

FOCUS UNIVERSITY INSTITUTE

Madrid, Spain

FINANCIAL RISK MANAGEMENT

Program Developer: Luis Fernando (Lou) Villalba, PhD., EdD.

Course Code:	MBA-FIN 609 (Provisional)
Credits:	3 North American Graduate Credits / Proposed 6 ECTS
Academic Level:	Graduate (Master's / MBA)
Duration:	14 Weeks
Student Workload:	Approximately 150 Hours (42 Guided + 108 Independent)
Delivery Mode:	Madrid-Based, Online, or Blended
Program/Stage:	Master of Business Administration in Finance / Finance Course 9
Professor:	
Office Hours:	[To be determined]
Contact:	[To be determined]

1. Course Description

This advanced MBA finance course develops the analytical, governance, and managerial capabilities required to identify, measure, aggregate, mitigate, finance, monitor, and communicate financial risks. Students examine market, credit, counterparty, liquidity, funding, operational, model, cyber, technology, and strategic risk through an enterprise and financial-institution lens.

Students apply value at risk, expected shortfall, sensitivity measures, credit analysis, liquidity metrics, stress testing, scenario analysis, limits, hedging, capital and liquidity planning, model validation, and risk-adjusted performance concepts. They evaluate assumptions, tail dependence, data quality, procyclicality, behavioral and incentive failures, concentration, and model uncertainty instead of treating risk metrics as objective facts.

The course integrates material climate, nature, transition, workforce, conduct, and technology risks where they create financial transmission channels. FinTech and artificial intelligence are addressed through model, data, third-party, cyber, bias, explainability, and governance risks while preserving accountable human judgment. The course culminates in an Integrated Financial Risk Management Framework and remains distinct from portfolio management and the Applied Finance Capstone.

Prerequisites: Successful completion of the six-course MBA common trunk or approved equivalent.

2. Course Learning Outcomes

Upon successful completion of this course, students will be able to:

- LO1. **Diagnose** market, credit, counterparty, liquidity, funding, operational, model, cyber, technology, conduct, and strategic risk exposures, transmission channels, concentrations, interdependencies, data weaknesses, and control failures. [Bloom's Level 4: Analyze]
- LO2. **Measure and challenge** financial risks using sensitivity analysis, value at risk, expected shortfall, duration, convexity, option Greeks, credit and counterparty metrics, liquidity indicators, stress tests, scenarios, and model-validation evidence. [Bloom's Level 5: Evaluate]

- LO3. **Design** risk appetite, limits, hedges, diversification, capital, liquidity, collateral, controls, governance, reporting, escalation, contingency, and recovery responses aligned with enterprise objectives and regulatory context. [Bloom's Level 6: Create]
- LO4. **Evaluate and integrate** material sustainability-related risks—including climate, nature, transition, workforce, and conduct factors—through financial transmission channels, time horizons, concentrations, scenarios, stress testing, mitigation, and governance. [Bloom's Level 5: Evaluate]
- LO5. **Develop and defend** an integrated financial risk management framework that combines resilience, sustainability, responsible FinTech and AI use, ethical and regulatory requirements, risk-adjusted decisions, monitoring, escalation, and transparent professional judgment. [Bloom's Level 6: Create]

3. Required Materials

3.1 Main Texts and Open Educational Resource (OER)

- Main Text 1 (Paid): Hull, J. C. (2023). Risk management and financial institutions (6th ed.). Wiley. <https://www.wiley.com/en-us/shop/general-finance-investments/risk-management-and-financial-institutions-6th-edition-p-9781119932482>
- Main Text 2 (OER): Dahlquist, J., & Knight, R. (2022). Principles of finance. OpenStax. CC BY 4.0. <https://openstax.org/details/books/principles-finance>

3.2 Supplementary Texts (Non-Open Educational Resources)

- McNeil, A. J., Frey, R., & Embrechts, P. (2015). Quantitative risk management: Concepts, techniques and tools (Rev. ed.). Princeton University Press. Paid reference; selected chapters.
- Jorion, P. (2007). Value at risk: The new benchmark for managing financial risk (3rd ed.). McGraw-Hill. Paid reference; selected chapters.
- Selected current peer-reviewed research on tail risk, credit, liquidity, operational resilience, model risk, systemic risk, climate and nature risk, FinTech, responsible AI, and risk governance.
- Current regulatory standards, supervisory guidance, market and macroeconomic data, audited disclosures, incident evidence, and stress scenarios for approved cases and jurisdictions.

