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What does a Court or Tribunal want (and not want) from a party-appointed quantum expert witness: perspectives from a practising expert and arbitrator

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In a recent article[1] the well-known and respected barrister Paul Darling QC gave this advice to disputants when selecting expert witnesses:

> *'Get the best expert you can. He (or she) must be highly expert in relation to the issues upon which he has been asked to give an opinion. He must fully and properly understand the role of an independent expert, study the rules about giving expert evidence and be both willing and able to comply with them…Over the years I have seen some expert witness disasters…And I have seen some absolutely brilliant ones. Thorough, fair, balanced, courteous and assured and who did not put a foot wrong. At the risk of repetition, get the best expert you can, ensure he understands his role and complies with the rules and jealously guard his independence. He will be your best weapon.'*

I could not agree more. And that is exactly the type of expert that a judge or arbitrator wants before them. I could stop there, but this would make for a very brief paper. Instead, I shall explore in more detail what is required of party-appointed quantum experts in particular, after first briefly considering the legal framework underpinning the above guidance.

When I first testified in court as an expert witness in the mid-1990s the oft-recited judgment relating to the duties of an expert witness, *The Ikarian Reefer*[2], had only recently been handed down. In that case, Mr. Justice Cresswell identified the following requirements[3]:

1. Expert evidence should be and should be seen to be the independent product of the expert uninfluenced by the exigencies of litigation.
2. An expert witness should provide independent assistance to the Court by way of objective unbiased opinion in relation to matters within his expertise and should never assume the role of advocate.
3. An expert witness should state the facts or assumptions on which his opinion is based. He should not omit to consider material facts which detract from his concluded opinion.
4. An expert witness should make it clear when a particular question or issue falls outside his expertise.
5. If an expert's opinion is not properly researched because he considers that insufficient data is available, then this must be stated with an indication that the opinion is no more than a provisional one.
6. If after exchange of reports, an expert witness changes his view on a material matter such change of view should be communicated to the other side without delay and when appropriate to the Court.

[1] 'Experts – Triumph or Disaster?' (https://pauldarlingqc.co.uk/fourth-article-experts-triumph-or-disaster/)
[2] *National Justice Compania Naviera SA v Prudential Assurance Company Ltd ('The Ikarian Reefer')* [1993] (No.1) 2 Lloyd's Rep 68
[3] At 81

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7. Where expert evidence refers to documents these must be provided to the opposite party at the same time as the exchange of reports.

These requirements have stood the test of time and remain valid. Recently, in *ICI*[4] Mr. Justice Fraser confirmed that:

> *'No expert should allow the necessary adherence to the principles in The Ikarian Reefer to be loosened."*

In England and Wales, the Civil Procedure Rules ("CPR") Part 35 confirms[5] that it is the duty of experts to help the court on matters within their expertise and this duty overrides any obligation to the person from whom experts have received instructions or by whom they are paid. It also confirms that an expert's report must comply with the requirements set out in Practice Direction 35 ('PD35'), which broadly reflect the principles set out in *The Ikarian Reefer*[6]:

1. Expert evidence should be the independent product of the expert uninfluenced by the pressures of litigation.
2. Experts should assist the court by providing objective, unbiased opinions on matters within their expertise, and should not assume the role of an advocate.
3. Experts should consider all material facts, including those which might detract from their opinions.
4. Experts should make it clear: (a) when a question or issue falls outside their expertise and (b) when they are not able to reach a definite opinion, for example because they have insufficient information.
5. If, after producing a report, an expert's view changes on any material matter, such change of view should be communicated to all the parties without delay, and when appropriate to the court.

Many (but not all) jurisdictions have similar standards. Unfortunately, however, too many cases are still being reported in which experts have fallen below the required standard. There are likely to be many more examples in arbitration awards which, for reasons of confidentiality, remain outside of the public domain.

The declarations and statements of truth required of expert reports filed in the Civil Courts of England and Wales[7] have changed over the years in an attempt to focus the minds of experts (and those instructing them) of their duties, with the aim of improving the quality of expert opinion evidence before the courts. The most recent change to PD35—which took effect on 1 October 2020—illustrates just how seriously the issue is being taken. Experts are now required to include the following at the end of their statement of truth:

> *'I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth."*

Only time will tell if this latest requirement results in a lower number of experts who are subject to judicial criticism in the courts of England and Wales, although it certainly ought to focus the mind of any expert who may be tempted to depart from the required standards.

