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# THE EUROPEAN AND MIDDLE EASTERN ARBITRATION REVIEW 2012

## CALCULATING PRE-JUDGMENT INTEREST

JAMES NICHOLSON, NOEL MATTHEWS AND ALEXANDRE RIVIÈRE

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# THE EUROPEAN AND MIDDLE EASTERN ARBITRATION REVIEW 2012

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# Calculating Pre-Judgment Interest

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In *Compañía del Desarrollo de Santa Elena v Costa Rica*, ICSID (2000), interest of $11.9 million was awarded on an award for damages of $4.2 million – in other words, the addition of interest nearly quadrupled the size of the award. This is an extreme example of a general point. We have identified publicly-available information in relation to 108 ICSID awards, of which 30 included an award of interest on damages. Among our findings, discussed below, we see that there remains a range of practice in the principles behind the selection of interest rates, and the basis of applying those rates – and that the award of interest can have a sizeable effect on the overall quantum of damages awarded in an investment treaty or commercial arbitration.

However, the consideration of interest typically occurs towards the end of the process of preparing pleadings or expert reports, and is logically a successor to a determination of pre-interest damages by a tribunal.

Perhaps as a result, in the past, the interest component of an award has sometimes been an afterthought – with limited submissions by the parties in relation to interest and brief explanations for the decision relating to interest in an award.

In recent years that picture has begun to change. Parties are submitting more detailed arguments in relation to interest and adducing expert evidence on the subject. Likewise, tribunals are providing more detailed explanations for their awards of interest.[1]

Despite the increased attention paid to interest, there can be significant variation from decision to decision regarding the rate of pre-judgement interest and how it should be applied.

### Fundamental concepts of interest

Before considering that question it is helpful to reflect on some fundamental concepts relating to interest. In the most general sense, interest is the amount paid by a borrower to a lender in exchange for the use of funds, provided in the form of a loan or a bond. In other words, it is the amount of compensation that lenders require in order to part with their money under a set of specific conditions for a certain length of time.

There is an important difference between loans and bonds. Loans are private agreements between a lender or lenders and a borrower that are agreed on a case-by-case basis, whereas bonds are typically by design traded on public markets. When issuing a bond, instead of agreeing a loan with a particular counterparty, a company or government sells its debt to an investor or investors in the form of a large number of essentially identical bonds. The issuer of a bond promises to make certain payments to whoever purchases that bond. The promised payments and the price of the bond together determine its yield. For example, if an investor purchased a bond for €100 that was expected to pay a coupon of €10 and return the €100 face value after one year, the yield on that bond would be 10 per cent. Had the investor purchased the bond for €110, the yield would have been 0 per cent, as the coupon payment would have been offset by the decline in capital value of the bond.

One way of thinking about the rate of interest on a loan or bond is to think about the main factors affecting that rate: the time value of money to the lender; the likelihood of default of the borrower; and the structure of the particular borrowing agreement.

In general, a payment of €100 today is considered by investors to be more valuable than a payment of €100 in one year's time. Investors – businesses and individuals – tend to prefer purchasing goods and services or making investments now to purchasing them in the future. Similarly, the flexibility to be able to spend our money now, even if we decide not to, is of value. Economists refer to the preference for receiving money sooner rather than later as the 'time value of money' – this is a widely-accepted phenomenon in the fields of economics and finance. Part of the reason lenders demand interest on loans is to receive compensation for foregoing the time value of money over the relevant period.

The likelihood that a borrower will not repay all or part of a loan, or that repayments will be late, also affects the rate of interest on a loan. Lenders require higher rates of interest from borrowers that are more likely to default on their loan commitments. For example, at the time of writing, the yield on a 10-year bond issued by the Greek government is around 23%, whereas the yield on a 10-year bond issued by the German government is around 2%. This difference reflects the market view that Greece is significantly more likely to default on its loan obligations than Germany. In general, differences in interest rates are not as stark as in this example. Nevertheless, the likelihood of default is still a major determinant of interest rates.

