Global Arbitration Review

The Guide to Damages in International Arbitration

Editor
John A Trenor

Second Edition

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Part II

Procedural Issues and the Use of Damages Experts

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Strategic Issues in Employing and Deploying Damages Experts

John A Trenor[1]

Parties frequently engage experts to assist in developing, calculating and presenting their cases on damages to tribunals in international arbitration. Such experts may specialise in economics, finance or accounting, or possess specialised business acumen in a particular industry, country or subject matter. Some damages experts offer scientific, technological or other technical skills. In many cases, damages experts are engaged to provide quantitative 'number-crunching' capabilities or modelling experience, such as company valuation or cash flow analyses.

Given the flexibility inherent in international arbitration and the focus on party autonomy, parties often have significant ability to craft the procedures regarding the resolution of damages issues. Of course, tribunals are typically granted considerable discretion to determine the applicable procedures under most arbitration laws and rules, including as it pertains to the resolution of damages and expert evidence.

This chapter addresses a number of techniques and approaches that parties and their counsel, as well as tribunals, can consider to maximise the effectiveness of expert assistance on damages issues. It bears emphasis that the usefulness or appropriateness of a particular technique or approach depends significantly on the circumstances of the case at issue. What may work or be appropriate in one case may not work in another. One size does not fit all. Parties should work with tribunals to determine the most appropriate procedures in each case.

Determining whether a damages expert is appropriate

One of the first strategic choices parties have to make regarding damages is whether to retain a damages expert and, if so, which expert.

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It is important for parties to begin considering damages issues, together with liability issues, as early as possible, especially after a dispute has arisen but often before, to guide appropriate decision-making. Counsel experienced in damages issues can work closely with clients, especially the commercial and financial teams within companies, to provide preliminary assessments and to determine what issues may arise and what type of damages expert may be appropriate.

Parties and their counsel often think first and foremost about whether a damages expert would help to present their case before the tribunal, but damages experts can be effective in helping to develop the damages case in the first place. Moreover, in many cases damages issues are intertwined with merits issues, and thus the right experts can help parties and their counsel to develop the entire case. Knowing how strong a damages case may be or how to accurately quantify the likely damages that may be recovered can help influence a party's strategy from the outset, including whether to initiate an arbitration or assert a counterclaim.

Although damages experts can be extremely useful, they are obviously not necessary in every arbitration. In some cases, parties and their counsel can effectively quantify damages and present the damages case. Sophisticated counsel, with experience in damages issues, can often work with the in-house teams of the client – whether commercial, financial, or other – to build and present the damages case.

Whether to engage a damages expert depends on a variety of factors, including the amount in dispute and the complexity of the damages issues. In cases involving small amounts in dispute, it may not be economical to engage damages experts. In cases with seemingly straightforward damages issues, it may not be necessary to engage damages experts. However, what may seem simple at the outset can be misleading, and an understanding of the complexity may develop over time.

Whether the opposing party has or is likely to engage a damages expert is another important consideration. It is not always necessary to engage a damages expert just because the other side has. There may even be strategic considerations about sending a message to the tribunal regarding the simplicity (or complexity) of the damages issues. However, it is important to fully consider the expectations of the tribunal and the assistance that damages expertise may provide, depending on the circumstances of the particular dispute.

The sophistication of the arbitrators on damages issues, if known, can also be an important factor in whether to engage a damages expert.

Of course, a party's financial resources and ability to pay for a damages expert influence the decision as well. In some instances, third-party funding may be an option.

Engaging the right damages expert

Engaging the right damages expert for the dispute is one of the most important decisions a party makes, together with its choice of counsel.

Given that damages issues are governed by the applicable law and often linked with liability issues, the lawyers engaged by the parties typically work closely with the client to identify the right experts for the case.

A wide variety of factors influence the selection of the right damages experts, including:

- the scope and depth of relevant experience, expertise and education;
- quantitative skills;
- reputation;
- demeanour, persuasiveness and credibility;
- ability to communicate complex issues clearly and persuasively in writing and orally at the hearing in terms a tribunal can understand;
- experience testifying at an arbitration hearing and, in particular, facing cross-examination;
- experience with expert conferencing (also known as 'hot tubbing');
- cost; and
- availability.

Of course, it is critical to establish that the expert is independent of the parties and impartial. Therefore, counsel must enquire about the extent to which the potential expert has previously worked for or has any other relationship with any of the parties or counsel (including opposing counsel, if known). The potential expert must be conflict-free. It is important to review any available publications by the candidate to determine if there are issue conflicts (i.e., positions taken by the candidate that might conflict with or undermine positions in the arbitration). These questions can be relevant not only for the individual candidate under consideration, but also for the organisation for which the expert works.

It is also worth inquiring whether the potential expert has any experience with experts retained by the other party or parties, if known yet. Experts often have experience working with or against other experts or have heard stories from others who have such experience. Often experts have useful insights on the strengths and weaknesses of their colleagues.

Of course, it is important to establish whether the potential expert is on board substantively with the party's case. If not, the party and its counsel must find another expert or revise the position the party intends to take.

Often, strategic questions arise whether to engage a damages expert with the necessary experience in the industry or country involved, or whether it would be preferable to hire separate experts. Sometimes, it is difficult to find all the necessary expertise in one person. In such cases, it may be necessary to engage multiple experts who work together to quantify damages. That, in turn, raises questions about whether the multiple experts should work together or separately, submitting a joint report or separate reports.

Counsel for a party typically research a number of potential experts (sometimes dozens) to best match the needs of the case with the expert's skill set. Counsel often interview a short list of candidates, occasionally with client participation, to make a final decision.

