

Interest as Damages

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In this article, we posit that when arbitral tribunals decide international disputes, they typically fail to fully compensate claimants for the loss of the use of their money. This failure occurs because they do not acknowledge that businesses typically invest in opportunities that pose a significantly greater risk than the risk reflected in such commonly used standards as U.S. T-bills and LIBOR rates. Claimants also must share the blame when they do not set out a well-constructed claim for interest as damages. However, even when claimants do so, tribunals often award damages at a statutory rate or at rate reflecting a nearly risk-free investment because they are unfamiliar with modern economic and financial principles. We propose changing this practice. We set out a legal framework for allowing an award of interest as damages and then furnish a model for claimants and tribunals to use. Under this model, interest reflects market realities with the interest award to be compounded on a yearly basis. This model would bring awards in line with modern economic practice and more accurately compensate injured parties.

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INTRODUCTION

Two principles are well settled in international law today. First, when a respondent engages in a wrongful act, it is liable for all damages that naturally result. Second, the respondent is liable for the loss of the use of money and must compensate by paying interest.¹

Because claims in international disputes today often involve millions of dollars and because lengthy periods of time may elapse between the origin of the dispute and the final award, a tribunal's award of interest may be as large as the principal claim itself.² In-

1. See generally John Y. Gotanda, *Damages in Private International Law*, 326 RECUEIL DES COURS 73 (2007); Thomas W. Wälde & Borzu Sabahi, *Compensation, Damages and Valuation in International Investment Law*, TRANSNAT'L DISP. MGMT., Nov. 2007, available at <http://www.transnational-dispute-management.com> (follow "Archive" hyperlink; then follow "TDM vol. 4 - issue #06" hyperlink; then follow "Compensation, Damages and Valuation in International Investment Law" hyperlink); see also *Factory at Chorzów* (Germ. v. Pol.), 1928 P.C.I.J. (ser. A) No. 17 (Sept. 13); *S.D. Myers, Inc. v. Canada*, Partial Award (Merits), ¶ 311, 40 I.L.M. 1408, 1443 (NAFTA Trib. 2000); *CMS Gas Transm. Co. v. Argentina*, ICSID Case No. ARB/01/8, ¶ 400 (May 12, 2005), 44 I.L.M. 1205; *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep.* (Award), ICSID Case No. ARB/97/3, ¶ 9.2.1 (Aug. 20, 2007).

2. See, e.g., *Compañía del Desarrollo de Santa Elena v. Costa Rica*, 15 ICSID REV. FOREIGN INVESTMENT L.J. 169, 200 (2000), available at <http://www.worldbank.org/icsid/cases/awards.htm> (awarding US\$4.15 million in damages and US\$11.85 million in interest); *KCA Drilling Ltd. v. Sonatrach*, International Chamber of Commerce [ICC] No. 5651 (awarding US\$23 million in damages and US\$26 million in interest), summarized in pertinent part in David J. Branson & Richard E. Wallace, Jr., *Awarding Interest in International*

deed, in *Compañía del Desarrollo de Santa Elena v. Costa Rica* an arbitral tribunal awarded US\$4.15 million in damages and US\$11.85 million in interest.³

Recent years have seen dramatic changes in the awarding of interest in the international arena. In the not too distant past, tribunals deciding international disputes would typically award interest by applying a national law on interest. They would apply a fixed statutory interest rate providing for the payment of only simple interest.⁴ The practice of awarding only simple interest was so ingrained that in her leading treatise, Marjorie Whiteman wrote “there are few rules within the scope of the subject of damages in international law that are better settled than the one that compound interest is not allowable.”⁵ And for over half a century, many agreed.⁶ This practice, however, began to change with the new millennium. Today, tribunals deciding disputes under the auspices of the International Centre for Settlement of Investment Disputes (ICSID) commonly award interest at market rates, such as the U.S. T-bill or LIBOR rates, and on a compound basis.⁷

Although these changes were designed to more fairly compensate claimants for the loss of the use of money, in practice they

Commercial Arbitration: Establishing a Uniform Approach, 28 VA. J. INT'L L. 919, 920 (1988); *Am. Bell Int'l Inc. v. Islamic Rep. of Iran*, 12 Iran-U.S. Cl. Trib. Rep. 170 (1986) (awarding approximately US\$28 million in interest on damages of approximately US\$50 million); *Gov't of Kuwait v. Am. Indep. Oil Co.*, 21 I.L.M. 976 (Mar. 24, 1982) (awarding US\$83 million in damages and US\$96 million in interest); *see also* *Azurix Corp. v. Argentine Rep.*, ICSID Case No. ARB/01/12 (July 14, 2006), 43 I.L.M. 262, *available at* <http://www.worldbank.org/icsid/cases/awards.htm> (awarding approximately US\$165 million in damages and interest at the average rate applicable to the U.S. six month certificate of deposit, compounded semi-annually, or approximately US\$17.5 million in interest); *Siemens A.G. v. Argentine Rep.*, ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, *available at* <http://www.worldbank.org/icsid/cases/awards.htm> (awarding approximately US\$218 million in damages and interest at the average rate applicable to the U.S. six month certificate of deposit, compounded annually, or approximately US\$34 million in interest).

3. *See* *Compañía del Desarrollo de Santa Elena v. Costa Rica*, 15 ICSID REV. FOREIGN INVESTMENT L.J. 169, 200 (2000), *available at* <http://www.worldbank.org/icsid/cases/awards.htm>.

4. *See* John Y. Gotanda, *Awarding Interest in International Arbitration*, 90 AM. J. INT'L L. 40 (1996).

5. 3 MARJORIE M. WHITEMAN, *DAMAGES IN INTERNATIONAL LAW* 1997 (1943).

6. *See, e.g.*, CHARLES ROUSSEAU, *DROIT INTERNATIONAL PUBLIC* V § 242 (1983) (stating that arbitral tribunals generally do not award compound interest unless its payment has been agreed to by the parties).

7. *See* John Gotanda, *Compound Interest in International Disputes*, OXFORD U. COMP. L. FORUM I (2004).

fail to do so. This failure occurs because they do not acknowledge that businesses typically invest in opportunities that pose a significantly greater risk than the risk reflected in such commonly used standards as U.S. T-bills and LIBOR rates.⁸ The fault, however, does not lie with tribunals alone. Claimants also must share the blame because they may not set out well-constructed claims for interest.⁹ Nevertheless, even when claimants do so, tribunals often award damages at statutory rates or at rates reflecting a nearly risk-free investment because they are unfamiliar with modern economic and financial principles.¹⁰

We propose changing this practice. In this article, we argue that the goal of full compensation would be better served by allowing interest to be awarded as damages. This approach finds support in national laws, as well as in international treaties and conventions. In addition, the traditional limitations on damages, such as causation, foreseeability and certainty, pose no *per se* bar to their award. We also furnish a model (the opportunity cost approach) for claimants and tribunals to use. Under this model, interest accrues at a rate in line with specific market realities with the interest award to be compounded on a yearly basis. This model would bring awards in line with modern economic realities and more accurately compensate injured parties. Indeed, such a standard is required to ensure that a party is made whole after being deprived of the opportunity to earn a return on the use of its money.¹¹

8. See RICHARD A. BREALEY & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 280 (3d ed. 1988); John C. Keir & Robin C. Keir, *Opportunity Cost: A Measure of Prejudgment Interest*, 39 *BUS. L.* 129 (1983).

9. See, e.g., *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 *I.L.M.* 896 (2002).

10. See John Y. Gotanda, *A Study of Interest* (Villanova Public Law and Legal Theory Working Paper Series, Working Paper No. 2007-10), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1005425 (discussing cases); see also ICC INSTITUTE OF WORLD BUSINESS LAW, DOSSIER V: INTEREST AUXILIARY AND ALTERNATIVE REMEDIES IN INTERNATIONAL ARBITRATION 169 (2008) (discussing cases).

11. See *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep.* (Award), ICSID Case No. ARB/97/3, ¶ 9.2.3 (Aug. 20, 2007); *LG&E Energy Corp. et al. v. Argentine Rep.*, ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina-Damages_Award.pdf; see also Thierry J. Sénéchal, *Present Day Valuation in International Arbitration: A Five Principle-Based Framework for Awarding Interest*, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1122584.

I. OVERVIEW

Interest is a sum paid or payable as compensation for the temporary withholding of money.¹² Today, interest is a well-accepted form of compensation for the loss of the use of money—so much so that it is often awarded without proof of actual loss. Courts and tribunals presume that the delayed payment of money deprives the injured party of the ability to invest the sum owed.¹³

There are three reasons for requiring a respondent to pay interest to a claimant that has succeeded on its damages claims. The first and main reason is to fully compensate the claimant by restoring it to the position it would have enjoyed if the wrongful act had not occurred.¹⁴ The payment of interest recognizes that there exists the loss of return opportunity between the time of injury and the time of award.¹⁵ Indeed, if there were no delay between the date of the injury and date of compensation, a claimant would be made whole by the tribunal's award, and an award interest would not be needed. However, delay in the payment of compensation can be quite lengthy and lead to increased financial loss to the claimant, ultimately leading to a position of uncertainty especially in times of monetary depreciation. In awarding interest, a tribunal rightly recognizes that the injured party is justly compensated not only for the original injury or loss but also for the passage of time between the date of injury or loss

12. See *McCullough & Co., Inc. v. Ministry of Post, Tel. & Tel.*, 11 Iran-U.S. Cl. Trib. Rep. 3, 29 (1986); 5 G. HACKWORTH, *DIGEST OF INT'L LAW* 735 (1943) (citing *Illinois Central Railroad Co. (U.S. v. Mex.)*, Opinions of the Commissioners 189 (1927)); I D. DOBBS, *DOBBS LAW OF REMEDIES* § 3.6(1) (2d ed. 1993). Interest is distinguished from usury, which is considered to be a form of unjust enrichment in that the creditor is receiving more than what the creditor had lent. Unlike usury, interest is the compensation due to a creditor because of a loss which he had incurred through lending. SIDNEY HOMER & RICHARD E. SYLLA, *A HISTORY OF INTEREST RATES* 73 (3d ed. 1991).

13. See *McCullough*, 11 Iran-U.S. Cl. Trib. Rep. at 29; *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 896 (2002); see also DOBBS, *supra* note 12, § 3.6(3); WHITEMAN, *supra* note 5, at 1991–92.

14. See *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep. (Award)*, ICSID Case No. ARB/97/3, ¶ 9.2.3 (Aug. 20, 2007); *LG&E Energy Corp. et al. v. Argentine Rep.*, ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina-Damages_Award.pdf; see also SERGEY RIPINSKI & KEVIN WILLIAMS, *DAMAGES IN INTERNATIONAL INVESTMENT LAW* 363 (2008).

15. See generally 3 *BUSINESS & COMMERCIAL LITIGATION IN FEDERAL COURTS* § 39.3 (Robert L. Haig, ed. 2008); *RESTATEMENT (SECOND) OF CONTRACTS* § 344(a) (1981); Michael S. Knoll, *A Primer on Prejudgment Interest*, 75 *TEX. L. REV.* 293 (1996).

and the date of full reinstatement.

The second reason for awarding interest is to prevent unjust enrichment of the respondent. Respondents that retain and use the money owed to the claimants during the resolution of the dispute enjoy an unfair benefit. They are receiving the earning capacity of the borrowed money without compensating the claimants for the loss of its use. Pursuant to this rationale, the respondents should be liable for at least "the reasonable cost the [respondent] would have incurred in borrowing the amount in question for the relevant period."¹⁶

The third reason for awarding interest is that it promotes efficiency. It encourages parties to avoid disputes and, when they do occur, to resolve them in a timely manner. Without interest, the losing respondent's obligations are lessened. Because the resulting cost to the respondent for the breach is less, the respondent may not be sufficiently deterred from breaching the contract. It may even delay the resolution of the dispute, because the respondent profits from the use of the claimant's money while the dispute is in the process of being resolved. As for the claimant, if the claimant knows that it will not receive interest, it may take excessive precautions to avoid future litigation.¹⁷

Claims for interest typically raise four issues. The first issue is whether the court or tribunal has the authority to award interest. If it decides that it has the authority to award interest, the second issue is how to determine the period over which interest accrues. The third issue is at what rate the interest should accrue. The final issue concerns whether interest should accrue on a simple or compound basis.

Liability for Interest. The laws of most countries hold a respondent liable for interest.¹⁸ Italian Civil Code Article 1224 illus-

16. *Sempra Metals v. Inland Revenue Commission*, [2008] 1 A.C. 561 ¶ 103 (H.L.) (U.K.) (Lord Birkenhead); see also Robert J. Sergesketter, *Interesting Inequities: Bringing Symmetry and Certainty to Prejudgment Interest Law in Texas*, 32 HOUS. L. REV. 231 (1995); Recent Developments, *Prejudgment Interest as Damages: New Application of an Old Theory*, 15 STAN. L. REV. 107 (1962).

17. See LOUIS B. SOHN & R. R. BAXTER, CONVENTION ON THE INTERNATIONAL RESPONSIBILITY OF STATES FOR INJURIES TO ALIENS: DRAFT NO. 12 WITH EXPLANATORY NOTES 242 (explanatory note to art. 38(1)); Knoll, *supra* note 15, at 296-97. An inadequate award of interest also could have the effect of pressuring the claimant to settle quickly, and to accept a lower amount of compensation early, rather than wait for an award of higher compensation.

