

Present-day valuation in international arbitration: a conceptual framework for awarding interest

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I. INTRODUCTION

In international arbitration, there is often a significant delay between the time when the injury occurs and the time when the decision is rendered by the arbitral tribunal. Consequently, arbitrators and parties are often confronted by the challenging question of how to deal with the passage of time and to propose with confidence a method to adjust the award to present-day value.¹ Despite the fact that an overwhelming body of international law jurisprudence supports the general proposition that the award should include an interest component, there is still considerable uncertainty concerning the calculation of interest. Consequently, the use of interest in international arbitration is often dependent on the circumstances at hand and tribunals with a wide discretion in respect of awarding interest.

In this article, we argue that, in international arbitration, the question of interest can be as important as the valuation of the loss itself. Indeed, awards of interest may in some cases exceed the principal owed because of extensive delays between the occurrence of the underlying injury and the resulting award. We strongly advocate that an international standard should be developed for awarding interest. 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. To help arbitrators and parties decide what interest can be reasonably and consistently applied, we introduce a conceptual framework based on a set of five principles.

II. LACK OF A UNIVERSALLY ACCEPTED SET OF STANDARDS FOR THE CALCULATION OF INTEREST IN ARBITRATION AWARDS

There is an important body of international jurisprudence supporting the point that interest should be awarded by arbitration tribunals.² One can easily browse the decisions rendered by international arbitral tribunals, human rights courts, international claims commissions and settlement procedures and national courts to find out that interest has been extensively discussed in many instances. However, we should also note that many of these international tribunals have failed to adopt a standardized and uniform approach for applying interest. Not surprisingly, resolving interest claims in international arbitration is often a process fraught with uncertainty and confusion, typically leading to a set of inconsistent decisions and diverging jurisprudence concerning present-day valuation. Today, interest is still applied in many different ways under applicable arbitration rules, not to mention the fact that many of such rules are currently silent as to interest.³

The lack of consensus for awarding interest in international arbitration is surprising indeed. The concept of interest is not new and obscure. The finance industry, for instance, has been applying interest for centuries. It is a standard business practice in the banking sector with clearly identified calculation rules and models. Consequently, it is unclear why tribunals hearing disputes between transnational contracting parties have not been able to reach a consensus on how to award interest, i.e. on a simple or compound basis.⁴

III. A CONCEPTUAL FRAMEWORK FOR INTEREST

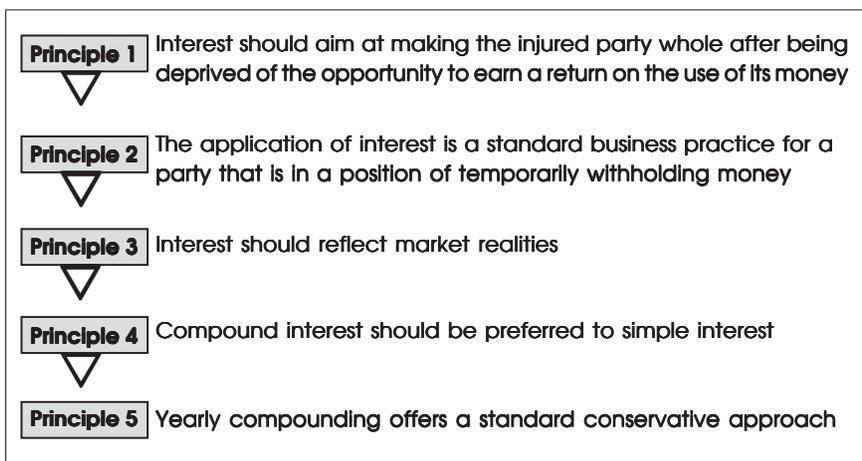
In this article, we propose to develop a conceptual framework for fulfilling the arbitrators' and/or parties' goal of developing a satisfactory approach to interest. We advocate that such an approach should be clearly principles-based, internationally consistent and coherent. Such a framework is needed to act as a map to give coherence to the application of present-day valuation.

We have conducted our analysis as follows:

- (a) with the objective that the conceptual framework can be applied in most instances where present-day valuation is required;
- (b) under the assumption that tribunals have to keep pace with modern financial practices and standards when awarding interest;
- (c) by making clear references to concepts applicable within the finance industry; and
- (d) by providing options to the reader when deciding on the applicability of specific interest rates, with reference to some examples and pointing out the weaknesses of some approaches.

