

## ANNEX C

### *Composite indexes budget practices*

This edition of *Government at a Glance* includes two composite indexes related to budgetary practices: the use of a medium-term perspective in the budget process and the use of a performance budgeting system. Data used for the construction of the composites are derived from the 2012 OECD Survey on Budgeting Practices and Procedures and the 2011 OECD Survey on Performance Budgeting. Survey respondents were predominantly senior officials in the Ministry of Finance.

The narrowly defined composite indexes presented in *Government at a Glance* represent the best way of summarising discrete, qualitative information on key aspects of budgetary practices such as medium-term expenditure frameworks and performance budgeting. “Composite indexes are much easier to interpret than trying to find a common trend in many separate indicators” (Nardo et al., 2004). However, their development and use can be controversial. These indexes are easily and often misinterpreted by users due to a lack of transparency as to how they are generated and the resulting difficulty to truly unpack what they are actually measuring.

The OECD has taken several steps to avoid or address common problems associated with composite indexes. The composites presented in this publication adhere to the steps identified in the *Handbook on Constructing Composite Indicators* (Nardo et al., 2008) that are necessary for the meaningful construction of composite or synthetic indexes.

Each composite index is based on a theoretical framework representing an agreed-upon concept in the area it covers. The variables comprising the indexes were selected based on their relevance to the concept by a group of experts within the OECD and in consultation with country delegates to the relevant working parties.

- Various statistical tools, such as factor analysis, were employed to establish that the variables comprising each index are correlated and represent the same underlying concept.
- Different methods for imputing missing values have been explored.
- All sub-indicators and variables were normalised for comparability.
- To build the composites, all sub-indicators were aggregated using a linear method according to the accepted methodology.
- Sensitivity analysis using Monte Carlo simulations was carried out to establish the robustness of the indicators to different weighting options (e.g. equal weighting, factor weighting and expert weighting). Expert weighting resulted as the most appropriate weighting method.

The indexes do not purport to measure the overall quality of budgetary systems. To do so would require a much stronger conceptual foundation and normative assumptions. Rather, the composite indexes presented in *Government at a Glance* are descriptive in nature, and have been given titles to reflect this. The survey questions used to create the indexes are the same across countries, ensuring that the indexes are comparable.