18. For a comparative study of interest, see Gotanda, *supra* note 1, at 193-236.

trates a civil code provision on the payment of interest.¹⁹ It states: “[i]n obligations having as their object a sum of money, legal interest is due from the day of default . . . even if the creditor does not prove that he has suffered any damage.”²⁰ Thus, under Italian law, a tribunal has the obligation, not merely the discretion, to award interest.²¹

In England, the payment of interest is authorized both by statutes and by judicial decisions. For example, the Supreme Court Act of 1981 and the County Courts Act of 1984, provide for those courts to award interest on debts and damages.²² In addition, English courts have held that a claimant may recover interest in several situations, including (1) when the agreement provides for interest in the case of delayed payment; (2) when the payment of interest could be inferred from the course of dealing between the parties or through trade usage; and (3) when the claimant had actually incurred interest charges because of the respondent’s actions and it “may reasonably be supposed to have been in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of it.”²³

19. Codice civile, [C.c.] art. 1224 (Ital.); *see also* Code civil [C. civ.] art. 1153 (Fr.); Bürgerliches Gesetzbuch [BGB] [Civil Code] § 288; Schweizerisches Obligationenrecht [OR] [Code of Obligations] art. 104 (Switz.); Nieuw Nederlands Burgerlijk Wetboek [NBW 6] §§ 119–20 (Neth.); Rântelag [The Interest Act] (1975:635) (Swed.), *translated in SWEDISH COMMERCIAL LEGISLATION* § 5 RteL:1–3 (Norstedts Juridik Zetee 1995); Allgemeines Bürgerliches Gesetzbuch [ABGB] [Civil Code] No. 946/1811 § 1333 (Austria); Finland Interest Act of 1982, *summarized in THE FINNISH LEGAL SYSTEM* 128 (Jaakko Uotila ed., 2d ed. 1985); Polgári Törvénykönyv [PTK.] art. 301 (Hung.); Kodeks cywilny [Civil Code] art. 359 (Pol.); Grazhdanskii Kodeks RF [GK] art. 395 (Russ.); Código Civil [C.C.] art. 1108 (Spain); *see also* COMMISSION ON EUROPEAN CONTRACT LAW, PRINCIPLES OF EUROPEAN CONTRACT LAW (Parts I & II revised & combined) (Ole Lando & H. G. Beale eds., 2000).

20. C.c. art. 1224 (Ital.).

21. Some jurisdictions, like France, draw a distinction between moratory interest, which is interest related to a monetary debt, and compensatory interest, which is interest on damages for breach of contract generally or for property damage. *See* Gotanda, *supra* note 10. In these countries, the former may be awarded without proof of fault or, in some cases, without a formal demand for payment or notice of default. *See id.* It should also be noted that some jurisdictions, like Germany, treat interest as a procedural matter, while others, like England, consider it to be a substantive matter. *See* Gotanda, *supra* note 4.

22. Supreme Court Act, 1981, c. 54, § 35A (Eng.); County Courts Act, 1984, c. 28, § 69 (Eng.); *see also* Administration of Justice Act, 1982, c. 53, §§ 15(1), 15(5)(a) (Eng.).

23. *Hadley v. Baxendale*, (1854) 156 Eng. Rep. 145 (Ex.); *see* *Bacon v. Cooper (Metals) Ltd.*, (1982) 1 All E.R. 397 (Q.B.); *Wadsworth v. Lydall*, (1981) 1 W.L.R. 598 (C.A.); *Trans Trust S.P.R.L. v. Danubian Trading Co.*, (1952) 2 Q.B. 297, 306–7 (C.A.); *In re Duncan & Co.*, (1905) 1 Ch. 307 (A.C.); *In re Anglesey*, (1901) 2 Ch. 548 (C.A.); *In re Roberts*, (1880) 14 Ch. D. 49 (C.A.); *Cook v. Fowler*, (1874) 7 H.L. 27 (H.L.); *Great Western Ins. Co. v. Cunliffe*, (1874) 9 Ch. 525 (Ch. App.); *Ikin v. Bradley*, (1818) 8 Taunt 250.

Subject to various exceptions, courts in England typically award only simple interest.²⁴ By contrast, the English Arbitration Act gives arbitrators the broad authority to “award simple or compound interest from such dates, at such rates and with such rests as it considers meets the justice of the case”²⁵

In 2000, the European Parliament and the Council of the European Union issued a Directive that required Member States to introduce measures to protect commercial creditors against late payment by creating, among other things, a right to interest for late payments. By its terms, this Directive is “limited to payments made as remuneration for commercial transactions and does not regulate transactions involving consumers, interest in connection with other payments, e.g., payments under the laws on cheques and bills of exchange, payments made as compensation for damages including payments from insurance companies.”²⁶

In the United States, the payment of interest in private actions is typically governed by state law. States have enacted statutes providing for interest.²⁷ For example, in New York, a statute provides a right to interest not only in actions where a debtor defaults on a money payment, but also in cases for damages for breach of contract generally or for property damage.²⁸

Countries in Asia, Latin American and Oceania also typically permit interest. For example, statutes in China and Japan allow for interest when a respondent defaults on a money payment.²⁹ In Mex-

24. See Supreme Court Act, 1981, c. 54, § 35A (Eng.); see also Law Reform (Miscellaneous Provisions) Act, 1934, 24 & 25 Geo. 5, c. 41, § 3 (Eng.). A number of exceptions exist that allow for the awarding of compound interest. See *Sempra Metals Ltd. v. Inland Revenue Commissioners*, (2007) 4 All E.R. 657; *Westdeutsche Landesbank Girozentrale v. Islington London Borough Council*, (1996) A.C. 669 (H.L.); *President of India v. La Pintada Cia Navegacion S.A.*, (1984) 2 All E.R. 773 (H.L.); *Wallersteiner v. Moir*, (1975) 1 Q.B. 373 (C.A.); *Wadsworth v. Lydall*, (1981) 1 W.L.R. 598 (C.A.); *London, Chatham & Dover Ry. Co. v. S. E. Ry. Co.*, (1893) A.C. 440 (H.L.).

25. Arbitration Act, 1996, c. 23, § 49 (Eng.); see also Adam Samuel, *Pre-Award Interest: England and Scotland*, 5 ARB. INT'L 310 (1989) (discussing an arbitrator's power to award interest in England and Scotland).

26. See European Council and Parliament, Council Directive 2000/35/EC, preamble § 13, 2000 O.J. (L 200) (on combating late payment in commercial transactions), available at http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&n umdoc=32000L0035&model=guichett.

27. See Anthony E. Rothschild, Comment, *Prejudgment Interest: Survey and Suggestion*, 77 Nw. U. L. REV. 192, 193 n.6 (1982).

28. N.Y. C.P.L.R. 5001(a) (2009).

29. See Zhonghua Renmin Gongheguo hetong fa [hereinafter Contract Law of the Peo-

ico, both the civil and commercial codes allow for the payment of interest.³⁰ And, in Australia and New Zealand, interest is awarded to compensate a party for the loss of the use of money and to discourage delay in resolving the dispute.³¹

International treaties, conventions and uniform laws also may provide the authority to award interest. The United Nations Convention on the International Sale of Goods (CISG) expressly provides that “[i]f a party fails to pay the price or any other sum that is in arrears, the other party is entitled to interest on it”³² In addition, the North American Free Trade Agreement (NAFTA) provides that a tribunal deciding a dispute pursuant to NAFTA may award “monetary damages and any applicable interest.”³³ And uniform laws, such as the UNIDROIT Principles and the Principles of European Contract Law, also provide for the payment of compensatory interest.³⁴

Many of the statutes and laws noted above deal with interest on damages. Most countries also typically permit the recovery of interest as damages. This award commonly occurs when the breach of contract has caused the claimant to incur financing charges at a rate different from the statutory rate. The claimant then is awarded interest at the borrowing rate that it paid in order to fully compensate it

ple’s Rep. of China] (promulgated by the Nat’l People’s Cong. Mar. 15, 1999, effective date Oct. 1, 1999), arts. 197–211; MINPO (Civil Code) art. 419 (Japan).

30. See Código Civil Federal [C.C.F.] [Federal Civil Code], *as amended*, art. 2117, Diario Oficial de la Federación [D.O.], 26 de Mayo, 14 de Julio, y 31 de Agosto de 1928 (Mex.); Código de Comercio [CÓD. COM.] [Commercial Code], *as amended*, art. 362, Diario Oficial de la Federación [D.O.], 7 de Octubre de 1889 (Mex.).

31. See Supreme Court Act, 1933, § 69 (AUSTL. CAP. TERR. LAWS); Supreme Court Act, 1970, § 94 (N.S.W. ACTS); Supreme Court Act, 1979, § 84 (N. Terr. Austl. Laws); Common Law Practice Act, 1867, § 72 (QUEENSL. PUB. ACTS); Supreme Court Act, 1935, § 30C (S. Austl. Acts); Supreme Court Civil Procedure Act, 1932, § 34 (Tas. Acts); Supreme Court Act, 1986, § 60 (Vict. Acts); Supreme Court Act, 1935, § 32 (W. AUSTL. REPR. ACTS); Judicature Act 1908, 1908 No. 89, § 87 (N.Z.); *Hungerfords v. Walker* (1989) 171 C.L.R. 125 (Austl.).

32. United Nations Convention on Contracts for the International Sale of Goods art. 78, Apr. 11, 1980, S. Treaty Doc. No. 98-9 (1983), 1489 U.N.T.S. 3 [hereinafter CISG]. CISG Article 84 also provides that “[i]f the seller is bound to refund the price, he must also pay interest on it, from the date on which the price was paid.” *Id.* art. 84(1).

33. North American Free Trade Agreement, U.S.-Can.-Mex., art 1135(1)(a), Dec. 17, 1992, 107 Stat. 2057, 32 I.L.M. 289 (1993) [hereinafter NAFTA].

34. See INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW [UNIDROIT], PRINCIPLES OF INTERNATIONAL COMMERCIAL CONTRACTS art. 7.4.9 (2004); COMMISSION ON EUROPEAN CONTRACT LAW, PRINCIPLES OF EUROPEAN CONTRACT LAW art. 9:508 (Parts I & II revised & combined) (Ole Lando & H. G. Beale eds., 2000).

for the injury that the respondent's wrongful act caused.³⁵

However, a number of countries prohibit the payment of interest for religious reasons. Most of these countries have legal systems based on Islamic law or the *Shari'a*, which expressly forbids the taking of interest.³⁶ Today, many leading Islamic finance specialists accept that time must be priced. Although they still object to the fixed, pre-determined aspects of interest-based lending with its inherent risk of lender exploiting borrower, Islamic finance currently aims to replicate in Islamic forms the substantive functions of modern financial instruments, markets, and institutions.³⁷

There also are exceptions to the general rule concerning liability for interest. For example, parties may agree that no interest will be paid on sums in arrears. Claims for interest may be denied if the payment of interest would result in injustice, be otherwise unconscionable or violate public policy. In addition, interest may not be awarded if the respondent can show proof of laches, bad faith, duress, or fraud on the part of the claimant.³⁸

In short, liability for interest is so pervasive under national laws that absent an exception, it is generally accepted that international tribunals may award interest to an injured claimant. In fact, in the *Compañía de Aguas del Aconquija, S.A. and Vivendi Universal*

35. See C. Civ. art. 1153 (Fr.); C.c. art. 1284 (Ital.); *Colunga v. Young*, 722 F. Supp. 1479, 1488 (W.D. Mich. 1989); *ITT Corp. v. United States*, 17 Cl. Ct. 199, 242 (1989); *Jad Int'l Pty. Ltd. v. Int'l Trucks Austl. Ltd.*, 50 F.C.R. 378, 391-92 (Austl. 1994); see also *Wadsworth*, 1 W.L.R. at 603; DOBBS, *supra* note 12, § 3.6(2).

36. G. GREGORY LETTERMAN, *LETTERMAN'S LAW OF PRIVATE INTERNATIONAL BUSINESS* 43 (1990); Samir Saleh, *The Recognition and Enforcement of Foreign Arbitral Awards in the States of the Arab Middle East*, in *CONTEMPORARY PROBLEMS IN INTERNATIONAL ARBITRATION* 348-49 (J.D.M. Lew ed., 1987) [hereinafter *CONTEMPORARY PROBLEMS*]. The rationale for this prohibition on interest is threefold:

1. Interest or usury reinforces the tendency for wealth to accumulate in the hands of a few, and thereby diminishes man's concern for his fellow man.
2. Islam does not allow gain from financial activity unless the beneficiary is also subject to the risk of potential loss; the legal guarantee of at least nominal interest would be viewed as guaranteed gain.
3. Islam regards the accumulation of wealth through interest as selfish compared with accumulation through hard work and personal activity.

Talib Sirraj Abdus-Shahid, *Interest, Usury and the Islamic Development Bank: Alternative, Non-Interest Financing*, 16 *LAW & POL'Y INT'L BUS.* 1095, 1102-03 (quoting Ingo Karsten, *Islam and Financial Mediation*, 29 *INT'L MONETARY FUND STAFF PAPERS* 108, 111 (1982)).

37. See, e.g., Mahmoud A. El-Gamal, *ISLAMIC FINANCE: LAW, ECONOMICS, AND PRACTICE* (2006).

38. Gotanda, *supra* note 1, at 252-53.

S.A. v. Argentine Republic arbitration award issued in August 2007, the ICSID tribunal stated that “the liability to pay interest is now an accepted legal principle.”³⁹

Accrual Period. Under the laws of most countries, interest starts to accrue from the date of default.⁴⁰ However, exactly what constitutes a default varies from jurisdiction to jurisdiction. If the parties agree that a breach of contract will occur if the respondent fails to fulfill its obligations by a certain time and then the respondent does not perform by that date, in many countries, interest begins to accrue automatically from the time of the breach.⁴¹ If the parties’ contract does not set forth a date for performance, in some jurisdictions, like New York, interest accrues “from the earliest ascertainable date the cause of action existed” or from the date upon which damages were incurred.⁴² By contrast, in many other jurisdictions, interest does not begin to accrue until the claimant demands performance.⁴³ In France, this requirement has been held not to apply to claims for purely compensatory damages, as opposed to claims for moratory damages, that is, damages for delay in performing as opposed to compensatory damages which are recoverable for the failure

39. *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep. (Award)*, ICSID Case No. ARB/97/3, ¶ 9.2.1 (Aug. 20, 2007).