It is important to note that this article is written from the perspective of a valuation practitioner and not from a legal perspective. Consequently, we do not discuss situations where the parties are legally bound to a specific methodology concerning interest, usually under constraints or prohibitions from a domestic legal system. We thus aim to provide a practical approach to the concept of interest. Our main concern has been to present complex material in a manner that is readily understood.⁵ The end notes provide the interested reader with additional sources of reference.

In the following figure, we provide an outline of our step-by-step conceptual framework.



Principle 1: Interest should aim at making the injured party whole after being deprived of the opportunity to earn a return on the use of its money

In the finance industry, it is implicit that an investment should be seen as an expenditure of money today in order to create value in the future. As such, businesses actually compare a dollar today to the promise held today to receive a dollar in one year. Indeed, the former is worth more than the latter, and this is why investment is being generated at a rate commensurate to the risk undertaken and the passage of time. When analyzing a business or investment loss, it is therefore logical to consider the loss of “return” opportunity between the time of injury and the time of award.

Under our first principle, we argue that the arbitral tribunal should always strive to place the claimant in the same position as it would have been in had no injury or loss occurred. This is why interest should be part of compensation to account for the passage of time after the date of injury. If there were no delay, a claimant would be made whole by the tribunal’s award. However, abnormally lengthy delays in the payment of compensation to the injured party may lead to increased financial loss for the party suffering the loss, leading to a position of uncertainty, especially in times of monetary depreciation. In awarding interest to account for the passage of time, the 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 and the date of full reinstatement (i.e. final sentence or payment of the award).

Consequently, the award of interest should be generally based on what the injured party probably would have obtained if it had invested its money during the time it was deprived of this money. The failure to adjust awards to a present-day value by compensatory interest⁶ would cause obvious economic harm to claimants and provide a windfall to respondents on the grounds that there is often a significant delay between the date of injury and the date of award.

Principle 2: The application of interest is a standard business practice for a party that is in a position of temporarily withholding money

The concept of interest is very old, dating back to the Sumerian and Egyptian cultures.⁷ The Egyptians and Sumerians had also devised a specific word for interest, “*ms*”, which means “to give birth”. Not surprisingly, references to the concept can be found in the historical record, for example in the religious texts of the Abrahamic religions that discussed the notion of excessive interest. In ancient times, the theory of interest was a natural concept for a pastoral society. If one lends someone a herd of thirty cattle for one year, one expects to be repaid with more than thirty cattle. In the Uruk period, the practice of lending money at interest was quite developed, and a complex system for recording contractual obligations was invented. Interest is also found throughout the Middle Ages with different interpretations, and in the Renaissance era greater mobility of people facilitated the spread of the practice of borrowing of money at interest. In today’s financial world, interest also reflects the price paid for borrowing money, expressed as a percentage rate over a period of time to reflect the rate of exchange of present consumption for future consumption. Interest charging is a standard practice in money markets, bond markets and option and futures markets. By far the most common form in which financial assets are lent by banks is money, but other assets may be lent to the borrower at an interest charge (i.e. shares, consumer goods, equipment, etc.), interest being considered as a “rent on money”.⁸

We have argued that interest is used all over the world and that it is a standard business practice. We should make a special note regarding Islamic finance. More specifically, Islam traditionally prohibits *Riba* or the use of interest.⁹ Though the term *Riba* literally means “increase”, it has been variously interpreted over the recent years, sometimes as usury, more often as any kind of interest. Still, today, most of the leading Islamic finance specialists accept that time must be priced. Although they still object to the fixed, predetermined aspects of interest-based lending with its inherent risk of lender exploiting borrower, Islamic finance currently aims to replicate in Islamic form the substantive functions of modern financial instruments, markets and institutions.¹⁰

Overall, we can safely conclude that in most countries of the world, whether in Europe, Oceania, Asia or America, the award of interest is a standard business practice. This leads us to articulate our second principle: interest should consistently apply whenever a claimant is in a position of temporarily withholding money. It is a standard business practice to award interest to people and organizations willing to give up the temporary use of their money, and this principle should equally be applied in international arbitration and litigation.

