

## Section 2.5 Risk Management

### Overview

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**Introduction** Up-front risk management is an important part of modern project management.

In a fixed-price lump-sum contract (as defined in Chapter 1) the Contractor accepts the risk of increases in the cost of labour and materials during the construction period (the inflation risk), as well as certain risks of changes in law.

The Contractor also accepts the Employer's definitions of delay and compensation events. Compensation events are those that may result in an adjustment to the Contract Sum as opposed to delay events that do not result in an adjustment to the Contract Sum.

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**Purpose** Decisions in relation to price variation options and compensation event options must be taken prior to the publication of the tender invitation. The result of those decisions will dictate what payments can be made outside of the fixed price.

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**In this section** This section deals with the following topics:

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## 2.5.1 Managing Delay and Compensation Events

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### Identifying compensation events

If a compensation event, as listed in the Contract, occurs in the course of the project, there may be an adjustment to the Contract Sum. The Contract sets limitations through procedures and valuation principles on when the Contract Sum can be increased for compensation events. There are a number of delay events that are optional compensation events in the Contract. The Employer has to decide before inviting tenders whether those delay events categorised as 'optional' on the Contract are:

- Flagged as compensation events in addition to being delay events, or
  - Remain just as delay events (default).
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### Traditional contracts

Delay events considered for compensation status in a traditional contract are:

- An instruction from the Employer to deal with an item of archaeological interest or human remains found on the site;
  - The presence on the site of unforeseeable ground conditions or a man-made obstruction in the ground other than utilities;
  - The presence on the site of unforeseeable utilities; and
  - Unforeseeable failure or delay of owners of utilities on the site in relocating utilities in accordance with the Works Requirements, when the Contractor has complied with their procedures and the procedures in the Contract.
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### Design-and-build contracts

Delay events considered for compensation in a design-and-build contract are:

- An instruction from the Employer to deal with an item of archaeological interest or human remains found on the site; and
  - Unforeseeable failure or delay of owners of utilities on the site in relocating utilities in accordance with the Works Requirements, when the Contractor has complied with their procedures and contract procedures.
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### Identifying delay cost option

The Employer should state in the tender documentation (Part 1K of the Schedule) how delay costs are to be dealt with, either as:

- Tendered daily rate(s), or
- Actual direct costs incurred.

If the Employer selects the tendered daily rate(s), it should then be tendered by all competing firms and entered in Part 2E of the Schedule. Employers cannot change their minds post-tender how delay costs are to be dealt with.

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## 2.5.1 Managing Delay and Compensation Events, Continued

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### Tender submission requirements

It should be made clear by employers in the tender documentation for the project that, in addition to the tender price, individual tender rates and percentages are to be submitted by tenderers for the purpose of valuing compensation events, as follows:

- A daily rate(s) of delay cost (if selected in tender documents);
  - Hourly rates for craftspersons, general operatives and apprentices (and possibly other categories);
  - Percentage additions to cost of materials; and
  - Percentage addition or deduction to cost of plant.
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### Evaluating rates

The hourly rates for delay should be the appropriate rates applying to each category of worker and should be based on wage rates not less than those provided by the most recent Registered Employment Agreements (REAs), or the National Minimum Wage, whichever is applicable.

Where an employer is asking for a tendered daily rate for delay, there is a choice, either to seek:

- A single daily rate; or
- Three different daily rates, each to be applied at different times during a contract (not available in the Minor Works Contract).

In both cases, the single or the three periods selected by the Employer to be used for comparison purposes at tender evaluation stage must be clearly stated in the tender documents. For example, if the number of days indicated is 40 (in the case of a single period), then the delay cost element of competing submissions will be compared based on a 40-day delay as part of an overall tender evaluation exercise. The number of days specified by the Employer should be proportionate to the scale, complexity and duration of the Contract.

**Note:** If delays are under-estimated, there is a risk of exploitation by the tenderers. If they are over-estimated, there is a risk of distortion in the selection by Most Economically Advantageous Tender (MEAT). The figure selected for delay in the MEAT method should also have regard to the choice already made on the Programme Contingency, which will be included in the lump-sum tender price. Where separate delay rates at different time stages are quoted, the MEAT calculation needs to include a calculation to show the financial impact of each type of delay.