[4] *Imperial Chemical Industries Limited v Merit Merrell Technology Limited (No. 2 Quantum)* [2018] EWHC 1577 (TCC) (at 237)
[5] Part 35.3
[6] Practice Direction 35 [2[('Expert Evidence – General Requirements')
[7] Practice Direction 35 [3] ('Form and Content of an Expert's Report')

With that background I shall now explore in more detail what a court or tribunal wants from party-appointed expert witnesses and quantum experts in particular, based on relevant authorities and my experiences, under the following sub-headings:

1. Independence and compliance with 'the rules'.
2. Relationship with instructing party.
3. Parity of instructions.
4. Access to the same information.
5. Addressing the cases of both parties.
6. Dealing with disputed fact or law.
7. Joint statements and the narrowing of issues.
8. Sampling.
9. General attributes.

Independence and compliance with 'the rules'

The primary requirement of a court or tribunal must be for the expert to comply with the applicable rules and, crucially, provide independent opinion evidence. In the Civil Justice Council's 'Guidance for the instruction of experts in civil claims', it states that[8]:

> *'A useful test of 'independence' is that the expert would express the same opinion if given the same instructions by another party. Experts should not take it upon themselves to promote the point of view of the party instructing them or engage in the role of advocates or mediators."*

Expert evidence which falls below the standard required is of no assistance to a judge or arbitrator, and ultimately it is of no assistance to the appointing party.

Let us look at a few extreme cases—or 'disasters' Mr. Darling QC bluntly puts it.

Just two years after the judgment in *The Ikarian Reefer* Mr. Justice Laddie handed down his judgment in *Cala Homes*[9], in which he referred to an article that had previously been published by an expert instructed by one of the parties, in which he wrote:

> *'...the man who works the Three Card Trick is not cheating, nor does he incur any moral opprobrium, when he uses his sleight of hand to deceive the eye of the innocent rustic and to deny him the information he needs for a correct appraisal of what has gone on. The rustic does not have to join in: but if he chooses to he is 'fair game'. If by an analogous 'sleight of mind' an expert witness is able so to present the data that they seem to suggest an interpretation favourable to the side instructing him, that is, it seems to me, within the rules of our particular game, even if it means playing down or omitting some material consideration. 'Celatio veri' is, as the maxim has it, 'suggestio falsi', and concealing what is true does indeed suggest what is false; but it is no more than a suggestion, just as the Three Card Trick was only a suggestion about the data, not an outright misrepresentation of them..."*

Suffice to say the judge did not accept that expert's interpretation of the rules, or his evidence.

[8] At 11
[9] *Cala Homes (South) Ltd and Ors v Alfred McAlpine Homes East Limited* [1995] EWHC 7 (Ch)

Also in 1995 a technical expert—who would later appear as an expert witness instructed by the defendant in *Anglo Group*[10]—wrote a paper from which the trial judge recited the following excerpt in his judgment:

> *'…an expert witness appointed under current procedure is under no duty to the court as an expert…My duty as an expert was simply to help my client win his case on the facts as defined in the statement of claim on truthful expert evidence that I had compiled, examined and presented—nothing more…It does not mean that an expert must be impartial as demonstrated by the fact that if asked the same question by either party he would give the same answer".*

In the same case a quantum expert from the same firm as the technical expert also appeared for the defendant. The judge found[11] that:

> *'…with some embarrassment…[his first report]…was written to support the defence and counterclaim…and prepared 'as a negotiating tool based on representation primarily of Winther Brown. It was not made as an expert witness report and had never intended as such'… Subsequently he said he wrote the second report as an independent expert. It relied on the unrealistic and inflated assumptions of the first report…"*

Unsurprisingly, the judge decided that both experts had failed to conduct themselves in the manner expected of an expert witness and rejected their evidence.

