Arbitration* (Cambridge University Press 2011) 606-628.
- K F Schumacher, H Klönne, ‘Discounted Cash Flow Method’ in Christina L Beharry (ed), *Contemporary and Emerging Issues on the Law of Damages in International Investment Arbitration* (Brill Nijhoff 2018) 205-230.

Journal Articles

- L. Deroche, 'War Clauses in International Investment Law: A Need for Clarity' (2020–21) 7(2) McGill Journal of Dispute Resolution
- C. Schreuer, 'Investment Protection in Times of Armed Conflict' (2022) 23 Journal of World Investment & Trade 701
- F. Eichberger, 'Self-Judgment in International Law: Between Judicialization and Pushback' (2024) 37 Leiden Journal of International Law 915
- A. Reinisch, 'The Use and Limits of Res judicata and Lis pendens as Procedural Tools to Avoid Conflicting Dispute Settlement Outcomes' (2014) 17 Journal of International Economic Law 211
- C. Schreuer, 'Investment Protection in Times of Armed Conflict' (2022) 23 Journal of World Investment & Trade 23(5-6), 701-715
- M. Waibel, 'Principles of Economic Analysis of International Investment Law' (2010) 10(4) International Economic Law Review 507
- K. Greenman, 'Of War and International Investment Law' (2024) 73 International & Comparative Law Quarterly 579
- J. Boué ,'The Investor-State Dispute Settlement Damages Playbook: To Infinity and Beyond' (2023), Journal of World Investment & Trade, vol. 24
- E. W. Brouwer, 'A Fair (?) Quantification of Damages in Investor-State Arbitration Proceedings: Reflections from the UNCITRAL Working Group III ISDS Reform Process'(2024) International Investment Law Journal 4, no. 2
- International Committee of the Red Cross, 'How is the Term "Armed Conflict" Defined in International Humanitarian Law?, ICRC Opinion Paper' (2024), International Review of the Red Cross vol 106, issue 925
- F. Gu and X. Qian, 'Reconstruction of the Evaluation of Legitimate Expectations within Investor–State Dispute Settlement: A Vantage Point from Fuller's Interactional Theory' (2025) World Trade Review
- C. Schreuer, 'Fair and Equitable Treatment in Arbitral Practice' (2005) 6 Journal of World Investment & Trade 357 Vol. 6 No. 3
- S. Batifort and J. Benton Heath, 'The New Debate on the Interpretation of MFN Clauses in Investment Treaties: Putting the Brakes on Multilateralization' (2017) Vol. 111, 4 AJIL 873
- V. Prislan, 'Investment Tribunals as Courts of Appeal? Determining State Responsibility for Substantive Denial of Justice', (2023) British Yearbook of International Law Vol.00 No. 0, 1-67
- M. Paulsen,' The Past, Present, and Potential of Economic Security' (2025) 50 Yale J. INT'L
- P. Crivelli and M. Pinchis-Paulsen, 'Separating the Political from the Economic: The Russia–Traffic in Transit Panel Report' (2021) World Trade Review 20, 582–605
- M. A. Bahmaei, 'Self-Judging Security Exception Clause as a Kind of Carte Blanche in Investment Treaties: Nature, Effect and Proper Standard of Review' (2023) Asian Journal of International Law 13(1):1-27

- T. Voon, 'Russia - Measures Concerning Traffic in Transit' (2020) 114 American Journal of International Law 96.
- S. Hartmann, 'Russia - Measures Concerning Traffic in Transit (WTO)' (2019) 58(5) International Legal Materials 899
- P. Dumberry, 'Host States' Due Diligence Obligation Towards Foreign Investors in the Context of Rebellions and Civil Wars' (2021) 22 Journal of World Investment & Trade. 705-731
- J. Marcoux and A. K. Bjorklund, 'Foreign investors' responsibilities and contributory fault in investment arbitration' (2020) 69(4) International & Comparative Law Quarterly 877.
- S. D. Franck and L. E. Wylie, 'Predicting Outcomes in Investment Treaty Arbitration' (2015) 65 Duke Law Journal 459.
- A. Reinisch, 'The Rule of Law in International Investment Law and Arbitration as Reflected in the Work of the ILA' (2024) 27 Zeitschrift für europarechtliche Studien 463.
- J. Paine, 'Beyond Investment Protection and ISDS: Towards an Investment Law Research Agenda Focusing on Investment Facilitation and Liberalization Commitments' (2025) World Trade Review 1–17.
- T. Marzal, 'Quantum (In)Justice: Rethinking the Calculation of Compensation and Damages in ISDS' (2021) 22 Journal of World Investment & Trade 22 (2021) 249–312
- T. Chen, 'To Judge The "Self-Judging" Security Exception Under The Gatt 1994 - A Systematic Approach' (2017) 12(2) Asian Journal of WTO & International Health Law and Policy 311.
- D. Boklan and A. Bahri, 'The First WTO's Ruling on National Security Exception: Balancing Interests or Opening Pandora's Box?' (2020) 19(1) World Trade Review 123.
- Stephan W Schill and Robyn Briese, 'If the State Considers: Self-Judging Clauses in International Dispute Settlement' (2009) 13(1) Max Planck Yearbook of United Nations Law 61.
- T. Schultz and C. Dupont, 'Investment Arbitration: Promoting The Rule Of Law Or Over-Empowering Investors? A Quantitative Empirical Study' (2014) 25(4) European Journal of International Law 1147- 1168.
- M. Jarrett, S. Puig, S. R. Ratner, 'Towards greater investor accountability: indirect actions, direct actions by states and direct actions by individuals' (2023) 14(2) Journal of International Dispute Settlement 259-280.
- A. Redfern, C. Reymond, A. Reiner, B. Hanotiau, E. Eveleigh and I. W. Menzies, 'The standards and burden of proof in international arbitration' (1994) 10(3) Arbitration International 317.
- I. T. Cate, 'The Costs of Consistency: Precedent in Investment Treaty Arbitration' (2013) 51 Columbia Journal of Transnational Law 418.
- Z. Liu and R. Avraham, 'Ex ante versus ex post expectation damages' (2012) 32(4) International Review of Law and Economics 339-355.
- N. Brennan,'Valuing Businesses in a Legal Context. Commercial Law Practitioner' (2001)Commercial Law Practitioner, 8(5) 270-274.