40. See generally Gotanda, *supra* note 1, at 193–233. It should be noted that there is a distinction between pre-judgment or pre-award interest and post-judgment or post-award interest. Pre-judgment interest is interest as part of an award, as opposed to post-judgment interest, which is interest on an award. In this context, we are referring to pre-judgment or pre-award interest.

Unless otherwise provided for by applicable law, pre-judgment interest typically runs until date of payment. See, e.g., *Azurix Corp. v. Argentine Rep.*, ICSID Case No. ARB/01/12, 43 I.L.M. 262, (July 14, 2006), available at <http://www.worldbank.org/icsid/cases/awards.htm>; *PSEG Global Inc. v. Rep. of Turkey*, ICSID Case No. ARB/02/5 (Jan. 17, 2007), available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20-%20Award%20and%20Annex.pdf>. However, in *Enron Corp. Ponderosa Assets, L.P. v. Argentine Rep.* and *Sempra Energy International v. Argentine Rep.*, the tribunals ruled that interest should accrue only until the date of the award because post award interest was not expressly requested by the claimants. See *Enron Corporation Ponderosa Assets, L.P. v. Argentine Rep.*, ICSID Case No. ARB/01/3 (May 22, 2007) (Award), available at <http://www.investmentclaims.com/decisions/Enron-Award.pdf>; *Sempra Energy International v. Argentine Rep.*, ICSID Case No. ARB/02/16 (Sept. 28, 2007), available at http://www.investmentclaims.com/decisions/Sempra_Energy-Award.pdf.

41. See, e.g., C.c. art. 1219 (Ital.); Civil Act [hereinafter KOR. CIV. ACT] art. 387 (S. Korea); MINPO (Civil Code) art. 412 (Japan).

42. N.Y. C.P.L.R. 5001(b) (2009).

43. See, e.g., Código Civil [C.C.] art. 1063 (Braz.); Código de Comercio [CÓD.COM.] art. 227 (Pan.).

to perform.⁴⁴

With respect to setting the accrual period, the 2000 European Union Directive requiring Member States to introduce measures to protect commercial creditors against late payment provides, among other things, that interest shall be “payable from the day following the date or the end of the period for payment fixed in the contract.”⁴⁵ If the contract does not specify a date, the Directive provides four options, the most notable being the right to interest thirty days after the date of receipt by the debtor of the invoice or an equivalent request for payment.⁴⁶

Interest Rate. To determine the rate at which interest accrues, the laws of many countries provide for courts and tribunals to first look to the parties agreement and enforce any provisions on the payment of interest, unless they violate public policy or usury laws.⁴⁷ In the absence of such agreement, in most countries, interest on a sum in arrears will accrue at the applicable statutory rate.⁴⁸ The rate in such statutes can vary widely, even within the same country.⁴⁹

Some countries, such as France, periodically set the rate of interest, typically basing it on market conditions.⁵⁰ By contrast, most other countries have fixed statutory rates that often remain unchanged for years.⁵¹ As a result, they do not accurately reflect com-

44. See Cour de cassation Chambre mixte [Cass. Ch. mixte] [highest court of ordinary jurisdiction], Decision No. 257 of July 6, 2007, report of Mr. Hederer.

45. Directive 2000/35/EC of the European Parliament and of the Council, *supra* note 26, art. 3.1.(a)-(b).

46. The Directive states that “if the date or period for payment is not fixed in the contract, interest shall become payable automatically without the necessity of a reminder: (1) 30-days after receipt by the debtor of the invoice or an equivalent request for payment;” (2) if the receipt of the invoice or the request for payment is uncertain, then 30-days after the receipt of goods or services; (3) if the request for payment precedes the receipt of goods or services, then 30 days after receipt of the goods or services; or (4) if the request for payment precedes the date for procedures to verify performance as determined by contract or statute, then 30 days after the procedural date. *Id.*

47. See Gotanda, *supra* note 4, at 50-51.

48. See Gotanda, *supra* note 1, at 193-236; see also Final Award in ICC Case No. 6281, reprinted in 15 Y.B. Com. Arb. 96 (1990); Final Award No. 6527 (ICC 1991), reprinted in 18 Y.B. Com. Arb. 44, 45-47 (1993).

49. See Gotanda, *supra* note 1, at 193-236.

50. In France, the legal rate of interest is equal to the arithmetic average of the last twelve monthly averages of the actuarial rate of return of auctions of three-week fixed rate treasury bills. See Monetary and Financial Code, art. L. 313-2 (Dec. 14, 2000).

51. See, e.g., KOR. CIV. ACT art. 379; N.Y. C.P.L.R. 5004 (2009); MINPŌ art. 404 (Japan); Código de Comercio [CÓD.COM.] art. 362 (Mex.).

pensation for the loss of the use of money. In the United States alone, statutes that fix interest at specific rates vary from 6% to 15%.⁵²

In New York, the statutory interest rate on damages for a breach of contract is 9%.⁵³ This rate has not changed for over twenty five years.⁵⁴ In 1983, when the New York statute was last amended, the U.S. T-bill rate was around 9%.⁵⁵ However, by 1993, the T-bill rate had fallen to 3%. In 2003, it was a little above 1% and it is currently around 2%. Thus, there can be a significant difference between a fixed statutory rate and a rate based on market conditions.

Some countries, like China, do not have a fixed statutory rate. In general, Chinese courts and tribunals will award interest at the contractually agreed upon rate, and in the absence of an agreement between the parties, they have discretion to award interest and typically do so at a reasonable rate. That rate has ranged from 5% to 10%, with 6% to 8% being the most common.⁵⁶

In England, in the absence of an applicable statute, courts have the discretion in fixing the rate at which interest accrues. Most courts apply the prevailing commercial rate. This rate is based on evidence submitted by the parties or, in some cases, on the rate that a claimant of like characteristics would have had to pay to borrow money during the period in question. A 2004 study by the Law Commission found that courts typically award pre-judgment interest at rate of 8%.⁵⁷ The rate of interest also may be prescribed by statute. For example, the Late Payment of Commercial Debts (Interest) Act of 1998 applies to claims for interest by commercial creditors who are owed money by commercial organizations. It provides for interest to accrue at a rate that is 8% above the Bank of England base rate.⁵⁸

52. Gotanda, *supra* note 1, at 210.

53. N.Y. C.P.L.R. 5004 (2009).

54. The statute was enacted in 1962 and was last amended in 1981, when the interest rate was increased from 6% per annum to 9% per annum. *Id.*

55. For a historical listing of U.S. T-bill rates, see http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/yield_historical_main.shtml.

56. See Contract Law of the People's Rep. of China arts. 197-207 (P.R.C.); see also D. Wu, *CIETAC's Practice on the CISG*, 2 NORDIC J. COM. L. (2005), available at http://www.njcl.utu.fi/2_2005/article2.pdf.

57. See The Law Commission, *Pre-judgment Interest on Debts and Damages*, No. 287 LAW COM 21 (2004).

58. The Late Payment of Commercial Debts (Interest) Act, 1998 (U.K.) provides for

Form of Interest. There are two principal forms of interest: simple interest and compound interest. Simple interest is interest that is calculated only on the principal owed. The interest owed for a certain period does not merge with the principal and become part of the base upon which future interest is calculated. In other words, in the simple interest scenario, the interest that accrues each period is not added to the base that is used to calculate interest in future periods. An award of compound interest means that the interest payment for a certain period is added to the principal sum owed, and that sum is treated as a new principal for calculating the interest for the next period. This is why compound interest is sometimes referred to as the capitalization of interest or as "interest on interest."⁵⁹

In most countries, simple interest is the norm.⁶⁰ And some countries forbid interest to be paid upon interest, even if the contract provides for it.⁶¹ However, some jurisdictions have begun to award compound interest on the ground that it is more in line with modern financial practice. As an American state court explained:

It is simply not credible in today's financial markets that a person sophisticated enough to perfect his or her appraisal rights would be unsophisticated enough to make an investment at simple interest—in fact, even passbook savings accounts now compound their interest daily. This fundamental economic reality strongly indicates to me that, our litigants typically being at least as financially sophisticated as passbook savings

simple interest on debts owed "for the supply of goods or services where the purchaser and the supplier are each acting in the course of a business." This Act was originally designed to protect only small business against the late payment of commercial debts, but it has since been broadened to implement the European Union Directive on combating late payment in commercial transactions. The Directive provided that "Member States shall ensure that . . . the level of interest for late payment [of commercial transactions] which the debtor is obliged to pay, shall be the sum of the interest rate applied by the European Central . . . , plus at least seven percentage points, unless otherwise specified in the contract."

59. See BREALEY & MYERS, *supra* note 8, at 36; EUGENE F. BRIGHAM & JOEL F. HOUSTON, *FUNDAMENTALS OF FINANCIAL MANAGEMENT* 207 (8th ed. 1998). Compound interest is calculated through the use of the following formula: $FV = PV(1+i)^n$, where FV is the future value of the total award, including interest, PV is the present value of the award (i.e., not including interest), i is the interest rate per compounding period, and n is the number of compounding periods.

60. Gotanda, *supra* note 7.

61. See, e.g., Schweizerisches Obligationenrecht [OR], Code civil suisse [Cc], Codice civile swizzero [Cc] [Civil Code] Mar. 30, 1911, RS 281, art. 105 (Switz.).

holders and seeking at least the same return, interest on appraisal cases should be compounded *daily*, not monthly. As for the defendant company in an appraisal action, it is even harder to imagine a corporation today that would seek simple interest on the funds it holds. One cannot imagine that a sophisticated businessman . . . would invest his company's funds in instruments yielding simple rates of interest. Nor is it conceivable that [a businessman's] lenders w[ould] provid[e] his companies with capital at simple rates of interest.⁶²

Furthermore, in many countries, compound interest may be awarded when the parties have agreed to it in the contract or when it is payable as special damages.⁶³

From an industry point of view, it should be noted that compound interest is the international standard applied in most time value applications. Indeed, the adoption of compound interest reflects the majority of commercial realities in that a loss of value incurred by a company, active in normal trading operations, implies the loss of use of that value.⁶⁴

II. INTERNATIONAL CLAIMS PROGRAMS AND INTEREST

Today, there exists an emerging body of international law jurisprudence that supports the general proposition that compensation may include an interest component based on compounding. In this respect, we can make reference to a few mass claim mechanisms having used the concept of interest.

For instance, under CRT I, the first Claims Resolution Tribunal established in 1997 to process claims in respect of 5,570 dormant Swiss bank accounts dating from 1933–1945, specific rules have been crafted to readjust the 1930s and 1940s value of the accounts to present day values and they take into account the principal of com-

62. *Onti, Inc. v. Integra Bank, Inc.*, 751 A.2d 904, 926–27 (Del. Ch. 1999).

63. *See Gotanda, supra note 7; see also Wadsworth*, 1 W.L.R., at 598 (stating a plaintiff may recover as special damages compound interest when the plaintiff borrows money from a financial institution charging compound interest to make up for the loss of funds caused by the defendant's breach and such action was foreseeable under the circumstances).

64. *See Sénéchal, supra note 11.*

pounding. In particular, the rules of the Claims Resolution Tribunal provide for applying the Current Value Adjustment Factor (CVAF), which “is an allowance for compounded investment return from the end of 1944 to the end of 1999”⁶⁵

The 2000 Knesset Inquiry Committee on the “Location and Restitution of Assets (in Israel) Belonging to Persons Who Perished in the Holocaust” found that many of the bank accounts belonging to Holocaust victims were handed from the British Custodian to Israel not at their real value at the time this transfer took place. The final report stated:

Advisory Committee recommended that the funds be reappraised on the basis of linkage to the consumer price index in Israel for the period to be determined, with an addition of an annual compound interest of 4%, which is similar to what was decided in the Volker Committee, that examined the bank liability to Holocaust victims in Switzerland. This calculation is based on the calculation that is customary when the State collects debts or taxes from the citizens, or pays them.⁶⁶

In both situations, it was recognized that an injured party should be compensated for the loss of the use of money and that compound interest may be necessary to achieve that goal.

III. INTERNATIONAL TRIBUNALS AND INTEREST

Arbitral tribunals deciding international disputes typically resolve claims for interest by using one of four approaches. First, if the parties’ agreement contains a provision on the payment of interest or designates a national law to apply to claims for interest, tribunals

65. Claims Resolution Tribunal, Rules on Interest, Charges, and Fees for Arbitral Decisions of the Claims Resolution Tribunal, ¶ d, available at http://www.crt-ii.org/_crt-i/rules_interest.html.

66. See PARLIAMENTARY COMMITTEE OF INQUIRY ON THE LOCATION AND RESTITUTION OF ASSETS OF HOLOCAUST VICTIMS IN ISRAEL, REPORT OF THE KNESSET INQUIRY COMMITTEE ON THE LOCATION AND RESTITUTION OF ASSETS (IN ISRAEL) OF VICTIMS OF THE HOLOCAUST (Rama Zutra ed., Dr. Susan Hattis Rolef trans., 2004), available at http://www.knesset.gov.il/committees/eng/docs/shoa_finalreport_eng.doc.

usually enforce it unless the agreement violates public policy.⁶⁷ This practice promotes the goals of party autonomy, respect for the intent of the parties and predictability and certainty concerning the legal rights of the contracting parties. Second, if the parties' agreement is silent or ambiguous on the payment of interest, many tribunals resolve the interest claim in accordance with applicable law selected through a choice of law analysis, which often results in applying a statutory interest rate and an award of only simple interest.⁶⁸ Third, some tribunals have resolved claims for interest based on general principles of law, such as the UNIDROIT Principles.⁶⁹ Fourth, others have resolved issues concerning interest, particularly the rate at which interest accrues, on the basis of fairness or reasonableness.⁷⁰

When tribunals decide transnational contract disputes, they most commonly resolve interest claims by applying national law.⁷¹

67. See Final Award in ICC Case No. 6531, *reprinted in* 17 Y.B. COM. ARB. 221, 223–24 (1992); Final Award in ICC Case No. 7006, *reprinted in* 18 Y.B. COM. ARB. 58, 65–66 (1993); Final Award of May 27, 1991 (UNCITRAL Ad Hoc Trib. 1991), *reprinted in* 17 Y.B. COM. ARB. 11, 26 (1992); Final Award in ICC Case No. 6162, *reprinted in* 17 Y.B. COM. ARB. 153, 162 (1992); Final Award in ICC Case No. 5485, *reprinted in* 14 Y.B. COM. ARB., 156, 158 (1989); Libyan Am. Oil Co. (LIAMCO) v. Gov't of Libyan Arab Rep. (1977), *reprinted in* 20 I.L.M. 1, 115–16 (1981).