3.3 Open Educational Resources (OER)

- OpenStax Principles of Finance (CC BY 4.0): <https://openstax.org/details/books/principles-finance>
- Bank for International Settlements consolidated Basel Framework: https://www.bis.org/basel_framework/
- Basel Committee principles for operational resilience: <https://www.bis.org/bcbs/publ/d516.htm>
- NIST Artificial Intelligence Risk Management Framework and resources: <https://www.nist.gov/itl/ai-risk-management-framework>
- Network for Greening the Financial System climate scenarios: <https://www.ngfs.net/ngfs-scenarios-portal/>

- European Banking Authority stress-testing and climate-risk resources: <https://www.eba.europa.eu/risk-and-data-analysis/risk-analysis/risk-monitoring/climate-risk-stress-testing-eu-banks>
- Federal Reserve Economic Data (FRED) for rates, spreads, volatility, liquidity, credit, and macroeconomic series: <https://fred.stlouisfed.org/>
- Selected current open-access central-bank, supervisor, securities-regulator, government, intergovernmental, standards, academic, incident, and market-risk resources.

3.4 Technology Requirements

- Reliable internet connection and Learning Management System access
- Spreadsheet and statistical software capable of exposure, sensitivity, volatility, correlation, simulation, value-at-risk, expected-shortfall, credit, liquidity, scenario, stress, visualization, and audit-trail work
- Instructor-approved market-data, risk-analytics, coding, model-validation, cyber/incident, collaboration, FinTech, and artificial-intelligence tools; multiple commercial subscriptions are not required
- PDF annotation and video-conferencing capability for source review, risk laboratories, committee simulations, crisis exercises, executive briefings, and the final oral defence

4. Assessment Structure

The course combines Risk Analytics and Governance Laboratories, a Market/Credit/Liquidity Risk Model, an independently completed midterm examination, a Climate/Operational/Model Risk Committee Memo, and the Week 14 Integrated Financial Risk Management Framework. The final project replaces a conventional final examination.

Assessment Component	Type	Weight	Due Date
Risk Analytics & Governance Laboratories	Ongoing	10%	Continuous
Market, Credit & Liquidity Risk Model	Formative	15%	Week 4
Midterm Examination	Summative	20%	Week 7
Climate, Operational & Model Risk Committee Memo	Summative	15%	Week 10
Integrated Financial Risk Management Framework	Summative	40%	Week 14
TOTAL		100%	

5. Grading Scale

This course uses the American University grading scale:

Letter Grade	Percentage	Description
A	93-100%	Excellent; exceptional achievement
A-	90-92%	Excellent work with minor areas for improvement
B+	87-89%	Very good; above average performance
B	83-86%	Good; solid understanding demonstrated
B-	80-82%	Good work with some areas for improvement
C+	77-79%	Satisfactory; meets basic requirements

Letter Grade	Percentage	Description
C	73-76%	Adequate; acceptable understanding
C-	70-72%	Passing but below average
D	60-69%	Minimum passing; significant improvement needed
F	Below 60%	Failing; does not meet course requirements

6. Course Schedule

Week 1: Financial Risk, Enterprise Objectives, and Risk Governance

Topics: risk and uncertainty; value creation and protection; financial and non-financial risk taxonomy; enterprise risk management; three-lines model awareness; board and executive oversight; risk culture; incentives; risk appetite; capacity, tolerance, limits, and escalation

Readings: Hull, selected foundations chapters; OpenStax, Chapters 1 and 5; Basel Framework overview

Synchronous: risk-taxonomy, appetite, governance, incentive, and escalation laboratory

Asynchronous: select an approved organization/case and establish the risk, evidence, data, and assumption register

Week 2: Risk Data, Distributions, Volatility, Correlation, and Tail Dependence

Topics: returns and loss distributions; volatility; covariance and correlation; non-linearity; skewness; kurtosis; fat tails; regime change; tail dependence; sampling; missing and stale data; procyclicality; aggregation; backtesting concepts; data lineage and controls

Readings: Hull, volatility and statistical selections; OpenStax, Chapters 7-8; McNeil et al., selected foundations

Synchronous: loss-data, volatility, correlation-breakdown, tail, and data-quality laboratory

Asynchronous: build exposure and loss datasets and document transformations, controls, gaps, and biases