The structure of an underlying borrowing agreement can also affect the rate of interest on a loan. Key terms such as the length of the loan, whether the loan is secured against an asset (such as a house, a factory or machinery) and whether or not the loan is guaranteed by another individual or company, can have a significant impact on the rate of interest.

Interest on loans can be calculated on either a compound or simple basis. Compound interest means that interest payments are calculated based on the total amount of the loan that is outstanding, including any previous interest accrued. This means that over time interest is charged (or earned) on interest previously paid. For example, a loan for €100 at a rate of 10 per cent with no repayments to the lender until maturity would accrue €10 interest in the first year after issuance and €11 in the second year (being 10% of €100 plus 10 per cent of the previous year's interest).

By contrast, when simple interest is paid, interest is calculated based only on the amount originally loaned from one party to another, without taking account of any interest that may have accumulated but not been paid in the meantime.





In most commercial contexts today, in which interest accrues on a loan over a number of periods, interest is calculated on a compound basis.

Other loans or bonds pay interest to the lender periodically. Although in such a circumstance the payments are invariant and therefore similar to simple interest, the lender is typically able to reinvest interest payments received into a similar loan, generating an effect similar to that of compounding.

### Interest in damages calculations

Pre-judgement interest is applied to damages calculations to account for the impact on a claimant of the passing of time between a loss being suffered by a claimant and the award of damages (with post-judgement interest applying to the extent there is any further delay between the award and payment of the award).

An award of damages is generally intended to compensate the claimant for the loss it has suffered as a consequence of the respondent's actions. In the majority of cases, the amount of damages awarded is intended to restore the claimant to the financial position it would have been in but for the respondent's actions.

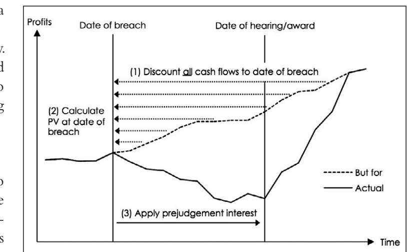
The determination of an appropriate interest rate and methodology to take account of the passing of time between a loss being suffered and the award of damages depends on a combination of the precise legal finding, the applicable law, finance theory, and the facts of the matter at hand.

Often, a key dimension of the legal finding underlying an award of damages is whether the loss is to be assessed as of the date of breach or wrongful act, or at a date close to the date of the hearing or award (a 'current' date).

To illustrate the implications of the selection of the appropriate date of assessment of loss, we give the example of an investment arbitration relating to the expropriation of an asset. In that case the assessment of the loss is often a calculation of the value of the asset as at the date the expropriation occurred (the date of breach) based on information available and expectations as of that date. All future income from the asset (including income that post-dates any award) is converted to a lump sum 'present value' at the date of breach using an appropriate discount rate, usually set by reference to the cost of capital applicable to the expropriated business or asset. The assessment of the income that would have been generated by the asset in principle takes into account only information available at the date of the breach. In those circumstances, pre-judgement interest is then applied to the resulting valuation to take into account the further loss to the claimant arising from it being deprived of the value of the expropriated investment between the date of assessment, being the date of breach, and the date of the award.

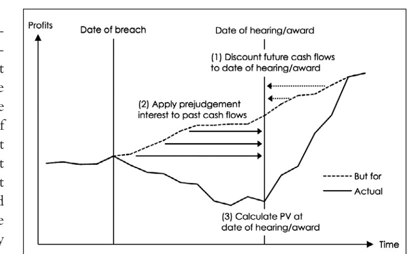
The diagram below illustrates this concept. The dotted line represents the financial position that a claimant would have been in but for a wrongful act (the 'But For Position'). The solid line represents the position the claimant is actually in (the 'Actual Position'). The loss suffered by the claimant is calculated as the difference between the two positions.

