EUROPEAN CENTRAL BANK

BANKING SUPERVISION

ECB DG-MS4 Internal Models division

# Reporting instructions for banks' internal validation function

Outcomes of pilot phase for operational risk Pillar I models

# General Objectives

The project "**Reporting instructions for banks' internal validation function**" has been developed by ECB and NCA model experts with the following goals:

1. Ensuring robust information on all models in the SSM and improving **prioritisation** of supervisory assessments

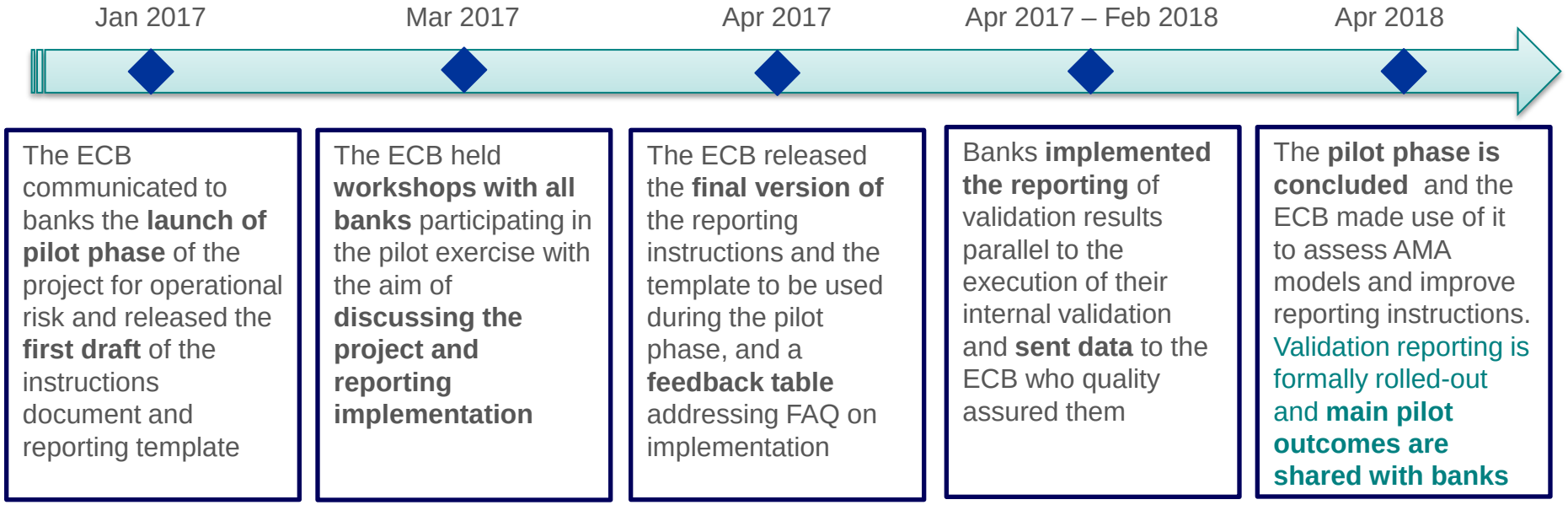
2. Defining **common metrics** for the assessment of internal models across SSM

3. Promoting **a common reporting** of institutions' validation results towards the ECB

The standardized reporting **neither replaces** the institutions' own **validation nor** does it intend to **promote best practices** in the validation of internal models. It is the responsibility of each institution to define its appropriate internal validation framework

# Pilot phase (1/2)

A pilot phase for the project has been carried out during 2017 involving **all Significant Institutions within SSM** with approved AMA models used at consolidated level. The **main milestones** of the pilot are summarized below



# Pilot phase (2/2)

The data submitted during the pilot phase have been **quality assured** by the ECB and then used to:

1. **Review the set of tests** in order to enhance the outcomes of the analyses (introducing / removing tests whenever deemed appropriate)
2. **Clarify the documentation** in order to facilitate the implementation of tests and the interpretation of the results
3. **Calibrate thresholds** for statistical tests in order to appropriately identify warnings about performances of AMA models and to ease results interpretation
4. Get a **comprehensive picture** of the performance of AMA models in order to support a **smooth the transition** towards the new envisaged Basel framework

The following slides report an **overview of practices** about segmentation of risk and modeling of both frequency and severity of losses based on data from the pilot phase

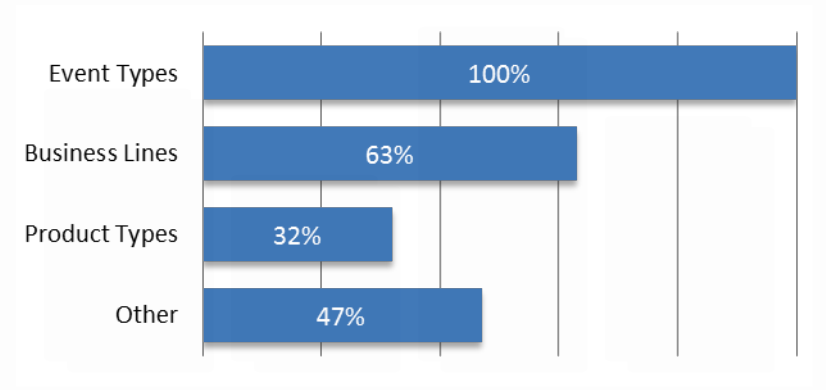
# Overview of practices

## *Definition of Operational Risk Categories*

### Description

The right hand side shows which types of criteria banks use for the ORC definition. The tables below show the top criteria for each category i.e. those most often used in the major 3 ORCs. The "Other" category included bank specific criteria like country/region, subsidiary, ORC type i.e. LDA vs scenario-based or loss sub-types like anatocism, payment card frauds

### Used criteria for ORC definition




### Top Event Types

| |
|---|
| Clients, Products & Business Practices - Improper Business or Market Practices |
| Clients, Products & Business Practices - Suitability, Disclosure & Fiduciary |
| Clients, Products & Business Practices - Product Flaws |
| Clients, Products & Business Practices - Selection, Sponsorship & Exposure |
| Clients, Products & Business Practices - Advisory Activities |

### Top Business Lines

| |
|---|
| Retail Banking - Retail Banking |
| Retail Banking - Card Services |
| Retail Banking - Private Banking |
| Commercial Banking |
| Trading & Sales - Sales |
| Trading & Sales - Proprietary Positions |

### Top Product Types

| |
|---|
| Derivatives & Securities |
| Investment Products |
| Brokerage |
| Capital Raising |
| Retail Credit |
| Commercial Credit |
| Deposits |
| Cash Management, Payments & Settlements |

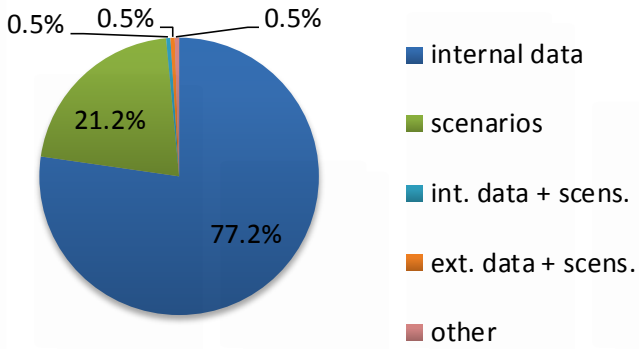
# Overview of practices

## *Modelling of the frequency distribution*

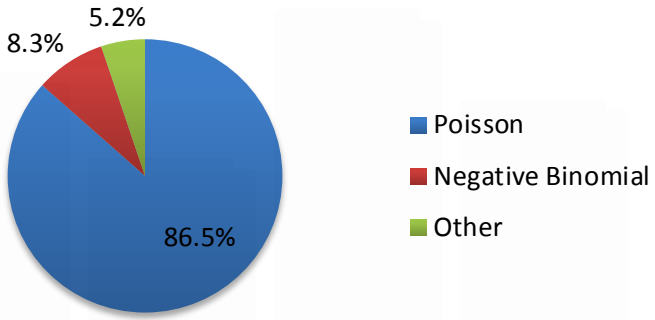
### Description

The pie charts show the distribution of the used core sources, distributions and fitting methods among AMA SSM banks for the frequency distribution

