

PUBLIC

# Risk Evaluation Methodology



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# RISK EVALUATION METHODOLOGY

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## OVERVIEW

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The Balancing and Settlement Code (BSC), Section Z<sup>1</sup> 5.4, requires the Performance Assurance Board (PAB)<sup>2</sup> to establish and maintain this Risk Evaluation Methodology (REM) that it will use to identify, evaluate and assess materiality of Settlement Risks.

The PAB reviews, and where appropriate updates, the REM annually. A draft is provided to Performance Assurance Parties<sup>3</sup> (PAP) and other interested parties for comment. Appropriate changes are made following consideration of these comments, after which the PAB approves and adopts the REM.

This document describes how we identify and evaluate Settlement Risks and how we will capture this information in the Risk Evaluation Register (RER). The RER itself will be reviewed at least annually by the PAB following the process described in Section Z 5.5, and may be updated ad hoc, as a 'within-period' revision (again described in Section Z 5.5).

**This REM is effective from 1 April 2019**



## Where to find out more

- Visit <https://www.elexon.co.uk/reference/performance-assurance/>
- Contact [paa@elexon.co.uk](mailto:paa@elexon.co.uk)

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<sup>1</sup> <https://www.elexon.co.uk/bsc-and-codes/balancing-settlement-code/bsc-sections/>

<sup>2</sup> The Performance Assurance Board is appointed by, and reports to the BSC Panel - <https://www.elexon.co.uk/group/performance-assurance-board-pab/>

<sup>3</sup> BSC Section Z 5.1.1 defines "Performance Assurance Party" as a Supplier, Meter Operator Agent, Data Collector, Data Aggregator, Meter Administrator, Licensed Distribution System Operator and/or a Registrant

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## DEFINITIONS AND PRINCIPLES

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BSC Section Z 5.1 sets out several key points with regards to Settlement Risk evaluation:

- **Settlement Risk** is:  
*"a risk of any failure or error in a step or process required under the Code (including in each case a risk which has materialised as an actual failure or an error) for the purpose of effecting Settlement or otherwise required in connection with Settlement in accordance with the provisions of the Code"*
- The **significance of a risk** is set out both in terms of *"the **probability** of the failure or error.... and its **impact** on settlement"*
- The level at which a Settlement Risk is considered '**material**' is at the discretion of the PAB i.e.  
*"of a level which the Performance Assurance Board determines (in its opinion) to be material"*
- The PAF should have regard to two objectives:  
*"(i) the **efficient, equitable and accurate allocation of energy** between Suppliers resulting from the aggregated consumption of Metering Systems for which each Supplier is responsible; and  
(ii) the **efficient, accurate and co-ordinated transfer of Metering Systems data** by Performance Assurance Parties between Suppliers and Supplier Agents."*

This methodology describes how the significance of the risks is evaluated. The PAB will determine which risks are material within the Risk Operating Plan (ROP) when deciding which risks are to be mitigated in the year and how.

Settlement Risk are both Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) risks<sup>4</sup>. Section Z 5.1.3 directs that CVA risks are treated as significant; therefore when setting the risk review schedule, the PAB should review CVA risks at least quarterly.

The PAB may identify risks that impact the PAF's scope directly or indirectly, but can't be defined as Settlement Risks. If the PAB has views on such matters, it can refer them to the BSC Panel to consider communicating to the relevant body (e.g. another industry Code or Ofgem).

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<sup>4</sup> SVA covers those processes affecting metering systems registered in the Supplier Meter Registration Service, and the processing of data that leads to allocation of energy to Supplier Balancing Mechanism Units. CVA covers those processes affecting metering systems registered in the Central Meter Registration Service, and the processing of data that leads to allocation of energy to BM Units, Interconnectors, Grid Supply Points (GSP) and GSP Groups.

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## IDENTIFICATION AND EVALUATION OF SETTLEMENT RISKS

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### Identifying Risks

Settlement Risks can be identified in many ways including:

- As a consequence of analysis of key risk indicators including issues (non-compliances)
- Following audits or other application of mitigating Performance Assurance Techniques<sup>5</sup>
- Feedback from BSC Parties and other stakeholders about what's concerning them
- As a consequence of ELEXON or Industry strategy work that identifies new or future risks.
- Following risk assessments on proposed BSC Modifications or Change Proposals<sup>6</sup>

The PAB, ELEXON (as the Performance Assurance Administrator (PAA)) or stakeholders (primarily Performance Assurance Parties) may propose adding, amending or closing/archiving Settlement Risks on the current risk register.