There are a number of issues that arise with the formal terms of the engagement itself. Although these are beyond the scope of this chapter, two are worth brief mention. First, in some jurisdictions, it is important for the lawyers to engage the experts on behalf of the client (rather than have the client engage the experts directly) to maximise the protection of legal privilege. Second, when considering the terms of compensation for the expert, care should be taken to preserve the impartiality of the expert. This is often addressed through payment based on hourly fees or a fixed fee for the matter (or fixed fees for various stages).

Working with damages experts

Advance planning by counsel working in conjunction with damages experts, once engaged, and by tribunals and the parties to establish the procedures for addressing how evidence from damages experts will be presented is critical to maximising the beneficial role that such experts can play.

For parties and their counsel, this advance planning typically starts with a detailed production schedule for ensuring that the experts are effectively integrated into the development of the damages case and that expert reports are prepared in a timely fashion in close coordination with the preparation of the parties' memorials.

In many cases, it takes time to develop the appropriate methodology for assessing and quantifying damages. This frequently entails a collaborative process involving the expert, counsel and the client that may take weeks or even months to develop, taking on board the parallel development of the factual and legal case, which influences the damages case. Counsel typically works with the expert to obtain relevant documents, data and other information from the client.

An early issue that often arises is whether to seek (or oppose) bifurcation of liability and damages, an issue discussed in Chapter 7 on procedural issues.

The tribunal can play an important role by placing issues regarding damages and experts on the agenda for the first procedural conference so the parties are prepared to discuss tentative procedures for addressing expert evidence on damages. Of course, in most instances, the parties cannot be expected to have fully developed their damages cases at that early stage and may not be ready to take positions on the relevant procedural issues regarding the presentation of expert evidence. Indeed, in many instances the parties will not yet have engaged damages experts at that stage. That can frequently be the case for the claimant, and it is even more often the case for the respondent.

However, if the tribunal begins the discussion early, it can encourage the parties to begin planning and considering options. In some cases, tribunals recognise the difficulties in committing to procedures regarding the presentation of expert evidence on damages at the outset and schedule procedural conferences at various stages in the timetable to revisit these issues as the parties develop their respective cases on damages further.

One issue that may arise when the parties and tribunal discuss the procedural timetable is whether the expert reports should be submitted with the parties' legal and factual submissions, as is often the case in international arbitration, or whether expert reports should be submitted at a later stage, either simultaneously or consecutively, whether in one round or two. Although there are pros and cons to different approaches, which may be influenced in part by differing views as to the role of the expert, it is often true that the parties and their counsel work closely with the experts they appoint to develop their cases, including on damages, and in many arbitrations it would not be possible or effective for parties to present their memorials without the support of accompanying expert damages reports.

Some tribunals propose – and occasionally even impose – off-the-shelf rules regarding the presentation of expert evidence. This can raise significant concerns among parties if such rules are not sufficiently flexible for proper application to the nuances of the case at issue. Although these rules may have worked in other cases, they may not be appropriate in others.

In considering which procedures are most appropriate for the particular case, it is obviously important to consider the costs, delays and potential distractions they may impose on the parties, through additional work to be performed not only by the experts, but by counsel and in-house personnel.

Effective presentation of damages issues in memorials and expert reports

Counsel play a critical role in presenting damages issues to the tribunal. Although the damages experts present their work in separate expert reports, it is the parties' memorials that the tribunal will read first, and it is counsel's presentation of the damages case that makes the first impression. The expert reports are often viewed, together with witness statements, as supporting materials, and it is counsel's role to integrate the expert's work into the memorials.

Counsel must work closely with the damages expert to develop and present a cohesive and comprehensible damages case, building on the relevant law, facts and expert analysis contained in the expert report.

To effectively present the damages case and the analysis of the damages experts, it is critical for the lawyers to fully understand the expert's methodology and analysis. This is important both for preparing written submissions and for the hearing, where it is essential in particular for effective cross-examination. Although this can at times be difficult, it is often apparent from the party's memorial when counsel do not fully understand the expert's analysis. This leads to less persuasive submissions and can even result in incorrect descriptions of the expert's work that undermine the client's case. Counsel who truly understand the expert's methodology and analysis are also better positioned to identify inconsistencies, weaknesses or other concerns in a draft report and can work with the expert to resolve them.

Counsel cannot effectively summarise and describe the expert's analysis without truly understanding the methodology that the damages experts use. Indeed, it is often important for counsel to work closely with the damages expert in developing the appropriate methodology. The theories of liability and damages must be mutually consistent. Therefore, the experts must have appropriate instructions on any legal parameters governing the calculation of damages.

Many damages issues relate to application of the central principle that the claimant should be restored to the position it would have been in 'but for' or without the wrongful actions. This general principle that the wrongdoer must make full reparation for the injury caused by the wrongful act – whether that is a breach of contract or a treaty violation – often lies at the heart of many aspects of the damages case. However, as always, the devil is in the detail and the precise legal standard that governs the dispute.

Moreover, damages calculations must anticipate the legal determinations that the tribunal must make on issues of liability and damages to ensure that the damages model is useful in light of the decisions ultimately reached by the tribunal. That may require alternative scenarios by the experts if damages calculations are conducted before a finding of the scope of any liability. This emphasises the need for clear communication by counsel to experts (and by the tribunal to the parties and their experts) and the need for clear understanding by the experts as to what this means for the purposes of quantifying damages.

It is important for counsel and experts to consider how best to present the damages assessment in a manner that enables the tribunal to understand the quantification associated with particular claims or theories and to avoid double counting or inconsistent decisions on liability and damages. For example, if a claimant alleges two separate grounds for breach of contract, the experts must assess what damages if any arise from either or both, avoid double counting and consider any interaction between the two. Sometimes separating the bases for damages is straightforward. In other cases, it can be extremely complicated.