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## 2.5.1 Managing Delay and Compensation Events, Continued

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### Hourly rates for craftspeople, apprentices and general operatives

In relation to the tendered hourly rates under both traditional and design-and-build contracts, the definition of a craftsperson in part 1K of the Schedule allows for it to be expanded to include other types of skilled personnel.

**Note:** If it is intended to expand the definition of a craftsperson, this must be specified in the Schedule part 1K, so that the wider definition can be priced in a single blended rate.

The category of apprentices is directly related to skilled personnel within the definition of craftsperson. Again a blended rate (e.g. a mixed or average rate) is tendered for apprentices to cover the range of skills within the definition of craftsperson; the blended rate should take account of the different grade levels in each apprenticeship.

General operative covers the complete range of direct labour other than craftsperson and apprentice. A blended rate is to be tendered for general operatives.

**Note:** See the Tender Evaluation Example on page 94.

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## 2.5.2 Managing Price Variation

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### Adjustment to the Contract Sum for changes in cost

The Contract must indicate the method to be used to calculate adjustments to the Contract Sum for changes to the cost of labour and materials that are allowable under the Contract. The two options are described in the Price Variation clauses attached to the contract form, as follows:

- **PV1, the Proven Cost Method** requires the Contractor to provide evidence by the way of invoices to support any claim for increases, including hyperinflation increases, in relation to the cost of materials used in the works and to also produce evidence of the cost of those materials at the Designated Date/Base Date. The Employer checks the validity of such claims independently by obtaining prices from a number of suppliers and other sources for the same materials in the same quantities and timeframes as in the project and compares them against the Contractor's claim.
- **PV2, the Formula Fluctuations Method** uses formulae to calculate the appropriate amount of Contract Sum adjustment for recovery of material cost changes. The formulae are based on price indices for materials, fuel and the Consumer Price Index published by the Central Statistics Office in its monthly *Statistical Release*.

For both PV1 and PV2, permitted increases<sup>4</sup> applied to the Registered Employment Agreement (REA) rates at the Base Date (for categories of workers for which recovery is permitted) are used to support Contract Sum adjustments for recovery of labour cost changes.

Employers are required to state in the tender documents which option is to be used. If a choice is not indicated in Part 1M of the Schedule, the default is that PV1 will apply. While the choice of PV1 and PV2 is available with both traditional and design-and-build contracts, PV2 can be difficult to use in design-and-build if the Employer cannot provide the percentages and weightings in Appendices 2 and 3 in the tender documents.

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### Post-tender negotiation rules

Post-tender negotiations are contrary to the terms of the EU Public Procurement Directives and the EU courts have specifically stated that negotiation on prices in open and restricted tender procedures is ruled out. This includes negotiating the buyout of the price variation clause (i.e. regulation of recovery of increases in labour and materials that occur after the Base Date).

Negotiating the buyout of the price variation clause post-contract award should equally not be considered.

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<sup>4</sup> Increases in workers' pay rates to the extent that they apply generally in the construction industry and which are compliant with Government guidelines and Social Partnership Agreements.

## 2.5.2 Managing Price Variation, Continued

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### Post-tender negotiation rules (continued)

Any such negotiations would conflict with the objective of the Government's objectives for fixed-price lump-sum contracts tendered on a competitive basis (i.e. to bring about a situation where the tendered price and the final cost paid are almost the same), and also National Guidelines which call for good governance, accountability and transparency in the spending of public money.

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### Cost risks Borne by the Contractor

In a fixed-price lump-sum contract, the Contractor accepts the risk of:

- Increases in the cost of labour and materials (the inflation risk) other than those increased by certain specified amounts (hyperinflation) and those outside the specified time period (fixed-price period);
- Increases in cost due to changes in law other than in certain specified areas; and
- Increases in cost due to exchange rate variations.

The definition of risks accepted by the Contractor and the recovery of increased costs by the Contractor (where risks revert to the Employer) are dealt with in more detail below.