Losses assessed at the date of breach




Alternatively, in a commercial dispute relating to a breach of contract, or in an investment treaty context in the situation of a wrongful expropriation, it may be the case that the losses are assessed as of a current date of assessment of loss. Such an assessment would take into account all the available information (including information available with hindsight). Pre-judgement interest is applied to losses arising in periods prior to the date of assessment of loss to reflect the passing of time between the date each loss occurred and the current assessment date. Future losses are discounted to a lump sum present value at the date of the hearing. The chart below, prepared in the same manner as that above, illustrates.

Losses assessed at a 'current' date




It is sometimes argued that when calculating a loss at the date of breach, the discount rate and the pre-judgement interest rate should be set equally. In our view, that reasoning is generally mistaken. The discount rate should be set by reference to the cost of capital of the asset in question. The cost of capital in turn reflects both the time value of money and uncertainty relating to the non-diversifiable risks of the projected cash flows at the date of breach. While the interest rate should reflect the former, there is no prima facie reason why it should reflect the latter. In other words, the discount rate and the interest rate appropriately differ because the discount rate reflects risks which are not directly relevant for the interest rate.

### Calculating interest in practice – what interest rate?

In the absence of specific legislation or rules, international arbitration tribunals have followed different approaches for determining the rate of pre-judgement interest.

We have reviewed 108 ICSID awards – which, unlike awards in commercial arbitration, are often publicly-available. Of these,

30 have addressed the issue of quantum of losses and included some decision on and discussion of pre-award interest.[2] We describe below the approaches taken in these awards.

The approach that tribunals have selected most frequently consists of using an interest rate that reflects the 'return Claimants could otherwise have earned' had they been given the opportunity to invest the pre-interest amount of the award in an alternative investment.[3] This is often justified by tribunals as the best way to provide full reparation to which the claimants are entitled. The explanation provided by the tribunal in *LG&E v Argentine Republic* explains why the alternative investment approach was selected in that case: '... interest recognizes the fact that, between the date of the illegal act and the date of actual payment, the injured party cannot use or invest the amounts of money due. It is therefore decisive to identify the available investment alternatives to the investor in order to establish 'full' reparation.'[4]

In implementing this approach for awards made in US dollars, tribunals usually use rates observed on US certificates of deposit, short-term US Treasury Bills or bond yields, but also rates in financial markets or other indicators that they consider a fair proxy of what the claimant would have earned on its investment. In *Marvin Feldman v Mexico*, the tribunal awarded interest on an award in Mexican pesos on a similar basis, by reference to yields on short-term Mexican government bonds.[5]

Rates consistent with this approach are generally relatively low, reflecting risk-free investments. However, there are two examples of higher interest rates apparently justified under this approach. In *Wena Hotels v Arab Republic of Egypt,* in which the award was made in US dollars, the tribunal concluded that a 9 per cent interest rate is 'deemed appropriate by reference to long-term investments, i.e., government bonds, in Egypt'.[6]

In *Alpha Projektholding v Ukraine*, the tribunal awarded interest on an award in US dollars at 9.1 per cent, compounded annually over five years, being the US Treasury 10-year bond rate plus a market risk premium. The tribunal stated: 'The Tribunal believes that this rate better reflects the opportunity cost associated with Claimant's losses, adjusted for the risks of investing in Ukraine.'[7]

Overall, in our survey of 30 awards of interest in ICSID arbitrations, 13 were based on the consideration of returns on alternative investments.

Tribunals have sometimes adopted a rate on the basis of some exercise of judgment that they consider reasonable, adequate, fair, or appropriate. In such instances, tribunals usually do not explain how they determined the interest rate, other than that they consider it reasonable. Such awards typically lead to interest rates of approximately 5 to 6 per cent, based on the five instances identified in our survey.