More recently, in *Van Oord*[12] Mr. Justice Coulson (as he then was) concluded as follows in relation to the evidence of the claimant's quantum expert:

> *'I endeavoured to give [him] the benefit of the doubt, particularly given his frank admission that he had not previously prepared a written expert's report or given evidence in the High Court, and because I was aware that he was dealing with a serious illness in his family. His abrupt departure from the witness box at a short break for the transcribers, never to return, was an indication of the undoubted stress he was under. But I regret to say that I came to the conclusions that his evidence was entirely worthless. There were a total of twelve different reasons for that conclusion.*
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> *…I consider that [he] allowed himself to be used, whether wittingly or otherwise, by…those with the most to gain in this litigation…to act as their mouthpiece. It was almost as if they were trying to see how much of their claim they could get past [him], and then [Allseas' expert], and ultimately the Court. It made a mockery of the oath which [he] had taken at the outset of his evidence…*
>
> *For all these reasons, I am bound to find that [he] was not independent and his evaluations (to the extent that he did any independent valuations which were relevant) were neither appropriate nor reliable. I am obliged to disregard his evidence in full."*

The twelve reasons given by Coulson J were damning and demonstrated that the expert had failed to comply with any of the general requirements of CPR PD35. I will return to some of these.

[10] *Anglo Group PLC v Winther Brown & Co. Limited and Others* [2000] EWHC Technology 127 (at 116)
[11] At 123
[12] *Van Oord UK Limited & Anor v Allseas UK Limited* [2015] EWHC 3074 (TCC) (at 80, 93 and 94)

Two years later, in *Bank of Ireland*[13] Coulson J was again highly critical of a quantum expert's lack of independence:

> *'…I concluded on the evidence that [he] was not a properly independent witness…borne out by many things: his unrealistic approach to the allegations; his attempt to mislead the court; his application of the wrong test; his unreasonable intransigence which led to his refusal to make any concessions whatsoever; and the fact that many of his criticisms, which he did not withdraw, were so unpersuasive…For him, it might be said that The Ikarian Reefer was a ship that passed in the night…"* (emphasis supplied)

The same year, Fraser J handed down his judgement in *ICI*[14], in which he was highly critical of all experts called by the defendant:

> *'I have considered each of the expert disciplines separately, and specifically not allowed my conclusion on any expert to impact upon my assessment of the evidence of any of other others in this respect, which has been reached independently of my conclusions on others. It is, however, the case that my considered conclusion on each of ICI's experts is that their evidence is not sufficiently independent of the party who has instructed them, and that the evidence of their opposite numbers is to be preferred…*
>
> *I do not know whether this preponderance of lack of independence on the part of a number of experts called by ICI is a coincidence. If it is a coincidence, it is a remarkable one. Whether it is coincidental or not, of those involved at the time, one important independent…person involved in the project was Mr Barton. His views, which have the evidential weight that I have explained, have been roundly ignored by ICI and by ICI's experts…The only other independent evidence is from MMT's experts…*
>
> *It is…a matter of concern that in a TCC case, with the sums are stake exceeding 10 million, there should be such a preponderance of partisan experts, all called by the same party."*

Contrast those examples with Mrs. Justice Jefford QC's evaluation of an expert instructed by the defendant in *Russell*[15]:

> *'…[he] was an impressive expert witness. He is qualified as a chartered construction manager, chartered quantity surveyor and chartered civil engineering surveyor. He had lengthy experience as a project manager on residential and commercial projects and with contractors. His evidence was fair and balanced and appeared to have been thoroughly researched. He also sought to ground his expert opinion in the facts of this case and not to be distracted by hypothetical scenarios that were put to him…"*

He is plainly the sort of expert that a judge or tribunal would want before them.

Relationship with Instructing Party

The requirement for an expert to provide independent opinion evidence does not mean that he or she must necessarily be independent of the party retaining him; it is their opinion evidence that must be independent and unbiased. However, where a pre-existing relationship exists, an expert should consider carefully whether a conflict of interest arises and, if not, whether he is able to give objective unbiased evidence before taking instructions. Where an expert

[13] *The Governors and Company of the Bank of Ireland & Anor v Watts Group PLC* [2017] EWHC 1667 (TCC) (at 59)
[14] See *supra* note 4 (at 233 *et seq.*)
[15] *Mr. and Mrs. Russell v Peter Stone (trading as PSP Consultants) and Anor* [2019] EWHC 831 (TCC) (at 13)

properly agrees to act, the expert must still take care to ensure that their evidence is not tainted with bias, whether unconscious or otherwise.

