

GUIDE TO ESTIMATING AND MANAGING CONTINGENCY SUM



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MARCH 2015

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1.0 Introduction

Project performance can be measured in various ways and one of them is the difference between Project budget and the final costs. This difference can be attributed to inaccurate cost estimates as a result of undefined cost elements within the project scope. For this reason, reserve funds called the **contingency sum** which are usually added to the estimated costs are often set aside to cover these extra costs.

2.0 Scope

This policy aims to guide procurement officers on how to estimate and manage contingency sum and it also sets out the difference between Contingency Sum and Variations.

3.0 Purpose

The purpose of this policy is to:

- Ensure that the contingency sum reserved for a particular project are utilized in a prudent manner,
- Provide a reference on the steps to be taken when estimating and applying the contingency sum percentage including the obtaining of approval from appropriate responsible authority, and
- Differentiate between contingency sum and variations.

4.0 Definitions

Contingency sum is a project management term that is sometimes mistakenly used interchangeably with Variations. However attempts to use them in cross-purpose situations can be disastrous. A proper understanding of the terms is crucial. Therefore, the following section provides a clear definition of the two terms.

4.1 Contingency Sum

Contingency sum is the sum of money allowed in the project budget for expenditure on aspects of the project that were unforeseen or unforeseeable at the time of preparing documents. Contingency Sum (known, unknown) covers a known risk which has an unknown cost value. That is these are risks that project managers should be aware of that may arise in the course of the project. Ideally project managers must have risk registers that record the past and the potential risks pertaining to a project.

Known and unknown risks can be identified early in the project. These are risks which will potentially impact the project later and can be alleviated with a good risk management process. A Contingency sum is a fund allocated for Risks remaining after risk response planning.

Examples of such risks are:

- Increase in quantities of materials without any changes to specification.
- Increase in personnel cost. (due to request by agency to expedite the work), or
- Significant increase in price of hardware material

The amount of contingency included in the estimate should be identified, as well as the methods used to determine the contingency amount.

Contingency usually excludes:

1. Major scope changes such as changes in end product specification, capacities, building sizes, and location of the asset or project; and
2. Extraordinary events such as major strikes and natural disasters

Any additional costs necessary to meet new statutory requirements or fire precautions are also excluded from its use.

4.2 Variations

In Project management, variations are usually due to the changes requested either by the contractor or the procuring agency pertaining to alternation to the scope of work in the form of an addition, substitution or omission from the original scope of work.

Variations may occur because of:

- Geological anomalies
- Statutory changes or enforcement.
- Site/building conditions differing from those described in the Contract documents; or
- Change requested by the Principal (these should be kept to an absolute minimum).

Some variations entail cost and/or time adjustments to the contract. Such variations should be priced by the Contractor, valued by the Quantity Surveyor and accepted if satisfactory by the Government tender board prior to being implemented.

The extent to which a variation to the works is reflected in an adjustment to the Contract Sum is determined by the 'valuation' of the variation. After a variation has been valued and agreed, an adjustment can be made to the Contract Sum.

The approval for any variations must be approved by the Government Tender Board.

5.0 Budget Estimates

Agencies, during budget submission must factor in contingency sum as part of the project costs as well. This will limit the issue of undue pressure on the budget division when allocating funds during the period when projects are approved and need additional funds to cover costs arising due to unforeseen reasons that could have been covered by contingency sum.

However agencies must be careful not to seek these set of contingency funds unless or until it is required.

6.0 Calculating Contingency Sum

Establishing a contingency sum is part of risk management. Before a project manager can determine the sum needed, they must analyze the potential risks. There is a need to refer to the past projects to identify the cause of any cost overruns and determine the amount of the overruns and note how often the events occur.

Generally, contingency sums will be 10% of the estimated contract value.

However the following steps can also be undertaken to determine the contingency sum that needs to be factored in for the project. Instead of giving an overall percentage to the contingency value can be calculated by calculating the probability of the component of the project that may attract contingency sum.

Ideally, contingency must be calculated at major task level. This makes it easier to work out the contingency budget. If you can't do it at task level,

with more money allocated to the riskier tasks, calculate the amount of contingency budget for each short phase or unit of work, not at a project level.

A Contingency sum can be arrived at by looking at your known Risks and their cost impacts.

- Identify Risks
- Identify Probability and Impact for each risk
- Identify Impact Costs for each Risk
- Multiply Impact Cost by Probability to arrive at an Expected Monetary Value (EMV) for each Risk.
- Add the EMV for all Risks identified. *And voila-* there you have your **Contingency Budget**.

CALCULATING CONTINGENCY RESERVE		
STEPS	DESCRIPTION	EXAMPLE
1.	List each contingency that could increase your expenses.	Adding extra personnel. Quantity of material Significant increase of steel price
2.	Estimate the contingency's cost per items	Personnel. ~ \$90,000 Quantity of material ~ \$120,000 Steel price ~ \$ 300,000
3.	With experience and prior data available calculate the probability of each contingencies occurring	Personnel. ~ 5% Quantity of material – 10% Steel price – 10%
4.	Calculate the value of each contingency in dollar value by multiplying the cost by the probability	Personnel. ~ 5% x \$90,000 = \$4500 Quantity of material – 10% x \$120,000 = \$12000 Steel price – 10% x \$300,000 = \$30,000

5.	Sum up the contingency values to get the total contingency reserve required.	Personnel. ~ \$4,500 Quantity of material – \$12000 Steel price – \$30,000 Total = \$46,500
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7.0 Approval & Control

The contingency sum is separate from the contract sum. It is to be requested by the agency as a separate request from the payment of the contract sum.

Agencies seeking GTB Approval must specify and differentiate the base contract sum and the value of the contingency sum.

The sum is not being taken as a line in your day-to-day expenditure spreadsheet, and the agency must not exploit it whenever the agency wants to do so. It should be noted that the contingency sum within a construction contract only is a sum upon which the supervising officer or clerk works will approve following which the Director Buildings will endorse such approval. However, it is necessary to seek written approval from the Head of the Agency for the spending increase. The agency must fully account and keep a record as it is expended.

As it is a sum of money which was approved when the tender was accepted, no new approval is necessary from the Government Tender Board to cover any expenditure properly charge-able to contingencies.

There shall be no separate provision for contingency sums in sub-contracts. Effective cost control requires that there shall be no separate allocation of the contingency sum (construction contracts) to be expended in any other way than on the direction or instruction of the Supervising Officer.

The agency must ensure that reports on the use of any contingency funds are prepared for transparency and accountability reasons.

8.0 Conclusion

In summary, a contingency sum allows the agency to react to unforeseen events that impact the project. The Provision of the contingency sum is based on project risk and the agency must ensure that it follows the mechanism to authorize and monitor the use of the funds.

Finally, procurement officers are strongly cautioned against incurring contingency expense. Procuring officers are informed the contingency sum is not meant to cater for project managers who were not proactive in working out the costs properly and officers who incur contingency charge for insubstantial reasons will be taken to task during audit queries. Procurement officers are advised the contingency sum is a measure to offset risks and unforeseen circumstances. If the agency gets to the end of the project and has not utilized it, the agency must not unnecessarily increase the scope or procure materials and extra equipment to spend the contingency sum.

9.0 Review

The guide will be reviewed initially after six months of its issue and at the end of second year. However if there are any significant changes that would require the guide to be reviewed, it will be done so immediately.