In most cases, it is counsel that instructs the experts in relation to the scope of their expert reports. Counsel can also assist the damages experts in helping to ensure that the expert reports are as easy to understand as possible. Counsel can provide useful input on drafts to identify passages that may not be readily understood by tribunal members who themselves are typically lawyers without technical backgrounds. Counsel also assist in ensuring that the experts have access to the relevant facts, including documents and data, on which to assess damages. This is often a collaborative process in which counsel provide the expert with the information they have obtained and the experts identify additional information that is necessary or useful in their assessments.

Experts, working with counsel, must communicate very complicated issues and seek to do so in clear, simple terms. It is not an easy task. Given that expert reports often address very complex topics, it can be helpful to move technical details to annexes, so that the body of the reports focus on the key issues in dispute. In some cases, it may be appropriate to consider the body of the expert report as being targeted at the tribunal, while the annexes are targeted at the other side's experts who are more interested in the details and backup calculations.

Visuals, such as charts, figures and tables, are extremely helpful presentation tools for damages issues both in the memorials and in the expert reports. The effective use of visuals demonstrates the adage that a picture is worth a thousand words. Not only do visuals break up dense text, but they can help lay readers understand technical issues. However, ineffective visuals, such as charts or tables that are not explained well, can confuse the tribunal. And, obviously, misleading visuals can readily undermine a party's case. Typically, counsel work with the experts to propose various visuals that counsel believe would be useful to include in the expert reports, which can then be duplicated in the memorials to explain and support the damages case.

Another effective tool for experts to use in their reports is to walk the tribunal through the damages case in a table that sets forth the key steps in the quantification.

It is fairly standard practice that an expert must provide copies of all documents and data on which he or she has relied. Experts should ordinarily identify the source of all data used in a particular analysis, including citations to the record. Charts, figures and tables should include precise identification of the source material, including where appropriate annexes with the actual data, methodology and calculations used.

Damages models

One of the core functions of the damages expert is to develop an appropriate model to calculate the damages.

Considerable thought must be given as to how simple or how complex the model should be. There is no clear answer that applies to every case. A simple model can be easier

for a tribunal to understand, and it can be less costly and time-consuming for the expert to develop and for the other side and the tribunal to assess. However, an overly simple model may not be sufficiently realistic or accurate. A complex model may be more applicable to the facts at issue and arrive at a more precise estimate of damages. However, an overly complex model may be more likely to contain errors, create more grounds for disagreement on less critical issues, be more costly to create and for the other side and the tribunal to assess, and be less understandable to the tribunal. Often, the ideal model is a compromise between simplicity and relevant detail that captures the key factors driving damages, without unnecessary complication that does not materially impact the results.

In some cases, issues regarding transparency arise when a damages expert seeks to use a proprietary model to quantify damages. Some experts have created their own confidential models that contain valuable work product. For example, the experts might rely on previously created models that they have refined over years of extensive (and expensive) market research, for use in consulting engagements with companies in the relevant industry. Such models could have significant value for other companies in the industry or other experts who work in that industry.

In such cases, there may be tension between the willingness (or ability) of the expert engaged by one party to disclose its model and the ability of the other party to defend itself without access to the model. Ordinarily, experts are expected or required to disclose the information on which they rely. That typically extends to the damages model used by the expert. In cases where an expert seeks to rely on a model that it is not willing or able to disclose, the tribunal ultimately may be called upon to decide how to address this tension. In some cases, limited disclosure to attorneys only may provide a viable alternative; in other cases, even that may not be appropriate or possible, or such limited disclosure may not be sufficient.

In a number of cases, one or both parties may seek to submit confidential documents, data or other information in support of their submissions. In such cases, the parties may agree on confidentiality undertakings to protect the confidential nature of the information. These undertakings can range from simple statements to detailed multi-page agreements. In some cases, the permitted recipients of the confidential information can be restricted, for example, to counsel and experts only, but there typically must be good reason for such restrictions to be imposed. If a party seeks such restrictions, compromises may be possible in which disclosure is permitted to certain designated individuals at the client, or perhaps to non-commercial employees, such as in-house counsel. In rare instances, one of the parties may seek to prevent disclosure to the damages expert engaged by the other side. This can raise serious issues regarding equality of arms. Where the parties are unable to reach agreement on the terms of the confidentiality undertakings and restrictions on disclosure, the tribunal must resolve the differences. Negotiation of such undertakings can be time consuming and costly, so it is important for the party seeking to impose such restrictions to raise the issue as early as possible.

In some cases, damages models are so simple that they can be presented in the expert report itself, either in the form of a table or annex. In many other cases, damages experts create their models as spreadsheets in Microsoft Excel or similar software. This software offers remarkable functionality to address the simplest to the most complicated models.

However, the sophistication of the software can result in spreadsheets that are virtually indecipherable to non-experts. For example, numerous 'commands' available in the software are not remotely self-explanatory and may conceal elaborate mathematical, logical, statistical or financial functions. Other functions, called 'look up' or reference functions, can be used to draw from data or calculations elsewhere in the spreadsheet or even from other spreadsheets or databases. Experts are even able to create their own functions as 'add-ins', which gives the software even greater functionality.

There are numerous 'best practices' that some advocate using in the creation of spreadsheets, although these may not be necessary or appropriate in all circumstances.

Obviously, each tab, each column and each row should contain clear headings identifying with appropriate precision the information contained therein. Moreover, the applicable unit of the data must be clearly stated; for example, the relevant currency, whether the figures are set forth in ones, thousands or millions, or the relevant unit of measurement (e.g., kg, cubic metre, kWh).