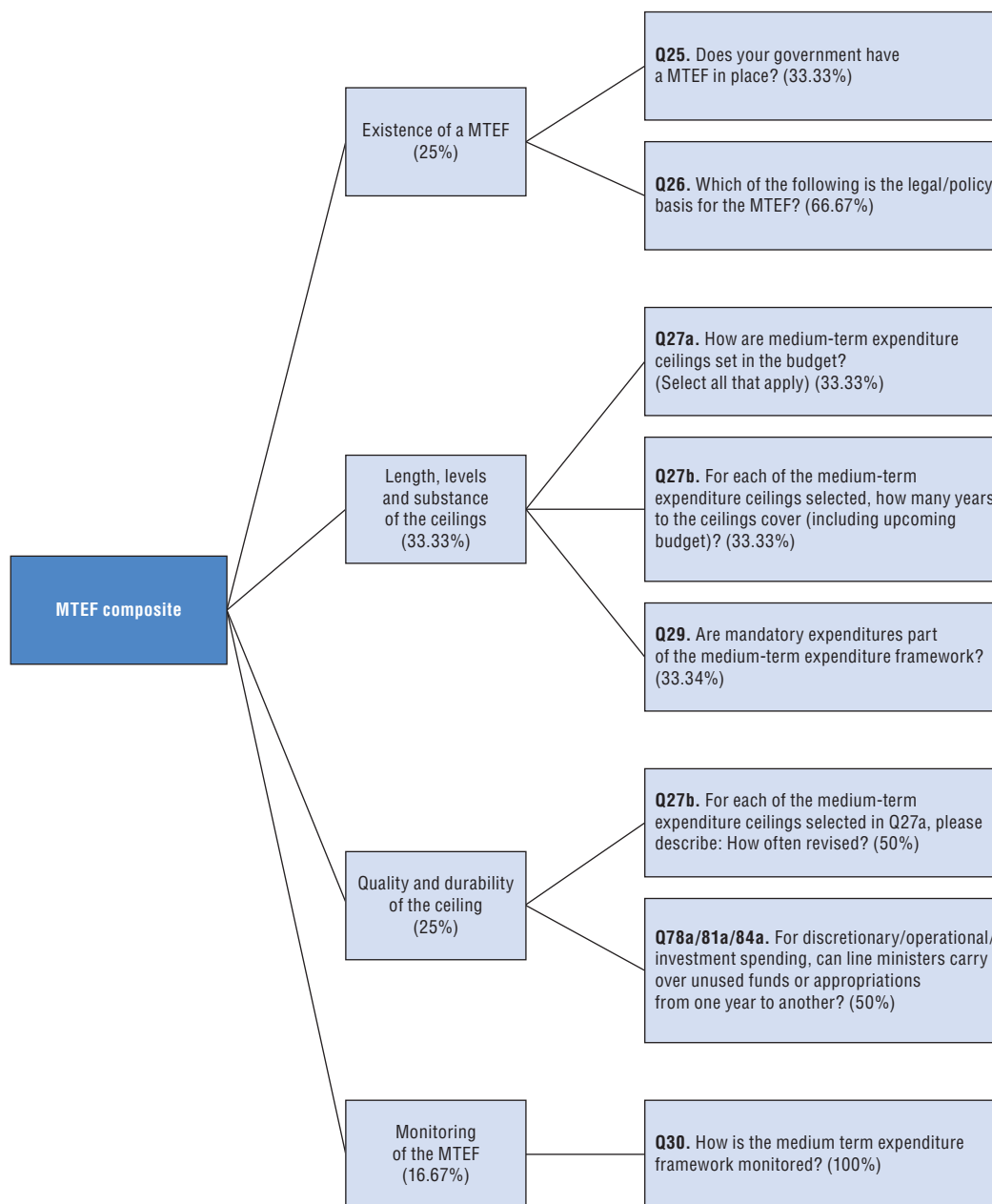
While the composite indexes were developed in co-operation with member countries and are based on best practices and/or theory, both the variables comprising the composites and their weights are offered for debate and, consequently, may evolve over time. The OECD is currently redefining best practices for budget transparency and is revisiting the concept of budgetary flexibility; as such, no composites related to these topics are presented in this edition. The composites displayed in the 2013 edition of *Government at a Glance* are not comparable with those in the 2009 edition, as they are built on renewed versions of the surveys including additional or differently worded questions and different weights.

The composites were built according to the following methodology: each of the topics was divided into broad categories comprising the theoretically relevant aspects for each of the two subject areas (medium-term expenditure frameworks and performance budgeting). A weight was assigned to each of these broad categories. Within each of the broad categories, the relevant questions were identified, a sub-weight was assigned to each question and a score was given to each of the answers within these questions. The country scoring for each question is the product of the weight of the broad category and the sub-weight of the question multiplied by the answer provided by each country (1 or 0). The composite is the result of adding together these scores for each country. Both composites vary from 0 to 1; a score of 1 implies the use of sound practices on a given topic.

## Medium-Term Expenditure Framework (MTEF) variables, weights and scoring

The following items and weights have been used in the construction of the MTEF composite.

