Soaring global construction costs under FIDIC: whose risk?

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It is well documented that construction and engineering projects around the globe are being affected by extreme and sometimes unprecedented price escalation. This is for many reasons including the ongoing effects of the Covid-19 pandemic and the Russia-Ukraine war.

In this article, we look at FIDIC's allocation of risk - in particular, the 'Adjustments for Changes in Cost', 'Force Majeure' and 'Exceptional Events' provisions.

Type of contract

The type of contract usually informs as to which party takes the risk (or benefit) of price fluctuations:

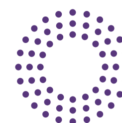
- In reimbursable or cost-plus contracts, the employer takes the risk. The contractor is reimbursed the actual cost, plus allowances for overheads and profit. If the contractor's actual costs increase, the contract price will increase also.
- In remeasurement contracts and fixed price/lump sum contracts the contractor usually takes the risk, unless there is a mechanism for cost adjustment.
- In remeasurement contracts (such as the FIDIC Red Book – For Building and Engineering Works Designed by the Employer) the contract price is based on approximate quantities and a schedule of rates and prices. But, if the rates and prices can be adjusted where price fluctuations occur, the contract price is recalculated using the new rates and prices and the final agreed quantities. The actual work done is remeasured when the works are completed.
- In fixed price/lump sum contracts (such as the FIDIC Yellow Book – Plant and Design Build) the contractor provides an overall figure, 'a lump sum', for all the works that are agreed to be carried out under the contract. But, if the amounts due to the contractor can be adjusted where price fluctuations occur, the contract price is recalculated.

Escalation clauses under FIDIC 1999 and 2017

FIDIC includes a mechanism for cost adjustment. In the FIDIC 1999 editions this is at Sub-Clause 13.8 (Adjustments for Changes in Cost), and in the FIDIC 2017 editions at Sub-Clause 13.7. It is an 'opt-in' clause. It applies only if under:

- the FIDIC Red and Yellow Books 1999 – a table of adjustment data is included in the Appendix to Tender;
- the FIDIC Silver Book 1999 – provided for in the Particular Conditions;
- the FIDIC 2017 forms – a Schedule(s) of cost indexation is included in the contract.

The table of adjustment data or Schedule(s) is a complete statement of the adjustments to be made to the cost of labour, Goods and other inputs to the



Works (for example, fuel). Any other rises or falls in the Costs are deemed to be included within the Accepted Contract Amount. No adjustment is applied to work valued on the basis of Cost or current prices.

Where it applies, the amounts payable to the contractor are adjusted for both rises and falls 'in the cost of labour, Goods and other inputs to the Works' by adding or deducting amounts calculated in accordance with:

- under the FIDIC 1999 editions – a prescribed formula (in the FIDIC Red and Yellow Books) or as set out in the Particular Conditions (in the FIDIC Silver Book); or
- under the FIDIC 2017 editions – the Schedule(s).

In the FIDIC Red and Yellow Books 1999, a formula is set out, but this may be amended as the parties choose. The wording states: 'The formulae shall be of the following general type'. The formula is as follows:

$$Pn = a + b\frac{Ln}{Lo} + c\frac{En}{Eo} + d\frac{Mn}{Mo} + \ldots$$

- The FIDIC Yellow Book Guidance suggests that in a plant contract, formulae which are more directly related to the timing of costs incurred by the manufacturers be adopted.
- The FIDIC Silver Book 1999 and the FIDIC Gold Book 2008 do not set out a formula. The FIDIC Silver Book Guidance suggests that the wording for provisions based on the cost indices in the FIDIC Yellow Book be considered.

The FIDIC 2017 editions do not set out a formula either. The Guidance states: 'It is recommended that the Employer be advised by a professional with experience in construction costs and the inflationary effect on construction costs when preparing the contents of the Schedule(s) of cost indexation'.