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### Inflation risk borne by the Contractor

For Public Works contracts, the Contractor tenders a price that is fixed for a defined *fixed-price period*, and within this period, the Contractor accepts the risk of normal inflation. The fixed-price period and the commencement date depends on the Price Variation method that is used – as specified in the following table:

PV Method	Fixed-price Period	Commencement Date
PV1	30 months	The Contract Date
PV2	36 months (incorporating a 6-month tender assessment period)	The Designated Date or the Recovery Date

#### Notes

- 1 The Designated Date is 10 days before the latest date for receipt of tenders.
  - 2 The Recovery Date is the Designated Date corrected to account for any delay to the commencement of the works resulting from actions or omissions of the Contractor.
  - 3 If the Contractor is responsible for delaying commencement of the works after the Contract has been awarded, the commencement of the fixed-price period is deferred.
  - 4 The Contractor is always entitled to compensation for *hyperinflation* and for inflation caused by changes of law (see below).
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## 2.5.2 Managing Price Variation, Continued

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### Managing lead-in times for transfer of inflation risk

There is invariably some delay between the close of the tendering process and the award of the Contract, so in the case of PV2, the actual fixed-price period that applies during a project may be shortened if a delay is caused by the Employer in awarding the contract. For example, if the planned project lead-in time is six months, the actual fixed-price period for project execution is 30 months, however, if the planned lead-in time is extended to nine months due to a delay by the Employer to awarding the Contract, the actual fixed-price period applying during project execution is reduced to 27 months.

In the case of PV1 the 30 months fixed-price period always commences at the Contract Date so that the actual fixed-price period applying during project execution does not change no matter what length of time it takes to award the contract.

**On shorter contracts**, this reduction for PV2, of the fixed-price period applying during the Contract, may not be an issue. If the Contract will definitely be completed within the 30-month period, it is possible in exceptional circumstances to have a planned lead-in time longer than 6 months. However, in no case should the lead-in period exceed 12 months.

In general, contractors tendering for short-term contracts will know the duration of such contracts and will price in their tender the cost increases expected to arise during that period. Competition in the market will dictate that this is the case.

**On longer contracts** it is important to minimise the lead-in time (6 months maximum) for PV2 to ensure that the longest possible period for fixed-price is available.

The Employer should consider carefully what is an appropriate lead-in time for the project. This is particularly important if the project is governed by the EU Procurement Directives, but all projects, irrespective of size, are subject to the EU Treaty principles of transparency, non-discrimination, proportionality, mutual recognition and equal treatment of tenderers. The lead-in time should not be confused with the tender validity period, which should be stated in the tender documents.

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### Inflation risk exception: hyperinflation

Hyperinflation is the term used to describe an extremely rapid rise in market prices over a very short period of time. The Contract entitles the Contractor to recover costs at any time after the Designated/Recovery Date, for sudden market increases in the price of materials or fuel, according to the rules in the Contract.

The compensation payable is the amount calculated according to the Contract as appropriate. This is dealt with in more detail in the price variation section of Chapter 3.

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## 2.5.2 Managing Price Variation, Continued

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**Exchange rate risk borne by Contractor**

The request for tenders should state that all prices are to be given in euro, and that the risk of currency fluctuations must be borne by the Contractor. Tenders submitted in a currency other than euro should not be accepted.

No compensation is payable for changes in the cost of materials, fuel or other prices due to variation in the currency exchange rate.

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**Risk of changes in law borne by Contractor & the Employer**

In fixed-price lump-sum contracts, the Contractor accepts the risk of any cost increase arising out of changes in legislation during the lifetime of the project.

There are exceptions; the Contract Sum is adjusted (up or down) for changes in:

- Value Added Tax;
- Excise duty or similar tariffs;
- Pay-Related Social Insurance; and
- The requirement for a licence to import any commodity.

Compensation for these increases is payable only if the Contractor has not already received compensation for them under the Contract (see above).

If the Employer identifies any such change in the tender documents, for example by referring to impending legislation, then no adjustment is made to the Contract Sum when the change occurs.

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## 2.5.2 Managing Price Variation, Continued

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### Data required for PV2 Invitation to Tender

In a traditional contract, if the Employer chooses to use PV2 to deal with price variation, the Invitation to Tender include the two appendices from the Contract, appropriately filled in:

- **Appendix 2, *Proportions of Labour, Materials, Fuel, and Non-Adjustable Overheads***, allocates a nominal percentage of the Contract Sum to each of five (in the case of building works) or six (in the case of civil engineering) broad categories of work items (labour, materials, fuel, non-reusable temporary works, overheads and plant (only for civil engineering)). In the case of overheads, for example, ten per cent (10%) should be allocated to overhead costs that are not subject to price adjustment. The total of the percentages must equal 100.
- **Appendix 3, *Indices and Weightings for Materials and Fuel***, allocates a nominal weighting to a range of material and fuel items that may be used on the project. The total of the weightings for Materials must equal 1, as must the total of the weightings for Fuel. The prices of items in this list are tracked by the Central Statistics Office, who publish the relevant price indices monthly.