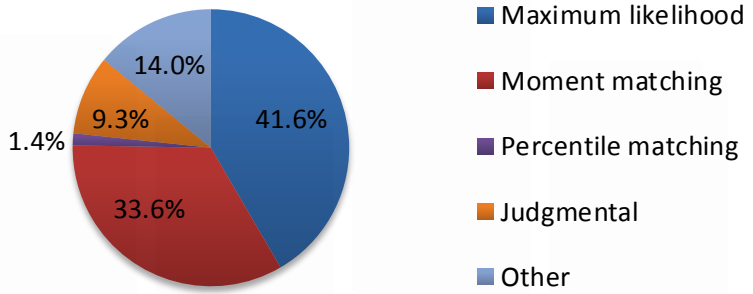
### Used Core Source




### Modelling Distribution*




### Parameter Fitting Method




* The conservatism of the final model is not driven by the distribution alone, but also by other modelling assumptions, like the fitting method, the core source and the modelling threshold

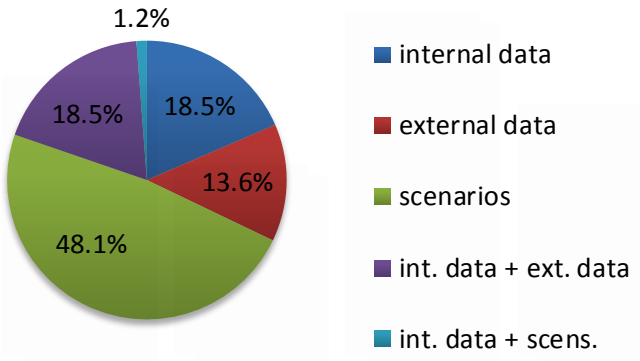
# Overview of practices

## *Modelling of the severity distribution (full)*

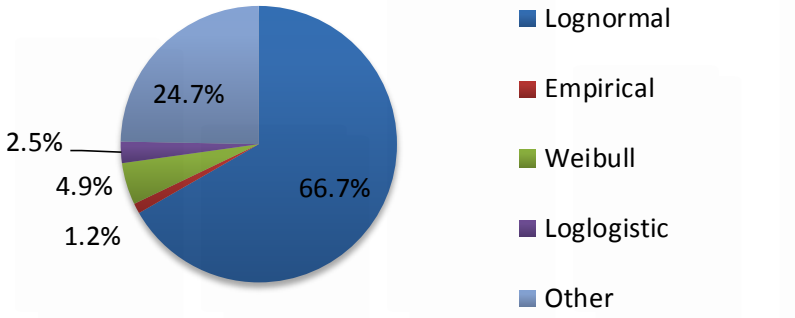
### Description

The pie charts show the distribution of the used core sources, distributions and fitting methods among AMA SSM banks for those severity distributions that are modeled by a non-spliced distribution function (42% of ORCs)

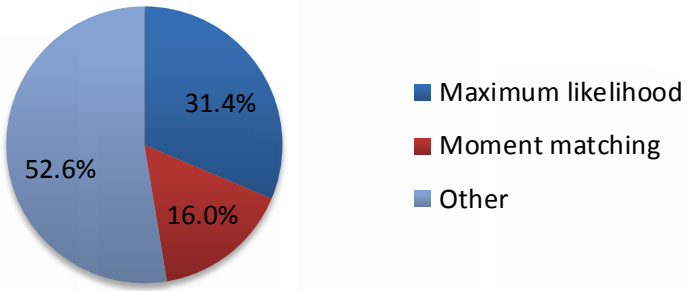
### Used Core Source




### Modelling Distribution*




### Parameter Fitting Method




* The conservatism of the final model is not driven by the distribution alone, but also by other modelling assumptions, like the fitting method, the core source and the modelling threshold