Principle 3: Interest should reflect market realities and be inclusive of inflation and market risk premium

In international arbitration, a tribunal reviewing a claim for interest will generally first examine all documents and circumstances giving rise to the dispute to see whether it can find an indication of an agreement, if any, concerning the application of interest. If a convention has been predetermined, we would suggest that the tribunal follow the parties' intentions and award interest in accordance with the existing convention. In the absence of a contractual interest provision, we advocate that the tribunal should strive to develop a methodology that would take into account market realities surrounding the injury.¹¹

We strongly believe that the injured party is entitled to interest reflecting market realities. Consequently, we argue that the appropriate interest should equal the risk-free rate (inclusive of inflation) plus a market risk premium to account for the fact that the injured party, at the time of injury, could have invested the aforementioned resources elsewhere in order to earn a rate of return available on its market of reference.¹² Indeed, an individual or corporation investing money for repayment at a later point in time expects to be compensated for the time value of money or for not having the use of that money while it is invested.

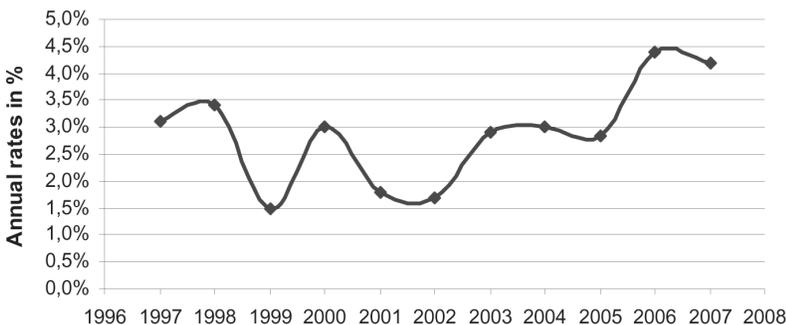
We now provide a step-by-step framework for arriving at the most appropriate interest on a fair market basis.

Step 1: Inflation should be included in the interest

Prices go up every year, and we could rightly argue that a claimant will seek to be compensated, as a minimum, for that loss of purchasing power. This statement is obvious in the finance world. Without interest that is at least equal to or above the inflation rate, lenders would not be willing to lend or to temporarily give up the ability to spend and savers would be less willing to defer spending. That is why we argue that inflation should be embedded in the interest when adjusting to present-day value.

It is noted that the measure of inflation is readily available in most countries. Inflation is defined as a sustained increase in the general level of prices for goods and services. It is measured as an annual percentage increase. As inflation rises, every dollar you own buys a smaller percentage of a good or service. Let us take an example. For determining the UK inflation rate, we can refer to the UK Consumer Price Index (or CPI), which is based on a composite consumer price index showing changes in purchasing power between 1997 and today.¹³ The source of information is widely available, and we can, for instance, use a composite price index for analysis of consumer price inflation, or the purchasing power of the pound, over long periods of time. The 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 that 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. In the following graph, we show fluctuations in the CPI over the last ten years.

UK Inflation based on Consumer Price Index



For an arbitration tribunal, the measure of inflation already provides an indication of the minimum bound for awarding interest, assuming that the parties would agree to accept the assumption of interest being equal to the inflation rate. As illustrated in the above graph, it would be easy to pick up a specific date or use an average for a determined period of time. However, we do not recommend using inflation itself as a proxy of the interest rate. One major drawback of an inflation-based method is its vulnerability to macroeconomic shocks and turbulence, i.e. devaluation and exchange rate exposures. Such turbulence can impact inflation and interest in different proportions. Furthermore, in the investment world, interest is rarely equivalent to the rate of inflation.

Step 2: Determination of risk profile

We now turn to the question of risk. People are either risk-adverse or risk-takers, and arbitral tribunals should recognize this fact when deciding what interest rate to apply. It is common for businesses to seek to secure different interest rates. The risk-adverse businessman will probably invest in government bonds and risk-free investments, while the risk-taking businessman will seek a higher return. When investing or placing capital into a project in China today, the investor is expecting a return based on a specific risk preference. Bear in mind that the investor always has a certain risk profile in mind when making the investment decision.

The level of political, economic and/or business risks to be undertaken by an individual investor is indeed a matter of preference. It is clear that 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 the inability to fulfil the originally agreed upon terms. In international arbitration, it is important for the tribunal to account for the underlying risk profile of the assets that form the object of the dispute. For instance, when computing an interest rate for a business loss, the tribunal will have to determine the risk profile of the investment. It should be noted that rational investors would usually not invest at a rate below the risk-free rate available in the market.

As a minimum, the rate of interest to be used for adjusting the award to present-day value should be equal to 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.