Another approach, occasionally used by tribunals, consists of using a corporate borrowing rate. Although not always explicitly specified as such by tribunals, this is economically equivalent to selecting an interest rate that banks or other lenders would have charged commercial borrowers in circumstances roughly similar to those of the dispute.[8] If conceptualised as the interest rate that the claimant (or respondent) would pay on its borrowings, such a rate would in principle be set by reference to the claimant's credit rating, access to capital markets and other considerations. However, in most cases, tribunals use benchmark interest rates such as the London Interbank Offered Rates (LIBOR), or prime rates, plus a premium, typically 2 per cent.

We found four instances of the above approach in our survey.

We also found four instances of interest awards made on the basis of the local host country legislation, and three instances of interest awards based on contractual specifications. In those seven cases, tribunals applied the interest rates specified in the relevant texts. For example, in *CDC Group plc v Republic of Seychelles*, the sole arbitrator awarded interest at a rate of 9 per cent, being the rate specified in loan agreements under dispute in this matter.[9]

Overall, our survey reveals wide variations in the interest rates used. Low rates, typically set by reference to 'risk free' interest rates, are usually awarded when a tribunal frames interest on the basis of returns on alternative investments such as bonds of governments of stable, developed countries – for the typical award, denominated in US dollars, this means US government bond yields. Such rates can be as low as 2 per cent.

To further summarise, instances of awards at higher rates, of closer to 10 per cent, exist where tribunals have taken into account high levels of market risk either directly or in the form of yields on government bonds in the respondent state. Tribunals appear to have identified higher rates both on the basis of returns on alternative investments, and on the basis of claimant borrowing costs. A further example of an interest rate of 9 per cent has arisen in the context of a relevant contractual interest rate.

#### Comment on the selection of an appropriate interest rate

The determination of the appropriate rate of interest in a damages context is ultimately a legal issue on which we are not in a position to comment. However, from an economic and financial point of view, if the purpose of an award is to restore the claimant to the position it would have been in but for the wrongful act(s), then the identification of an interest rate that fits this purpose is one that we are able to address as economic and financial experts.

From this perspective, in order to calculate an appropriate interest rate, it is necessary to construct a realistic hypothetical or 'but for' scenario relating to the uses to which the claimant would have put the relevant funds, thereby identifying the interest or return it would have earned (or saved). In theory, potential hypothetical scenarios include that the firm would have invested in other business ventures, repaid debt, raised less external financing, made distributions to shareholders, or a combination of the above.

Claimants sometimes consider arguing that they would have invested the relevant funds in high return business ventures. However, in our experience it is difficult to establish with sufficient support either that a claimant would have taken such a course of action, or in some circumstances that the relevant course of action would have generated the asserted high returns. Moreover, a claimant seeking to make such an argument either needs to make the argument that they would have made a particular investment which would have unexpectedly generated a very high return, which may lack plausibility, or would need to assert that it foresaw the high return that it is now asserting. In that second case, the claimant would also need to overcome the potential challenge that, if it saw with sufficient certainty such high returns in the investment under discussion, why was it not willing or able to raise from other sources sufficient financing to pursue that opportunity?

An alternative line of reasoning would be that, if the claimant had the relevant funds at its disposal, it would have approached its corporate financing in a different, cheaper, way. Companies typically have a range of types of financing outstanding, including: a variety of loans and bonds, of differing maturities, interest rate structures







(eg, fixed v floating), levels of lender security, and currencies; hybrid financial instruments such as preferred shares; and equity which itself may come in different classes each with different associated rights.

There are some practical difficulties in assessing interest rates or rates of return corresponding to claims based on reducing financing raised or repaying existing financing. Typically it is difficult to demonstrate with sufficient likelihood that the claimant would in fact have repaid or refrained from raising funds via certain specific classes of assets.

Moreover, an economist or valuer would expect a company to make the allocation of funds that is most advantageous economically. On a forward-looking basis, financial theory tells us that the incremental cost of financing, or benefit of repaying financing, to a company is (approximately) equal to its weighted average cost of capital. However, as discussed above, the use of a cost of capital in the (necessarily) primarily backward looking context of awarding prejudgment interest may compensate the claimant for risks that are not present, and thereby unduly benefit the claimant.