It is recognised that the formula set out above to calculate the adjustment multiplier (Pn), which is to be applied to the estimated contract value, is crude, but it is a fast and reasonably credible way of calculating and reimbursing fluctuations in costs.

The formula relies on:

- a fixed element (a), representing the non-adjustable portion in contractual payments, which is fixed at the time of contract. FIDIC suggests ten per cent in the Appendix to Tender or Guidance;
- the weighting of the resources (b), (c) and (d), which is determined at the time of contract. For example, a road project might be 20/40/40 for labour, equipment and materials;
- cost indices for the current 'now' value (n) and the original value (o) for each of, for example, labour (L), equipment (E) and materials (M), which need to be updated frequently to stay current (preferably monthly rather than quarterly or annually, but that will depend upon the cost indices chosen).

Fixed element (ten per cent)

Where there is contractor compensable delay which pushes the project into a period of inflation, it seems unfair that this portion is non-adjustable. Perhaps, it might be claimed as a prolongation cost as it falls squarely within the definition of 'Cost'. The authors are not aware of any precedent on this.

Weightings

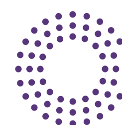
In the FIDIC Red and Yellow Books 1999 (but not the FIDIC Silver Book 1999 or the FIDIC 2017 editions), the weightings may be adjusted if they have been rendered unreasonable by way of a Variation to the Works.

The last paragraph of Sub-Clause 13.8 of the FIDIC Red and Yellow Books 1999 states:

> "the weightings for each of the cost factors stated in the table(s) of adjustment data will only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations".

Therefore, the claiming party would need to demonstrate that the original contract weightings were correct at the time of contract and that a Variation had rendered them unreasonable, unbalanced or inapplicable. Inflation alone would be insufficient.

This provision does not apply simply where the original contract weightings fail to reflect the actual contract weightings. Sub-Clause 4.11 of the FIDIC 1999 editions states: 'The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Contract Price. […] Unless



otherwise stated in the Contract, the Contract Price covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper design, execution and completion of the Works and the remedying of any defects'. The FIDIC 2017 editions have similar wording.

Cost Indices

Cost indices provide a simple way to relate the original value to a corresponding cost now. Unfortunately, cost indices are not an accurate reflection of the actual costs, but they are easy and reasonably credible.

The choice of cost indices is important, and when choosing them it is necessary to understand, for example:

- exactly what they measure. Many indices are intended to reflect only general building construction;
- in which location. The indices ought to align with the source of materials. Changes might be needed to the indices if there is a change in supplier or country of origin for the supply of materials, for example because of sanctions;
- in which currency. The currency of the cost indices and the currency for payment ought to align, otherwise there may be scope for further adjustment when the currency of the cost indices is converted into the currency of payment.

The categories of the cost indices are usually broad and not necessarily linked to specific items in the bill of quantities. Therefore, they do not work well with bespoke construction elements.

Occasionally, the parties will create their own indices if there are no appropriate existing indices.

It has also been suggested that the parties might consider using different indices for different phases of the works.

In the FIDIC Red and Yellow Books 1999, if the source of the cost indices is 'in doubt', the Engineer may determine the correct source. This wording is not in the FIDIC 2017 editions.

If the cost indices are not 'current' the Engineer may determine a provisional index for the issue of the Interim Payment Certificates, and subsequently adjust when (if) a current cost index becomes available. In the FIDIC Red and Yellow Books 1999, Sub-Clause 13.8 makes no reference to Sub-Clause 3.5 (Determinations), which only applies: 'Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 …', so the determination referred to does not need to be made in accordance with Sub-Clause 3.5. In the FIDIC 2017 edition, reference to a determination has been deleted to avoid any confusion.

After the time for completion

Under the FIDIC Red and Yellow Books 1999 and the FIDIC 2017 editions, if the contractor fails to complete within the Time for Completion (meaning the time for completing the Works including any extension of time due to the contractor), further price rise risk is allocated to the contractor, and the benefit of any falling prices is allocated to the employer.