For a transnational commercial dispute, we advocate the use of an interest rate that reflects market realities. The rationale for using such an approach is based on the assumption that businesses will generally tend to demand an extra payoff above the risk-free rate for investing in assets with some level of risk. The *raison d'être* of businesses is 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 its investments that are proportional to the amount of additional risk those investments add to its portfolio.

Step 3: The cost of capital or borrowing cost as a proxy for interest

Some experts or lawyers may be tempted to argue that the appropriate interest rate for adjusting an award to present-day value could be derived from the claimant's cost of capital or internal borrowing rate. It would be theoretically correct to assume that the award of interest can be envisaged on such a basis. However, we do not recommend using the cost of capital or the internal borrowing rate for adjusting an award to present-day value unless the claimant demonstrates in a credible manner how to arrive at such an opportunity cost.

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 prepared to invest in that firm's security. It represents a measure used for discounting investment cash flows on specific projects and for pricing products. While it would be theoretically accurate to award interest on a cost of capital basis, it is problematic from a practical standpoint. In practice, it may be very difficult for a claimant to demonstrate how it arrived at such a cost of capital. The cost of capital can be difficult to derive because it is based on too many assumptions, including the fact that financial markets are dominated by

rational, risk-averse investors seeking to maximize satisfaction from return on their investment and that markets are efficient, frictionless and without imperfections like transaction costs, taxes and restrictions on borrowing and short-selling.

In addition, the cost of capital model usually assumes that investors base their judgment on a common time horizon. As a result, the cost of capital approach can be costly to determine and may well lead to a “battle of the experts”.

The claimant or respondent’s borrowing rate may be used to derive the interest, but such a rate based on the costs of borrowing may be difficult to derive and may rely heavily on judgment. Indeed, 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). In other words, the cost of debt is 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 proposed to derive the cost of borrowing:

- **Method 1:** The first method consists of taking 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 so straightforward, because it is indeed 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 consists of finding the cost of debt capital based on bond ratings for each of the selected firms. Then the cost of debt can be found by assuming an average debt profile for the company under review and obtaining an average rating. The average rating is indeed difficult to estimate in some cases, and when information is lacking (i.e. because the firm is not publicly traded) it is necessary to estimate the borrowing spreads by comparing corporate issues of similar standing.

- **Method 3:** An intuitive – but not absolutely accurate – 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 obtaining a weighted average.

However, this method can only give a crude approximation of the borrowing rate. Using book value for finance charges is a risky business, especially when firms are involved in “creative accounting”. Furthermore, such a measure does not differentiate between short-term and long term debt and does not take into account the different risk-free rates in each year that debt finance is raised. Interest charges on zero-coupon bonds would also not appear on the balance sheets of the firms.

In summary, we recommend using an approach that reflects market realities. The cost of borrowing or the cost of capital should only be used when the injured party can persuasively derive such a cost under a set of tested assumptions and using reliable data.

4. **Principle 4: Compound interest should be preferred to simple interest**

One of the most difficult issues confronting an arbitral tribunal is whether to award simple or compound interest. 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 (see below). Compound interest is sometimes referred to as the capitalization of interest or as “interest on interest”. This type of interest computation is determined on the principal and any interest earned over a period of time. 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 us take an example. We want to calculate the interest on EUR 1 000 000 at 5% interest per year for a period of ten years. The formula that we will use for this is the simple interest formula, or:

$$I = P r t$$

Where:

- P** is the principal amount: EUR 1 000 000
- r** is the interest rate: 5% per year or, in decimal form, $5/100 = 0.05$
- t** is the time involved: a 10-year time period

To calculate the simple interest, we multiply $\text{EUR } 1\,000\,000 \times 0.05 \times 10$ to find that the interest is EUR 500 000. We can provide an illustration by adjusting an award of EUR 1 000 000 according to different time and interest rate scenarios (on a yearly compounding basis).

(in EUR)

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 a 5% interest rate and a 15% interest rate is quite significant, i.e. a rise from EUR 1.6 million to EUR 4 million. Consequently, the compounding will have a greater impact at high interest rates and longer periods of time.

There is no real international consensus in international arbitration as to whether or not interest should be awarded on a simple or compound basis. Still, 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 that is active in normal trading operations implies the loss of the use of that value. Not recognizing this reality would lead to awarding a windfall to the respondent.