Figure C.1. Variables and weights used in MTEF index

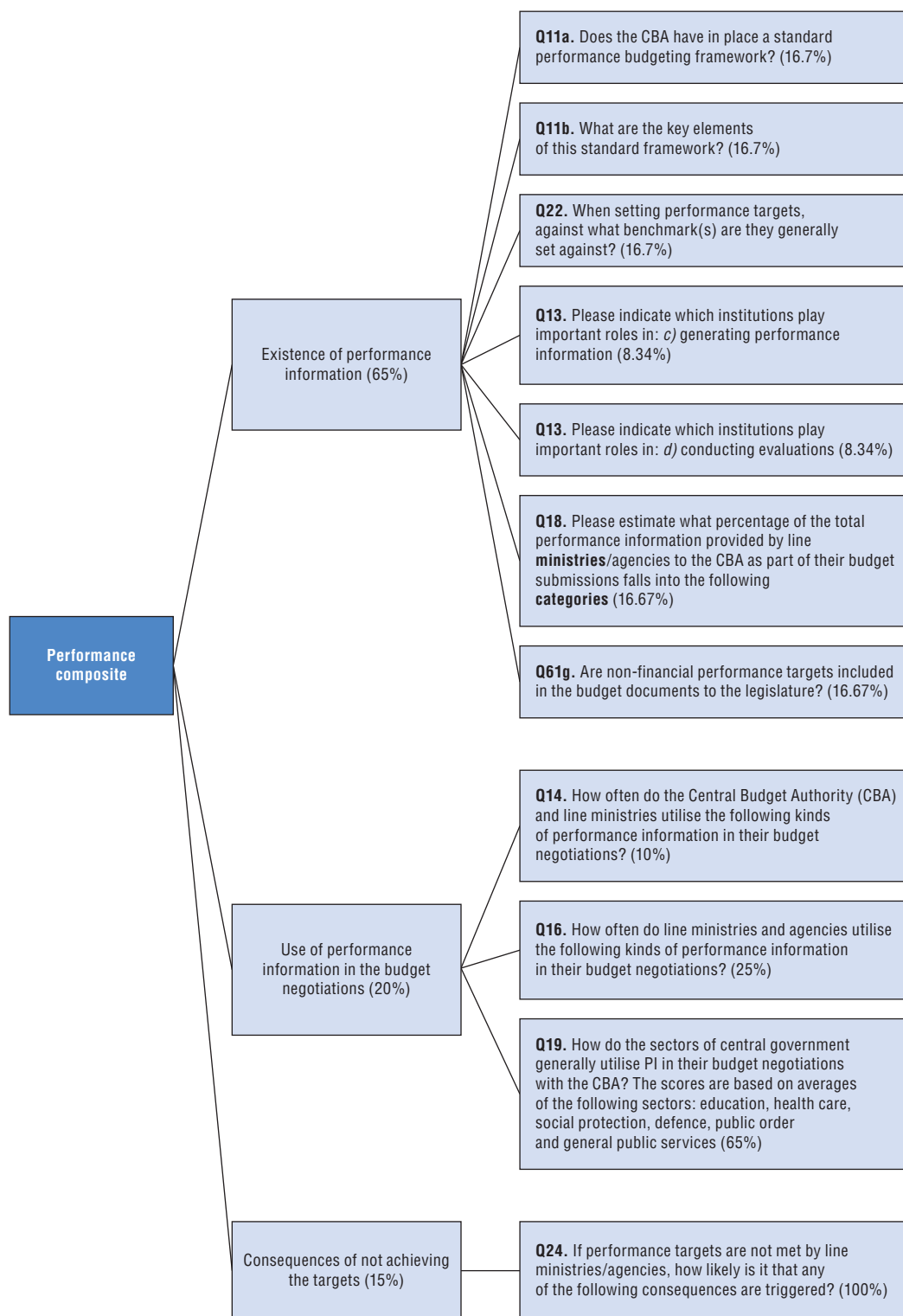


Note: Additional details regarding the theoretical framework, construction and weightings of each composite are available at: [www.oecd.org/gov/govtaglance.htm](http://www.oecd.org/gov/govtaglance.htm).

## Use of a performance budgeting system at the central level, weights and scoring

The following items and weights have been used in the construction of the MTEF.

Figure C.2. **Variables and weights used in the performance budgeting index**



Note: Additional details regarding the theoretical framework, construction and weightings of each composite are available at: [www.oecd.org/gov/govataglance.htm](http://www.oecd.org/gov/govataglance.htm).



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