68. See, e.g., Final Award of Dec. 21, 1995 (Cairo Regional Centre for Int'l Com. Arb. 1995), *reprinted in* 22 Y.B. COM. ARB. 13, 26 (1997); Final Award in ICC Case No. 2637, *reprinted in* 2 Y.B. COM. ARB. 153 (1977); Final Award in ICC Case No. 6281, *reprinted in* 15 Y.B. COM. ARB. 96 (1990); Final Award in ICC Case No. 6531, *reprinted in* 17 Y.B. COM. ARB. 221 (1992); Award No. SCH-4318 (Schiedsgericht der Bundeskammer der gewerblichen Wirtschaft, June 15, 1994) (Austria), *available at* <http://www.unilex.info/case.cfm?pid=1&do=case&id=56&step=FullText>; Award No. 01 93 1061 (Tribunal Cantonal de Vaud, Mar. 11, 1996) (Switz.); Final Award in ICC Case No. 7567, *available at* <http://www.unilex.info>.

69. See Final Award of April 12, 1996 (Ad Hoc Arbitration, Rome 1996), *reprinted in pertinent part in* MICHAEL JOACHIM BONELL, *THE UNIDROIT PRINCIPLES IN PRACTICE* 401 (2002); Final Award in ICC Case No. 8874, *reprinted in* *THE UNIDROIT PRINCIPLES IN PRACTICE*, *supra* at 455.

70. See, e.g., AAPL v. Sri Lanka, ICSID Case No. ARB/87/3 (June 27, 1990), 30 I.L.M. 577 (1991); Phillips Petroleum Co. Iran v. Iran, 21 Iran-U.S. Cl. Trib. Rep. 161 (1989); McCollough & Co. v. Iran, 11 Iran-U.S. Cl. Trib. Rep. 3, 29 (1986); Final Award in ICC Case No. 11849 (fashion products case), *reprinted in* 31 Y.B. COM. ARB. 148, 169–70 (2006).

71. See, e.g., Final Award in ICC Case No. 9839, *reprinted in* 29 Y.B. COM. ARB. 66 (2004) (awarding in a breach of contract case 9% interest on damages pursuant to N.Y. C.P.L.R. 5001(a)(b)); Final Award in ICC Case No. 10329 (industrial product case), *reprinted in* 29 Y.B. COM. ARB. 108 (2004) (awarding in a case governed by the CISG interest at a rate of 5% pursuant to the Swiss Code of Obligations); Final Award in ICC Case No. 9333 (Services case), *available at* <http://cisgw3.law.pace.edu/cisg/wais/db/cases2/989333i1.html> (awarding in a dispute governed by the CISG 5% interest pursuant to Article 104 of the Swiss Code of Obligations); Final Award in ICC Case No. 8611 (industrial equipment

By contrast, the trend in investment disputes has been for tribunals to award interest at market savings or lending rates, such as the U.S. T-bill rate or the LIBOR rate.⁷² Investment tribunals can choose this method because they often enjoy broad power under an international treaty or convention to award interest to achieve the principle of full reparation for the loss caused by the wrongful act.⁷³

In international investment arbitrations, the trend is also to-

case), available at <http://cisgw3.law.pace.edu/cisg/wais/db/cases2/978611i1.html> (awarding in a dispute governed by the CISG 5% interest pursuant to Article 352 of the German Commercial Code); see also Francesco G. Mazzotta, *CISG Article 78: Endless Disagreement Among Commentators, Much Less Among the Courts*, available at <http://www.cisg.law.pace.edu/cisg/biblio/mazzotta78.html> (concluding that most courts and tribunals award interest under the CISG pursuant to national interest rate statutes). But see Final Award in ICC Case No. 8790 (processed food product case), 29 Y.B. COM. ARB. 13. (2004) (awarding in a case governed by the CISG interest at the LIBOR rate for the period in which the default occurred).

72. See, e.g., *Compañía del Desarrollo de Santa Elena v. Costa Rica*, 15 ICSID REV. FOREIGN INVESTMENT L.J. 169, 200 (2000), available at <http://www.worldbank.org/icsid/cases/awards.htm>; *PSEG Global Inc. v. Rep. of Turkey*, ICSID Case No. ARB/02/5 (Jan. 17, 2007), available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20-%20Award%20and%20Annex.pdf>; *Azurix Corp. v. Argentine Rep.*, ICSID Case No. ARB/01/12 (July 14, 2006), 43 I.L.M. 262, available at <http://www.worldbank.org/icsid/cases/awards.htm>; *Siemens A.G. v. Argentine Rep.*, ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, available at <http://www.worldbank.org/icsid/cases/awards.htm>; *ADC Affiliate Limited v. Hungary*, ICSID Case No. ARB/03/16 (ICSID Arb. Trib. Oct. 2, 2006), available at <http://www.worldbank.org/icsid/cases/awards.htm>; *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 933, 945 (2002); *Maffezini v. Spain*, ICSID Case No. ARB/97/7 (Jan. 31, 2001), available at http://www.worldbank.org/icsid/cases/emilio_AwardoftheTribunal.pdf; *LG&E Energy Corp. et al. v. Argentine Rep.*, ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina Damages_Award.pdf.

73. See *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 896 (2002) (BIT provided that compensation for expropriation must be “prompt, adequate and effective” and “shall amount to the market value of the investment,” which the tribunal saw as including a determination of interest compatible with those principles); *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep. (Award)*, ICSID Case No. ARB/97/3, ¶ 9.2.2 (Aug. 20, 2007) (noting that Article 5(2) of the BIT required that compensation be paid by a state party for lawful expropriation “bear interest, computed at an appropriate rate, until the date of payment”); NAFTA, *supra* note 33, art. 1135(1) (stating that a tribunal may award “monetary damages and any applicable interest”); see also International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, art. 38, in REPORT OF THE INTERNATIONAL LAW COMMISSION, FIFTY-THIRD SESSION, U.N. GAOR, 56th Sess., Supp. No. 10, U.N. Doc. A/56/10 (2001) (“Interest on any principal sum payable . . . shall be payable when necessary in order to ensure full reparation” and that “the interest rate and the mode of calculation shall be set so as to achieve that result.”); see generally ANDREW NEWCOMBE & LLUÍS PARADELL, LAW AND PRACTICE OF INVESTMENT TREATIES: STANDARDS OF TREATMENT (2009); ALAN REDFERN, MARTIN HUNTER, NIGEL BLACKBAY & CONSTANTINE PARTASIDES, LAW AND PRACTICE OF INTERNATIONAL COMMERCIAL ARBITRATION 64 (4th ed. 2004).

ward using compounding of interest.⁷⁴ For example, in *Middle East Cement Shipping and Handling Co. v. Arab Republic of Egypt*, the tribunal concluded “that, to make the compensation ‘adequate and effective’ pursuant to Art. 4. c) of the BIT, it is appropriate that the interest pursuant to the last sentence of Art. 4. c) of the BIT be awarded as compound interest.”⁷⁵ Similarly, in *Metalclad Corp. v. United Mexican States*, the tribunal stated that compound interest will best “restore the Claimant to a reasonable approximation of the position in which it would have been if the wrongful act had not taken place.”⁷⁶ In addition, as the tribunal in *Siemens A.G. v. Argentine Republic* noted, “tribunals have ruled that compound interest is a closer measure to the actual value lost by an investor.”⁷⁷ It explained:

Where an owner of property has at some earlier time lost the value of his asset but has not received the monetary equivalent that then became due to him, the amount of compensation should reflect, at least in part, the additional sum that his money would have earned, had it, and the income generated by it, been reinvested each year at generally prevailing rates of interest.⁷⁸

In reality, however, neither the approach of tribunals deciding transnational contract disputes nor the approach of the investment tribunals is likely to achieve the main goal of interest: to fully compensate a claimant for the loss of the use of money. The former approach generally fails to properly compensate a party for its loss because it awards interest pursuant to national laws containing statutory rates that remain unchanged for years. Moreover, these domestic statutes typically provide for only simple interest. Indeed, the failure to provide for compound interest alone could, in the case of a lengthy delay in payment, result in a significant economic loss to a claimant. In today’s finance world, compound interest is the international standard applied in most time value applications. Not recognizing this

74. See Gotanda, *supra* note 10, at 169.

75. *Middle East Cement Shipping & Handling Co. S.A. v. Arab Rep. of Egypt*, ICSID Case No. ARB/99/6 (Apr. 12, 2002) (Award), 7 ICSID Rep. 173 (2005).

76. *Metalclad Corp. v. United Mexican States*, ICSID Case No. ARB(AF)/97/1 (2000) (Award ¶ 131), *reprinted in* 26 Y.B. COM. ARB. 99 (2001).

77. *Siemens A.G. v. Argentine Rep.*, ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, available at <http://www.worldbank.org/icsid/cases/awards.htm>.

78. *Id.* ¶ 399.

reality would leave the claimant less than whole and result in a wind-fall to the respondent.⁷⁹

The approach taken by investment tribunals is a step in the right direction. It more accurately compensates a party for the loss of the use of money through an award of interest at a market rate, such as the U.S. T-bill or LIBOR rate, and on a compound basis. Nevertheless, this approach has a serious drawback that prevents it from achieving its main goal. It ignores the reality that businesses typically invest in opportunities that have a significantly greater amount of risk than the U.S. T-bill or LIBOR rates.

Today, it is common for businesses to seek to secure different interest rates. A risk-averse businessperson will likely invest in government bonds and virtually risk-free investments; others will seek higher return through more risky investments. When investing or placing capital into a project today, the investor is expecting a return based on a specific risk preference. Indeed, an investor always has a certain risk profile in mind when making the investment decision. The level of political, economic, and business risks that an individual investor undertakes is a matter of preference. The investor will want to be compensated for the risks undertaken in making the investment. Therefore, the investor should not only be compensated for inflation risks but also for systematic and regulatory risks. Such risks include the possibility of default or inability to fulfill the originally agreed upon terms. Accordingly, a tribunal should account for the underlying risk profile of the assets in the dispute in order to achieve the goal of full compensation.⁸⁰

One should not be too quick to lay all the blame at the feet of tribunals for failing to award interest at a rate that accounts for risk. In a few instances, applicable law may prevent a tribunal from doing

79. See *Compañía del Desarrollo de Santa Elena v. Costa Rica*, 15 ICSID REV. FOREIGN INVESTMENT L.J. 169, 200 (2000), available at <http://www.worldbank.org/icsid/cases/awards.htm>; *Pope & Talbot, Inc. v. Govt. of Canada*, (2001) (Award ¶ 89); *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896 (2002); see also *Gotanda*, *supra* note 7.

80. Rational investors would usually not invest at a rate below the risk-free rate available in the market. At minimum, the rate of interest to be used for adjusting the award to present day value should thus be equal or above the risk-free rate. This rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time. It usually includes inflation. Consequently, the risk-free rate is the minimum return an investor expects for any investment since he or she would not bear any risk unless the potential rate of return is greater than the risk-free rate.

so.⁸¹ In other cases, the claimant may fail to provide sufficient information needed to award interest in a manner that would fully compensate a party for the loss of the use of money. For example, in the *Wena Hotels* arbitration, the claimant sought interest on an award of damages, but failed to specify the rate at which interest should accrue and whether it should be on a simple or compound basis.⁸² Nevertheless, even where the claimants have asserted claims for interest based on lost opportunity cost, tribunals have sometimes rejected them as speculative or have awarded a lesser rate without explanation.⁸³

The tribunal's decision in *PSEG Global Inc. v. Republic of Turkey* illustrates this practice. There, the tribunal ruled that Turkey breached its obligation to provide claimants fair and equitable treatment as provided for in the United States-Turkey Bilateral Investment Treaty in their efforts to build and operate a coal power plant in Turkey. It awarded claimants compensation for their actual expenses related to the investment, totaling approximately US\$9 million.⁸⁴ With respect to the claim for interest, both sides "extensively dis-

81. *Cf. Iowa Lakes Electric Cooperative v. Schmitt*, 2001 WL 355722 (Iowa Ct. App. Apr. 11, 2001) (ruling that Iowa Code § 668.13(1) does not allow interest on past damages and only allows for the payment of interest from the date of the commencement of the suit); *see also* N.C. GEN. STAT. § 24-5 (2009).

82. *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 945 (2002). This also occurs in domestic courts. As one U.S. state court noted:

In point of fact, very few, if any, appraisal trials provide a record on which the trial judge may base his compound versus simple interest decision. The parties usually fail (or refuse) to address this miniscule issue. That should not be surprising. After spending days, or even weeks, in a trial, wading through swarms of hired experts and hours of excruciating testimony, the trial judge, the parties, and counsel are determined to get it over as quickly as possible—which means no one wants to prolong the trial by even a minute in order to have yet more testimony on an issue like simple or compound interest. After two or three weeks of trial, it is inhumane to expect the trial judge to plead for yet another bucket of water to be added to the ocean.

Onti, Inc. v. Integra Bank, Inc., 751 A.2d 904, 929 n.103 (Del. Ch. 1999).