For example, in *Russell*[16], Jefford J said this of the quantum expert retained by the claimants:

> *'What emerged from his evidence was that for about 5 months from November 2013 to March 2014, he had acted as a "Client Representative" for [the claimants]. His evidence was that it was not a "formal" appointment and arose at a time when [they] were having problems with the contractors…He had, therefore, to that extent been involved in the continuation and completion of the project…and, however informal the role, he had invoiced for that work. That was obviously relevant and I can see no satisfactory explanation for his failure to mention this role in his report but rather declaring that he had no other relationship with the claimants (which was factually wrong). I do not, however, think that it would be fair or realistic to dismiss [his] evidence simply on the basis that he lacked independence. He was still capable of expressing an independent view on the matters on which he was asked to opine. However, it does seem to me that it may have led [him] on occasion to try too hard to advance the claimants' case and I bear this in mind when assessing his evidence."*

Coulson J's rejection of a quantum expert's evidence in *Bank of Ireland*[17] was more pointed, which, in part, appears to have reflected the judge's concerns of the expert's very close commercial relationship with the claimant:

> *'…it was clear that the Bank was his principal client, providing the vast majority of his work (and fees), and that he had spent most of the last few years acting for the Bank as an expert witness in actions against monitoring quantity surveyors arising out of the 2008-2009 financial crash. He told me that, until now, these had all been resolved by ADR, so that this was the first of those disputes which had come to court. He was, I think, unaware of the difference between acting as the Bank's advocate in, say, a mediation, and his duties to the court when giving expert evidence".*

"Many (but not all) jurisdictions have similar standards. Unfortunately, however, too many cases are still being reported in which experts have fallen below the required standard. There are likely to be many more examples in arbitration awards which, for reasons of confidentiality, remain outside of the public domain."

Parity of instructions

Having been given leave to call expert opinion evidence it normally falls upon the parties' representatives to formulate detailed instructions for their respective experts, although prospective experts are often asked to assist in identifying the issues upon which expert opinion may be required, and on occasion the tribunal may take a more active role in determining the issues for the experts.

Inconsistencies in instructions between experts of the same discipline is unhelpful, not least because it can impact upon the level of engagement between opposing experts, reduce the potential for the narrowing of issues and ultimately result in hearing time and associated costs being incurred which

[16] See *supra* note 15 (at 12)
[17] See *supra* note 13

might otherwise have been avoided. It might also reduce the possibility of an early settlement between the parties.

As an arbitrator I would want experts of like disciplines to take an active role in identifying such inconsistencies at the earliest opportunity and seek a resolution with those instructing them.

Access to the same information
In *ICI*[18], Fraser J said:

> *'Experts of like discipline should have access to the same material. No party should provide its own independent expert with material which is not made available to his or her opposite number."*

Where an expert has access to evidence that is not disclosed but which is relevant, the expert should seek early instructions with a view to ensuring that such information is made available to the opposing expert.
In *DBE*[19] the judge noted this in relation to the claimant's accountancy expert:

> *'...[she] made reference on a number of occasions in her report and in her oral evidence to information she had received from DBE that was not in witness statements or documents before the court. She did not appear to appreciate that there was any issue with this approach and it can only be inferred that DBE's legal team did not alert her to the fact that she could not properly rely on such evidence in arriving at her expert opinions."*

Disputed fact or law
In *ICI*[20] Fraser J said:

> *'Where there is an issue, or are issues, of fact which are relevant to the opinion of an independent expert on any particular matter upon which they will be giving their opinion, it is not the place of an independent expert to identify which version of the facts they prefer. That is a matter for the court."*

The same applies to points of law.

In relation to ICI's quantity surveying expert in particular, the judge said[21] that he had:

> *'...took a position on what is an issue of fact and law for the court, that it is not within the sphere of an expert witness to do."*

In the same case, the judge was also critical of ICI's accountancy expert and his instructions. His instructions were criticised[22] because they:

> *'...clearly sought to have [him] give his opinion on causation to the court...Given these were his instructions, it is difficult to criticise him unduly for following them, although the way in which he did so can, as will be seen, justifiably be criticised. Criticism is however justified for the instructions themselves. Whether losses flowed from a repudiation and other similar matters of causation in this case are matters for the court. They are not matters for accountancy expert evidence..."*

As to the way in which the expert went about his instructions, the judge said[23]:

[18] See *supra* note 4 (at 237)
[19] *DBE Energy Ltd v Biogas Products Ltd* [2020] EWHC 1232 (TCC) (at 35)
[20] See *supra* note 4 (at 221 and 237)
[21] At 176
[22] At 214
[23] At 216

'Statements demonstrating [him] taking a partisan stance on matters of fact pepper his report…This evidence from an expert who is supposed to be independent is wholly surprising… Expert witnesses should not embark upon such primary challenges to the facts. If there are two versions of the facts, experts should consider them both. They should not choose which version is correct; that is the function of the court…"

There are other recent examples[24].