Principle 5: Yearly compounding offers a standard and conservative approach

The choice of the compounding period is crucial. The shorter the compounding period, the faster the principal amount will grow. All other things being equal, compound interest also has a larger effect as the time period and the interest rate increase. To illustrate, the following table shows the final principal amount of an initial investment amount of EUR 1 000 000 after 10 years, at an annual 5% interest rate, with the given compounding periods.

Periodic compounding $P(1 + r/n)^{Yn}$ (in EUR)						
1	2	4	12	52	365	Pe^{Yr}
Yearly	Semi-annually	Quarterly	Monthly	Weekly	Daily	Continuous
1 628 895	1 638 616	1 643 619	1 647 009	1 648 325	1 648 665	1 648 721

Now, let us use a rate of 15% to demonstrate the effects of rate sensitivity over a principal amount of EUR 1 000 000.

Periodic compounding $P(1 + r/n)^{Yn}$ (in EUR)						
1	2	4	12	52	365	Pe^{Yr}
Yearly	Semi-annually	Quarterly	Monthly	Weekly	Daily	Continuous
4045 558	4247 851	4360 379	4440 213	4472 022	4480 308	4481 689

There are no prescribed standards for choosing one particular compounding period over another¹⁴ (annually, quarterly, monthly or daily are the most common options). The compounding period usually depends on the financial products chosen by the client. For many products, interest is calculated on a quarterly basis (on March 31, June 30, September 30 and December 31). Other compounding periods are used at the client's request (as a special condition, for example, a compounding period of one year).

For some special products, such as forfaiting transactions or bank-to bank loans, interest is calculated on a semi-annual basis, and in the case of short-term finance even for an exact period (e.g. 90 days).¹⁵ We can easily conclude that, after looking at banking usage, a standard compounding period does not clearly emerge.

We can even complicate the issue further by mentioning the following practices related to compounding:

- Bonds are often compounded on a yearly or semi-annual basis. Corporate bonds are most frequently payable on a semi-annual basis. The amount of interest paid (every six months) is the disclosed interest rate divided by two (multiplied by the principal), the yearly compounded rate being higher than the disclosed rate.
- Mortgage loans generally refer to semi-annual compounding, but sometimes a monthly compounding basis is used (e.g. in the US market).
- Most financial institutions worldwide award interest on a daily (and sometimes bi-monthly) compounded basis for money on deposit.
- 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).

Different practices can be also applied in different countries. Some countries require financial institutions to have most of their interests on an annual basis, with banks then using several types of interest periods. For instance, for letters of credit and letters of guarantee, 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.

We conclude that there are no prescribed standards for choosing one particular compounding period over another. On the conservative side, we suggest using the yearly approach. Furthermore, the yearly compounding period is implicit in using average annual returns on the market. Clearly, the continuous compounding approach should be banned as it is rarely used. (In financial engineering, the valuation of derivatives may use continuous compounding, which is the limit as the compounding period approaches zero.)

IV. CONCLUSION

We have argued that, when arbitral tribunals award interest in international arbitration, they should seek to fully compensate the aggrieved party for the loss of the use of money. Indeed, the award of interest should be a significant element in full compensation to reflect the lapse of time between the original injury and the decision of the arbitral tribunal. Notwithstanding the well-established acceptance of interest as a component of compensation, its application often remains an issue subject to the wide discretion of tribunals. This is partly due to the fact that no standardized approach has been developed and accepted by the arbitral community.

We have advocated following existing business practices in regard to the application of interest. Based on the analysis provided in the previous pages, the following are arguments that may be suggested to adjust awards to present-day values:

- Under the first principle, we have argued that interest should aim at making the injured party whole after being deprived of the opportunity to earn a return on the use of its money. A failure to adjust values to the present day would be contrary to well-established international law principles that compensation must be full.
- Under the second principle, we have argued that a failure to adjust values for the passage of time would also be inconsistent with the practice of most of the major modern financial systems. If no adjustment is made for the passage of time, we may conclude that the injured party would be unjustly affected by the lack of opportunity to receive compensation for the temporary withholding of its money.