- All risks will be reviewed at least once a year in line with Section Z 5.4.2; higher priority risks will be reviewed more frequently as directed by the PAB.
- For the annual review, a draft RER will be published on the ELEXON website and stakeholders invited to comment. For changes within the year, the PAB will invite stakeholders to comment on material changes only.
- Stakeholders should send any proposal for change to the PAA who will review and discuss with the proposer, and prepare a recommendation for the PAB. If the PAA has a different view as to the proposal, all viewpoints will be included with a recommendation for PAB decision. Once the risk has been added to or amended on the RER (or closed), following agreement at the PAB, the new RER will be published, and stakeholders invited to comment as necessary.
- An archive of any rejected amendments and closed risks will be maintained by the PAA for information.

A Settlement Risk will be closed when the PAB considers it is no longer a risk, or because it has been re-drafted into a new risk, or merged with another risk. The reason for closure will be noted in the RER.

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<sup>5</sup> A list of Performance Assurance Techniques is available on the website

<https://www.elexon.co.uk/reference/performance-assurance/performance-assurance-techniques/>

<sup>6</sup> All Modifications and Change Proposals will be assessed by the PAA for impact on the Settlement Risks; any impacts noted will be presented to the PAB with a recommendation.

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## Recording Risks - Risk Evaluation Register

Once identified, each Settlement Risk is recorded on the RER with the following information:

Field	Notes
Identification Number	This is a unique number for each risk captured in the RER
Date added	Date the risk was initially added to the RER; format dd/mm/yyyy
Effective From Date	Date approved by the PAB as added, amended or closed; format dd/mm/yyyy
Workflow Status	Proposed - prior to approval at the PAB Approved - after approval by the PAB [Note that closed risks will be captured on a separate tab in the RER]
Risk Category	High level area of risk
Risk Sub-Category	Related process / activity
HH/NHH/Both/NA	Indicator of whether the risk affects the Half Hourly or Non-Half Hourly market, or both; n/a for risks that are CVA only
CVA/SVA/Both	Indicator of whether the risk affects the CVA or SVA market, or both
Risk title - The risk that...	Description of the trigger or event that would lead to the risk materialising
Risk consequence - resulting in...	The consequence of the risk materialising. Most often this will be energy volumes missing from Settlement, or erroneous or estimated data entering Settlement
Risk Factors	Prevalent root causes
Relevant BSC and BSCP processes	Sections and clauses where compliance is described - may not be exhaustive
Non-Settlement impacts	Supplementary information to support PAPs in understanding potential consequences outside the BSC if the risk manifests - may not be exhaustive
Impact	£ value – most plausible estimated error over next 12 months. Represents estimations of both the probability of the failure or error and its impact on Settlement, given the controls that will be in place over the year
Impact rationale	Commentary on factors influencing the Impact, including any future events or changes forecast to potentially affect the risk in the year
Impact band	1-5 banding reflecting range of Impact values
Upper Impact	£ value – most plausible estimated upper value over next 12 months
Lower Impact	£ value – most plausible estimated lower value over next 12 months

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Volatility	H / M / L indicator that describes the difference between the Impact and the Upper Impact
Volatility rationale	Commentary on what is causing the Volatility
Movement	Increasing / decreasing / stable - observed trend over recent reviews, in particular since the RER was last presented to the PAB. Additional trend analysis may be presented to the PAB to supplement this information
Target Impact*	£ value – reflects maximum Impact value the PAB determines acceptable
Target Impact rationale*	Commentary on reason for the Target Impact
Impact Variance*	£ value of the difference between the Impact and Target Impact values – only shown where the target is lower than the current value. Accompanied by an indicator (e.g. red, amber or green)
Target Volatility*	Tolerate / reduce
Target Volatility rationale*	Commentary on reason that the Volatility should be tolerated or reduced
Noted Controls	List of the BSC-prescribed controls that do or can mitigate the risk. These are activities or processes that are likely to be applied routinely and can act as a risk prevention measure. Note that a Performance Assurance Technique (PAT) is not a control for these purposes as it is applied at the PAB's discretion (for the most part) following a Risk Management Determination.
Control Strength	H/M/L indicator of estimated effectiveness of the available controls for the risk. Control effectiveness <40% is rated low; between 40%-70% is medium strength and >70% is rated high strength. This gives additional insight into how the risk can be mitigated
Control Strength rationale	Describes how the controls help, and reason for the assigned strength
Supplementary controls	Examples of preventative controls outside the BSC which affected parties may seek to use, may not be exhaustive
Assumptions	Any key assumptions not directly related to the impact or control scores rationales
Key risk indicators	Key metrics that provide information such as the at risk population, potential failure rate, magnitude of error per failure, or otherwise support risk evaluation
Additional information	Any other useful information not captured elsewhere. E.g. clarifications on scope of risk, events that may increase/decrease the probability or severity due to factors such as BSC change
PAP role – responsible for a risk factor	List of party role types which could cause the risk to manifest through non-compliance with the identified risk factors (not exhaustive)
PAP role – responsible for a	List of party role types which could take action to mitigate the risk through deployment