Adjustments to prices after the Time for Completion are made using the most favourable to the employer of:

- the index or price applicable from the date 49 days (ie, seven weeks) before the expiry of the Time for Completion; or
- the current index or price.

Procedure

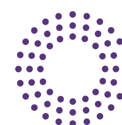
Under both the FIDIC 1999 and 2017 editions, an application for an Interim Payment Certificate under Sub-Clause 14.3 must include any amounts to be added or deducted for changes in cost under Sub-Clause 13.8. The contractor is not obliged to give notice under Sub-Clause 20.1 of the FIDIC 1999 editions.

Force majeure under FIDIC 1999

Under the FIDIC 1999 forms of contract, if either party is prevented from performance of its obligations by Force Majeure (FM) then, subject to giving notice, it may be excused performance of those obligations. The contractor may also be entitled to an extension of time and/or cost.

Definition of FM

Sub-Clause 19.1 contains a definition of FM. It is:



> "an exceptional event or circumstance (a) which is beyond a Party's control, (b) which such Party could not reasonably have provided against before entering into the Contract, (c) which, having arisen, such Party could not reasonably have avoided or overcome, and (d) which is not substantially attributable to the other Party."

The 'exceptional event or circumstance' might be the price escalation itself or something else, such as the Russia-Ukraine war or Covid-19, the effect of which is price escalation, and there is scope for argument on this point.

It has been noted in respect of current price escalation in the construction sector that for some countries 'these are some of the highest rates of inflation we have seen in decades, yet not in the hyperinflationary territory of the Weimar Republic in Germany following World War I, or Zimbabwe from 2007 to 2009' and 'Whilst the definition of hyperinflation is loose, for it to materialise, we'd expect significant increases to inflation on a month-on-month basis, above double-digit growth'.[1]

On this basis, it could be argued for some countries that price escalation as currently seen is not exceptional.

If price escalation is the 'exceptional event or circumstance', it seems likely that Sub-Clause 19.1, sub-paragraphs (a) and (d) will also be satisfied unless, for example, the party in question is a government with control over, or responsibility for, the price escalation. Regarding Sub-Clause 19.1, sub-paragraph (b), the provisions that a contractor can make before entering the contract are generally limited to price and planning and in Sub-Clause 19.1 are expressly limited to what is 'reasonable'. Sub-Clause 19.1, sub-paragraph (c), which refers to the event having arisen not being 'reasonably […] avoided or overcome', appears to exclude from FM an event/circumstance whose effect could reasonably be completely negated. The fact that the effects of an event/circumstance can (or should – see below) be mitigated does not mean that the event cannot be FM.[2]

Sub-Clause 19.1, sub-paragraphs (i)–(v) contain a list of example events or circumstances which, if they otherwise satisfy the definition, could constitute FM. Price escalation (or volatility) does not appear on this list but this is not fatal if it otherwise satisfies the definition. The real significance of this list is that four of the events listed may (subject to other criteria) give the contractor entitlement to money as well as time. If an event – such as price escalation – is not listed, there will be no monetary compensation for it (see below).

The requirements for prevention

If the price escalation in question were to satisfy the definition of FM, it would only have contractual effect – and so be of use to the affected party – if it were also to prevent the affected party from performing any of its obligations under the contract.

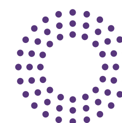
This requirement for prevention is set out in two provisions.

- Sub-Clause 19.2 provides that if a party 'is or will be prevented from performing any of its obligations under the Contract' by FM, it shall give notice and 'shall specify the obligations, the performance of which is or will be prevented'. Having given notice, the party shall 'be excused performance of such obligations for so long as such [FM] prevents it from performing them'.[3]
- Sub-Clause 19.4 provides that if the contractor 'is prevented from performing any of his obligations under the Contract by [FM] of which notice has been given [under Sub-Clause 19.2] and suffers delay and/or incurs Cost by reason of such [FM]', then the contractor shall be entitled, subject to Sub-Clause 20.1, to an extension of time for any such delay and, in limited circumstances, to additional cost.