The judges' conclusions in these cases are not surprising; there can be no doubt that it is not for an expert witness to 'decide' or 'take a position' on disputed fact or law. Where the parties are in issue on a fact or a legal principle that impacts on quantum, the proper approach is to provide alterative valuations or assessments, as suggested by Fraser J. In *Bluewater*[25], Mr. Justice Ramsey noted this in relation to the quantum experts' approach to disputed fact in their joint statements:

'…they were able to provide a range of agreed figures which applied depending on my findings…I am very grateful to them for their hard work and sensible approach."

I must confess to being one of the quantum experts in that case! The approach adopted in *Bluewater* is how I aim to deal with disputed fact or law as an expert, and I encourage experts appearing before me as arbitrator to do the same.

There may be cases where it is necessary for an expert to assume a fact or legal principle in order to arrive at an opinion—such as how the valuation provisions of a contract are intended to work if not adequately particularised by the parties in the pleaded cases; in those circumstances the assumptions should be clearly identified as such. There may be cases where it is appropriate to make alternative assumptions with corresponding alternative valuations or assessments.

Addressing both parties' cases

An expert will be hard pressed to show that he/she has acted independently if both parties' cases are not taken into account. In *Great Eastern Hotel*[26] His Honour Judge Wilcox decided this in relation to one of GEH's experts:

'I reject the expert evidence of him as to the performance of Laing as contract manager in relation to periods one and two. He has demonstrated himself to be lacking in thoroughness in his research and unreliable by reason of his uncritical acceptance of the favourable accounts put forward by Laing."

The first three of Coulson J's twelve reasons for rejecting the claimant's quantum expert evidence in *Van Oord*[27] are relevant:

'First, [he] repeatedly took OSR's pleaded claims at face value…He uniformly utilised the rates which had been claimed by OSR, not on the basis of any quantity surveying or expert opinion he might have had as to their

[24] For example, in *DBE* (see *supra* note 19), the judge said this in relation to one of the experts (at 31): "*…[he] did not take proper care in his report to set out the background facts in an impartial way and this resulted in the expression of views which appeared to me, on a number of occasions, to be biased… He also sought to assert as facts matters which were properly for the determination of the court.*"

[25] *Bluewater Energy Services BV v Mercon Steel Structures BV & Ors* [2014] EWHC 2132 (TCC) (at 39)

[26] *Great Eastern Hotel Ltd v John Laing Construction Ltd* [2005] EWHC 181 (TCC) (at 111)

[27] See *supra* note 12 (at 81 *et seq.*)

applicability, but because he had been told that those rates had been agreed by the parties…

Secondly, …he prepared his report by only looking at the witness statements prepared on behalf of OSR. He did not look at the witness statements prepared on behalf of AUK…

Thirdly, …[he] refused to value these claims on any basis…other than the full basis of the OSR claim…"

In *Walter Lilly*[28] Mr. Justice Akenhead was critical of the claimant's quantum expert who did not take account of the other party's case:

'I was disappointed with [the defendant's quantum expert] who, although an experienced expert, I felt was trying too hard to reduce the delay and other quantum heads to an insignificant level. Whether he felt, subconsciously, pressurised by Mr Mackay or not I can not say. But his arguments were reduced to scraping the barrel in some respects such as suggesting that WLC had not demonstrated any loss and expense attributable to Plot C alone; this was absurd because it must follow that, if there was as here delay (almost 30 months delay), some time and resources must have been incurred in consequence and that obviously has a cost. He endorsed a totally artificial calculation to demonstrate that WLC had recovered all its preliminaries costs on the three Units."