- Under the third principle, we have clearly stated that the injured party as a corporate entity is entitled to an interest reflecting market realities. We have highlighted that a pure inflation-based approach is flawed for the following reasons: (1) inflation is a monetary phenomenon not related to interest rate policy only (in fact, inflation is influenced by the relative elasticity of different variables, including wages, prices and interest rates); (2) consumer price indices that measure the price of a selection of goods purchased are not always representative; and (3) inflation in itself does not account for the time value of money. As such, international arbitrators should strive to award interest at a fair market rate, taking into account the notion of risk. We have argued that the cost of capital could be used as a proxy but that it can be difficult to determine in some situations, i.e. for non-listed companies and for some regions of the world. We have concluded that we would prefer to use a market-based approach that reflects the fact that investors generally tend to demand an extra payoff above the risk-free rate for investing in assets with some level of risk.
- Under the fourth principle, we have advocated the use of compound interest over simple interest. Although we must admit that there is a line of arbitral authority that has generally awarded simple interest, we strongly advocate reverting to compounding, which is the standard in the financial community. In addition, the usually long delays between the time of injury and the time of the award justify the use of compound interest.
- Under the fifth principle, we have concluded that there are no convergent standards for choosing the compounding period but advocated that yearly compounding seems to be a conservative basis.

In international arbitration, the charging of compensatory interest is logical. A failure to adjust values between the date of the loss and the date of the award would be contrary to the well-established international principle that compensation must be full. This article presents a conceptual framework for assessing compensatory interest in accordance with financial standards and market realities.

END NOTES

- ¹ A fundamental question has to be asked regarding the exact date of loss and the date on which interest ceases to accrue, but we leave this issue for another article.
- ² See, e.g., J. Gotanda, 'Awarding Interest in International Arbitration', *American Journal of International Law* (1996).
- ³ We have to admit that statutes in many jurisdictions could clearly specify the applicable interest rate on court judgments. However, in this chapter, we only refer to a conceptual framework to be applied to international arbitration and do not make references to specific national laws that would govern the application of interest.
- ⁴ See, e.g., J. Gotanda, 'Compound Interest in International Disputes', Oxford University Comparative Law Forum (2004). This paper provides a thorough analysis of the notion and application of compounded interest.
- ⁵ This chapter does not provide a case study. For a concrete example of how to derive interest rates, see T. Sénéchal, 'Time Value of Money: A Case Study', 4(6) *Transnational Dispute Management* (2007).
- ⁶ It should be clarified that we distinguish between the use of compensatory ("prejudgment" or "pre-award") interest – the interest that is used to account for the lapse of time between the original injury and the arbitral award – and the use of moratory interest, often referred to as "post-judgment" or "post-award interest" because it is related to the delay in acting upon the judgment or award. In this chapter, the main concern is to provide an overview of the use of compensation interest.
- ⁷ See, e.g., S. Homer and S. Richard, *A History of Interest Rates* (New Brunswick, Rutgers University Press, 1991).
- ⁸ See, e.g., S.G. Kellison, *The Theory of Interest* (Homewood, R.D. Irwin Inc., 1970).
- ⁹ A presentation on Islamic finance was provided by Fakhiah Azahari at the ICC Banking Commission meeting of April 2007 in Singapore. The details of this presentation can be obtained from the author of this chapter.
- ¹⁰ See, e.g., M. El-Gamal, *Islamic Finance: Law, Economics and Practice* (Cambridge University Press, 2006).
- ¹¹ We do not make references to the constraints that may be imposed by relevant national laws, and we admit that the tribunal may be obliged to apply domestic conventions about choosing an interest rate. This is particularly true for domestic arbitration. See also, e.g., J.M. Colon and M.S. Knoll, 'Prejudgment Interest in International Arbitration', 4(6) *Transnational Dispute Management* (2007).
- ¹² In this chapter, we do not aim at discussing the impact of foreign currency exchange rates. Still, in a few words, we would like to suggest the following rule. When the parties do not operate in the same market and currency, we recommend computing the loss in the claimant's currency (assuming that the loss is claimed for the claimant's country of operation in which the harm is done), applying an interest rate from that country or market and converting the final award into the appropriate destination currency only at the end.

- ¹³ The UK CPI is based on both official and unofficial sources. In our case, it replaces previous long-run inflation indices produced by the Office for National Statistics, the Bank of England and the House of Commons Library.
- ¹⁴ The author requested members of the ICC Banking Commission to provide input on the issue of compounding. From the responses provided, it is clear that there exists a great divergence of opinions and practices worldwide. The ICC Banking Commission comprises about 500 members from more than 65 countries. The Commission is thus representative of the finance industry.
- ¹⁵ This is based on a discussion with Monika Houšteká, Head of the Trade Finance Department, Ěeská Spoøitelna, Czech Republic.