Week 3: Market Risk, Sensitivities, and Derivative Exposures

Topics: interest-rate, yield-curve, spread, equity, foreign-exchange, commodity, volatility, and basis risk; duration; convexity; beta; delta, gamma, vega, theta, and rho; linear and non-linear positions; hedging; basis and residual risk; P&L attribution

Readings: Hull, market-risk and derivatives selections; OpenStax, Chapters 9 and 15; current market evidence

Synchronous: sensitivity, Greeks, hedge-effectiveness, P&L, and residual-risk laboratory

Asynchronous: map positions to risk factors and construct sensitivity and hedge exhibits

Week 4: Value at Risk, Expected Shortfall, and Model Challenge

Topics: variance-covariance, historical, and Monte Carlo approaches; horizon; confidence; scaling; expected shortfall; stressed measures; incremental and component risk; diversification; backtesting; exceptions; limitations; model comparison and challenge

Readings: Hull, VaR/ES selections; Jorion, selected chapters; Basel market-risk provisions; Acerbi and Tasche

Synchronous: VaR/ES construction, backtesting, exception, and model-risk challenge

Asynchronous: complete Market, Credit and Liquidity Risk Model

Assessment Due: Market, Credit & Liquidity Risk Model (15%)

Week 5: Credit, Counterparty, Concentration, and Wrong-Way Risk

Topics: probability of default; exposure at default; loss given default; expected and unexpected loss; ratings and migration; spreads; structural and reduced-form concepts; counterparty exposure; netting; collateral; credit valuation adjustment awareness; concentration; wrong-way risk; credit mitigation

Readings: Hull, credit and counterparty selections; Basel credit/CVA provisions; current issuer and counterparty evidence

Synchronous: credit-loss, migration, counterparty, collateral, concentration, and wrong-way-risk laboratory

Asynchronous: develop credit and counterparty risk profile, limits, and mitigation options

Week 6: Liquidity, Funding, Capital, Collateral, and Contagion

Topics: market and funding liquidity; bid-ask and depth; liquidation cost; margin and collateral; cash-flow ladders; liquidity coverage and stable funding awareness; leverage; capital adequacy; concentration; runs; fire sales; interconnectedness; contingency funding; recovery options

Readings: Hull, liquidity and capital selections; Basel liquidity and capital provisions; selected central-bank evidence

Synchronous: liquidity ladder, collateral call, funding stress, capital, and contagion simulation

Asynchronous: prepare for the midterm through an integrated financial-risk case

Week 7: Midterm Examination and Financial-Risk Integration

Topics: governance; risk appetite; data; distributions; market risk; sensitivities; derivatives; VaR; expected shortfall; credit; counterparty; liquidity; funding; capital; collateral; limits; mitigation; model limitations

Readings: Review Weeks 1-6 resources

Synchronous: individual midterm examination; generative AI is not permitted unless expressly authorized

Asynchronous: post-examination correction and professional-learning plan

Assessment Due: Midterm Examination (20%)

Week 8: Operational Risk, Resilience, Cyber, Conduct, and Third Parties

Topics: people, process, system, and external events; fraud; misconduct; legal risk; cyber threats; privacy; technology failure; business continuity; critical operations; impact tolerance; dependencies; outsourcing; cloud and vendor concentration; incident response; lessons learned; operational resilience

Readings: Hull, operational-risk selections; Basel Committee operational-resilience principles; selected cyber and incident guidance

Synchronous: critical-operation mapping, cyber/third-party incident, control, and resilience laboratory

Asynchronous: build scenario, control, dependency, response, and lessons-learned records

Week 9: Model Risk, FinTech, Responsible AI, and Digital Finance

Topics: model inventory and tiering; development and independent validation; conceptual soundness; data and implementation; benchmarking; monitoring; override; explainability; bias; drift; automation; algorithmic decisions; APIs; platforms; blockchain and digital assets; fraud and AML awareness; vendor models; NIST AI RMF

Readings: Hull, model-risk and FinTech selections; NIST AI RMF; selected current digital-finance and model-governance evidence

Synchronous: AI/FinTech model inventory, validation, bias, drift, vendor, and override laboratory

Asynchronous: evaluate a model or digital process and propose validation, monitoring, controls, and accountability

Week 10: Climate, Nature, Transition, Workforce, and Conduct Risk

Topics: physical and transition risk; nature dependencies and loss; carbon, energy, water, and resource exposure; workforce and community impacts; conduct and liability; financial transmission to credit, market, liquidity, operational, insurance, and strategic risk; horizons; concentration; data gaps; mitigation and adaptation