One of the most common recommendations is that the spreadsheet should clearly differentiate between the three key parts of the model: (1) the variable inputs, (2) the calculations and (3) the outputs. If the spreadsheet is designed with this structure, the hope is that the model will be easier to understand. Some models even include tabs labelled as 'Inputs', 'Calculations' and 'Outputs' to help the reader navigate through the model.

Another recommendation is that the spreadsheet should start with an instruction or cover page that provides an overview of how the model is structured and how the spreadsheet flows from tab to tab.

In some instances, the inclusion of a 'control panel' that enables the user – including the tribunal – to adjust inputs for key parameters can be extremely useful. This optional feature is discussed further below.

If used appropriately, the use of colour-coding of rows, columns or cells can significantly help the reader understand how the model works.

Consistency in the structure of the spreadsheet helps to maximise readability and minimise errors. For example, using the same structure for similar tabs (such as consistent ordering of data into columns) and using the same formulae where possible can make it much easier for the reader to understand the model.

One common recommendation is that all input data should include identification of the precise source for the data. Accurate documentation of the input data can help opposing experts identify and resolve disagreements.

Presenting hard-coded data (i.e., the numerical results of calculations that are themselves not disclosed) is generally disfavoured in the absence of some justification, as it prevents the other side's expert from understanding the underlying inputs or calculations used to derive the hard-coded entries.

It can be extremely useful for the expert to include textual comments or explanations throughout the spreadsheet to allow opposing experts and the tribunal to understand the model.

Many recommend that calculations proceed step-by-step across multiple cells, rather than the use of multiple calculations per cell. This simplification of the calculations, together with clear headings and appropriate comments, can go a long way towards simplifying the spreadsheet and enabling the reader to understand how the model works.

Whether explained in the spreadsheet itself or in the accompanying expert report, the expert should indicate if the input data has been adjusted, corrected, cleaned of outliers or typos, etc. The expert should also explain the basis for any such adjustments and, where appropriate, identify what changes were made to which data.

It is often useful for the expert to include cross-checks in the spreadsheet that automatically flag any errors and allow the reader to check the entry of data or the calculations for accuracy or to check that the output is realistic.

Another common recommendation is that the spreadsheet should, if possible, be audited by a separate team from the one that created it.

Many other 'best practices' on various technical issues regarding the creation of spreadsheets are frequently recommended to guide experts in developing effective models while minimising errors.

Although these best practices can help make a spreadsheet easier to understand, implementing them is not always easy and is far from cost-free. Many of these recommendations can take considerable additional time to implement, which is not always available and can distract the experts from other tasks and lead to a significant increase in expert fees.

Moreover, it is worth emphasising that many experts have no formal training in Excel, and some of the best experts or most accurate models may not follow these practices. To take the most basic example, simple models may not need any of these 'bells and whistles', as some may call them. However, the more complicated the model, or the larger the amount in dispute, the more likely it is that some of these recommendations may be advisable and cost-effective.

Control panels on spreadsheets

One option that can be extremely helpful for the tribunal is for one or both experts to prepare an interactive model that is set up with a 'control panel' tab in the spreadsheet that enables the user to adjust the input variables. The 'control panel' tab typically includes pull-down options (or 'radio buttons' or 'check boxes') for various inputs, or, if the expert wants to provide even more flexibility, the user may have the ability to enter a specific number. After the user selects all the required options, the spreadsheet then calculates damages on the basis of the user-selected input variables. Typically, the 'control panel' includes a summary table of the key components of the damages calculations, which are updated instantaneously as the user selects different options from the pull-down menus.

The benefit of the 'control panel' is that it allows the user to explore the impact on damages of variations in the input variables – without requiring the user to understand all (or indeed any) of the calculations in the spreadsheet. The user can also vary the input variables without fear of making mistakes or destroying the model. The 'control panel' is very user-friendly and can be greatly welcomed by the tribunal.

As a basic example, the 'control panel' might include a pull-down option for the user to select either simple or compound interest. If the user selects compound interest, another option is enabled, requiring the user to select the compounding period (e.g., annual, quarterly or daily). Another pull-down menu might ask the user to select from certain interest rates, such as the rate proposed by the claimant and the rate proposed by the respondent. Or, the expert could enable the user to choose from a longer list of options, such as LIBOR + 1 per cent, LIBOR + 2 per cent, Prime + 1 per cent and Prime + 2 per cent. If the

expert wants to provide the user with more flexibility, the 'control panel' could include a box in which the user can enter any interest rate. Or, the expert could enable the user to enter any interest rate within a certain range of realistic options. The 'control panel' could also enable the user to select start and end dates for the accrual of interest.

As another basic example, if the damages calculation requires the valuation of a company using a discounted cash flow (DCF) model, the expert could design the 'control panel' to include pull-down options for such input variables as the valuation date, the weighted average cost of capital (WACC), the cash flow assumptions (e.g., claimant's or respondent's) or the growth rate.

A 'control panel' can also include a pull-down menu to select the input data that the model uses (e.g., claimant's proposed data or respondent's proposed data).

The degree of functionality that the expert offers to the user in the 'control panel' can vary tremendously. For example, the expert can set up the 'control panel' so that certain options are disabled or 'greyed out' if the user selects another incompatible option. In the context of the interest rate example above, the expert would be likely to set up the 'control panel' so that the compounding period pull-down is disabled if the user has already selected simple interest (because no compounding period is relevant).

A 'control panel' can also include scenario options. The expert can include a selection of pre-packaged scenarios that the user can choose from a pull-down menu, such as the claimant's position on all the input variables or the respondent's position. Numerous other scenarios are possible. Depending on the design of the spreadsheet, the expert could enable the user to vary specific input variables after selecting a scenario option.

