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OSFI's expanding role in regulation of artificial intelligence and machine learning

By **Darcy Ammerman, Anna Holota and Karin Mistlberger**

Law360 Canada (March 13, 2024, 11:47 AM EDT) -- The Office of the Superintendent of Financial Institutions (OSFI) has recently undertaken measures to regulate artificial intelligence (AI) and machine learning (ML) in the financial services sector. These actions come in the wake of OSFI's 2023-2024 annual risk outlook, which indicated that it is exploring systemic and institutional vulnerabilities associated with digital innovations, including blockchain AI and ML (see Office of the Superintendent of Financial Institutions, "OSFI's Annual Risk Outlook – Fiscal Year 2023-2024" (April 18, 2023).)

This article focuses on OSFI's final Integrity and Security Guideline, its updates to Guideline E-23: Enterprise — Wide Model Risk Management, and its call for industry feedback on the adoption of AI and ML. Given the rise in the use of AI and ML within financial institutions and pension plans, we can expect that OSFI's regulation of these technologies will increase in the coming years.

OSFI releases final Integrity and Security Guideline

On Jan. 31, OSFI released its final Integrity and Security Guideline. (See OSFI, "Integrity and Security Guideline" (Jan. 31 2024).) Although this guideline does not explicitly deal with AI and ML, OSFI's reformed expectations with respect to security of technology assets may require federally regulated financial institutions (FRFIs) to adopt or bolster systems that defend against AI driven attacks.

Security is defined in the guideline as "protection against malicious or unintentional external or internal threats to real property, infrastructure, and personnel (physical threats) and technology assets (electronic threats)." FRFIs are expected to ensure that technology assets are secure, with weaknesses identified and addressed, effective defences in place, and issues identified accurately and promptly.

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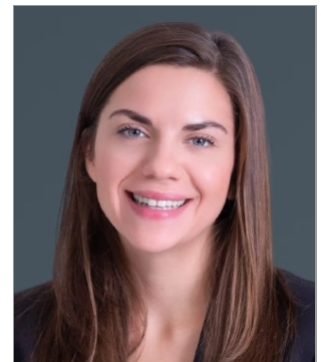
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FRFIs are further expected to implement standards and controls that protect the confidentiality, integrity and availability of data and information. In practice, the revised guideline will require FRFIs to adopt systems that they can use to manage, detect, and report issues related to their use of AI and ML technologies.

OSFI will implement the finalized guideline in stages (see OSFI "Integrity and Security – Letter" (Jan.31, 2024)). By Jan. 31, 2025, FRFIs must comply with all new or expanded expectations regarding technology assets. All aspects of the Guideline will be in force by July 31, 2025.

OSFI updates Guideline E-23: Enterprise-Wide Model Risk Management

On Nov. 20, 2023, OSFI released a revised draft of Guideline E-23 for consultation and is seeking feedback until Mar. 22, 2024 (see OSFI, "OSFI consults on draft guideline for model risk management" (Nov. 20, 2023)). The revised Guideline E-23 builds off the framework OSFI first issued in September 2017, expanding the scope of its application, and responding to the rapid growth in digitalization and model usage, including increased use of AI and ML in the financial services industry (see OSFI, "Draft Guideline E-23 – Model Risk Management" (Nov. 20, 2023)). Its main changes are outlined below.

First, draft Guideline E-23 expands the definition of "model" to explicitly include AI and ML methods. "Model" now means application of theoretical, empirical, judgmental assumptions and/or statistical techniques, including AI/ML methods, which processes data to generate results. This change recognizes the surge in AI and ML application in the financial services sector and the accompanying increases in risk from their use.

Second, the scope of Guideline E-23 will be expanded to apply to federally regulated insurers and federally regulated pension plans (FRPPs) in addition to deposit-taking institutions, given that these entities also use models to support decision-making.

Finally, expectations set out in the revised Guideline E-23 are principles-based, meaning that they will apply to all models regardless of whether they are used for non-financial risks, such as climate, cyber and tech, or financial risks, such forecasting economic conditions, pricing products, and developing business strategies (see "OSFI consults on draft guideline for model risk management"). This departs from the previous Guideline E-23, which focused on regulating models used for financial purposes (see OSFI, "Enterprise-Wide Model Risk Management Guideline – Letter (2017)" (Sept. 13, 2023)).

OSFI expects that relevant organizations will achieve the following outcomes:

(1) Models are adequately managed at each stage of their lifecycle;
(2) Model risks are managed proportionally to the organizations' model risk profile, complexity and size; and
(3) Models are well understood within the organization and associated risks are managed through a well-defined, enterprise-wide risk management framework.

The final guideline will take effect in July 2025.

OSFI and FCAC seek industry feedback on adoption of AI and ML technologies

On Dec. 20, 2023, OSFI and the Financial Consumer Agency of Canada (FCAC) released a questionnaire seeking feedback from FRFIs on how they are adopting AI and ML technologies. The deadline for providing responses was extended to March 4.

The purpose of the questionnaire is for OSFI and FCAC to better understand how ready institutions are for the emerging technology of quantum computing. Through the questionnaire, FRFIs are invited to share their uses, strategies, plans, challenges, governance, and risk management practices with respect to AI and ML technologies on a confidential basis.

The results of the questionnaire will be used to:

(1) Increase OSFI and FCAC's understanding of financial institutions' involvement in AI and ML and quantum computing;
(2) Inform policy and supervisory work; and
(3) Assess the current state of quantum readiness.

OSFI and FCAC will analyze the results of the questionnaire and share current practices with participating institutions. FRFIs that contributed should review the results once announced, as these could provide insight into future OSFI and FCAC policies and guidelines related to AI and ML technologies.

Conclusion

Recently, OSFI has taken steps to increase regulation of AI and ML technology used by FRFIs and FRPPs. We can expect further regulation of AI and ML in the future, as OSFI works to continue to ensure public confidence in the Canadian financial system amid a rapid proliferation of AI and ML tools. FRFIs and FRPPs should stay apprised of public questionnaires and consultations launched by OSFI so that they can adequately prepare for upcoming regulation.

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