Readings: NGFS scenarios; EBA climate-risk stress-testing resources; Basel climate-risk principles; selected sustainable-finance research

Synchronous: financial-transmission, concentration, climate/nature scenario, conduct, and risk-committee laboratory

Asynchronous: submit Climate, Operational and Model Risk Committee Memo

Assessment Due: Climate, Operational & Model Risk Committee Memo (15%)

Week 11: Stress Testing, Scenario Analysis, and Reverse Stress

Topics: purpose and governance; sensitivity versus scenario; historical, hypothetical, systemic, climate, operational, and multi-risk scenarios; severity and plausibility; balance-sheet dynamics; management actions; second-round effects; reverse stress testing; capital and liquidity implications; recovery and resolution awareness

Readings: Hull, stress-testing selections; EBA stress-testing guidance; NGFS scenario guidance; selected supervisory materials

Synchronous: enterprise stress, reverse-stress, management-action, capital/liquidity, and recovery simulation

Asynchronous: develop integrated scenarios, transmission maps, thresholds, actions, and limitations

Week 12: Risk Aggregation, Hedging, Limits, Reporting, and Assurance

Topics: aggregation across risk types; diversification assumptions; concentration; risk-adjusted performance; economic capital awareness; limits and early warnings; hedging and insurance; dashboards; board reporting; breaches; escalation; control testing; model validation; independent review; audit and regulatory interaction

Readings: Hull, enterprise-risk and governance selections; Basel Framework; selected risk-reporting and assurance guidance

Synchronous: risk aggregation, limit breach, hedge, dashboard, board, and assurance challenge

Asynchronous: complete risk appetite, measurement, response, reporting, escalation, and assurance architecture

Project Milestone Due: Approved risk universe, appetite, metrics, stress scenarios, sustainability transmission, AI/FinTech controls, response plan, and governance framework

Week 13: Integrated Financial Risk Management Studio

Topics: risk architecture; interdependencies; appetite; measurement; stress; mitigation; capital/liquidity; resilience; sustainability; AI/FinTech; reporting; assurance; implementation; limitations; oral-defence preparation

Readings: Review current authoritative financial, market, operational, technology, regulatory, sustainability, incident, and organizational evidence for the approved case

Synchronous: risk analytics, red-team challenge, instructor consultation, risk-committee rehearsal, and oral-defence preparation

Asynchronous: complete framework, model, evidence portfolio, presentation, AI Usage Statement, and critical reflection

Week 14: Risk-Committee Presentations, Oral Defence, and Integration

Topics: integration of risk taxonomy, measurement, appetite, stress, mitigation, capital, liquidity, resilience, sustainability, technology, governance, reporting, assurance, and professional judgment

Readings: No new readings; review project evidence, models, decisions, limitations, and course outcomes

Synchronous: Integrated Financial Risk Management Framework presentations, individual oral defence, peer learning, and course synthesis

Asynchronous: submit final framework, auditable model, evidence portfolio, presentation, AI Usage Statement, and individual reflection

Assessment Due: Final Project: Integrated Financial Risk Management Framework (40%)

7. Detailed Assignment Descriptions

7.1 Risk Analytics & Governance Laboratories - 10%

Learning Outcomes Addressed: CLO1, CLO2, CLO3, CLO4, CLO5

Description

Graduate risk-management capability develops through disciplined preparation, exposure analysis, quantitative modelling, stress and incident exercises, control design, committee simulations, source verification, peer challenge, professional communication, and reflection.

Requirements

- Attend at least 12 of 14 synchronous sessions and participate actively
- Complete data/tail, market, VaR/ES, credit, liquidity, operational, model/AI, sustainability-risk, stress, aggregation, limit, and reporting studios
- Use traceable data, consistent definitions, reproducible calculations, documented assumptions, controls, scenarios, uncertainty, and limitations
- Provide respectful, specific, evidence-based challenge during risk cases, validation reviews, crisis exercises, peer assessment, and committee briefings
- Follow confidentiality, market-conduct, privacy, security, accessibility, academic-integrity, source-rights, and AI-disclosure requirements

Participation Rubric

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Preparation & Engagement (20%)	Consistently prepared; contributions materially advance collective financial-risk decisions	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Risk Analytics & Governance Studios (35%)	Rigorous, auditable work connects exposures, metrics, scenarios, controls, and enterprise objectives	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Professional Contribution (20%)	Evidence-based questions and challenge materially improve models, controls, resilience, and committee judgments	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Responsible Evidence & Conduct (25%)	Exemplary provenance, confidentiality, security, ethics, accessibility, reproducibility, and AI transparency	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

7.2 Market, Credit & Liquidity Risk Model (Formative Assessment 1) - 15%

Learning Outcomes Addressed: CLO1, CLO2, CLO3

Due Date: Week 4

Description

Students construct and challenge an auditable risk model covering material market, credit, counterparty, and liquidity exposures for an approved institution or instructor-provided portfolio.