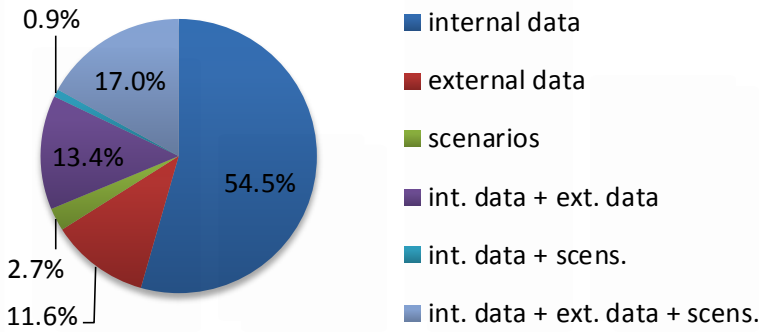
# Overview of practices

## *Modelling of the severity distribution (body)*

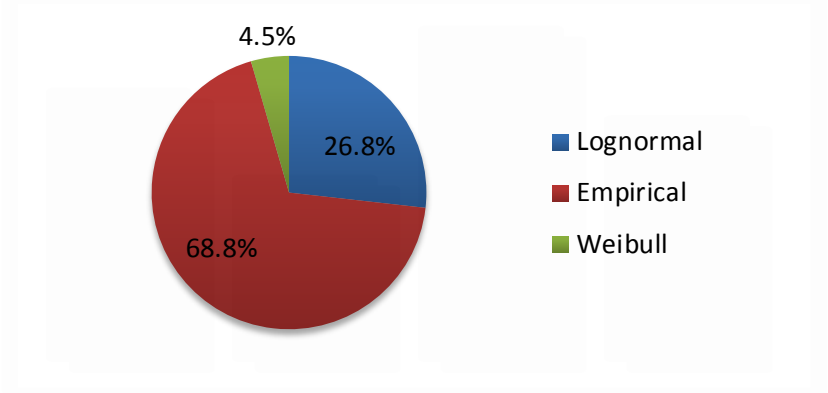
### Description

The pie charts show the distribution of the used core sources, distributions and fitting methods among AMA SSM banks for the body of those severity distributions that are modeled by a spliced distribution function (58% of ORCs)

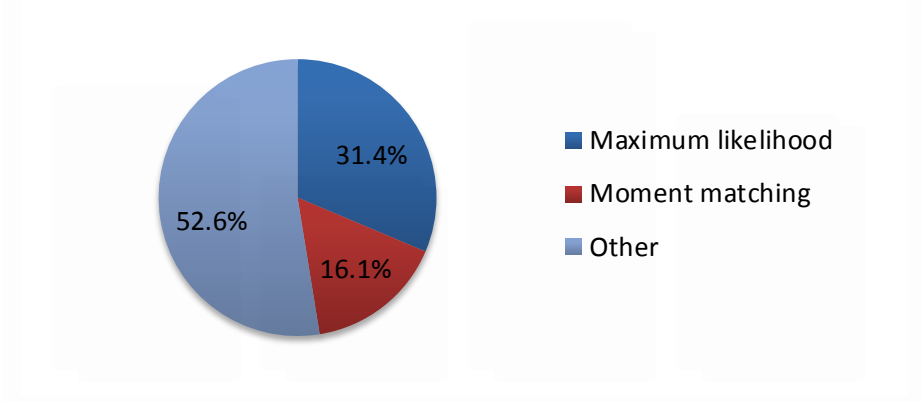
### Used Core Source




### Modelling Distribution*




### Parameter Fitting Method




* The conservatism of the final model is not driven by the distribution alone, but also by other modelling assumptions, like the fitting method, the core source and the modelling and body/tail threshold