The 'control panel' might also include a reset button, enabling the user to return to the default scenario at any time.

The expert can also provide error messages or comments if certain inputs are selected. So, if the user entered a start date for the accrual of interest that pre-dated the date of the breach, the spreadsheet could be set up to display an error message explaining why the input value is not possible.

A 'control panel' can even be set up to track an agreed list of issues in dispute prepared by the parties. For each issue on the list, the 'control panel' of the spreadsheet can set forth the various options available to the tribunal for each issue in dispute (whether through a pull-down menu or the ability to enter a specific number within a particular range). After the tribunal has deliberated and decided on how it will decide each of the issues in dispute, it can enter its determinations into the 'control panel' and immediately see the resulting damages calculation.

Joint models

In some cases, the parties or the tribunal may explore the possibility of the damages experts submitting a joint report. The idea behind a joint report is to identify areas of agreement and disagreement and, if possible, to encourage the experts to reach agreement on the model that they use. Sometimes the tribunal might request the parties to instruct their experts to work on preparing a joint model that offers certain functionality to facilitate the tribunal's calculation of damages.

Again, this may raise significant questions regarding costs and potential delays.

Obviously, it is not always possible or worthwhile to pursue a joint model. For example, in some cases, the damages experts may have created two entirely different models. The structure of the two models may be so different that there are not easy ways for one expert to adapt its model to accommodate different assumptions by the other side's expert. If the experts were instructed to prepare a joint model, in such a case, it might merely consist of copying the two distinct models into one spreadsheet.

However, even that may be of some benefit to the tribunal in some cases. Among other things, it might enable the tribunal to more easily compare the two models, particularly if there is a joint 'control panel' tab that allows the tribunal to calculate damages under both models based on the same key input variables. It can also be useful to determine why the different models reach different conclusions. The key differences may be identified more easily.

Resolving differences between the parties' damages experts

One of the most difficult aspects of damages disputes is to identify, understand and resolve the differences between the experts. The resolution of these differences is ultimately the responsibility of the tribunal tasked with rendering an award resolving the dispute before it. However, the parties – through their counsel and experts – can play an important role in assisting the tribunal in this regard. There are a number of techniques that can assist the tribunal, but first it is necessary to understand the scope of potential differences between the experts.

Understanding the assumptions and methodologies

The different assumptions that experts make can lead to differences in the way the experts construct their models and in the inputs that they enter into their models, resulting in different outputs and therefore different damages calculations. Experts may make different assumptions for any number of reasons, including:

- education or training;
- experience on other matters;
- lack of experience on similar matters;
- communications with the client or counsel about facts and law;
- formal instructions received from counsel;
- understanding of the applicable contracts, treaties or other legal instruments based on commercial or other experience of the experts;
- review of documents, data or other evidence formally introduced in the case (such as witness statements);
- review of documents, data or other evidence provided by the client or counsel but not submitted in the case; and
- review of publications or documents obtained elsewhere.

Frequently, experts make assumptions that are not stated. Their silence can be intentional or inadvertent. Indeed, in some instances, experts may not even realise they are making certain assumptions that may prove to be unfounded or, at a minimum, subject to disagreement. For example, an expert may assume a certain fact as a given based on discussions with the client or counsel, yet the other expert has assumed a different possibility. These differences

can often be difficult to identify, as they are not explained in the expert reports and can often only be ascertained upon close examination of the damages model. Such details can be buried deep in an Excel spreadsheet, particularly if its design is not consistent with best practices. This is why experts are encouraged to state all assumptions in their reports to minimise the risk of such unstated assumptions.

In addition to different assumptions, experts frequently disagree on the methodologies they employ. Experts may disagree on the appropriate methodology for many of the same reasons identified above based on their experience, communications with or instructions from the client, and understanding of the applicable law and facts. The experts may also disagree on the level of simplification or complexity appropriate in the model.

At its most basic, the experts may disagree on the applicable methodology because they are seeking to answer different questions. It is therefore important to confirm whether the experts are assessing damage to the same thing (such as the whole company, a specific business unit or particular assets), whether they are assuming the same key dates (such as date of breach or valuation date) and whether they are on the same page in other key respects.

Key differences between the experts

Experts can and do disagree on any number of issues. To give a few examples, experts often disagree about:

- the timing of key events, the duration of the events causing the damage and whether the damage is ongoing or temporary;
- the assumptions underlying the 'but-for' scenario – what would have happened without the damaging conduct;
- estimates of future cash flows or growth rates;
- the appropriate discount rate;
- whether to rely on information or data after a certain date (such as the valuation date) and if so what weight to give that information;
- the appropriate statistical approaches, including such basic issues as the use of the arithmetic mean or the median;
- the level of statistical significance appropriate for the analysis;
- the appropriateness of various benchmarks or comparators and whether adjustments should be made to benchmarked data and, if so, which ones;
- the applicability of interest and how it should be calculated;
- the proper treatment of currency conversion issues; and
- the proper treatment of tax issues.

Many of these issues are addressed in other chapters in this publication.

The importance of accurate, robust data

Another area for significant disagreement between the experts can be the underlying data that they input into the damages model. In some instances, it is relatively easy to determine whether the experts are using the same data. In other instances, that requires further investigation.

Another area for disagreement between the experts is the extent to which the data must be cleaned or corrected before being entered into the model. Many are familiar with the

acronym GIGO, meaning Garbage In, Garbage Out. If the input data is not accurate, the output will not be meaningful, regardless of the sophistication of the model.