On the other hand, businesses typically aim to and do generate returns higher than the returns on government bonds – they must, in order to attract investment that could otherwise go into such relatively safe instruments as government bonds. Awarding interest at the rate of government bonds may therefore under-compensate a claimant for any deprival of funds.

The tentative conclusion from an economic and financial viewpoint, therefore, is that although interest at fully risk-free rates may not compensate claimants for the returns that they would have generated if they had held the awarded amounts at the relevant time, an award of interest at a company's cost of capital is likely to be too high, absent strong supporting evidence that a return at that rate of interest could in fact have been generated.

#### Calculating interest in practice – other issues

There are a number of other issues that can affect the calculation of pre-judgement interest in practice. Some of the most common include whether interest should be calculated on a compound or simple basis, the starting point for calculating interest, exchange rate issues, and the effect of tax on calculations of interest.

##### Should interest be applied at a compound or simple rate?

As noted above, in most commercial contexts, interest is paid in one of two ways.

First, interest is accumulated as part of a loan and is repaid in full at the maturity of the loan. In such circumstances, interest is typically calculated on a compound basis.

Otherwise, interest is paid out on a simple interest basis, in which case it is typically available for reinvestment by the lender. For example, a government bond with a coupon of €10 each year and a par value of €100 will generate an interest rate of 10 per cent on a simple basis. However, investors are able to reinvest the coupons in further government bonds, generating an aggregate compound return.

We are not aware of commercial contexts in which interest is paid on a simple basis while accumulating on a loan. Since an award of interest on losses in a legal setting made on a simple interest basis generally does not take account of the claimant's ability to reinvest the constituent interest payments, such awards of interest are not consistent with commercial reality.

In the context of a claim for damages, it is often argued that compound interest is required in order to make the claimant whole because the claimant could have earned compound interest on its investments or with the deprived funds. This approach appears to have been given some degree of acceptance by international tribunals.

However, there appears in particular to have been a historic tendency towards the award of compound interest only when tribunals find expropriation, and against an award of compound interest in other circumstances. This was described, for example, by the tribunal in *Compañía del Desarrollo* who wrote in 2000 that: '... there is a tendency in international jurisprudence to award only simple interest, this is manifested principally in relation to cases of injury or simple breach of contract. The same considerations do not apply to cases relating to the valuation of property or property rights.'[10]

Consistent with this, our survey shows that a tribunal has awarded simple interest in only one case where there had been a finding of expropriation. This case was *Southern Pacific Properties v Egypt*, in which the tribunal decided that: 'The provisions of Egyptian law which prohibit compound interest and require that the interest not exceed the principal are also applicable'.[11]

Relying on the *Compañía del Desarrollo* award, the tribunal in another ICSID award that involved breach to multiple clauses of a concession agreement, concluded in 2003 that: 'international law does not require it [compound interest], the Tribunal can dispense with making a determination on whether the specific circumstances of the case prevent an award of compound interest in the present arbitration.'[12]

More recently, however, the award of compound interest by tribunals has no longer necessarily been related to a finding of expropriation by the tribunal.[13] In the 20 instances of awards including compound interest, all issued since 2000, 10 did not involve findings of expropriation.

This more recent trend is evidenced in an award rendered in 2007 by the tribunal in *OKO Pankki Oyj and others v Republic of Estonia*, in which the tribunal did not find expropriation but nevertheless stated that: '... compound interest reflects economic reality. The time value of money in free market economies is measured in compound interest; simple interest cannot be relied upon to produce full reparation for a claimants' loss occasioned by delay in payment; and under many national laws, an arbitration tribunal is now expressly empowered to award compound interest'.[14]

In *Tecnicas Medioambiantales Tecmed v The United Mexican States*, the tribunal indicated that the 'application of compound interest is justified as part of the integral compensation owed to the Claimant as a result of the loss of its investment.'[15]

Moreover, in *Azurix v Argentine Republic,* the tribunal 'considers that compound interest reflects the reality of financial transactions, and best approximates the value lost by an investor.'[16]

Indeed, our survey suggests that investment treaty tribunals increasingly regard the principle of full compensation as their primary consideration in the determination of interest calculation, whether there is a finding of expropriation or other treaty breach. In none of the ICSID awards reviewed before the year 2000 did the tribunal grant compound interest. Between 2000 and 2005, compound interest awards represented 67 per cent of pre-interest awards, and between 2006 and 2011 this proportion rose to 86 per cent.