Requirements

1. Define organization/portfolio scope, valuation date, base currency, positions, counterparties, data sources, risk factors, models, and limitations
2. Measure material market sensitivities and construct VaR and expected-shortfall estimates using at least two approaches
3. Estimate credit/counterparty exposures, expected loss, migration or concentration, collateral, and wrong-way risk where relevant
4. Assess market/funding liquidity, liquidation costs, cash-flow gaps, margin/collateral calls, and stress amplification
5. Document formulas, code, data lineage, assumptions, backtests, exceptions, sensitivities, controls, limitations, and a complete AI Usage Statement

Total Length: 1,500-2,000-word technical memorandum plus auditable risk model, exposure maps, backtests, stress exhibits, controls, and source record

Format: APA 7 professional brief with auditable exhibits; submit PDF and editable source files through the LMS

Market, Credit & Liquidity Risk Model Rubric

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Scope, Exposure & Data Architecture (15%)	Precise positions, counterparties, factors, source hierarchy, lineage, controls, and limitations	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Market Risk, VaR/ES & Backtesting (25%)	Sensitivities, methods, estimates, stressed results, backtests, exceptions, and limitations are rigorous	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Credit & Counterparty Risk (20%)	Expected loss, migration, concentration, collateral, netting, and wrong-way risk are decision useful	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Liquidity, Stress & Model Controls (25%)	Cash-flow gaps, liquidation, margin, amplification, scenarios, model checks, and validation are compelling	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Communication, Evidence & AI Transparency (15%)	Technical memorandum and model are concise, calibrated, reproducible, accessible, and fully documented	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

7.3 Midterm Examination (Summative Assessment 1) - 20%

Learning Outcomes Addressed: CLO1, CLO2, CLO3, CLO4

Due Date: Week 7

Description

The individual examination assesses independent mastery and integration of risk governance, data and tails, market sensitivities, derivatives, VaR/ES, credit, counterparty, liquidity, funding, capital, collateral, limits, mitigation, and model limitations.

Requirements

1. Diagnose risk exposures, drivers, concentrations, interdependencies, data weaknesses, incentives, and control failures
2. Calculate and interpret market sensitivities, VaR, expected shortfall, backtesting evidence, and model limitations
3. Analyze credit/counterparty expected loss, concentration, collateral, netting, and wrong-way risk
4. Evaluate liquidity/funding gaps, margin calls, capital effects, contagion, limits, and contingency responses
5. Recommend and defend a risk response with evidence, ethics, governance, uncertainty, and limitations

Format: 120-minute examination with applied short answers, evidence interpretation, analytical work, and an integrated decision case

Conditions: Individual work; approved reference sheet and calculator permitted; generative AI not permitted

Midterm Examination Rubric

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Risk Diagnosis, Data & Governance (20%)	Exposures, drivers, concentrations, data, incentives, appetite, limits, and controls are accurately integrated	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Market Risk & Quantitative Measures (25%)	Sensitivities, derivatives, VaR/ES, backtesting, tails, and model limitations are correctly applied	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Credit, Counterparty & Concentration (20%)	Expected loss, migration, collateral, netting, concentration, and wrong-way risk are rigorous	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Liquidity, Funding, Capital & Contagion (20%)	Cash gaps, margin, leverage, capital, amplification, limits, and contingencies are critically evaluated	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Recommendation & Communication (15%)	Coherent, proportionate risk response is concise and convincingly defended	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

7.4 Climate, Operational & Model Risk Committee Memo (Summative Assessment 2) - 15%

Learning Outcomes Addressed: CLO2, CLO3, CLO4

Due Date: Week 10

Description

Students prepare and defend a risk-committee memorandum integrating climate/nature transmission, operational resilience, and model/AI risk for a material enterprise exposure.