To take an example, assume that the input data consists of sales data from the company or from some third party (e.g., aggregate data collected by a government statistical agency or a third-party commercial vendor). If the data has not been assessed for the inclusion of possible errors, the model may produce distorted, or even nonsensical, output.

Experts must assess whether the input data needs to be cleaned of errors, outliers, impossible or unrealistic data, etc. The question then turns to how best to determine which data points are errors or outliers. Errors or outliers can be identified manually, through sampling or other methods, and the most appropriate method must be assessed in the circumstances. This depends on the exercise of judgement by the experts, who may disagree on the need to remove or adjust data points and the proper method for identifying them. Moreover, experts can disagree on what to do with the data points identified. For example, should the outliers be removed from the data set or corrected? To identify any such differences between the experts in their approaches to the underlying data, it is important for each expert to indicate clearly in the expert reports what steps have been taken in this regard and to explain the reasons and process undertaken.

A related issue is the extent to which the experts agree on the appropriateness of making adjustments to certain data, such as comparative benchmarks, to account for differences between the target and the comparators. The appropriateness of such adjustments and the specific adjustments to be made again require judgement on the part of the experts. In any event, it is important for the experts to identify any such adjustments made and provide explanations of the reasons for them in the export reports.

Procedures and techniques to assist in understanding the experts' analysis

There are numerous procedures and techniques, some of which are discussed below, that can assist the tribunal in understanding and resolving the disagreements between the damages experts. Many are directed at understanding how the experts' analysis would change using other data or assumptions (such as data or assumptions relied on by the other expert or as instructed by the tribunal). Of course, a well-designed damages model (perhaps including a 'control panel'), in conjunction with a clear expert report persuasively explaining that model and the reasons for the expert's disagreement with the other expert, may be the most effective technique.

Sensitivity analysis

A common technique that can be used to demonstrate the impact of certain variables on the damages calculation is sensitivity analysis. Put simply, sensitivity analysis can show the impact on damages (or even the impact on a specific component of the model) based on the increase or decrease of an input variable by certain percentages or absolute values. The approach offers several potential benefits.

First, as its name suggests, sensitivity analysis is used to demonstrate the sensitivity of the model to variations in a key input. This helps to demonstrate which inputs are the most important drivers in the model and which are not. This can be extremely useful to enable the experts – and ultimately the tribunal – to focus on the key input variables that truly matter for the damages calculation. It may well be that the experts disagree on any number

of input variables in the model, but not all are equally important to the damages calculation. Some may simply have no material impact and can, in appropriate circumstances, be disregarded or at least given less attention than the key input variables. Of course, if the experts disagree about a number of less significant input variables, the collective impact of those variables can matter greatly. And, of course, there can be disagreements between the parties and experts as to what significant or material really means. That can depend on the amount in dispute: a $1 million variation in damages could be material in a smaller dispute but would be far less determinative in a billion-dollar dispute.

Second, sensitivity analysis can help to demonstrate the numerical range of possible outcomes (e.g., minimum and maximum values) based on reasonable variation of the particular input variable. Identifying this range can assist in narrowing the scope of the disagreements between the experts.

Third, sensitivity analysis can be used as an effective presentation tool to readily display the various damages calculations based on the specific values of the input variable that have been proposed.

A sensitivity analysis can often be presented effectively in a table in the expert report with the options for the input variable set forth in the first column and the corresponding damages calculations set forth in the second column. The results of a sensitivity analysis can also be presented in a chart depicting the line or curve representing the relationship between the input variable and the damages calculation, with the input variable depicted on the x-axis and the resulting damages figures displayed on the y-axis. The more sensitive damages are to the input variable, the steeper the line will be.

Fourth, sensitivity analysis can be used to identify potential flaws in the model where the output is unrealistic based on a reasonable variation in the input variable.

One common use of sensitivity analysis is to show the extent to which a DCF analysis varies depending on the discount rate (i.e., the WACC used). An expert can use sensitivity analysis to demonstrate that increasing or decreasing the WACC can have a multimillion-dollar impact on the damages calculation, with specific calculations for each option.

There are many other input variables that can be assessed using sensitivity analysis, including the applicable interest rate, the growth rate (such as the terminal growth rate of a DCF model), profit margins, tax rates and many more on which the experts might disagree. However, attention must be paid to whether the variables are interrelated.

It is also possible to present the results of more complex sensitivity analyses in a matrix displaying the possible variations of the first input across the columns and the possible variations of the second input across the rows.

Of course, like most techniques, sensitivity analysis is subject to limitations and can be misused or ineffectively deployed. The variations in the input variable must be reasonable for the outcome of the sensitivity analysis to have meaning. In some cases, parties or experts will include a sensitivity analysis with extreme or unlikely examples meant to convey the impression that the model is more sensitive to variation in output than it really is when reasonable variations in the inputs are used. Or, conversely, parties or experts will present sensitivity analysis with unrealistically narrow variation in the input variable in an effort to convey the opposite impression.

Sometimes, parties or experts may structure the sensitivity analysis to leave the impression with the tribunal that the midpoint of the range is the most reasonable, but this depends on whether the variation in the input variable is equally reasonable in both directions.

A potentially useful variation is scenario analysis in which scenarios that vary multiple input variables as a package are analysed and compared. For example, one type of scenario analysis would be to present the best case, worst case and most likely case. It is also possible to assign probabilities to each scenario and to weight the outcomes to present a weighted damages calculation based on all of the scenarios considered. Again, however, such analyses have limitations.

There are other related, far more complicated analyses beyond the scope of this chapter that can be used to study the model.