83. *See, e.g., PSEG Global Inc. v. Rep. of Turkey*, ICSID Case No. ARB/02/5 (Jan. 17, 2007) ¶¶ 341–45, available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20-%20Award%20and%20Annex.pdf>.

84. *Id.* The tribunal declined to award claimants the market value of their investment on the ground that the BIT permits such damages only for cases of expropriation. It recognized that a number of tribunals had awarded the fair market value for non-expropriated breaches, but it distinguished those cases on the ground that the damaged investments were in those cases in the production stage.

cussed the question” and provided experts’ views on the subject.⁸⁵ The claimants sought their alleged lost opportunity costs, which they asserted ranged from 10.6% to 12%, or alternatively the Turkish sovereign rate.⁸⁶ Turkey argued that the appropriate interest rate should be that of the U.S. T-bill.⁸⁷ In rejecting the claimants’ claim for interest based on lost opportunity cost, the tribunal noted:

The Tribunal is not persuaded . . . that the cost of equity offers an appropriate basis [upon which to calculate interest] The cost of equity is based on subjective determinations by investors. For this reason it does not offer a useful basis for calculating interest that aims at the protection of the value of funds spent rather than the value of expropriated assets⁸⁸

The tribunal also declined to use the Turkish bond yield rate or the U.S. T-bill rate because there was no evidence that the claimants would have placed the money owed in either financial market. In the end, the tribunal determined that the interest rate that would “compensate adequately an international company such as PSEG Global” under the circumstances was the “6 month average LIBOR plus 2 percent per year for each year during which the amounts” were owed and that interest should be compounded semi-annually.⁸⁹

Siemens A.G. v. Argentine Republic illustrates a situation in which the tribunal sought to set the interest rate in order to ensure “full reparation” but in reality fell short of its goal. In that case, the claimant was awarded a concession to create and operate Argentina’s personal identification and electoral information system, which was

85. *Id.* ¶ 341.

86. The tribunal noted:

The Claimant’s expert . . . used the date of alleged expropriation, March 3, 2001, to calculate prejudgment interest relating to expenses made before and after this date. For the period prior to March 2001, the estimated interest rate is 12% based on the opportunity cost to the Project Company at that particular point in time and the length of time since the investment was made until the date of expropriation. This opportunity cost is in turn based on the “historic” cost of equity. Post award interest is calculated at 10.6%.

Id.

87. *Id.* ¶ 344 (The respondents’ expert argued that the U.S. T-bill rate was the appropriate reference because there was no risk involved in the case of compensation resulting from an award).

88. *Id.* ¶ 343.

89. *Id.* ¶ 341–48 (explaining that there was no further explanation of why the LIBOR rate plus 2% was the most appropriate rate).

based on the creation of national identity cards (DNIs).⁹⁰ Argentina caused the claimant to suspend production of the DNIs and subsequently terminated the contract. The claimant filed for arbitration, alleging violations of the Mutual Protection and Promotion of Investments treaty between the Federal Republic of Germany and the Argentine Republic. The tribunal ruled, *inter alia*, that Argentina's actions amounted to an expropriation and that it also breached its treaty obligation to provide fair and equitable treatment.⁹¹

With respect to interest, the claimant sought an award of interest at a compound rate of 6%, which it claimed was its average corporate borrowing rate. In contrast, Argentina argued that the Treaty provided for interest at the usual bank rate. The tribunal noted that, in determining the applicable interest rate, the "guiding principle is to ensure 'full reparation for the injury suffered as a result of the internationally wrongful act.'"⁹² It thus rejected the claim for interest at the corporate borrowing rate on the ground that the appropriate rate is not the rate associated with corporate borrowing but the rate that reflects the amount of compensation the claimant would have earned if it had been paid after the expropriation. The tribunal concluded that "[s]ince the awarded compensation is in dollars, . . . the average rate of interest applicable to the U.S. six-month certificates of deposit is an appropriate rate of interest," which resulted in an interest rate of 2.66%.⁹³

In short, tribunals deciding international disputes have by and large failed to fully compensate injury claimants for the loss of the use of money through the awarding of interest because such awards do not reflect modern economic realities.

90. Siemens A.G. v. Argentine Rep., ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, available at <http://www.worldbank.org/icsid/cases/awards.htm>.

91. *Id.* ¶ 403.

92. *Id.* ¶ 396.

93. *Id.* ¶ 399–400. The tribunal also ruled that interest should be compounded annually because if the compensation had been paid following the expropriation, the claimant would have earned interest on interest on that amount. Compound interest, the tribunal noted, "is a closer measure of the actual value lost by an investor" and furthers the "objectives of prompt, adequate and effective compensation that reflects the market value of the investment immediately before the expropriation." *Id.*

IV. INTEREST AS DAMAGES

Claimants would be more accurately compensated for the loss of the use of their money if they received interest as damages, as opposed to interest on damages. Furthermore, a model claim and award of interest as damages would use a risk-free interest rate plus a market risk premium, and such interest would be compounded on a yearly basis.

A. *Procedural and Legal Framework*

In order for a tribunal to award interest as damages, a claimant first would need to assert a claim for interest as damages. Thus, the claimant would have to show that there exists the authority to award interest as damages, that the loss was caused by the respondent, that it was foreseeable and that the claimant could prove the loss with sufficient degree of certainty.⁹⁴

1. Authority to Award Interest as Damages

Many national laws recognize that interest may be awarded as damages. For example, while the German Civil Code provides for interest to accrue on a money debt during the period of default at the statutory rate, it allows an obligee to claim higher interest on a different legal basis and to "claim additional loss."⁹⁵ In addition, in the United States, many jurisdictions allow for the recovery of interest as a component of damages.⁹⁶ This commonly occurs when the defendant's breach of contract causes the claimant to borrow funds at a specified interest rate to make up for the loss of the use of the money owed.⁹⁷

94. See generally Gotanda, *supra* note 1, at 96-171 (In many countries, a claimant is precluded from recovering loss that could have been avoided.).

95. BGB § 288 (Ger.).

96. See Gotanda, *supra* note 4, at 42, 44, 46 (outlining that European, Asian and North and South American countries allow for the recovery of interest as a component of damages).

97. See, e.g., *American Anodco, Inc. v. Reynolds Metals Co.*, 743 F.2d 417 (6th Cir. 1984); *Sullivan Industries, Inc. v. Double Seal Glass Co.*, 480 N.W.2d 623 (Mich. Ct. App. 1991); *Quate v. Caudle*, 381 S.E.2d 842 (N.C. Ct. App. 1989).

This practice is consistent with international treaties and conventions. The CISG, for instance, mandates the recovery of interest “if a party fails to pay the price or any other sum that is in arrears.”⁹⁸ However, it also permits the recovery of interest as damages under Article 74, which sets forth the general rules regarding the recovery for breach of contract, if the injured party can prove that greater loss has occurred.⁹⁹ The purpose of awarding damages for breach of contract is similar to the main reason for awarding interest: damages for breach of contract are designed to place the aggrieved party in the same position it would have been in if the contract had been performed. The goal is to give the aggrieved party the “benefit of the bargain” by fully compensating it for direct, incidental and consequential losses.¹⁰⁰

In the investor-state arena, bilateral investment treaties (BITs) may provide broad authority to award monetary compensation, which could include interest as damages.¹⁰¹ For example, in *Wena Hotels Ltd. v. Arab Republic of Egypt*, the BIT between the United Kingdom and Egypt required that compensation for expropriation must be “prompt, adequate, and effective” and “shall amount to the market value of the investment”¹⁰² The tribunal saw this requirement as including a determination of interest compatible with those principles.

The Permanent Court of International Justice in the *Chorzów Factory* case has set forth the customary international law standard for damages for unlawful actions by States,¹⁰³ including unlawful ex-

98. CISG, *supra* note 32, art. 78.

99. H. Stoll & G. Gruber, *Arts. 74–77*, in COMMENTARY ON THE U.N. CONVENTION ON THE INTERNATIONAL SALE OF GOODS (Peter Schlechtriem & Ingeborg Schwenzer eds., 2nd ed. 2005).

100. See Gotanda, *supra* note 1 at 94–95.

101. See *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896 (2002); *Compañía de Aguas del Aconquija, S.A. & Vivendi Universal S.A. v. Argentine Rep. (Award)*, ICSID Case No. ARB/97/3, (Aug. 20, 2007); see also NAFTA, *supra* note 33, art. 1135(1), (stating that a tribunal may award “monetary damages and any applicable interest”); International Law Commission, *supra* note 73, art. 38 (“Interest on any principal sum payable . . . shall be payable when necessary in order to ensure full reparation” and that “the interest rate and the mode of calculation shall be set so as to achieve that result.”).

102. *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 918 (2002).

103. In this article, we focus only on damages, and not compensation for lawful expropriation under customary international law, which has been a subject of much debate. See generally Irmgard Marboe, *Compensation and Damages in International Law: The Limits*

propriations and treaty violations: full compensation.¹⁰⁴ The Court explained:

The essential principle contained in the actual notion of an illegal act—a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals—is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.¹⁰⁵

The principle that reparation “must . . . wipe out all consequences of the illegal act” is also articulated in the Articles on Responsibilities of States adopted by the International Law Commission.¹⁰⁶ Article 31 provides that a State’s obligation is “to make full reparation for the injury caused by the internationally wrongful act.”¹⁰⁷ Article 36 further provides that compensation for damage caused “shall cover any financially assessable damage”¹⁰⁸ Furthermore, Article 38 states: “Interest on any principal sum [payable] . . . shall be payable when necessary in order to ensure full reparation” and that “[t]he interest rate and the mode of calculation shall be set so as to achieve that result.”¹⁰⁹

In sum, there is a general principle calling for full compensation for damages resulting from a breach of contract or internationally wrongful act. This principle is certainly broad enough to support a claim for interest as damages as the purpose of awarding interest; the award would make the claimant whole from the loss, particularly the loss of the use of money. Thus, a claimant may argue that if a

of “Fair Market Value”, 7 J. WORLD INVESTMENT & TRADE 723 (2006).

104. *Factory at Chorzów* (Germ. v. Pol.), 1928 P.C.I.J. (ser. A), No. 17 (Sept. 13).

105. *Id.*; see also *ADC Affiliate Limited v. Hungary*, ICSID Case No. ARB/03/16 (Oct. 2, 2006) ¶ 484, available at <http://www.worldbank.org/icsid/cases/awards.htm>; S.D. Myers, Inc. v. Canada, Partial Award (Merits), ¶ 311, 40 I.L.M. 1408, 1443 (NAFTA Trib. 2000); *CMS Gas Transm. Co. v. Argentina*, ICSID Case No. ARB/01/8, ¶ 400 (May 12, 2005), 44 I.L.M. 1205; *Petrobart Limited v. Kyrgyz Rep.*, Arb. No. 126/2003 (Arb. Inst. of the Stockholm Chamb. of Comm. 2005) 77, available at http://ita.law.uvic.ca/documents/petrobart_kyrgyz.pdf.

106. See THE INTERNATIONAL LAW COMMISSION’S ARTICLES ON STATE RESPONSIBILITY: INTRODUCTION, TEXT AND COMMENTARIES art. 31, comm. 1 (James Crawford ed., 2002).

107. International Law Commission, *supra* note 73, ch. IV.E.1.

108. *Id.* art. 36.

109. *Id.* art. 38.

wrongful act had not occurred, it would have used its money earlier and would have invested it. According to the claimant, it would have invested the money in a manner that would earn a certain rate of return. The claim is actually a claim for damages for loss directly resulting from the respondent's conduct. The claimant is arguing that an award of these damages is necessary to reestablish the situation that likely would have existed if the respondent had not acted improperly.¹¹⁰

2. Causation/Foreseeability

In order to recover damages, a causal connection must exist between the aggrieved party's loss and the respondent's act.¹¹¹ Thus, the issue becomes whether the respondent's wrongful act was so connected with the aggrieved party's loss or damage that as a matter of ordinary common sense and experience, it should be regarded as a cause of it. The requirement of causation typically does not generate much controversy. In fact, in many countries it is often subsumed within the discussion of foreseeability or remoteness.¹¹²

Even if the aggrieved party can show that the respondent's action caused the aggrieved party's loss, the aggrieved party must still show that the damages are not too remote. In general, "[t]he non-performing party [in a contract action] is liable only for harm which it foresaw or could reasonably have foreseen at the time of the conclusion of the contract as being likely to result from its non-performance."¹¹³ In most cases, the failure to pay money when owed

110. Interest could be claimed as damages either to indemnify a capital withholding or to restore an injured party to the economic situation that it would have been in if the damages award for the other substantive claims had occurred immediately. In many ways, a claim for interest as damages is similar to a claim for lost profits.

111. See generally BIN CHENG, *GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS* 241-53 (1953); Gotanda, *supra* note 1, at 92-186; see also International Law Commission, *supra* note 73, art. 37(3).

112. See Gotanda, *supra* note 1; Wälde & Sabahi, *supra* note 1.

113. INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW [UNIDROIT], *PRINCIPLES OF INTERNATIONAL COMMERCIAL CONTRACTS* 2004 art. 7.4.4, available at <http://www.unidroit.org/english/principles/contracts/main.htm>. This concept is often attributed to the landmark English case of *Hadley v. Baxendale*, (1854) 156 Eng. Rep. 145 (Ex.), in which the court set forth two major principles:

1. A loss is recoverable if it can be said to flow naturally from certain breaches of the contract (i.e., that which any reasonable person should have foreseen).

would cause a loss, because the aggrieved party would not be able to use the funds at issue. The loss should also be foreseeable as a natural and contemplated result of the respondent's wrongful act. Logically, parties know that the failure to pay a sum of money on time will result in the aggrieved party not being able to use those funds that could generate a return on their capital. They also should know that a breach of contract or an act such as an expropriation will result in a separate and distinct monetary loss while the valid claim remains unpaid.

