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Federal Housing Finance Agency (FHFA)

- Established by the Housing and Economic Recovery Act of 2008 (HERA).
- **Agency Mission:** To ensure the regulated entities fulfill their mission by operating in a safe and sound manner to serve as a reliable source of liquidity for equitable and sustainable housing finance and community investment throughout the economic cycle.
- **The Office of Planning, Performance and Risk (OPPR)** – Oversees and directs the Agency's Strategy, Planning, and Risk management programs through cross-functional planning, analysis, and performance management.
 - OPPR's portfolio includes administrative policy oversight, change management, Enterprise Risk Management (ERM), external audit coordination, integrated planning, internal control evaluation, process improvement, strategic planning & organizational performance management, and targeted quality assurance reviews.



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FHFA ERM Program

- FHFA is currently working to improve its ERM maturity from Level 3 (*Defined*) to Level 4 (*Institutionalized*) on the Maturity Model.
 - The goal is furthering integration between ERM and Internal Controls over Reporting (ICOR).
 - Going beyond testing of financial controls to incorporate operational reviews and data quality/reporting.
 - Technology plays a key role, including Enterprise Governance, Risk and Compliance (eGRC) tools and Artificial Intelligence (AI).



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Planning for AI

- Identifying opportunities to leverage AI
 - External risk scanning
 - Cybersecurity scanning
- Bringing on a Chief AI Officer to drive the Agency's AI vision, ensuring that AI is effectively utilized to deliver strategic value, improve efficiency, and enable data-driven decision-making across the organization.
- Ensuring data integrity and security around data used within AI tools.
- Developing a governance structure and policies and procedures around permissible use of AI.

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Example: Risk Scan - Regulatory Filings

FOR ILLUSTRATION ONLY

AI Prompt

Summarize the risks highlighted in this 2022 FHFA report to congress:



Output

- **Credit Risk Management:** Elevated interest rates, recent uncertainty in the banking sector, and challenges in certain sectors of the multifamily industry have made credit risk management a priority for Fannie Mae and Freddie Mac. This includes monitoring counterparty risks, especially given declining earnings among sellers and servicers of Enterprise-backed loans.
- **Market Risk Exposures:** Although market risk exposures are described as low due to shrinking retained portfolios and effective funding and hedging strategies, the report emphasizes the importance of ongoing vigilance.
- **Liquidity and Operational Risks:** Both Enterprises reportedly exceed FHFA's guidance for liquidity by maintaining a large volume of high-quality liquid assets. However, operational risks, including those related to cybersecurity threats, remain elevated. Additionally, the changing economic environment has elevated model risk, as many models rely on data generated in different economic conditions.
- **Counterparty Risk Management:** The report highlights the use of minimum financial eligibility requirements for approved seller/servicers as an important tool for managing counterparty risk. Updates to these requirements aim to strengthen seller/servicer net worth, capital, and liquidity requirements.
- **Capital Positions:** Efforts to strengthen the capital positions of Fannie Mae and Freddie Mac are ongoing, with enhancements to the Enterprise Regulatory Capital Framework (ERCF) finalized in 2022. These enhancements are intended to protect taxpayers from adverse economic conditions and align capital requirements with the risks posed by the Enterprises' businesses.
- **Pricing Framework Review:** The FHFA conducted a comprehensive review of the Enterprises' pricing framework with the goal of supporting borrowers limited by income or wealth, ensuring a level playing field for lenders, fostering capital accumulation at the Enterprises, and achieving viable returns on capital.
- **Climate Risk:** The report underscores the serious threat posed by climate risk and climate-related disasters to the U.S. housing finance system. FHFA has focused on assessing and managing climate risk, including the withdrawal of insurance coverage in climate-vulnerable regions and the rising cost of insurance where it remains available.
- **Legislative Recommendations:** The report outlines areas requiring Congressional intervention, such as FHFA's lack of authority to examine services provided to its regulated entities, shortcomings in the Enterprises' statutory capital definitions, and the ongoing need for key housing finance reforms.