Assignment Focus

The memorandum must connect non-financial risk factors to traceable financial and operational transmission channels while distinguishing evidence, assumptions, scenarios, uncertainty, regulation, ethical judgment, and management choice.

Requirements

1. Decision context, critical operations, risk appetite, exposures, stakeholders, dependencies, controls, and governance
2. Climate, nature, transition, workforce, conduct, operational, cyber, third-party, model, FinTech, and AI factors where material
3. Transmission to market, credit, liquidity, capital, revenue, cost, asset, liability, operational, legal, and strategic outcomes
4. Severe-but-plausible and reverse-stress scenarios with data gaps, second-round effects, concentrations, and management actions
5. Recommendation with limits, controls, validation, resilience, mitigation, contingency, ownership, reporting, escalation, and review
6. Complete source, data, model, scenario, regulation, incident, limitation, safe-disclosure, and AI Usage Statement records

Total Length: 1,800-2,200-word risk-committee memorandum plus transmission, scenario, control, validation, resilience, and monitoring exhibits

Format: Professional decision memorandum, auditable exhibits, and 5-7 minute individual review; submit through the LMS

Climate, Operational & Model Risk Committee Memo Rubric

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Risk Context, Appetite & Dependencies (15%)	Critical operations, exposures, stakeholders, dependencies, controls, appetite, and governance are precise	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Sustainability Transmission & Materiality (20%)	Climate, nature, transition, workforce, and conduct factors connect to supported financial and operational pathways	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Operational, Cyber, Model & AI Risk (20%)	Processes, systems, third parties, models, bias, drift, security, resilience, and accountability are rigorously evaluated	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Stress, Concentration & Management Actions (15%)	Severe and reverse scenarios, second-round effects, concentrations, uncertainty, and actions are transparent	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Recommendation, Controls & Governance (20%)	Limits, validation, mitigation, contingency, ownership, reporting, escalation, and review are actionable	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Evidence, Model & AI Transparency (10%)	Sources, data, models, scenarios, incidents, regulations, limitations, and AI use are verified and auditable	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

8. Final Project: Integrated Financial Risk Management Framework (Summative Assessment 3) - 40%

Learning Outcomes Addressed: All course learning outcomes (CLO1-CLO5)

8.1 Project Overview

The final project is the signature assessment of Financial Risk Management. Students develop and defend an enterprise-wide, implementation-ready framework supported by auditable risk analytics, scenarios, controls, and governance.

8.2 Project Scope

Each student selects an approved financial institution, corporate treasury, investment organization, business unit, FinTech process, or instructor-provided case for which lawful, non-confidential, and sufficiently reliable risk evidence is available.

8.3 Deliverables

Integrated Financial Risk Management Framework (3,500-4,500 words, excluding appendices)

1. Executive Risk-Committee Brief: risk profile, appetite, material concentrations, stress outcomes, proposed responses, decisions requested, and limitations
2. Risk Universe and Transmission Map: market, credit, counterparty, liquidity, funding, operational, model, cyber, technology, conduct, strategic, sustainability, and interdependency analysis
3. Risk Analytics and Model Record: exposures, sensitivities, VaR/ES, credit, liquidity, stress, backtesting, data lineage, assumptions, exceptions, model limits, and validation priorities
4. Risk Appetite and Limits: capacity, tolerance, metrics, thresholds, early warnings, concentration, limit architecture, breach handling, and escalation
5. Sustainability and Resilience Design: climate/nature/workforce/conduct pathways, critical operations, scenarios, controls, adaptation, transition, contingency, stakeholders, and safeguards
6. FinTech, AI, Cyber, and Model Governance: inventory, tiering, validation, explainability, bias, drift, security, third parties, override, incident response, accountability, and monitoring
7. Response, Capital, Liquidity, and Assurance Plan: hedging, diversification, insurance, collateral, funding, capital, recovery actions, ownership, reporting, testing, independent review, and audit
8. Evidence and AI Record: dated sources, data provenance, reproducible calculations, assumptions, scenarios, limitations, independent judgment, reflection, and disclosure

Executive Presentation and Individual Oral Defence (12-15 minutes plus 5-10 minutes for questions)

- Present during the Week 14 synchronous session
- 10-12 slides or equivalent risk-committee visual narrative supported by exposure, metric, stress, sustainability, technology, control, capital/liquidity, and governance evidence
- Respond to questions about sources, assumptions, models, tail risk, concentrations, scenarios, limits, mitigation, sustainability pathways, AI/FinTech controls, assurance, and limitations
- Professional, accessible, and interculturally responsive communication with transparent attribution and independent graduate mastery