[1] See the Turner & Townsend survey report on its 'International construction market survey 2022' in the section 'Global economic outlook': www.turnerandtownsend.com/en/perspectives/international-construction-market-survey-2022, accessed 26 January 2023.

[2] See further Corbett & Co, 'FIDIC 2017: A Practical Legal Guide' (2020) Clause 18.

[3] This excuse from performance does not apply to the obligation of either party to make payments to the other party under the contract.



These provisions refer to the prevention of 'any' obligations[4] so a shutdown of the whole project is not necessary.

If the price escalation falls within the definition of FM set out above, are there circumstances in which it might prevent performance? It is easy enough to see how price escalation may make it more onerous for a contractor to perform its obligations, or may cause delay or disruption, but at what point can it be said that the price escalation is preventing the contractor's performance?

In English law, prevention has been interpreted in the context of force majeure as meaning physical or legal prevention and not mere economic unprofitability.[5] The mere fact that the cost of performance has increased is insufficient for prevention. The position may be different in other legal jurisdictions.

What if the scale of the loss resulting from the price escalation means that a contractor cannot continue to trade? Clearly, there is scope for argument about the tipping point after which prevention may occur and that point will be different in each case. It is suggested, however, that it will usually be difficult to show prevention because of price escalation alone.

Entitlement to time and/or cost?

If a contractor is prevented from performing obligations under the contract by FM, has given notice, and suffers delay or incurs Cost by reason of such FM, Sub-Clause 19.4 provides that the contractor shall be entitled, subject to Sub-Clause 20.1, to an extension of time and – if the event or circumstance is of the kind listed in Sub-Clause 19.1 sub-paragraphs (i) to (iv) (and in the case of sub-paragraphs (ii) to (iv) occurs in the Country)[6] – to payment of such Cost.

In other words, FM and prevention will only entitle the contractor to an extension of time, unless the FM is on the list of causes giving rise to Cost. These causes include war and, if it occurs in the Country, terrorism, strikes, munitions of war (etc).[7]

A contractor may therefore be entitled to an extension of time for delay caused by price escalation (or Covid-19) if this otherwise satisfies the definition of FM and prevents the contractor, but not to payment of Cost, which would only be available (in the context of the present article) if the contractor can show instead that the FM is war.

In summary: Covid-19 might, in the correct circumstances, entitle a contractor to time but not money, and war might, in the correct circumstances, entitle a contractor to time and Cost. But, whilst the FM clause may give the contractor extra time to procure materials that were prevented from being procured on time because of Covid-19 or the Russia-Ukraine war, it is unlikely to assist a contractor who is merely obliged to pay higher prices than originally estimated.[8]

Mitigation

Sub-Clause 19.3 requires each party to use 'reasonable endeavours' to minimise delay resulting from FM. It does not require mitigation of any other consequence, although most legal systems will require mitigation as a general principle. In terms of price escalation, were this to constitute FM, 'reasonable endeavours' might include changing suppliers or transport options, although, of course, that may not be possible or may have no effect if there is price escalation across the board. The usual rule, subject to the governing law, is that mitigation does not require a party to incur additional cost. The parties may agree, in the interests of the project, to overcome price escalation by changing, for example, the physical works to avoid, reduce or share the impact of costly items.

No FM but obligations unlawful or impossible

Under the FIDIC 1999 editions, Sub-Clause 19.7 provides a remedy where if any 'event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract then, upon notice by

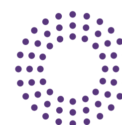
[4] Sub-Clause 19.4 of the MDB Harmonised Edition (June 2010) refers to 'substantial obligations'.

[5] *Tennants (Lancashire) Ltd v G S Wilson & Co Ltd* [1917] AC 495.

