

# *IRB models*

## *An industry perspective*

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# Agenda

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**Why do banks use internal models?**  
Motivation and benefits



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**What could possibly go wrong?**  
Risks and challenges



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**What's next?**  
Trends and upcoming challenges



# Why do banks use internal models?

## Motivation and benefits

**Banks in Europe have been progressing towards IRB models for the last 20 years, and to a large degree are willing to remain in AIRB/FIRB as much as possible**



### Reasons to go to IRB models (and to stay there)

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- 1. Supervisory incentives** (e.g. minimum EAD coverage)
- 2. Direct benefits**
  - RWA optimization and lower cost of capital
  - Higher, more precise risk sensitivity
  - Use test fosters better risk management
- 3. Indirect benefits**
  - Avoids a competitive disadvantage (drifting off the market)
  - Supervisory scrutiny yields better models and better data
  - Better understanding of supervisor's requirements, supervisory dialogue
- 4. Industry-level benefits**
  - Level playing field, reduction of undue competitive advantage, within harmonized jurisdictions
  - Incentivizes credit to the real economy (IRB banks have lower RWs)
  - Perceived consistency, standardized methodology (e.g. ITT)

# What could possibly go wrong?

## Risks and challenges

**Although benefits are indisputable, in hindsight the process is challenging and costly**



### Challenges for banks

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#### 1. Investment

- Long-term, high-uncertainty investment (necessary business case)
- Organizational setup (three LoDs, independence, dedicated functions, Internal Audit, consultants)
- Need for specialized profiles (regulation + business + data + quant), painfully scarce in the market
- Data (availability, quality, consistency, traceability and integrity) and technology (DWHs, DMs, tools)

#### 2. Governance and risk management

- Strong senior management involvement
- First adoption of IRB models has heavy focus on risk management and governance (e.g. ECB general topics)

#### 3. Regulatory risk (bounce-back, return to compliance)

- Trend towards sophistication reverted to simplification (e.g. LDP, ULDP, AMA) – and simplifying is costly too
- Need for precision in regulation (e.g. MoC, CRR Art. 179 1f vs. EBA GL MoC)
- Delays in approvals (supervisory availability)
- “Return to compliance” effectively bumping up capital levels in Europe – unexpectedly vs first adoption

#### 4. Supervisory process (missions)

- Missions perceived as highly time- and resource- consuming, sometimes overlapping
- Distraction from daily activities, accumulation of regulation – leads to a perception of “compliance as sole priority”

# What's next?

## Trends and upcoming challenges

The future seems to bring yet more challenging topics, promising to keep the industry awake, but also to consolidate a solid and resilient banking system

### Six topics coming our way

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1. **Rationalization of model map and model complexity** (balance between sophistication and simplification)
2. **Semi-automation of processes; efficiency as the next goal**
3. **Model risk management** (major failure of banks' MRM during covid)
4. **Convergence between IRB and IFRS 9 models**
5. **ESG integration into credit risk models** (e.g. ESG scores, taxonomy, carbon emissions, 30y+ horizon stress tests)
6. **More sophisticated techniques** (ML/AI)





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