This conclusion finds support in cases in which a debtor fails to timely pay a debt and the creditor requests and receives as damages any interest expense that it incurs from borrowing money to make up for the shortfall of funds resulting from the debtor's wrongful act.¹¹⁴ In those instances, courts and tribunals have found interest to be a normal and foreseeable result of the wrongful act. In addition, courts have awarded interest as damages when a product that is to become part of the buyers' goods is defective and the buyer borrows funds to repair the defect.¹¹⁵ Borrowing the funds needed to finance the repair and paying the resulting interest are considered inju-

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2. If a loss does not flow naturally from the breach, it must be shown that when the defendant entered the contract, the defendant possessed such knowledge that would enable an ordinary person to foresee that extraordinary loss would result from breaching the contract (i.e., the knowledge that a reasonable person with particular knowledge should have foreseen). The second rule of *Hadley* has thus been described as actual foreseeability or contemplation—what a reasonable person with particular knowledge should have foreseen.

A number of countries limit damages through the concept of adequate causation. The test for whether adequate causation exists has been expressed as whether "the obligor's default, as judged by ordinary human standards at the time of its occurrence, render, more likely, damages of the kind actually suffered." ARTHUR TAYLOR VON MEHREN & JAMES RUSSELL GORDLEY, *THE CIVIL LAW SYSTEM* 1115 (2d ed. 1977).

It should also be noted that even if one were to apply a tort causation analysis, the result would be the same. See generally 3 E. ALLAN FARNSWORTH, *FARNSWORTH ON CONTRACTS* 148 (3d ed. 2004) (noting the requirement of causation in contract is "similar to that imposed in tort cases"). In fact, the tort causation analysis is less stringent than in contract. See *id.* § 12.14.

114. *Bixler v. First Nat'l Bank*, 619 P.2d 895 (Or. 1980); *Airy Development Associates v. Savings Bank of Utica*, 241 A.2d 720 (N.Y. App. Div. 1997); *Quate v. Caudle*, 381 S.E.2d 842 (N.C. Ct. App. 1989); see also Award of May 30, 1979, Case Nos. 3099 and 3100, reprinted in *COLLECTION OF ICC ARBITRAL AWARDS 1974-1985* 72-75 (Sigvard Jarvin & Yves Derains compilers, 1990); Stoll & Gruber, *supra* note 99, art. 74 ¶ 16.

115. *Certain-Teed Products Corp. v. Goslee Roofing & Sheet Metal, Inc.*, 339 A.2d 302, 302 (Md. Ct. Spec. App. 1975); *Duracote Corp. v. Goodyear Tire & Rubber Co.*, 1981 WL 2599, *5 (Ohio Ct. App. Dec. 9, 1981).

ries that follow in the normal course of events from the breach and thus constitute foreseeable losses.

As these cases demonstrate, the delay in payment of money owed causes a foreseeable loss. In terms of foreseeability, it matters not whether the wrongful act necessitates that the claimant borrow money. As Allan Farnsworth pointed out,

what must be foreseeable is only that loss would result if the breach [or wrongful act] occurred. There is no requirement that the breach [or wrongful act] itself or the particular way in which the loss came about be foreseeable [Nor is there a requirement that] the magnitude of the loss [must] . . . have been foreseeable.¹¹⁶

Thus, parties today know that the failure to pay a sum when due in the ordinary course of events causes a loss because the use of money itself has economic value. Accordingly, interest in this context is in fact foreseeable and that doctrine is simply not a barrier to awarding interest as damages.

3. Certainty

Perhaps the greatest barrier to awarding interest as damages is the well known concept of certainty. In many jurisdictions, the aggrieved party must prove damages with a certain degree of certainty. The purpose of this requirement is to deny recovery of loss that has not occurred or which may never occur. While the certainty standard varies under national laws, most have adopted a reasonable certainty requirement, which is a standard that can be found in the UNIDROIT Principles as well as the Principles of European Contract Law.¹¹⁷

Courts and tribunals also differ over the scope of the certainty

116. FARNSWORTH, *supra* note 113, § 12.14. *But cf.* Djakhongir Saidov, *The Law of Damages in International Sales: The CISG and Other International Instruments* 113–19 (2008) (arguing that foreseeability should be interpreted as applying to both nature and extent of loss); *see also* Peter Huber & Alastair Mullis, *THE CISG* 280 (2007) (noting that it makes little difference in practice whether foreseeability applies also to extent because a loss that is unusual or of extraordinary dimension would likely be considered a different type of loss than what was foreseeable).

117. UNIDROIT, *supra* note 113, art. 7.4.3 (2004); Lando & Beale, eds., *supra* note 19, art. 9:501(2).

requirement. In many jurisdictions, the reasonable certainty rule applies only to determining whether damages occurred, not what the amount of damages was. Thus, if the claimant provides sufficient evidence of loss or damage, the fact that the amount of damages is difficult to assess is generally no bar to recovery.¹¹⁸ In others, a claimant must show with reasonable certainty both that it has suffered damage as a result of the wrongful act and that damages amount to a certain sum.¹¹⁹ A number of investment tribunals also have ruled that recovery is allowed only for those economic losses that can be proved with reasonable certainty.¹²⁰

The scope of the certainty requirement can have a major impact on a claimant's success. If the certainty requirement applies only to ascertaining fact of loss and not to extent of loss, then a claimant seeking interest as damages will need to show if the claimant had access to the principal amounts at issue that in the likely course of events it would have earned the interest above a risk-free rate. Even if the amount is difficult to calculate or the claimant is able only to approximate the amount lost, the claimant is still entitled to recovery. Here, the claimant would need to provide only a basis upon which a tribunal can reasonably estimate the extent of the claimant's loss with respect to interest. If the certainty requirement applies both to fact and extent of loss, then the claimant also would need to provide evidence as to the amount of interest it lost.

118. See JOHN W. CARTER & DAVID J. HARLAND, *CONTRACT LAW IN AUSTRALIA* ¶ 2117 (14th ed. 2002); CHITTY ON CONTRACTS § 1562 (24th ed. 1977); Codice civile swizzero [Cc] art. 42 (Switz.); Codice civile [C.c.] art. 1226 (Ital.); Código Civil [C.C] arts. 1645, 1648 (Guat.); Haack v. Martin, [1927] S.C.R. 413 (Can.); Ticketnet Corp. v. Air Canada, [1997] 154 D.L.R. (4th) 271 (Can.); Bagwell Coatings, Inc. v. Middle S. Energy, Inc., 797 F.2d 1298 (5th Cir. 1986); Locke v. United States, 283 F.2d 521 (Ct. Cl. 1960); Kozłowski v. Kozłowski, 80 N.J. 378 (1979). Jan Paulsson adeptly explained the policy for this rule: "contract morality requires that the risk of uncertainty should not fall on the victim of breach." Jan Paulsson, *The Expectation Model*, in *EVALUATION OF DAMAGES IN INTERNATIONAL ARBITRATION, DOSSIERS OF THE ICC INSTITUTE OF WORLD BUSINESS LAW 60* (Yves Derains & Richard H. Kreindler, eds., 2006); but cf. Hugo P. Diaz, *Damages in Investor-State Arbitration, Applicable Law and Burden of Proof*, in *EVALUATION OF DAMAGES IN INTERNATIONAL ARBITRATION, DOSSIERS OF THE ICC INSTITUTE OF WORLD BUSINESS LAW 125, supra*.

119. See RESTATEMENT (SECOND) OF CONTRACTS § 352; UNIDROIT, *supra* note 113, art. 7.4.3(1).

120. See PSEG Global Inc. v. Rep. of Turkey, ICSID Case No. ARB/02/5 (Jan. 17, 2007), available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20-%20Award%20and%20Annex.pdf>; LG&E Energy Corp. et al. v. Argentine Rep., ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina-Damages_Award.pdf.

The claimant need not prove its damage with mathematical precision or with proof beyond a reasonable doubt; it only need establish a *prima facie* case with regard to damages.¹²¹ A claimant should be able to prove the amount of its loss with reasonable certainty through the use of an “objective valuation method which can be founded on rational reasoning.”¹²² The claimant’s burden is tempered by the “clear principle that [a tribunal should insist only upon] as much certainty and particularity as is reasonably possible . . . , having regard to the circumstances and nature of the acts themselves causing the damage.”¹²³

B. Model Approach

If a claimant is able to show that there exists the legal authority to award interest as damages and is able to prove the various prerequisites to recovery, it then becomes necessary to determine how such interest should be calculated. In theory, there are at least four ways to do so: (1) the inflation-based approach; (2) the risk-free rate approach; (3) the borrowing rate approach; and (4) the opportunity cost approach. We advocate using the opportunity cost approach, which provides for interest to accrue at a rate in line with specific market realities with the interest award to be compounded on a yearly basis.

121. *Asian Agricultural Products Ltd. v. Rep. of Sri Lanka*, ICSID Case No. ARB/87/3 (June 27, 1990), 30 I.L.M. 577, 603 ¶ 56; see also Appellate Body Report, *United States—Measures Affecting Imports of Woven Wool Shirts and Blouses from India*, 12–14, WT/DS33/AB/R (May 23, 1997). Indeed, the calculation of damages itself is not an exact science. As the tribunal deciding the *Himpurna California Energy Ltd. v. P.T. (Persero) Perusahaan Listrik Negara* dispute explained:

There is no reason to apologise for the fact that [the approach used to calculate damages, in this case the DCF method,] involves approximations; they are inherent and inevitable. Nor can it be criticised as unrealistic or unbusinesslike; it is precisely how business executives must, and do, proceed when they evaluate a going concern. The fact that they use ranges and estimates does not imply abandonment of the discipline of economic analysis; nor, when adopted by arbitrators, does this method imply abandonment of the discipline of assessing the evidence before them.

Final Award of May 4, 1999, reprinted in 25 Y.B. COM. ARB. 13 (2000).

122. *Wälde & Sabahi*, *supra* note 1, at 10, 49.

123. P. Gélinas, *General Characteristics of Recoverable Damages in International Arbitration*, in *EVALUATION OF DAMAGES IN INTERNATIONAL ARBITRATION, DOSSIERS OF THE ICC INSTITUTE OF WORLD BUSINESS LAW 13*, *supra* note 118 (citing *Ratcliffe v. Evans*, (1982) 2 Q.B. 524 (A.C.)).

1. The Inflation-Based Approach

Inflation is a common feature in evaluating damages in domestic law and, as a result, may be considered in fixing the rate of interest.¹²⁴ Indeed, court judgments in which inflation was utilized in the assessment of damages can be found in many jurisdictions, based on the premise that prices go up every year, so a claimant will probably seek to be compensated for that loss of purchasing power.¹²⁵ This statement is obvious in the finance world. Without interest at least equal or above the inflation rate, lenders wouldn't be willing to lend, or to temporarily give up the ability to spend, and savers would be less willing to defer spending.

The following example illustrates how inflation rates are used. For determining the U.K. inflation rate, for instance, arbitrators and experts usually refer to the U.K. Consumer Price Index (or U.K. CPI) based on a composite consumer price index showing changes in purchasing power over time. The source of information is widely available and we can use, for instance, a composite price index (CPI) for analysis of consumer price inflation, or the purchasing power of the pound, over long periods of time. A CPI is a statistical measure of a weighted average of prices of a specified set of goods and services purchased by wage earners. It is an index which tracks retail prices of a specified set of consumer goods and services, providing a measure of inflation. The CPI is a fixed quantity price index and effectively represents a cost-of-living index. Indices are produced by different organizations, for instance, in the U.K., the Office for National Statistics, the Bank of England and the House of Commons Library.

The inflation-based approach has several major drawbacks. First, the inflation-based method is vulnerable to macroeconomic shocks and turbulence, i.e., devaluation and exchange rate exposures taking place over time and in some cases in an unexpected fashion.¹²⁶

124. See Cc. art. 1284 (Italy) (giving Ministry of treasury the authority to set interest rates based *inter alia* on average gross yields of government bonds and the inflation rate); *Government of the State of Kuwait v. The American Independent Oil Company (Aminoil)*, 21 I.L.M. 976 (1982) (considering, among other things, the level of inflation in setting the interest rate).

125. See generally D. Dobbs, *Law of Remedies* § 3.7 (2d ed. 1993) (citing cases).

126. For a further discussion of inflation and its effect on interest, see T. Sénéchal, *supra* note 11; *DOSSIER V*, *supra* note 10, at 219, 225-26; see also *Government of the State of Kuwait v. American Independent Oil Company (Aminoil)*, 21 I.L.M. 976 (1982) (consider-

Second, interest is rarely equivalent to the rate of inflation. An individual who invests money for repayment at a later point in time expects to be compensated for the time value of money, or not having the use of that money while it is invested. In short, we conclude that the inflation-based approach is flawed and should not be used to arrive at the interest rate. Properly understood, inflation in itself is only one element accounting for the time value of money.

2. The Risk-Free Rate Approach

Under the risk-free rate approach, we consider a rate of return of an investment with theoretically zero risk. In theory, the risk-free rate is the minimum return an investor expects for any investment because he or she will not accept additional risk unless the potential rate of return is greater than the risk-free rate. In practice, the absolutely risk-free rate does not exist, since even the safest investments always carry a very small amount of risk, including the U.K. Gilts and the U.S. T-bill.

One of the principal risk-free instruments is the Treasury Bills or T-Bill.¹²⁷ U.S. T-Bills, for instance, are short-term debt obligations backed by the U.S. government with a maturity of less than one year. Like zero-coupon bonds, they do not usually pay interest prior to maturity; instead they are sold at a discount of the par value to create a positive yield to maturity. Regular weekly T-Bills are commonly issued with maturity dates of 28 days (or 4 weeks, about a month), 91 days (or 13 weeks, about 3 months), and 182 days (or 26 weeks, about 6 months). Today, many regard T-Bills as the least risky investment available to U.S. investors. Indeed, with government securities, the default risk is relatively low.