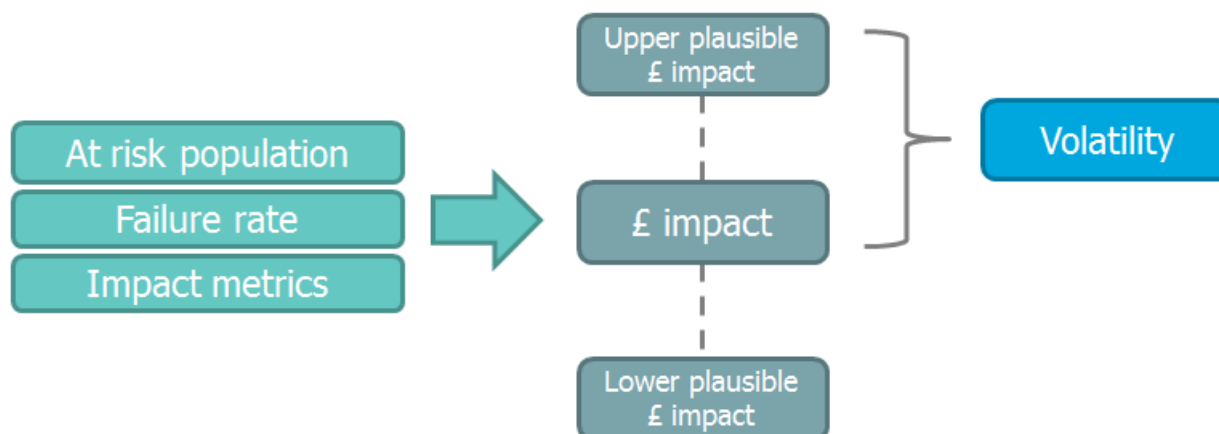
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control	of a BSC control (not exhaustive)
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\* Fields populated from the Risk Operating Plan

## Evaluating Risks

The PAB will evaluate Settlement Risks to determine an Impact value / band and a Volatility rating:



These ratings are judgments, supported with data as far as is possible and appropriate. The PAA will identify data sources and items which will be helpful in assessing the risks; these key risk indicators will be described in the RER. Key risk indicators could come from:

- Output of techniques e.g.
  - PARMS Serials
  - Trading Disputes information
  - BSC Audit issues and findings of Technical Assurance of Performance Assurance Party audits
  - Non-compliances identified by the Technical Assurance Agent
- Data Transfer Network data flows (where ELEXON has access periodically or ad hoc)
- Quarterly extract from Supplier Meter Registration Systems (SMRS)
- Central BSC systems data (e.g. system prices)
- Other publically available information (e.g. Ofgem data)

The assessments are illustrative of the potential impact over a 12 month period and where possible quantify gross error – disregarding whether impacts are an overstatement or understatement of allocated energy. Evaluation of risks may take into account price volatility as a component of that risk.

An example of the processes is described below:

### Step 1 – Impact value and band

- a) Identify at risk population
- b) Evaluate likely failure rate
- c) Identify any other relevant metrics



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- d) Derive lower, middle and upper plausible impacts
- e) Allocate the risk to an impact band based on middle Impact:

Impact Band	Description
5	<b>Extreme</b> – Potential financial impact <b>£25m or more</b>
4	<b>Major</b> - Potential financial impact of between <b>£10m and £25m</b>
3	<b>Moderate</b> - Potential financial impact of between <b>£2m and £10m</b>
2	<b>Minor</b> - Potential financial impact of between <b>£500k and £2m</b>
1	<b>Incidental</b> - Potential financial impact of <b>less than £500k</b>

## Step 2 – Volatility rating

- a) Compare the middle and upper impacts
- b) PAA to assign a high / medium / low indicator to the difference based on factors such as how much higher the upper is than the middle (proportionally), and whether the upper impact spans several impact bands.

Volatility could be caused by lack of information about the risk; inherent uncertainty in the risk factors; or a risk environment with many fluctuating influences.

The PAA will provide the PAB with reports to support risk assessment and to track any improvements in risk environment.

## NEXT STEPS

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### Risk appetite and Performance Assurance Techniques

The PAB will set out in the Risk Operating Plan the level of Settlement Risk that can be tolerated in the year, given the resources available to implement mitigations (“risk appetite”) for each risk by assigning the [Target Impact](#) and [Target Volatility](#), and set out the rationale for both.

The [Impact Variance](#) will indicate the reduction in error the PAB would like to achieve (if any), by deploying the mitigations - the Performance Assurance Techniques that are deployed by the PAB to detect, prevent or remedy manifestation of the Settlement Risks.

The current list of PATs is set out on the ELEXON website. Refer to the relevant web pages and the PAF Document for more information.