Although the issue of whether to award simple or compound interest is primarily a legal issue, from an economic and financial

point of view an award of simple interest does not accord with commercial realities.

Post award interest, when awarded, is most often based on the pre-award interest decision, and was awarded on a compound basis in 16 cases and on a simple basis in eight cases across our sample.

### When should interest run from?

Identifying the period over which interest should be applied is not always straightforward. In principle, it is usually the case that interest should be applied to the claimant's losses from the date (or dates) on which those losses arose. In practice, it can be difficult to identify that date. It is not always the case that losses are realised straight away. For example, damage to a company's assets may take some time before it affects the company's sales, and even longer before its cash returns are affected.

Interest on lost profits is in principle calculated by reference to lost cash flows, which can differ significantly from accounting profits due to differences in timing between accounting entries and cash movements, including the effect of taxes. For example, accounting profits are usually recognised as soon as a product is sold even if payment for that product is not received for some time. Although the associated profit would be recognised in the financial statements of the company straight away, the company is unlikely to be able to earn interest on this amount until it receives actual payment. It can therefore be important to ensure either that interest is being calculated according to the timing of cash flows rather than accounting entries, or that the discrepancies from basing interest calculations on accounting entries are small.

### Frequency of compounding

If compound interest is awarded the practical issue of how often interest should be compounded will need to be addressed.

Although we have seen this question exercise tribunals, in general the answer is to be found by considering the precise basis for the award of interest being considered. Interest rates are typically quoted according to one of various conventions. For example, LIBOR is quoted on an Actual/360 convention, meaning that a 1 month LIBOR rate of 6 per cent is exactly equivalent to interest of 0.5 per cent over one month (being one-twelfth of 6 per cent). Due to the effect of compounding, a full year of interest paid on a 1 month LIBOR rate of 6 per cent would generate a return – known as the effective annual rate – of 6.17 per cent. As a result, it does not, for example, make sense to apply annual compounding to a rate that it is given on a monthly basis.

As such, the question of frequency of compounding interest, at least when the interest rate being used is derived from some commercial instrument, becomes an issue of understanding all the dimensions of the interest rate being used.

### Exchange rate issues

The rate of interest applicable to balances held in different currencies can differ significantly, not least due to differences in expectations of inflation and economic growth. Claims relating to an investment in a developing country are often denominated in a hard currency such as the euro or dollar. If damages are assessed in the local currency, before being translated to hard currency, this gives rise to two issues.

First, in many cases, the principles underlying the payment of interest awarded depend materially on the currency in which funds would have been held. The appropriate basis for awarding interest may differ between currencies.

Second, even more significantly, fluctuations in exchange rates may mean that it may make a significant difference to the final sum claimed whether the damages are translated into hard currency at the date of breach, at the then-prevailing exchange rate, at the date of the hearing or award, or periodically as lost cash flows would have been realised. The determination of which method is appropriate may require a tribunal to take a position on whether the claimant would have translated its losses into hard currency at an earlier or later date.

Particularly striking in our sample of ICSID awards is that only four of the awards of interest were made in the currency of the recipient state, with a further three being tied to some contractual basis. Fully 23 of the awards were made in dollars or euros. We do not have a breakdown of whether the amounts awarded in hard currency were converted as of the date of breach or at a current date.