Not only should experts address both parties' cases, but they should avoid opining on matters that are not pleaded and/or in issue. For example, In *ICI*[29], Fraser J was critical of the claimant's quantity surveying expert because:

'He decided to value the MMT works using actual cost. There is no contractual basis for this whatsoever. It is a wholesale departure from the contract terms…Further, and even if it were right to adopt a valuation method entirely outwith the recorded written agreement of the parties, he did not in his report produce a valuation using these rates at all. In other words, there is no alternative valuation provided by him for use by the court if the ICI position (and [the expert's] position) on the non-applicability of these rates was not accepted. There is no good reason for this wholesale omission…

This is not the type of evidence that an independent expert, complying with their duty to the court, should be giving…

He was also failing even to consider the pleaded issues. He was creating new issues that prior to his involvement did not exist…

I do not consider that [he] should have embarked upon such an approach, which is not one that an independent valuation expert should have adopted."

There are other examples[30].

If circumstances do arise where an expert strongly believes that an alternative approach to valuation or assessment is required, he would probably be best

[28] *Walter Lilly & Company Limited v Giles Patrick Cyril Mackay and Anor* [2012] EWHC 1773 (TCC) (at 101)
[29] See *supra* note 4
[30] For example, in *DBE* (see *supra* note 19) the judge decided this in relation to one of the technical experts (at 31): "*…despite the clear identification by the court at the CMC of the issues that the technical experts were to address, [he] chose to try to introduce into his report (and later into the Technical Joint Statement) numerous other issues which did not arise from the pleadings…*". In all the circumstances, the judge preferred the evidence of the other expert.

advised to take up the matter with those instructing him at the earliest opportunity in order that the situation can be regularised (or possibly even seek directions under CPR Part 35.14 if the matter is before the courts of England and Wales), rather than embarking on a frolic of his own. In any event, the expert would still be wise to provide alternative opinions based on the pleaded cases.

Before moving on, it is relevant to note that the above cases all concern the traditional procedural approach of common law jurisdictions, where an expert witness is not required to put pen to paper until after close of pleadings and all factual evidence is produced. It is, however, common in international arbitration for a 'memorial' procedure to apply. This is where each round of case statements includes all evidence upon which that party relies, including expert evidence. In a memorial approach there is often also a specific disclosure process after the conclusion of case statements where further factual documents are disclosed. Such an approach means that experts (especially those appointed by the claimant) will have incomplete information at the time of preparing initial reports and so opinions may need to be reviewed and if necessary revised during the process to account for the development of the parties' respective cases and the evolving body of factual evidence. Experts need to take extra care when working under a memorial procedure to ensure that their opinions do not become entrenched and that they remain objective and independent as further legal argument and factual evidence becomes available.

Joint statements and the narrowing of issues

In *ICI*[31], Fraser J said:

> *'The process of experts meeting under CPR Part 35.12, discussing the case and producing an agreement (where possible) is an important one. It is meant to be a constructive and co-operative process…"*

CPR Part 35.12 provides that:

> *'The court may, at any stage, direct a discussion between experts for the purpose of requiring the experts to—*
>
> *(a) identify and discuss the expert issues in the proceedings; and*
> *(b) where possible, reach an agreed opinion on those issues.*
>
> *The court may specify the issues which the experts must discuss.*
>
> *The court may direct that following a discussion between the experts they must prepare a statement for the court setting out those issues on which –*
>
> *(a) they agree; and*
> *(b) they disagree, with a summary of their reasons for disagreeing.*
>
> *The content of the discussion between the experts shall not be referred to at the trial unless the parties agree.*
>
> *Where experts reach agreement on an issue during their discussions, the agreement shall not bind the parties unless the parties expressly agree to be bound by the agreement."*

I cannot emphasise enough how two impartial quantum experts can be of great assistance to a court or tribunal in narrowing issues between them and providing alternative opinions where differences remain, or where alternative

[31] See *supra* note 4 (at 237(4))

valuations or assessments apply depending upon the court or tribunal's findings of fact or law. A constructive joint statement is particularly important when it comes to quantum, because there is often a lot of detail to consider, and judges/arbitrators often do not have the time or resources required to undertake an in-depth analysis of such large volumes of quantum data without the aid of expert evidence.