The London Inter-Bank Offer Rate or LIBOR, is also used in arbitration.¹²⁸ LIBOR is the interest rate that the banks charge each

ing, among other things, the level of inflation in setting the interest rate).

127. See *BG Group Plc v. Argentina*, Final Award of Dec. 27, 2007 (UNCITRAL Ad Hoc Trib. 2007), http://ita.law.uvic.ca/documents/BG-award_000.pdf (awarding interest at the average rate applicable to 6-month U.S. T-bill); *LG&E Energy Corp. et al. v. Argentine Rep.*, ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina-Damages_Award.pdf (awarding interest at rate of short term U.S. T-bills); *CMS Gas Transm. Co. v. Argentina*, ICSID Case No. ARB/01/8 (May 12, 2005), 44 I.L.M. 1205 (awarding interest at average U.S. T-bill rate).

128. See, e.g., *MTD v. Chile*, Award of 25 May 2004, para. 250; *Maffezini v. Spain*,

other for loans (usually in Eurodollars). This rate applies to inter-bank market loans borrowed for anywhere from one day to five years. This market allows banks with liquidity requirements to borrow quickly from other banks with surpluses, enabling banks to avoid holding excessively large amounts of their asset base as liquid assets. Both the LIBOR curve and the U.S. Treasury curve are widely used proxies for the risk-free rate or the basis of a discount rate.¹²⁹

Selecting a risk-free rate as a proxy for the interest rate may be appropriate in some circumstances, such as disputes between sovereign entities. However, for an investment dispute involving a private party, a claimant may rightly select interest at its opportunity cost of capital. This is particularly true for any publicly-traded or privately held businesses operating under an on-going concern. In such case, the risk-free rate approach may not be appropriate because the interest would not include a return that compensates the claimant for the average risk it bears.¹³⁰

3. The Borrowing Rate Approach

Others have argued that the respondent's borrowing rate should be used to derive the interest rate.¹³¹ However, a rate based

ICSID Case No. ARB/97/7, para 96 (Jan. 31, 2001), available at http://www.worldbank.org/icsid/cases/emilio_AwardoftheTribunal.pdf.

129. See David Yong Yan & Robert Brooks, *London Inter-Bank Offer Rate (LIBOR) Versus Treasury Rate: Evidence from the Parsimonious Term Structure Model*, J. FIXED INCOME, June 1999. For a further discussion of the structural differences among the various risk-free rates, see MARK KANTOR, VALUATION FOR ARBITRATION: COMPENSATION STANDARDS, VALUATION METHODS AND EXPERT EVIDENCE (2008).

130. For a further discussion of risk-free investment rates and systematic and unsystematic risks, see F. REILLY & K. BROWN, INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT (5th ed. 1997); S. REPININSKY & K. WILLIAMS, DAMAGES IN INTERNATIONAL INVESTMENT LAW (2008).

131. See, e.g., LG&E Energy Corp. et al. v. Argentine Rep., ICSID Case No. ARB/02/1 (July 25, 2007), available at http://www.investmentclaims.com/decisions/LG&E-Argentina-Damages_Award.pdf; see also Michael S. Knoll & Jeffrey M. Colon, *The Calculation of Prejudgment Interest* (Univ. of Pennsylvania Law School, Public Law Working Paper No. 06-21), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=732765. While this approach furthers the goal of preventing unjust enrichment of the respondent, it may fail to fully compensate the injured party for its loss and may frustrate that party's expectation/performance interest. In addition, it ignores that businesses intend to be compensated for risks (other than bankruptcy of the defendant). It also is premised on the assumption that the respondent can borrow unlimited amounts. In some cases, the amount of money wrongfully withheld or the value of the asset destroyed may exceed the ability of the respondent to borrow. See Franklin M. Fisher & R. Craig Romaine, *Janis Joplin's Yearbook and the The-*

on the costs of borrowing may be difficult to derive and may rely heavily on a judgment call. It can be challenging to estimate the borrowing rate or cost of debt for a particular company. The "total debt" ratio of a firm is defined as the ratio of short-term and long-term debt, finance leases and preferred stock to the value of the firm (market capitalization plus book value of debt). The cost of debt is thus equivalent to the risk-free rate plus a margin that reflects the credit and market risk of the debt issued by a company. This market risk of debt is often difficult to estimate and depends on many assumptions and variables that could lead to arbitrary results.

Three methods can be used to derive the cost of borrowing:¹³²

Method 1. The first method would take into account the observed interest margins payable over the risk-free rate over the years, averaging them, and adding them to the risk-free rates in each year that debt finance is raised. However this is not as straightforward as it might first appear. It is cumbersome to apply a series of different risk-free rates to individual borrowings according to the years in which they are made.

Method 2. The second method would find the cost of debt capital based on bond ratings for each of the selected firms. The cost of debt can be found by assuming an average debt profile for the company under review and determining an average rating. The average rating is difficult to estimate in some cases, for example, when the firm is not publicly traded. In those cases, it is necessary to estimate the borrowing spreads by comparing corporate issues of similar standing.

Method 3. An intuitive third method consists of obtaining the ratio of finance charges over the total (or net) debt for similar individual firms over a period of time and then calculating a weighted average. However, this method can give only a crude approximation of the borrowing rate: using book value for finance charge is a risky business, especially when firms are involved in "creative accounting." Furthermore, such a measure does not distinguish between short-term and long-term debts and does not take into account the different risk-free rates in each year that debt finance is raised. Inter-

ory of Damages, 5 J. ACCT. AUDITING & FIN. 145, 147-48 (1990).

132. Thierry Sénéchal, *Time Value of Money: A Case Study*, 4 TRANSNAT'L DISP. MGMT., Nov. 2007.

est charged on zero-coupon bonds also would also not appear on the balance sheet of the firms.¹³³

4. The Opportunity Cost Approach

We have argued that interest should be considered as an amount due or paid for the temporary withholding of money, bearing in mind that the investor always has a certain risk profile in mind when making the investment decision. The International Valuation Standards Committee (IVSC) also clearly establishes that valuation experts should consider such factors as the level of interest rates, rates of return expected by investors on similar investments, and the risk inherent in the anticipated benefit stream when estimating discount rate for a valuation.¹³⁴ This is why we advocated moving away from the notion of a “risk-free rate” to a rate of return commensurate to the risk undertaken.

Some experts have argued that depriving the claimant of an asset Y at time 0 allows the respondent to relieve the claimant of the risks associated with investment in that asset.¹³⁵ This is not necessarily true because claimants could easily point out that the specific investment project being the object of the dispute has generated positive cash flows and rate of return over the long run. It is true that most businesses are made up of high returns for successful ventures and negatives returns on unsuccessful ones. But above all, businesses do exist to generate shareholder value and positive net present values (NPVs) for investors. Therefore, it is not correct to assume that the claimant is not compensated for the returns generated in a consistent

133. Some may argue that, in the case of a dispute with a sovereign government, a successful claimant that is owed money has in effect made a loan to the sovereign. Since the sovereign will certainly repay, the loan is essentially risk-free; hence, the risk-free rate is appropriate. As noted, this approach does not place the injured party in the position it would have been in had the breach or wrongful act not occurred. Another problem with this approach is that all governments are not created equal in terms of risk. While the U.S. government may borrow at an essentially risk-free rate, other countries do not. This approach ignores this reality. Of course, if one takes into account this risk, it is not at all then clear why other risks that are present are excluded. Indeed, foreign investors typically take into account a variety of risks, including country specific risks when deciding whether to undertake a project.

134. See KANTOR, *supra* note 129, ch. 4; see generally INTERNATIONAL VALUATION STANDARDS COMMITTEE, INTERNATIONAL VALUATION STANDARDS (8th ed., 2007).

135. See Fisher & Romaine, *supra* note 131, at 145–57.

manner over the years. As such, interest should not be awarded at the risk-free interest rate. As a result, an investor is right in asking for a rate above the risk-free rate. Of course, the level of political, economic, and business risks to be undertaken by an investor is indeed a matter of preference and it is thus important to arrive at a correct opportunity cost for the investment under dispute.

The question now becomes how to define the interest under the opportunity cost approach?

It would probably be correct to state that there is not an easy answer or straight answer to this question. It depends on the investment type, the business governance structure of the claimant and respondent (whether the business is privately or publicly held), the proportion of debt (leverage), the tax environment, etc.

For a publicly-held firm, we may well argue that the appropriate interest rate for adjusting an award to present day value should be derived from the claimant's cost of capital.¹³⁶ The cost of capital is defined as the return that needs to be earned by a firm in order for the financial markets to be willing to invest in that firm's security. It represents a measure used for discounting investment cash flows on specific projects and for pricing products. The cost of capital is a mix of the cost of equity and the cost of debt. A firm's cost of equity capital is the expected return on a financial asset of riskiness comparable to that of the firm. Under the Capital Asset Pricing Model (or CAPM), which aims at estimating the cost of equity, the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk), often represented by the quantity beta (β) in the financial industry, is taken into consideration, as well as the expected return of the market and the expected return of a theoretical risk-free asset (R_f). Expressed in its simplest form, this model estimates the equity cost of capital as the sum of two components, the "riskless rate" and the "reward" for taking risk.¹³⁷ The basic CAPM equation is:

136. *See, e.g.*, Siemens A.G. v. Argentine Rep., ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, available at <http://www.worldbank.org/icsid/cases/awards.htm>.

137. SERGEY RIPINSKY & KEVIN WILLIAMS, DAMAGES IN INTERNATIONAL INVESTMENT LAW, 197 (2008); *see also* RICHARD A. BREALEY, STEWARD C. MYERS & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE (8th ed. 2006).

$$RE = RF + \beta (RM - RF)$$

where RF = risk-free rate

(RM - RF) = long-term average market price of risk

β = the systematic risk of the firm

A firm's cost of debt capital is merely the rate that it has to pay to borrow in the market. The firm's total cost of capital is then the weighted average of the cost of equity capital and the cost of debt capital and, usually abbreviated as the "Weighted Average Cost of Capital" (WACC).

While it is theoretically accurate to award interest on this basis, it may be problematic from a practical standpoint. In practice, it may be very difficult for a claimant to demonstrate how it arrived at such an opportunity cost and to convince a tribunal that its loss is reasonably certain. The cost of capital may be difficult to derive, because it is based on many assumptions and it requires high expertise as well as reliable data. Usually, the discount rate is found by deriving the average cost of equity and debt of the company, weighted according to their relative contributions. One difficulty is related to the derivation of the cost of equity. The estimation of the cost of equity, i.e., through the CAPM, is based on one major assumption, that financial markets are dominated by rational, risk-averse investors, who seek to maximize satisfaction from return on their investment. Other important assumptions include that the market is efficient, frictionless, and without imperfections like transaction costs, taxes and restrictions on borrowing and short selling. In addition, it assumes that investors base their judgment on a common time horizon, because the model in itself is a one-period expectation model.¹³⁸ Under the CAPM, the true beta can be difficult to estimate as it depends on the operation characteristic of the underlying asset. Using the CAPM also implies doing research on the firm's financial gearing ratio, operating leverage and market competitiveness, and so on.

For these reasons, we only propose to refer to the WACC model for estimating the cost of capital for publicly-traded assets. We do not propose to use the cost of capital approach to derive the interest rate for privately-held firms because publicly available information may not be available for deriving the cost of capital. Fur-

138. Thierry Sénéchal, *Dealing with Uncertainty: Discounted Cash Flow (DCF) Versus Adjusted Present Value (APV)*, 4 TRANSNAT'L DISP. MGMT, June, 2007.

thermore, the information is often missing for many regions of the world and for non-traded companies when benchmarks are not easy to obtain.¹³⁹ Indeed, such an approach under deficient information would require a significant level of inquiry into the individual circumstances of the company under scrutiny and would lead to an unnecessary “battle of the experts” arguing over the underlying assumptions of the model.

For privately-held corporations or any other corporations for which the cost of capital could not be calculated from traditional models, we advocate using a risk-free rate (for example, government bonds) plus a market-risk premium (as measured by an historical average of the excess of the market return over the risk-free rate). The rationale for using this approach, equivalent to using a market rate of return, is based on the assumption that businesses will generally tend to demand an extra payoff above the risk-free rate for investing in an asset with some level of risk.¹⁴⁰

As pointed out by Mark Kantor, arbitrators should be pleased to know that they need not draft their awards with quite the level of detail required by international banks. Still, reference to publicly available quotations may indeed be useful. That will be especially true if the arbitrators anticipate the parties may take the award into other forums for an extended period of time. An arbitrator can easily incorporate into the award a more technically correct interest rate provision by cross-referencing to definitions commonly accepted by the international financial community.¹⁴¹

139. Many publications are available. For example, Ibbotson publishes a book called the “Cost of Capital Yearbook” that gives detailed calculations of cost of capital (debt, equity and WACC) for firms organized by SIC code. As a result, the data to perform a number of the calculations may be readily available from third party sources. However, information from these sources is often provided on a specific country basis and for developed economies, and not necessarily for all region of the world and for all business sectors. In particular cases, the data may not be appropriate or may not exist from third-party sources. At this time, tribunals are often reluctant to award interest based on internal financial records. See, e.g., PSEG Global Inc. v. Rep. of Turkey, ICSID Case No. ARB/02/5 (Jan. 17, 2007), available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20-%20Award%20and%20Annex.pdf>.

140. Cf. ELROY DIMSON, PAUL MARSH, & MIKE STAUNTON, GLOBAL EVIDENCE ON THE EQUITY RISK PREMIUM (London Business School 2002), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=431901; see also PABLO FERNANDEZ, MARKET RISK PREMIUM USED IN 2008 BY PROFESSORS: A SURVEY WITH 1,400 ANSWERS (Apr. 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1344209.