### Tax and interest

It is often the case that an award of damages is taxable in the hands of the claimant. This partly explains why damages are often calculated on a pre-tax basis (for example, assessments of lost profits typically do not take into account the incidence of taxation on those profits). Similarly any interest awarded on a loss may be taxable in the hands of the claimant.

In such circumstances, it can be important to consider fully the effect of taxation on an award of interest. For example, consider an award of interest on the 'alternative investment' basis. When considering the interest that could have been earned on such an investment there are two taxation effects to consider. First, interest could only have been earned on the post-tax value of the award. Second, the interest that would have been earned would, itself, then be subject to taxation.

The usual practice we observe is to calculate interest using a pre-tax interest rate on the pre-tax value of an award. This may be due to an implicit assumption that the total award will be taxable in the hands in the claimant so that taxation 'falls out of the equation'. However, such an approach fails to deal with the second taxation effect described above. Mathematically, it is equivalent to assuming that the interest earned by the claimant on an alternative investment would not, itself, be taxable. This can be corrected by applying a post-tax interest rate to the pre-tax value of the award.

As interest calculations become more sophisticated it may be the case that the incidence of taxation is considered by tribunals in more detail. However, there is clearly a trade-off involved in such an approach. While considering taxation may improve the accuracy of an interest calculation it may also require a detailed (and costly) analysis of a claimant's taxation position.

### Summary

Interest can be an important part of the award for damages in investment treaty or commercial arbitration disputes, representing a significant proportion of an overall award and running to millions of euros or dollars in some cases. We have surveyed a number of ICSID awards and identified 30 that take into account pre-judgement interest in their assessment of quantum.

The approaches used to assess pre-judgement interest vary from case to case, although there are several that appear more frequently than others. The 'alternative investments' approach, under which the tribunal determines interest by reference to the returns on alternative investments that were available to the claimant, is the most frequently used in past ICSID awards – followed by judgmental interest rates considered reasonable by a tribunal, and then, by rates of interest broadly applicable to commercial borrowers. Although the interest rates used by tribunals are rarely higher than 6 per cent unless the result of the 'LIBOR or government bond rate plus premium' formula is to generate a still higher rate, tribunals have in specific circumstances awarded interest on amounts denominated in US dollars based on higher rates.

Our research has also shown that there is an increasing trend for tribunals to award compound rather than simple interest. This trend is consistent with the calculation of interest in most commercial contexts, where interest is usually calculated on a compound basis.

In our experience, there are often economic and financial arguments to support a range of different approaches, depending on the particular circumstances of the case in question. The most appropriate approach depends on the facts of the case, but may also be affected by any legal submissions that are accepted by the tribunal. Overly prescriptive or generalised approaches that do not take into account the specific circumstances of a case are at risk of incorrectly compensating the claimant. As a result, the variety of approaches taken by tribunals in calculating interest allows sufficient flexibility to adapt the determination of interest to the specificities of each case.

In our view, the starting point for any award of interest should be a thorough consideration of the facts of the matter, the relevant law and the relevant economic and financial theory. Clear and well-reasoned analysis is essential. Given the significance of claims for interest in arbitration cases, the assessment of interest is a matter to which tribunals, counsel and their clients must often devote significant attention.





### Notes

* The authors would like to thank Zephan Trent (consultant, London) for his assistance with this article.