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Example: Risk Scan - Regulatory Filings

FOR ILLUSTRATION ONLY



AI Prompt

Summarize Fannie Mae risk factors highlighted in their recent 10-k filing:

AFERM
Association for Federal
Enterprise Risk Management



Output

- **GSE Risk:** Fannie Mae's future is uncertain due to undercapitalization, potential receivership, effects from agreements with the Treasury, and conservatorship constraints. These factors may hinder talent retention and diversification of business activities.
- **Credit Risk:** Fannie Mae is at risk of significant credit losses from borrower defaults and uninsured property damage. Dependence on credit enhancements and mortgage insurance might not fully offset credit losses, and counterparty failures could cause financial and operational strain.
- **Operational and Model Risk:** Operational failures, security breaches, or model inaccuracies could disrupt Fannie Mae's business operations, risk management, and data integrity, leading to financial losses, reputational harm, and regulatory penalties.
- **Liquidity and Funding Risk:** Restricted access to debt capital markets could adversely affect Fannie Mae's funding and operations. Lower credit ratings may increase borrowing costs and hinder reasonable debt issuance.
- **Market and Industry Risk:** Fluctuations in interest rates, economic conditions, and asset values could significantly affect Fannie Mae's financial outcomes, including asset values, prepayment rates, business volume, and demand for securities.
- **Legal and Regulatory Risk:** Legislative, regulatory, or judicial changes could negatively affect Fannie Mae's operations, increase costs, or alter its market standing.
- **General Risk:** Changes in accounting standards and the uncertainty in management's judgments and assumptions could materially affect Fannie Mae's financial reporting.

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Example: Risk Scan - Regulatory Filings

FOR ILLUSTRATION ONLY



AI Prompt

Summarize Freddie Mac risk factors highlighted in their recent 10-k filing:

AFERM
Association for Federal
Enterprise Risk Management



Output

- **Conservatorship Matters:** Freddie Mac faces significant impacts from administrative or congressional changes, penalties for covenants breaches, and the risk of receivership that could leave stockholders valueless.
- **Credit Risks:** Mortgage credit risk stemming from underwriting reliance, mortgage fraud, housing price declines, macroeconomic adversities, counterparty risks, and climate change effects could heighten credit losses. CRT transactions' feasibility may also vary.
- **Market Risks:** Interest rate and market spread changes could harm Freddie Mac's financials. UMBS price drops or demand declines could reduce profitability, while UMBS acceptance and LIBOR to SOFR transition pose additional challenges.
- **Liquidity Risks:** Limited funding or higher costs could disrupt operations, and U.S. government credit rating downgrades could further affect Freddie Mac's liquidity.
- **Operational Risks:** System failures, cybersecurity threats, third-party dependencies, model inaccuracies, and climate change could negatively impact operations and reputation.
- **Legal and Compliance Risks:** Legal and regulatory non-compliance could trigger enforcement actions and damage reputation. Not meeting housing or equitable finance requirements could introduce further risks.
- **General Risks:** Economic, political, geopolitical events, and public health crises could adversely influence Freddie Mac's business and finances.

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Implementing AI and Managing AI Risk

- Implementation of eGRC tools
 - Maturing processes and programs before implementing and standing up technology is key to successful implementation
- Implementation of Agency Information Resource Management Plan
 - Strategic plan that incorporates AI in conjunction with modernizing Information Technology (IT) infrastructure
 - Using cloud capability to allow flexibility around data-intense areas
- Workforce Planning
 - Identify strategy for IT and infrastructure capabilities
 - Obtain the necessary skillset and talent, adding AI to that layer



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Resources

- The Office of Management and Budget (OMB) Memorandum M-24-10, *Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence (AI)* <https://www.whitehouse.gov/wp-content/uploads/2024/03/M-24-10-Advancing-Governance-Innovation-and-Risk-Management-for-Agency-Use-of-Artificial-Intelligence.pdf>
- National Institute of Standards and Technology (NIST) *AI Risk Management Framework (RMF) Playbook*: https://airc.nist.gov/AI_RM_F_Knowledge_Base/Playbook
- Department of Energy (DoE) *AI Risk Management Playbook (RMP)*: <https://www.energy.gov/ai/doe-ai-risk-management-playbook-airmp>
- Gartner (<https://www.gartner.com/en>) provides research, insights, advice, and market intelligence to help make informed business decisions around AI
- Commodity Future Trading Commission (CFTC) *Report and Recommendations to the CFTC on Responsible Artificial Intelligence in Financial Markets*: <https://www.cftc.gov/PressRoom/PressReleases/8905-24>
- Advisory Bulletin on *Artificial Intelligence and Machine Learning*: <https://www.fhfa.gov/sites/default/files/2023-06/Advisory-Bulletin-2022-02.pdf>
- FHFA *Information Resource Management (IRM) Strategic Plan*: <https://www.fhfa.gov/sites/default/files/2024-05/Information-Resources-Management-Strategic-Plan-FY2024-2026.pdf>



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Questions



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Contact Information



Edom Aweke

Associate Director of Planning, Performance, and Risk
Office of Planning, Performance, and Risk
Federal Housing Finance Agency
Washington, DC 20024
(e) Edom.Aweke@fhfa.gov



John Major

Branch Manager, Risk Management and Compliance Branch
Federal Housing Finance Agency
Washington, DC 20024
(e) john.major@fhfa.gov



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