During the tender period, tenderers may be given an opportunity to comment on the Employer's nominal percentages and weightings in accordance with the instructions to tenderers. Any revisions to the percentages and weightings that the Employer wishes to make will be circulated not later than the time stated in the tender documents for issue of amendments. The completed appendices 2 and 3 should be contained within the Pricing Document.

**Note 1:** These nominal percentages and weightings are not intended to be an exact representation of the actual use of materials etc. on the project; they are used solely for the purpose of calculating the price variation.

**Note 2:** Only those categories of materials listed in the CSO monthly publication Table 3A<sup>5</sup> are permissible. If a project requires only some of these categories, this is acceptable and can be achieved by allocating weightings only to those categories required, and ensuring that all categories add up to one.

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<sup>5</sup> Detailed Wholesale Price Indices (excluding VAT) for Building and Construction Materials.

## 2.5.2 Managing Price Variation, Continued

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### **PV2 use of material and fuel categories**

The relevant material and fuel categories for the PV2 clause of the Contract, and the weighting for each, are as indicated by the Employer. It is not envisaged that every category will be used on every contract. Some contracts that do not involve a lot of diverse materials may use only a small number of categories.

The Employer allocates work elements in the Bill of Quantities /Specification or other tender document to categories of material or to non-reusable temporary works, as deemed appropriate.

**Note:** The allocation of work elements to categories is for the purposes of allocating an index for price recovery to a part of the Contract Sum, and in no way denotes a preference for the type of material/temporary works to be used.

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### **PV2 tender data in a traditional contract**

In the case of traditional contracts where Bills of Quantities are used, the work items should be individually coded by the Employer to indicate which material category they fall into for price variation purposes.

The information provided in a traditional contract ensures that all tenderers bid on an equal basis, as both the proportions of the work and the weightings of each material and fuel (for the purposes of the PV2) clause are known.

Tenderers will also know which material index will be used for which work item, as the work items will be linked to categories, which are in turn linked to specific CSO indices. In the case of fuel and labour, which are not linked to work items, the tenderers will know the percentages and indices that apply.

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### **PV2 weightings not required**

Within the PV2 clause, weightings are not required in Appendix 3 for non-reusable temporary works or labour costs. There will be only one rate of increase for non-reusable temporary works – the Consumer Price Index – and only one rate of increase for labour – General Round Increases under the Social Partnership Agreement.

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### **PV2 data and the fixed-price period**

The Employer must provide the data set out above even where the Contract is due to be completed before the end of the 36<sup>th</sup> month after the Designated or Recovery Date. This allows for exceptional increases to be calculated (in the case of hyperinflation) and deals with the situation where a delay occurs in awarding the Contract or commencing the works (not on account of the Contractor), which may mean that the contractual date for completion falls after the end of the 36<sup>th</sup> month, even though that may not have been the Employer's original intention.

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## 2.5.2 Managing Price Variation, Continued

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### Offer period in Standard Form of Tender

The following text is included in the Standard Form of Tender which must be sealed. This is relevant when using either PV1 or PV2:

*'We agree that this offer will remain open for your acceptance at any time until the latest of –*

*The end of the period specified in this Invitation to Tender<sup>6</sup>*

*Expiry of at least 21 days written notice to terminate this tender given by us'*

**Note 1:** Item (i) indicates a time limit (usually defining an assessment period of up to 6 months). If the Contract is made earlier, neither the Employer nor the tenderer suffers any loss under the price variation – except in respect of the very limited application of the Price Variation clause prior to the Base Date.

**Note 2:** Item (ii) is included to protect the Employer from inadvertently losing the right to accept the tender. The tender remains open beyond the limit specified at (i). However, where the tenderer has given written notice to expressly terminate the tender, the tender remains open for 21 days from such notice and the Employer has this period to decide if he wants to accept the tender if he so wishes.

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<sup>6</sup> A tender assessment period of 6 months is assumed