Pre-hearing meetings of experts

Another procedural technique that is often considered is a pre-hearing meeting between both experts. Although not appropriate in all arbitrations, the idea is that such meetings may facilitate the identification of areas of disagreement that can be narrowed through more informal discussions or areas of agreement that have not been clearly identified or realised. Prior to any such meetings, the experts' communication is likely to have been limited to the exchange of written expert reports, and they may feel like they are 'writing' past each other. Sitting down together in an effort to identify and understand the basis for any disagreements may prove to be extremely valuable.

If such a meeting is agreed by the parties or directed by the tribunal, it is important to arrange the procedure in advance so both experts – and the parties and their counsel – have a common understanding of how the meeting will occur. Advance preparation can also maximise the likelihood that the meeting is productive. When to schedule the meeting, or indeed how many meetings to arrange, are important first steps that depend on the circumstances of the case.

Frequently, the parties agree or the tribunal directs that such meetings will occur on a without prejudice basis, with the objective to foster open discussion. However, it is not uncommon for such meetings to be viewed as an unwanted exercise by some and a distraction from more pressing demands, such as hearing preparation if the hearing is scheduled to follow closely thereafter.

Often, the question arises whether the experts should meet with or without the presence of counsel. There are pros and cons to both approaches, but in either case the role of the expert and the purpose of the meeting must be clearly defined and clearly understood. Experts are not authorised by the clients that have engaged them to settle aspects of the dispute or to make binding commitments; rather, the experts have been engaged to assist the parties and the tribunal in understanding the damages aspects of the case. They cannot formally resolve the issues on behalf of the parties because they do not represent the parties in that capacity.

Experts do not run cases on behalf of the clients that engaged them, nor do they necessarily know all aspects of the case. Often, experts have limited roles or roles that do not perfectly correspond with that of their colleagues.

There are often reasons why the parties and their counsel favour the presence of counsel at the expert meetings to understand the issues being discussed and how they impact

the case and to offer guidance on the relevance of legal or factual issues that the experts may not know. It is often true that the experts themselves prefer counsel to attend as well, particularly if they are unfamiliar with the process or uncertain about their roles.

There can be further complications with arranging a joint meeting of the experts in cases in which there are multiple experts for one or both parties and the experts do not necessarily line up on similar issues. One possible solution is to arrange for all the experts to attend, but such meetings can become more burdensome, costly and less efficient.

List of agreed and disagreed points

Building on the idea behind pre-hearing meetings of the experts is the related procedural technique of asking or directing the experts to prepare a list of the key points on which they agree or disagree. As with pre-hearing meetings, there are differing views among parties, counsel and experts as to the benefits of such a task. For some, the feeling is that the experts have expressed their opinions in their written submissions, and it is unreasonable to expect the experts to change these opinions simply by working with their counterparty to prepare a list of agreed and disagreed points.

Before determining whether such steps are likely to be productive, it is important to consider the time and cost of pre-hearing meetings or lists of agreed and disagreed points. As noted, these steps may significantly distract the experts from other responsibilities, including preparation for the hearing.

These techniques can be effective if the parties, their counsel and experts believe that there is likely to be room for further agreement on key issues, or if the scope of disagreement is not yet clearly identified in the expert reports. In contrast, in cases where the experts are far apart or have radically different approaches, these techniques may be distractions.

Too often, the experts are so far apart on their positions that the experts end up listing issues of secondary or tertiary importance simply to find some room for agreement. The exercise can risk losing its purpose in such circumstances.

Joint reports

Taking the idea of joint lists one step further, in some cases, tribunals have proposed the possibility of a joint report prepared by both experts. In some instances, the joint report would be submitted prior to the hearing; in others, it would be submitted after the hearing. The primary objective in both situations is to encourage or enable the experts to narrow the scope of disagreements.

The considerations to take into account before proposing a joint report are similar to those discussed above, with the added concern that a joint report is likely to add significantly to costs and delay.

Expert presentations

An effective procedural technique that is used in many cases is the submission of expert presentations at or before the hearing. These expert presentations are often prepared as Microsoft PowerPoint slide packs, which are presented orally at the hearing in lieu of direct examination. The key benefit of expert presentations following the exchange of expert reports is that each expert can summarise his or her opinion on damages issues and

highlight the areas of agreement and disagreement from his or her perspective. It is often critical to allow experts to summarise their key positions and update the tribunal on developments at the time of the hearing.

If such presentations are to be made, it is important to reach agreement on the procedures in advance. For example, questions arise as to when the experts should submit written copies of the slide packs – at the hearing or in advance – and whether such presentations should be exchanged simultaneously. Other issues to consider are whether to restrict the time allowed for oral presentation. Often, these issues are left to the parties to allocate their time as they best see fit, taking into account guidance from the tribunal about what it would find most beneficial from its perspective.

Many parties, counsel and experts believe that expert presentations are time well spent. They offer the experts an ability to present often very complex concepts with the support of visuals such as charts, figures, tables, and occasionally even the spreadsheets themselves in which they have created their models. For example, in some cases, it is extremely useful to have each expert walk through the organisation and functionality of its model.

Typically, the tribunal is encouraged to ask questions during the oral presentations, but counsel and experts are not. Rather, counsel typically are expected to save questions for cross-examination, and experts are expected to wait until expert conferencing, if agreed.

Expert conferencing

It has become increasingly common for the parties to agree or for the tribunal to direct that the experts appear before the tribunal for questioning simultaneously, a technique generally referred to as expert conferencing and colloquially called 'hot tubbing'. The objective is to provide an opportunity for the tribunal to hear from both experts at the same time, where the tribunal members and counsel can ask both experts questions and allow the experts to respond and react to each other.