- J. B. Simmons, ‘Valuation in investor–state arbitration: toward a more exact science’, (2012), 30(1) Berkeley Journal of International Law, 196.
- J. Paterson, M. Rwashdeh, ‘Economic damages: a reconsideration of retrospective valuation’(2023), The Middle Eastern and African Arbitration Review.
- J Alberro, G D Ruttinger, ‘“Going concern” as a limiting factor on damages in investor–state arbitrations’ (2015) 2(1) Journal of Damages in International Arbitration 1-22.
- S N Elrifai, ‘Equity-based discretion and the anatomy of damages assessment in investment treaty law’ (2017) 34(5) Journal of International Arbitration 835.
- A Bougias, A Episcopos and G Leledakis, ‘Valuation of European firms during the Russia-Ukraine war’ (2022) 218 Economics Letters.
- C H Brower II, ‘Politics, Reason, and the Trajectory of Investor-State Dispute Settlement’ (2017) 49 Loyola University Chicago Law Journal 271.
- P Bekker, F Bello, ‘Reimagining the damages valuation framework underlying fair and equitable treatment standard violations through a three-stage contextualized approach’ (2021) 36(2) ICSID Review - Foreign Investment Law Journal 339.
- E Shirlow, ‘Transparency in investment treaty arbitration: past, present, and future’ (2025) 16(3) Journal of International Dispute Settlement.

Reports and Working Papers

- UNCITRAL Working Group III (Investor–State Dispute Settlement Reform), *Possible Reform of ISDS: Assessment of Damages and Compensation* (Note by the Secretariat, A/CN.9/WG.III/WP.220, July 2021)
- UNCITRAL Working Group III (Investor–State Dispute Settlement Reform), *Draft Guidelines on the Calculation of Damages and Compensation* (A/CN.9/WG.III/WP.240, 20 March 2024)
- UNCTAD, ‘*Annotations to the Model Clauses for the Bilateral Investment Agreement (BIA)*’ (21 September 2023)
- P. Leepipatpiboon, C. Castrovillari, T. Mineyama, ‘Macroeconomic Shocks and Conflict’(2023), IMF Working Paper 2023/068, International Monetary Fund.

Websites and blogs

- Deepu Jojo Sushama, ‘Appellate Structure and Need for Legal Certainty in Investment Arbitration’ (*Kluwer Arbitration Blog*, 1 May 2014).
- Fabian Eichberger, ‘When Reinforced Self-Judgment Meets Judicial Review: Insights from Seda v Colombia’ (*EJIL: Talk!,* 10 September 2024)

- Toni Marzal, ‘Against DCF valuation in ISDS: on the inflation of awards and the need to rethink the calculation of compensation for the loss of future profits’ (*EJIL: Talk!*, January 26, 2021)
- Anthea Roberts, Zeineb Bouraoui, ‘UNCITRAL and ISDS Reforms: Concerns about Costs, Transparency, Third Party Funding and Counterclaims’ (*EJIL: Talk!,* June 6 2018)
- Güneş Ünüvar, ‘The Mandate Conundrum: Reflections on the 46th Session of the UNCITRAL Working Group III on ISDS Reform’ (*EJIL: Talk!,* November 21 2023)
- Siobhán McInerney-Lankford and Manuela Corredor Vasquez, ‘UNCITRAL WGIII and human rights: towards a more balanced ISDS system?’ (*EJIL: Talk!*, 8 October 2020)