8.4 Project Timeline & Milestones

Week	Milestone	Deliverable	Weight
Week 9	Scope and Evidence Gate	Approved organization/case, risk universe, critical decisions, appetite context, source hierarchy, data architecture, and evidence plan	Formative feedback
Week 12	Integrated Design Gate	Exposure metrics, risk models, stress scenarios, sustainability transmission, AI/FinTech controls, limit architecture, and response options	Peer/instructor review
Week 13	Complete Draft and Challenge	Complete framework, analytics, governance, reporting, assurance plan, presentation, reflection, and AI record	Instructor feedback
Week 14	Final Presentation and Defence	Final framework, model, evidence portfolio, executive presentation, and individual defence	40% of final grade

8.5 Final Project Grading Rubric

Integrated Financial Risk Management Framework Written/Applied Portfolio (70% of Final Project Grade)

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Scope, Evidence & Risk Diagnosis (15%)	Decision-ready scope and triangulated evidence connect objectives, exposures, concentrations, interdependencies, data, and control failures	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Risk Analytics, Models & Validation (15%)	Sensitivities, VaR/ES, credit, liquidity, stress, backtesting, lineage, assumptions, and validation are compelling	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Risk Appetite, Limits & Financial Responses (15%)	Capacity, tolerance, metrics, limits, hedging, collateral, funding, capital, contingency, and escalation are coherent	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Sustainability, Resilience & Stakeholder Effects (15%)	Material pathways, scenarios, critical operations, adaptation/transition, safeguards, and affected groups are integrated	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
FinTech, AI, Cyber & Model Governance (15%)	Inventory, tiering, validation, explainability, bias, drift, security, vendors, override, response, and accountability are robust	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Implementation, Reporting & Assurance (15%)	Owners, resources, dashboards, testing, review, independent challenge, audit, milestones, and adaptive learning are actionable	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Evidence, Model, Limitations, AI & Professional Quality (10%)	Executive-ready, current, reproducible, calibrated, accessible, safe, and transparently disclosed	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

Executive Presentation and Individual Oral Defence (30% of Final Project Grade)

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Risk and Resilience Narrative (30%)	Compelling narrative connects objectives, exposures, metrics, stress, controls, sustainability, technology, and decisions	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Analytical & Decision Visuals (25%)	Accurate, accessible visuals make risk, tails, concentrations, scenarios, limits, capital/liquidity, and roadmap understandable	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Executive & Intercultural Presence (20%)	Confident, concise, accessible, and responsive to diverse risk-committee and stakeholder perspectives	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready
Oral Defence (25%)	Responses demonstrate independent mastery of evidence, models, uncertainty, risk responses, sustainability pathways, technology controls, and limits	Strong, relevant work with minor gaps in evidence, integration, or precision	Adequate work demonstrating minimum competence but limited depth or integration	Incomplete, inaccurate, weakly supported, or not decision-ready

9. Course Learning Outcomes and Assessment Alignment

CLO / Assessment	Labs	Diagnostic	Midterm	Exercise	Final Project
CLO1	✓✓	✓✓	✓✓	✓	✓✓

CLO / Assessment	Labs	Diagnostic	Midterm	Exercise	Final Project
CLO2	✓✓	✓✓	✓✓	✓✓	✓✓
CLO3	✓✓	✓✓	✓✓	✓✓	✓✓
CLO4	✓✓	✓	✓✓	✓✓	✓✓
CLO5	✓	✓	✓	✓	✓✓

Key: ✓ = Addressed | ✓✓ = Primary Direct Evidence

10. Course Policies

10.1 Attendance & Participation

Regular attendance and active participation in synchronous sessions are essential for success in this course. Students are expected to attend all scheduled synchronous sessions with cameras enabled. If you must miss a session, please notify the instructor in advance. More than two unexcused absences may result in a reduced participation grade.

10.2 Late Submission Policy

- Assignments submitted within 24 hours of deadline: 10% penalty
- Assignments submitted 24-48 hours late: 20% penalty
- Assignments submitted more than 48 hours late: not accepted without prior approval
- Extensions may be granted for documented emergencies with advance notice

10.3 Academic Integrity

All work submitted must be your own original work. Plagiarism, including the use of AI-generated content without proper disclosure, is a serious academic offense. All sources must be properly cited. Violations of academic integrity will result in a zero for the assignment and may lead to further disciplinary action.