141. See KANTOR, *supra* note 129, ch. 9 (“Checklist for Interest”).

Indeed, the market rate of return approach is not only a method widely used in finance, but it is also quite straightforward to use. The approach is consistent with economic realities, the economic purpose of businesses being to seek higher returns based on their risk profile. Incorporated investors and businesses will not usually invest at the risk-free rate. In international arbitration, arbitrators and parties should recognize that the claimant will seek to maximize profits and earn incremental returns on their investments in proportion to the amount of additional risk those investments add to their portfolio.¹⁴²

This method raises one main issue: how does one derive the risk premium?

The expected market risk premium is the difference between the risk-free rate and the market-risk ($R_m - R_f$). The extreme volatility of the stock and bond markets makes a long measurement period essential. Therefore, this risk premium must be a historical average of the excess of the market return over the risk-free rate. Information on market risk is easily available. For instance, the London Business School has determined the risk premia in the U.S. for the period 1900–2001 was 5.6% (geometric mean of risk premia relative to bills) and the prospective risk premia for U.S. to be 5.3%.¹⁴³

142. A somewhat analogous situation arises in shareholder suits under Delaware law in the United States against corporations for a determination of the fair value of the shares in the event of a merger. In this situation, the shareholder has a statutory right to a "fair rate of interest . . . to be paid upon the amount determined to be the fair value" owed. DEL. CODE ANN. tit. 8, § 262 (2007). There are two reasons for awarding interest in this situation: (1) to compensate a plaintiff for the loss of the use of its money; and (2) to disgorge from respondent any benefit it received from the use of the plaintiff's funds. See *Prescott Group Small Cap, LP v. Coleman Co.*, 2004 WL 2059515 (Del. Ch. Sept. 8, 2004). Delaware courts have ruled that these purposes are fulfilled equally by weighting the respondent's actual cost of borrowing and the prudent investor rate where no special circumstances exist. See *Chang's Holdings, S.A. v. Universal Chems. & Coatings*, 1994 WL 681091 (Del. Ch. Nov. 22, 2004). The court determines the latter by looking to the plaintiff's opportunity cost based on an objective standard. See *Gonsalves v. Straight Arrow Publ'rs, Inc.*, 2002 WL 31057465 (Del. Ch. Sept. 10, 2002). In the event that the plaintiff fails to meet its burden of proof, the court awards interest at the default rate, which is the applicable legal rate of interest set forth in Delaware Code § 2301(a) (5% over the Federal Discount Rate). See *In re United States Cellular Operating Co.*, 2005 WL 43994 (Del. Ch. Jan. 6, 2005).

143. See Elroy Dimson, Paul Marsh & Mike Staunton, *Global Evidence on the Equity Risk Premium* (LBS Institute of Finance and Accounting Working Paper No. IFA 385, 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=431901. The study also found that over the 102-year period, the risk premium for the world index relative to Bills was 4.6% and the prospective arithmetic risk premium for the world index to be 3.9%. *Id.* Different institutions provide their statistics and analysis of risk premium, mostly for equity risk premium. See, e.g., IBBOTSON ASSOCIATES, STOCKS, BONDS, BILLS AND

Simply put, the approach advocated in this article (the risk-free rate plus the market-risk premium) is roughly equivalent to an approach based on the market rate of return. Market rates of return are often readily available from financial market public information on a regular basis. When working on adjusting an award to present day value over a certain period of time, it becomes easy to take an average of the annual returns. There is, however, a complication in deciding what is the market to which we should make reference to determine the interest rate. We thus advocate use of the broadest equity market index available in the country where the claimant is based.

The following example shows the dramatic difference between the model approach for a privately held company and the approach for calculating interest commonly used by investment tribunals. Assume that a tribunal awards US\$100 million in damages, calculated from the date of the wrongful act, which is 1 January 1997, and the date of the award is 31 December 2006. The average T-bill rate for the ten-year period is 3.65%. Based on the 2008 Ibbotson Risk Premia Over Time Report, a leading source for historical market data, the equity risk premia for that period is 4.5%. As a result, our market rate should be 8.15% (or the sum of 3.65% and 4.5%).

If interest is calculated pursuant to the approach commonly used by investment tribunals (average T-bill rate of 3.5%, compounded annually), the interest award over US\$100 million would total approximately US\$43.1 million.

If interest is calculated based on the opportunity cost approach for privately held companies (risk-free rate plus market risk premium (8.15%), compounded annually), the interest award would total approximately US\$118.9 million.

The difference between the interest award under the approach commonly used by investment tribunals and the award under the model approach is US\$75.8 million. In other words, the model approach in this case results in an award that is nearly 3 times more than the interest award calculated by using the approach commonly employed by investment tribunals.

C. *Compounding*

1. Simple Interest Versus Compound Interest

We also advocate using compound interest and, in particular, yearly compounding. As noted, in the finance world, compound interest is the international standard applied in most time value applications. Indeed, the adoption of compound interest reflects the majority of commercial realities in that a loss of value incurred by a company, active in normal trading operations, implies the loss of use of that value.¹⁴⁴ Not recognizing this reality would also lead to awarding a windfall to the respondent.¹⁴⁵

In the simple interest scenario, the interest that accrues each period is not added to the base that is used to calculate interest in future periods. Let's take an example. We want to calculate the interest on 1,000,000 euros at 5% interest per year for a period of ten years. The formula we will use for this is the simple interest formula:

$$I = P r t$$

Where:

- a. P is the principal amount, 1,000,000 euros
- b. r is the interest rate, 5% per year, or in decimal form, 5/100=0.05
- c. t is the time involved, 10 year time period

To find the simple interest, we multiply 1,000,000 euros \times 0.05 \times 10, which results in 500,000 euros in interest.

As noted earlier, compound interest differs from simple interest in that the principal balance grows by the amount of interest earned in past periods depending on the stated compounding period.

144. John Gotanda, *Compound Interest in International Disputes*, 2004 OXFORD U. COMP. L. FORUM 1.

145. See *id.*; see also *Rep. Azurix Corp. v. Argentine Rep.*, ICSID Case No. ARB/01/12 (July 14, 2006), 43 I.L.M. 262; *Siemens A.G. v. Argentine Rep.*, ICSID Case No. ARB/02/8 (Feb. 6, 2007), 44 I.L.M. 138, available at <http://www.worldbank.org/icsid/cases/awards.htm>; *PSEG Global Inc. v. Rep. of Turkey*, ICSID Case No. ARB/02/5 (Jan. 17, 2007), available at <http://www.investmentclaims.com/decisions/ARB0205%20PSEG%20v%20Turkey%20Award%20and%20Annex.pdf>; *Wena Hotels Ltd. v. Arab Rep. of Egypt*, ICSID Case No. ARB/98/4 (Dec. 8, 2000), 41 I.L.M. 896, 933, 945 (2002); *Maffezini v. Spain*, ICSID Case No. ARB/97/7 (Jan. 31, 2001), available at http://www.worldbank.org/icsid/cases/emilio_AwardoftheTribunal.pdf; *Compañía del Desarrollo de Santa Elena v. Costa Rica*, 15 ICSID REV. FOREIGN INVESTMENT L.J. 169, 200 (2000).

Now we provide an illustration on the impact of compounding by adjusting an award of 1,000,000 euros according to different time and interest rate scenarios on a yearly compounding basis.

Rate / Time period	5%	8%	12%	15%
5 years	1,276,282	1,469,328	1,790,848	2,011,357
10 years	1,628,895	2,158,925	3,105,848	4,045,558
15 years	2,078,928	3,172,169	5,473,566	8,137,062
20 years	2,653,298	4,801,021	9,646,293	16,366,537

All other things being equal, compound interest has a larger effect as the time period increases and as the interest rate increases. For instance, over a 10 year time period, the difference between 5% interest and 15% interest is quite significant, from 1.6 million to 4 million. Consequently, the compounding will have greater impact for high interest rates and longer periods of time.

2. Choice of the Compounding Period

The choice of the compounding period can have a significant impact on the amount of the award. The shorter the compounding period, the faster the principal amount will grow. All other things being equal, compound interest has also a larger effect as the time period increases and as the interest rate increases.

There are no prescribed standards for choosing one particular compounding period over another (annually, quarterly, monthly or daily are the most common options).¹⁴⁶ The compounding period usually depends on the financial products chosen by the client. For some financial products, interest is calculated on a quarterly basis, typically on the last day of the month (i.e., the 31st of March, 30th of

146. See Sénéchal, *supra* note 11.

June, 30th of September, 31st of December). Other compounding periods are widely used in the financial industry. For example, interests paid for term deposits in many countries are compounded on a daily basis. For forfeiting transactions or bank-to-bank loans, interest can be calculated on a semi-annual basis, and in the case of short term finance, even for the exact period, for example, ninety days.¹⁴⁷ We can easily conclude that, after looking at banking usage, a standard for the compounding period does not clearly emerge. However, continuous compounding is not widely used.¹⁴⁸

Different practices can also be applied in different countries. Some countries require financial institutions to compound most of their interests on an annual basis, with the banks then using several types of interest periods. For instance, for letters of credit and letters of guaranty, compounding could be done quarterly in advance after the first quarter. For loans, the compounding period could be "monthly past the month." It is also noted that interest rates for loans could be calculated on a daily balance, and applied monthly. This would obviously result in a compounding effect, based on the monthly cycle. On government bonds, long-term corporate bonds, bills and discount government papers, different practices can be found in the world.

We suggest using the yearly approach since that is a common default practice in the business community. Furthermore, the yearly compounding period is implicit in using average annual returns on the market. Still, depending on the nature of the claims, the invest-

147. *Id.*

148. Here are some practices related to compounding:

1. Bonds are often compounded on a yearly or semi-annual basis. Corporate bonds are most frequently payable on the semi annual basis. The amount of interest paid (each six months) is the disclosed interest rate divided by two (multiplied by the principal), the yearly compounded rate being higher than the disclosed rate.
2. Mortgage loans generally refer to semi-annual compounding (but sometime the monthly compounding basis is used, i.e., in the U.S. market).
3. Most financial institutions worldwide award interest on a daily (and sometimes bi-monthly) compounded basis for money on deposit.
4. Continuous compounding is not widely used. In financial engineering, the valuation of derivatives may use continuous compounding, which is the limit as the compounding period approaches zero. The shorter the compounding period, the faster the principal amount will grow. Different options are available (annually, quarterly, monthly or daily are the most common options).

ment vehicles serving as a benchmark, the place of breach and the time horizon under consideration, arbitrators may need to switch to a different compounding period, as most appropriate.¹⁴⁹

* * *

In sum, awarding interest pursuant to the opportunity cost approach would more accurately compensate claimants for the loss of the use of their money than the approaches that tribunals currently use. This method reflects the realistic assumption that if the claimants would have had the use of their money earlier, they would have invested it in a way that would have earned a higher rate of return than the risk-free interest rates typically awarded.¹⁵⁰ Additionally,

149. See Sénéchal, *supra* note 11.

150. A common argument against the use of a rate in excess of the risk-free rate is that if the company could have earned more, it could simply have raised more capital and done so. On the one hand, this argument sounds like an attack on causation. If so, it is misplaced because causation looks at connection between the wrongful act and loss or damage. Clearly, absent unusual circumstances, the wrongful withholding of money causes a loss from the inability to use the funds (causation is typically not concerned with the extent). On the other hand, this argument could be based more on the doctrine of avoidability; that is, the claimant should not receive all of its damages because it could have avoided some or all of the loss. This argument is misplaced. First, and most importantly, even if we assume that the claimant could have secured the funds to make additional investments, it does not necessarily mean that the claimant could have avoided the loss by doing so. But for the breach or wrongful act, the claimant could very well have profitability entered into both transactions as the opportunity to invest in the market is generally available. In other words, if the claimant could have raised the additional money and taken advantage of the investment opportunities generally available during the relevant time period, any income earned on those additional moneys is not a consequence of (and therefore not a mitigation of) the breach. It is thus irrelevant whether the claimant could have raised more money and earned the same interest it is seeking as damages. See FARNSWORTH, *supra* note 113, § 12.12; see also *Neri v. Retail Marine Corp.*, 30 N.Y.2d 393 (N.Y. 1972). In fact, in this circumstance, the wrongdoer also had the opportunity to use the claimants' funds in the same manner. Second, the argument assumes that the claimant has the ability to secure the amounts at issue. However, the ability to raise capital is not unlimited and the costs associated with the raising of such funds may go well beyond the simply paying interest to a third party lender. In any event, it would be for the respondent to show that the claimant could have, but did not, take reasonable steps to avoid further loss. See FARNSWORTH, *supra* note 113, § 12.12 (citing cases). It also should be noted that, in situations where a party does not take reasonable mitigation efforts, damages are typically assessed as if the claimant had done so. What that would mean here is that the claimant would be treated as if it took the steps to raise the capital and then would have invested it. Under this theory, the expenses associated with raising the capital would still be taken into account and would likely be equivalent to the claimant's WACC.

If, however, the claimant truly has suffered no damage from the respondent's detention of the claimant's money, then the claimant may be precluded from recovering interest as damages, even under a restitution theory. See generally GARETH JONES & ROBERT GOFF, *GOFF & JONES: THE LAW OF RESTITUTION* (G. Jones ed., 7th ed. 2007) (discussing the concept that the benefit must be gained as the claimant's expense).

this method is in accord with modern business practices and with sound economic and financial principles. Because it is based on objective, readily available data, it also avoids the major concern that claims for interest as damages are usually supported by subjective evidence and are therefore speculative.

CONCLUSION

Arbitral tribunals deciding international disputes have failed to fully compensate claimants for the loss of the use of their money, because their awards of interest do not take into account the reality that businesses typically invest in opportunities that pose a significantly greater risk than the risk reflected in such commonly used standards as U.S. T-bills and LIBOR rates. This problem can be remedied by allowing awards of interest as damages, which is a concept found in laws, treaties and conventions. An ideal award of interest as damages would call for interest to be calculated at the opportunity cost of capital. When such an approach cannot be used, we propose to use a market rate of return with the interest award to be compounded annually. This approach would more accurately compensate injured parties and bring awards of interest in line with modern economic realities.