1. For example, *OKO Osuuspankkien Keskuspankki Oyj and others v Republic of Estonia* (ICSID ARB/04/6) paras 343-357.
2. In one of those cases the only point explicitly discussed by the tribunal is the issue of simple v compound interest.
3. *Compañía de Aguas del Aconquija SA and Vivendi Universal SA v Argentine Republic* (ARB/97/3), para 9.2.8.
4. *LG&E Energy Corp, LG&E Capital Corp, LG&E International Inc v Argentine Republic* (ARB/02/1), para 55.
5. *Marvin Feldman v Mexico*, (ARB(AF)/99/1), paras 205-6.
6. *Wena Hotels Ltd v Arab Republic of Egypt* (ARB/98/4), para 123. We have been unable to confirm whether the government bonds referred to were denominated in Egyptian pounds or US dollars. If they were denominated in Egyptian pounds, and given the award was made in US dollars, there is a potential inconsistency between the currency of the award and the interest rate applied.
7. *Alpha Projektholding GmbH v Ukraine* (ARB/07/16), para 514. Although an 'opportunity cost' could relate to the cost of increased borrowings at the 9.1 per cent rate, we consider that the natural usage of this term implies that the tribunal has in mind the foregone returns on this amount on a similar alternative investment.
8. See for example: '*Accumulating Damages in Litigation: The Roles of Uncertainty and Interest Rates*' (Patell, Weil and Wolfson, 1982) and more recently, '*Prejudgment Interest in International Arbitration*' (Colon and Knoll, 2007).
9. *CDC Group plc v The Republic of the Seychelles* (ARB/02/14), para 61.
10. *Compañía del Desarrollo de Santa Elena SA v The Republic of Costa Rica* (ARB/96/1), para 97.
11. *Southern Pacific Properties (Middle East) Ltd v Republic of Egypt* (ARB/84/3), para 224.

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FTI Consulting is a global business advisory firm dedicated to helping organisations protect and enhance enterprise value in an increasingly complex legal, regulatory and economic environment. With more than 3,700 professionals located in most major business centres in the world, we work closely with clients every day to anticipate, illuminate, and overcome complex business challenges in areas such as investigations, litigation, mergers and acquisitions, regulatory issues, reputation management and restructuring.

FTI's International Arbitration practice brings together a team of highly credentialed testifying experts with deep experience in damages quantification and related services in the context of treaty and commercial arbitration, supported by a dedicated team of professionals and emerging experts. We provide practical, actionable advice, and independent written and oral expert testimony delivered concisely and clearly.

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12 *Autopista Concesionada de Venezuela C.A (Aucoven) v Bolivarian Republic of Venezuela* (ARB/00/5), para 396.
13 Awards with simple interest represented 100 per cent of the awards before 2000 and only 23 per cent of awards after 2000.
14 *OKO Pankki Oyj and others v Republic of Estonia* (ARB/04/6), para 345.
15 *Tecnicas Medioambientales Tecmed SA v The United Mexican States* (ARB (AF)/00/2), para 196.
16 *Azurix Corp v The Argentine Republic* (ARB/01/12), para 440.

**James Nicholson**
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James Nicholson is a managing director in FTI's Paris office and co-head of FTI's economic and financial consulting segment in France. James specialises in the assessment of damages and related issues in international arbitration, often acting as testifying expert before ICC, ICSID and other tribunals. James has more than 15 years experience in finding practical solutions and providing independent expertise in relation to complex unstructured business, valuation, economic, and financial problems, in contentious and non-contentious contexts. James joined FTI in 2009, having moved to Paris from London in 2007 with LECG.

**Noel Matthews**
FTI Consulting

Noel Matthews is a director in FTI's London office. Noel is a chartered accountant and has provided financial and economic consulting advice to clients for the past 12 years. His experience includes financial advice in the context of disputes, valuation advice, intellectual property, economic regulation and corporate strategy.

In recent years, Noel's practice has focused on expert financial advice in the context of international arbitration and domestic litigation. Typically, this involves the quantification of lost profits, assessments of wasted costs, business valuation or advice relating to accounting matters.

**Alexandre Rivière**
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Alexandre Rivière is a director in FTI's Economic and Financial Consulting practice, and is based in the Paris office. He joined FTI in November 2009. Prior to this he was a senior manager in PwC's Corporate Finance division and was involved in litigation and valuation matters. Alexandre was also formerly part of KPMG's Forensic and Litigation practice in New York. Alexandre has over 13 years of experience in performing valuations in a variety of contexts and in particular in dispute related contexts, and providing forensic accounting services on a wide variety of engagements.

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