Failure to engage properly in the process is likely to lead to adverse comments. For example, in *ICI*[32] Fraser J said this of the quantity surveying experts:

> *'…Ordinarily, in a quantum trial, one would expect the two quantum experts to meet, and agree at least one but usually more joint statements, as the areas of dispute between them narrowed or were resolved. Indeed…the court would usually expect to rely heavily upon expert quantity surveying evidence to arrive at the correct valuation. No judge, even in the Technology and Construction Court, can be expected to embark him or herself upon a detailed valuation of every part of a contractor's final account or final assessment, particular [sic] when the works were (as here) very detailed and the project had developed through numerous design changes over a long period of time.*
> *However, in this case the Joint Statement by the Quantum Experts is a most unhelpful document. It is not possible to identify why that is, as discussions between experts are without prejudice. The Joint Statement essentially amounts to a recitation of each expert's view, with the occasional exception where a minor item was in fact agreed. However, such items are few and far between.*
>
> *There may be many reasons behind this unsatisfactory state of affairs. However, the significant reason is that the two quantum experts have approached their tasks in two starkly different ways."*

See also *Bank of Ireland*[33], in which one of Coulson J's criticisms of the Bank's quantum expert was as follows:

> *'I consider that [his] approach was thoroughly unreasonable. The agreed note demonstrated that he made no concessions at the experts' 'without prejudice meetings', using them instead—quite deliberately—to raise entirely new matters with his opposite number…I observed at the outset of the trial that I had never seen a Joint Statement between experts that contained no agreement at all. I find that the main reason why the Joint Statement in this case contained no such agreement was due to [his] complete failure to make any concessions at all."*

Compare those cases to the judgment in *Bluewater*[34]:

> *'Through a series of Joint Statements the quantum experts were able to narrow many of the disputes which were apparent on the pleadings. Where they were unable to reach complete agreement that was often because of issues of principle which I have had to resolve and, in these cases, they were able to provide a range of agreed figures which applied depending on my findings. They have made my task immensely easier than it might otherwise have been and I am very grateful to them for their hard work and sensible approach."*

[32] See *supra* note 4 (at 166)
[33] See *supra* note 13 (at 67)
[34] See *supra* note 25 (at 39)

While it is highly desirable for quantum experts to agree alternative figures or financial models which are subject to the findings of the court or tribunal, care must be taken to ensure that what is provided is clear and 'user-friendly' in order to avoid the possibility of misapplication. In *Doglemor*[35] the Court had to consider an arbitral tribunal's computational error when using a damages model developed by the experts. The error resulted in a damages award of US$58m instead of US$4m if the model had been applied correctly. The Court allowed a challenge to the award under section 68(2) of the Arbitration Act 1996, holding that the error constituted a serious irregularity that caused substantial injustice.

Sampling or Extrapolation

In cases which involve large numbers of individual complaints, a party may seek to base its case on sampling or extrapolation. Getting a representative sample right is, however, not without difficulty.

Amey[36] is a case about works carried out on a highway maintenance term contract, in which the defendant alleged some 36,000 repairs had been defectively carried out. His Honour Judge Davis said:

> *'I accept that it is open to Cumbria as a matter of law to seek to persuade me to accept its extrapolation case on the basis that its sample is sufficiently representative to be relied upon. I accept that there is no principle of law nor of statistical theory that a claim or a proposition can only be established by statistically random sampling. I accept that it is perfectly open to a claimant to seek to establish a claim by reference to representative sampling, although further and different considerations will apply to such a claim, with which I shall have to engage in due course."*

In *Standard Life*[37] the claimant claimed £38.1 million from the defendants for alleged professional negligence. The claim included the cost of some 3,604 variations issued to the contractor under the building contract, of which it only particularised 122 by way of 'sample' in its pleading. This was the subject of a strike out and summary judgment application before the judge. Mr Justice Kerr confirmed as follows in relation to the principle of sampling:

> *'Trial by sample is a critical tool in the hands of the case managing judges of this court. We could not manage without it. The judges of this court regularly give directions accordingly. In doing so, they are making good use of their power to control the evidence and determine the issues on which evidence is required…"*

Perhaps unsurprisingly, Kerr J rejected the application. In terms of further case management, he said[38]:

> *'In charting the way forward, a balance must be struck. On the one hand, these defendants should know the full case they face, including better information about causation and quantum. On the other hand, Standard Life should have a means of redress in the court at proportionate cost and within a reasonable time. The court must do the best it can to reconcile the tension between these two propositions, which pull in opposite directions."*

In striking this balance, Kerr J directed a procedure which would lead to an agreed sample of variations.

