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MRM Insights Brief

OCC Raises Expectations of Model, Data, and Tools Management

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OCC RAISES EXPECTATIONS OF MODEL, DATA, AND TOOLS MANAGEMENT

The US Office of the Comptroller of the Currency (OCC) – one of the primary US banking regulators - has been busy in recent months reviewing and enhancing the way it will scrutinize Model Risk Management (MRM) in the future.

In August 2021, it published its first Comptroller’s Handbook on MRM¹, which goes into considerable detail about its expectation of how its chartered banks should manage the development, implementation, and use of models in their day-to-day operations. It also details the approach that OCC examiners will take in their assessments.

Its publication indicates how models have been growing in significance in US financial institutions for many years, in scale, scope, and complexity at institutions of all sizes, from their humble origins of a handful of modeling spreadsheets used in banks. Models are now an essential management tool to help manage the business, cultivate new customers, mitigate risks, and develop new products.

A New Regulatory Priority

MRM has not been a regulatory priority in the past. The primary guidance has been the Federal Reserve’s SR 11 7 framework² in the US, published in 2011. It covers similar ground to the OCC MRM handbook but covers less detail and has a reduced scope.

Building on SR 11 7, the OCC has expanded the definition of models and is far more prescriptive about what institutions need to think about when planning and enhancing their MRM. Its approach is principles-based, compared with other more checkbox-based regulations. Much of what it asks for is common sense, and many modeling and risk teams will have already implemented most of the requirements.

However, the use of models has changed significantly since 2011. The publication of the handbook is a recognition that many mission-critical models are now built, developed, and used outside the confines – and the controls – of a corporate IT function. Cloud computing capabilities mean that end users can rent servers, databases, and data to create mission-critical models simply by using a credit card. The handbook is, in part, designed to bring consistency to the way models are managed, regardless of who develops and manages them.

As well as clarifying and amplifying the fundamentals of MRM, the handbook contains some new developments in MRM, not covered by SR 11 7, which will affect all institutions.



1 OCC. (2021, August 18). Comptroller’s Handbook: Model risk management. OCC. Retrieved September 27, 2021, from <https://www.occ.gov/publications-and-resources/publications/comptrollers-handbook/files/model-risk-management/index-model-risk-management.html>.

2 Parkinson, P. M. (2011, April 4). Board of governors of the Federal reserve system. The Fed - Supervisory Letter SR 11-7 on guidance on Model Risk Management -- April 4, 2011. Retrieved September 27, 2021, from <https://www.federalreserve.gov/supervisionreg/srletters/sr1107.htm>.

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Few Models Are Standalones

The sophisticated model environments in most banks mean that few models are created as standalone applications. They take feeds from data sources, other models used elsewhere in the business, and from what are known as quantitative models. These might be described as tools and calculators that, while less sophisticated than the models they support, remain a crucial element of the modeling ecosystem.

These tools can feature all types of data – GDP data, unemployment data, inflation data, equity and instrument pricing trends, weather information, and population metrics, for example. Quantitative models capture and enrich this data, ready to be applied to the business models themselves.

The OCC's view is that these need to be managed with the same care and due diligence as conventional models because errors and omissions in these tools and calculators can have the same impact as an issue in a business-critical model itself.

The handbook now requires institutions to 'define acceptable practices' for using these tools and calculators. In practice, this will mean including them in an inventory to be documented, monitored, managed, and audited like the core business models they support.

Significant Implications

While including quantitative models in an inventory might seem like a small change, the implications for institutions are significant.

Institutions recognize that they need to manage their core business model estate. While there may be gaps, by and large, they are well down the road to meeting the OCC's expectations of having comprehensive inventories for these models, complete with full documentation, defined ownership and change management processes, and senior management supervision.

The situation with the way quantitative tools are managed is very different. Outside a few specialist teams, by and large, they are not managed or controlled. Their use can be informal and ad hoc, driven more by users' needs rather than those of the business. Few modeling or risk teams will have the infrastructure and process to find, define, manage, and monitor them in the same way they can with their standard business models.

The most ubiquitous tool used in quantitative models is the Excel spreadsheet. Its widespread use, ease of use, and powerful capabilities makes it ideal for the purpose. The lack of controls and transparency that help drive this flexibility means spreadsheets are a significant source of the risks the OCC is looking to address. The handbook now mandates the same levels of control, transparency, and auditability of these tools and calculators that typically feature in standard models.

So, what is the best way to bring these quantitative models under proper control?



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Create Your Inventory

An inventory will be central to managing your quantitative models in line with the way you manage your business models. The OCC requires a centralized inventory for all quantitative models, which will challenge all institutions, as everyone in a bank will likely have their own definition of what constitutes a quantitative model.

A centralized inventory will drive the standards and definitions associated with using tools and calculators. The inventory will help risk managers and modeling teams to define and manage the risk appetite that will dictate how quantitative models are used. The inventory also helps to address issues including model ownership, documentation requirements, change control, and the change approval process.

Model Discovery

A key challenge in meeting the expectations of the OCC in using quantitative models is simply just finding them all. While quantitative models make extensive use of Excel, the problem is that everyone else in a bank does too. Spreadsheets are used widely throughout every business process, and can be found in individual PCs, shared drives, SharePoint servers, and in the Cloud. The challenge of finding all, not just some, of the tools and calculators will take effort and planning.

The OCC will expect a complete inventory of all the relevant tools and calculators. It will need evidence that a complete search of the whole IT estate is carried out regularly to ensure that the inventory covers all the quantitative models that it needs to.

The huge volume of tools and calculators in use means that there is considerable scope for quantitative models to be missed during the search process. Institutions will need proven and robust search capabilities to find and filter these spreadsheets-based models, including capturing how they are connected to other systems and data sources. The OCC will be expecting the full picture, and institutions will need to be able to provide this picture quickly, accurately, and efficiently.



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Reporting on the Quantitative Models

With the quantitative models identified, controlled, and documented, the inventory now provides an excellent platform for reporting to stakeholders, managers, and regulators. The results can be escalated into the same GRC environment used to manage the business models to provide end-to-end visibility of the MRM situation.

For tools and calculators that are not built on Excel, an inventory is still required to provide the visibility and control that management, auditors and regulators need.

Mitratech offers a range of powerful and proven **MRM solutions** that will allow financial institutions to provide the ability to meet the OCC's requirements.



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