10.4 AI Usage Policy

Artificial intelligence may support selected source discovery, data cleaning, code or formula review, anomaly detection, scenario generation, model documentation, control mapping, visualization, and communication, but students remain accountable for every source, data transformation, model, exposure, risk estimate, stress result, sustainability pathway, control judgment, ethical implication, and recommendation.

1. **Assessment Conditions:** The Week 7 midterm examination is completed without generative AI unless the instructor expressly authorizes a specific tool or accommodation.
2. **Transparency and Provenance:** Every AI-assisted submission must include an AI Usage Statement identifying tools, purposes, material prompts, outputs used, information supplied, verification steps, limitations, and substantive human revisions.
3. **Verification, Current Authority, and Professional Limits:** AI output is not evidence. Students must use dated authoritative sources, verify calculations and claims, distinguish facts from estimates and scenarios, document limitations, and avoid presenting course work as legal, audit, certification, engineering, or other regulated professional advice.

4. Privacy, Security, Confidentiality, Rights, and Responsible Disclosure: Sensitive personal, community, employee, customer, supplier, ecological, contractual, proprietary, or security information must not be entered into public AI systems. Students must use lawful access, data minimization, approved storage, safe simulation, rights-holder respect, and responsible disclosure.

10.5 Communication Expectations

The instructor will respond to emails within 48 hours during the work week. For urgent matters, please indicate 'URGENT' in the subject line. Course announcements will be posted on the LMS. Students are expected to check the LMS and their university email daily.

10.6 Accessibility & Accommodations

Focus University Institute is committed to providing equal access to all students. Students requiring accommodations should contact the Disability Services Office and the instructor at the beginning of the term. Reasonable accommodations will be made to ensure full participation in all course activities.

10.7 Netiquette Guidelines

Online learning requires respectful, professional communication. When participating in synchronous and asynchronous discussions, please use professional language, be respectful of diverse perspectives, avoid all-caps (which reads as shouting), and provide constructive feedback. Remember that cultural differences may affect communication styles.

11. Additional Resources

11.1 Library & Research Support

- Focus University Institute Library: financial risk, derivatives, banking, corporate treasury, credit, liquidity, operational resilience, cyber, model risk, FinTech, AI governance, climate finance, regulation, and peer-reviewed business databases
- Research Librarian consultations are available for authoritative academic, regulatory, standards, statistical, organizational, community, and methodological evidence.

11.2 Writing & Academic Support

- Writing and Learning Support: graduate risk analysis, spreadsheet/statistical modelling, quantitative reasoning, stress and scenario design, evidence evaluation, risk-committee writing, visualization, presentation, and study consultations
- APA Citation Guide: Purdue OWL (<https://owl.purdue.edu/>)

11.3 Technical Support

- IT Help Desk: LMS, account, spreadsheet, statistics, coding, market/risk data, model validation, incident analysis, secure storage, visualization, presentation, accessibility, versioning, and approved-tool support

- Source verification, data-provenance, safe-disclosure, accessibility, reproducibility, and AI Usage Statement tutorials are available in the course Getting Started module.

11.4 Professional Development

- OpenStax, BIS/Basel Committee, NIST AI RMF, NGFS, EBA, FRED, and other authoritative open financial-risk, resilience, technology, and sustainability resources
- Peer-reviewed research, audited disclosures, public filings, market/macro data, supervisory evidence, incident reports, stress scenarios, and regulatory materials used with lawful access and context
- Professional risk associations, central banks, prudential and securities regulators, accounting bodies, standards organizations, exchanges, and resilience/cyber networks

11.5 Suggested Bibliography (APA 7)

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Hull, J. C. (2023). *Risk management and financial institutions* (6th ed.). Wiley.

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McNeil, A. J., Frey, R., & Embrechts, P. (2015). *Quantitative risk management: Concepts, techniques and tools* (Rev. ed.). Princeton University Press.

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12. Syllabus Disclaimer

This syllabus represents a plan for the course and may be modified based on pedagogical needs or material changes in markets, technologies, laws, prudential or securities regulation, accounting or sustainability standards, supervisory guidance, threat conditions, models, incidents, and data availability. Course analysis is educational and does not constitute investment, risk, banking, insurance, tax, accounting, legal, audit, assurance, cybersecurity, or other regulated professional advice. Students will be notified of significant changes through the LMS and email.

Focus University Institute

Madrid, Spain

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