Returning to *Amey*, the judge raised the question of 'trial by sample' in earlier case management conferences, but in the judge's words:

[35] *Doglemor Trade Limited and Ors v Caledor Consulting Limited and Anor* [2020] EWHC 3342 (Comm)
[36] *Amey LG Limited v Cumbria County Council* [2016] EWHC 2856 (TCC) (at 1.26)
[37] *Standard Life Assurance Limited v Gleeds & Ors* [2020] EWHC 3419 (TCC) (at 87)
[38] At 134

'Cumbria's position had always been that this was unnecessary, since its extrapolation approach avoided the need to examine every potential defect. That, however, ignored the sheer quantity of items which would need to be addressed pre-extrapolation. It appears that both parties, perhaps understandably, proceeded in the confident expectation that the liability (paving) experts and the quantum experts would reach substantial agreement in relation to individual items or, where not, at least identify what were the common issues, thus avoiding the need to conduct a separate mini-trial of each and every item. However, regrettably, the experts have reached very little agreement, and it has not proved possible to identify common issues which, once determined, will enable the individual items to be resolved without the need for further consideration of the individual circumstances of that item. By the time that it became apparent that this was the case, which was not until shortly before trial due to the delay in finalising the expert paving and quantum evidence, it was too late to consider some further or alternative case management approach to resolving these individual items in a proportionate manner".

The case proceeded to trial based on Cumbria's pleaded extrapolation of its own sample. In the event, the judge decided[39] that:

'Overall, I accept the criticisms of almost every stage of the sampling process…I am satisfied that there were a number of errors in the development of the process for choosing the samples in this case. In summary, although there were 1,706 separate works instructions involving patching issued during the course of the contract only 544 works instructions were identified and only 116 works instructions were available for selection. Only approximately 7% of the total number of works instructions and the total number of patches were available for selection.

There was an initial bias in the selection of the initial samples, both by year and by area. Worse than this, was the decision to focus on the patches laid in the first 3 years in heavily trafficked roads. This is an example of deliberate clear bias. It is difficult to say to what extent actual bias was introduced, but in my view there is clearly a risk that it was…"

Consequently, Cumbria only recovered £1.2m of its £15.6m counterclaim and Amey ended up as the net winner in the action.

Experts can play a crucial role in assisting the court/tribunal and the parties in establishing a reasonable sample that will facilitate a fair resolution of a dispute, at reasonable cost, and avoid some of the difficulties encountered in the above cases. This is something I would encourage as an arbitrator.

General attributes

In all but the simplest of cases, there is likely to be a large volume of factual evidence to consider by quantum experts. It is necessary, therefore, for a quantum expert to have the ability to thoroughly analyse big data in an efficient manner, yet produce clear, concise, and sensible conclusions that will assist the judge or tribunal in determining the financial aspects of a case in an efficient manner.

Conclusions

Drawing the threads together, I submit that courts and tribunals want quantum experts who:

[39] At 25.143 *et seq*.

1. Provide objective, unbiased opinions on matters within their expertise, and not stray outside of that expertise.
2. Take account of both parties' cases, avoid taking a position on disputed fact or law and take account of any material facts that might detract from a concluded opinion.
3. Where issues exist in fact or the law, provide alternative valuations or assessments.
4. Where necessary, clearly state any assumptions upon which an opinion is based and, if there is insufficient data to reach a firm conclusion, identify the opinions as being provisional.
5. Do not become entrenched in their views if further legal argument or evidence requires opinions to be reflected upon.
6. Take the joint statement process seriously, genuinely seek to narrow issues between the experts and work together to summarise the various valuations or assessments that might apply depending upon the findings of the court or tribunal.
7. Where necessary, help the parties in a timely manner to overcome potential problems which might have time and cost implications, such as parity of instructions between experts of like discipline, access to the same documents and the selection of appropriate samples.
8. Generally make the job of the court or tribunal easier in determining the financial outcome of a case by producing clear, concise, and sensible valuations or assessments reflecting the issues that require resolution.

And, above all else—to borrow Mr. Darling QC's words—courts and tribunals want experts who understand their role, comply with the rules, and jealously guard their independence.

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