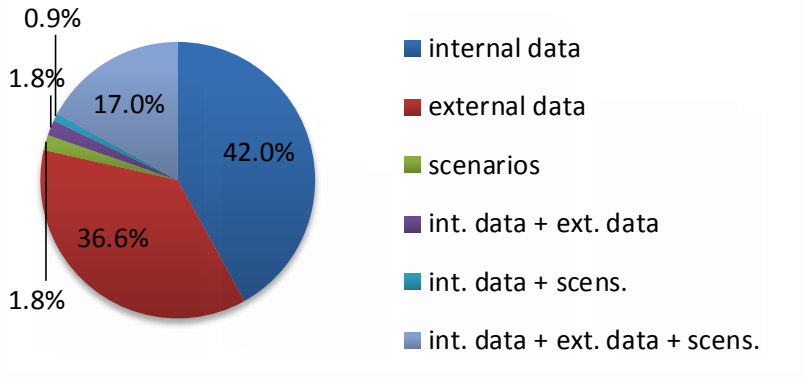
# Overview of practices

## *Modelling of the severity distribution (tail)*

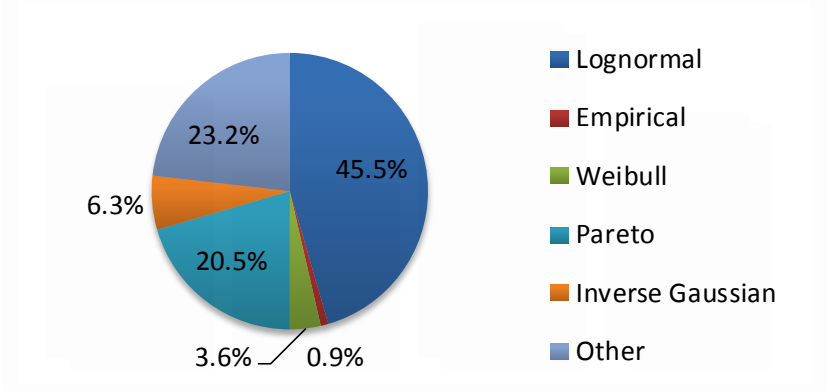
### Description

The pie charts show the distribution of the used core sources, distributions and fitting methods among AMA SSM banks for the tail of those severity distributions that are modeled by a spliced distribution function (58% of ORCs)

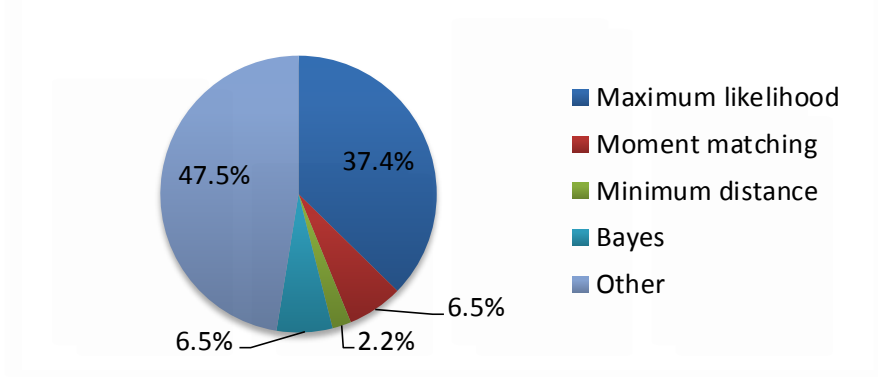
### Used Core Source




### Modelling Distribution*




### Parameter Fitting Method




* The conservatism of the final model is not driven by the distribution alone, but also by other modelling assumptions, like the fitting method, the core source and the modelling and body/tail threshold