Again, if expert conferencing is agreed, it is important to establish the specific procedures in advance. This includes agreement on the order of expert conferencing at the hearing. Typically, expert conferencing is scheduled to occur after expert presentations and cross-examination by counsel have occurred. The idea is that differences between the experts' positions will be clearer and more defined following cross-examination. Agreement should also be reached on how much time to devote to expert conferencing and how that time will be allocated between the parties. Typically, it is allocated equally to both parties.

Other procedural issues to consider are whether the tribunal intends to identify in advance the areas of discussion that it expects the experts to discuss and whether expert conferencing will proceed topic-by-topic or all topics at once. It is often useful for the tribunal to prepare a list of questions in advance and, in some cases, to provide the list to the experts in advance. In addition, it is important to determine who is permitted to ask questions during expert conferencing: the tribunal members or counsel for the parties, or both.

If expert conferencing is arranged, it almost always should be in addition to expert presentations, where appropriate, and cross-examination by counsel. Expert conferencing is intended to achieve different objectives from presentations and cross-examination and should not be used be instead of the right of the parties to present their case through experts and to cross-examine the expert engaged by the other side.

As with pre-hearing meetings of experts, it is not always clear which experts line up on similar issues, further complicating the procedure. If there are multiple experts on one or both sides, expert conferencing with all experts heard simultaneously could become unwieldy.

Tribunal-appointed experts

Another procedural technique that some tribunals consider is whether to engage a tribunal-appointed expert to assist the tribunal in resolving disagreements between the party-appointed experts. Given the significant expense and delays that this can create, careful consideration should be given to the likely advantages and disadvantages.

Parties, counsel and party-appointed experts often have significant reservations about the utility of a tribunal-appointed expert. These may include concerns regarding how much influence the tribunal-appointed expert may wield in resolving damages issues. It is important that the tribunal, appointed by the parties pursuant to the agreed appointment procedure, resolves the parties' dispute and not a tribunal-appointed expert.

There are also often significant concerns on the part of parties about whether the tribunal has identified the right expert for the dispute. Concerns have been raised by parties that the tribunal's selection of the tribunal-appointed expert may inadvertently dictate the outcome, for example, if the expert holds certain views (e.g., majority or minority views) on the key damages issues in dispute.

The role of the tribunal-appointed expert should be clearly defined in advance. The tribunal-appointed expert might be engaged to produce a report commenting on the positions taken by the party-appointed experts (i.e., a third view on the damages issues in dispute). In some cases, tribunals have engaged tribunal-appointed experts solely for purposes of implementing the tribunal's decision to ensure that it has properly applied the model in light of the tribunal's conclusions.

The process must be clearly defined, including what information will be provided to the tribunal-appointed expert, what opportunity the tribunal-appointed expert will have to request further information, what timetable the tribunal-appointed expert will operate on and whether the tribunal-appointed expert can communicate privately with the tribunal. The precise terms of the tribunal-appointed expert's instructions should be discussed and agreed in advance.

The parties must have an opportunity to provide comments on the proposed expert before appointment, after being provided with background materials setting forth the proposed expert's education, expertise, and experience, and other relevant disclosures, including a statement of independence and impartiality.

If a tribunal-appointed expert is engaged, the parties must also have a full opportunity to be heard. That includes allowing the parties and their experts to respond to any expert report submitted by the tribunal-appointed expert. That also includes allowing the parties to cross-examine the tribunal-appointed expert at the hearing. That may also extend to permitting the party-appointed experts to ask the tribunal-appointed expert questions. The party-appointed experts should also have the opportunity to comment on the tribunal-appointed expert's work at the hearing. It may also include the involvement of the tribunal-appointed expert in expert conferencing at the hearing.

On a related point, some have raised the question whether a tribunal can appoint an administrative secretary for quantum issues, with the individual having relevant quantitative skills. This may raise some of the same issues discussed above. Moreover, this raises concerns about the proper role of a tribunal secretary, who is supposed to be administrative in function, and whether the secretary is delegated with decision-making power on a *de facto* basis.

Another related technique would be for the tribunal itself to engage with its own damages model. This can have significant negative consequences for one or both parties. The model can be flawed – ranging from simple mathematical errors with significant consequences to fundamental errors in the methodology employed. The assumptions can be flawed or incompatible with the model. The model or the assumptions can be incompatible with the commercial relationship between the parties.

To the extent the tribunal seeks to pursue its own model, it is critical that the parties and experts have the opportunity to review and comment.

Conclusion

In order to maximise the effectiveness of expert assistance on damages issues, the parties and the tribunal can consider a wide variety of techniques and approaches. The potential benefits should be weighed against the potential costs, delays and distractions. Advance planning and discussion of the procedures is important to reach agreement on which are best suited for the particular arbitration and how they will be applied. When used appropriately, these techniques and procedures can help the tribunal understand the parties' respective damages cases and resolve the parties' differences in a fundamentally sound manner, while reducing the risk of conceptual, computational or other errors in the ultimate award.

Appendix 1

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John A Trenor is a partner at Wilmer Cutler Pickering Hale and Dorr LLP in the firm's international arbitration practice group. Mr Trenor has represented companies, states, state-owned entities, international organisations and individuals in a wide variety of disputes in the aviation, defence, financial services, oil and gas, pharmaceuticals, technology, telecommunications and other industries. He has advised clients regarding commercial, investor-state and state-to-state arbitrations seated in common-law and civil-law jurisdictions worldwide under virtually all the major institutional, as well as *ad hoc* rules, including ICC, LCIA, AAA, SCC, VIAC, ICSID, UNCITRAL and others. He has extensive experience in matters regarding public and private international law, including such areas as investment protection, state responsibility, reparations, territorial sovereignty, sovereign immunity, the law of treaties, the law of the sea, conflict of laws and extraterritoriality.

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