[6] 'Country' is defined in Sub-Clause 1.1.6.2 as the 'country in which the Site (or most of it) is located, where the Permanent Works are to be executed'.

[7] See Sub-Clause 19.1 for the complete list.

[8] There is no entitlement to Cost in respect of natural catastrophes, and to be entitled to Cost in respect of the other specified categories, the FM must have occurred within the Country unless the force majeure arises out of 'wars, hostilities (whether war be declared or not), invasion, act of foreign enemies'.



either Party…', the parties shall be discharged from further performance.

There is similar wording at Sub-Clause 18.6 of the FIDIC 2017 editions.

It is difficult to see how price escalation could make it unlawful for a party to fulfil its contractual obligations.[9] Whether price escalation makes it impossible for a party to fulfil its obligations may depend on the meaning given to the word 'impossible' in the relevant jurisdiction (it may for example, encompass impracticability because of extreme and unreasonable expense or loss)[10] and the facts (in respect of which there may be a tipping point as mentioned above).

Exceptional events under FIDIC 2017

In the 2017 forms, FIDIC does not use the term 'Force Majeure' and instead uses the term 'Exceptional Events'.[11] The requirement for the event or circumstance to be 'exceptional' no longer features in the definition. In other words:

- it must be an event or circumstance;
- which must be beyond the parties' control;
- which such a party could not have reasonably provided against before entering into the contract;
- which having arisen such party could not have reasonably avoided or overcome; and
- which was not substantially attributable to the other party.

The omission of the word 'exceptional' has been corrected in the FIDIC 2017 second edition, as reprinted in 2022 with amendments.

Apart from this, the provisions in FIDIC 2017 are largely similar to those in FIDIC 1999 and so the considerations identified above will continue to apply.

The governing law

It is important to keep in mind that, in addition to the FIDIC provisions mentioned above, the law governing the contract may include additional remedies or legal principles that may be relevant including change of circumstances, impossibility, frustration, and good faith requirements.

Conclusion

The contract allocates risk according to FIDIC's assessment of which party is best able to respond to that risk. FIDIC fiercely protects its risk allocation, for example with Golden Principle 3 (GP3) which states: 'the Particular Conditions must not change the balance of risk/reward allocation provided for in the GCs'. However, it is probably true to say that when drafting the contracts in 1999 and in 2017, FIDIC did not foresee the global shocks of the past three years.

The same might be said of the parties, many of whom may not, when entering into the contract, have: (1) given much thought to the optional escalation clause; or (2) taken professional advice on the correct cost indices to apply when preparing the contract documents.

Whether price escalation affecting FIDIC contracts constitutes FM or an Exceptional Event will be assessed on the wording of the relevant provisions (which, despite GP3, may include amendments to the standard FIDIC wording) and the facts of each case. Prevention is essential. Even then, as price escalation is not on the list in Sub-Clause 19.1, the contractor will not be entitled to compensation for it (ie, payment of Cost) but only (if the contractor suffers delay) to an extension of time.[12]

Parties should take advice on the governing law of their contract as that may provide alternative relief.

Practical solutions might be the smarter solutions.

Please get in touch at victoria.tyson@howardkennedy.com with your thoughts or to discuss any concern

[9] Although unlawfulness might arise if, for example, one party to a contract is prohibited from continuing a contractual relationship with the other party as a result of sanctions.

[10] See Knutson, 'FIDIC An Analysis of International Construction Contracts' (Kluwer Law, 2005) at p 237 in relation to the law of Malaysia and the reference to *Kung Swee Heng v Paritam Kaur [1948]* MLJ 170 in which Hill J referred to the definition adopted by the American Law Institute: 'Impossibility means not strict impossibility but impracticability because of extreme and unreasonable difficulty, expense, injury or loss'.

[11] Clause 18 of the Red Book 2017.

[12] Subject to compliance with notice requirements.