Annexure 10

FRM – FINANCIAL RISK MANAGER

Financial Risk Manager (<u>FRM</u>) is a renowned professional designation given by the Global Association of Risk Professionals (GARP) to those with specialised knowledge in evaluating risk in banks, insurance firms, accounting consultancies, amongst others. Similar to the <u>CFA course</u>, FRM is another financial certification that is concerned with evaluating candidates on their knowledge of controlling, analyzing market risk, credit risk, and other financial related risks. Being an internationally known accreditation, GARP provides this certification to candidates after they successfully qualify the <u>FRM exam</u>. If you are a financial professional looking to earn this designation, here is a detailed blog that will walk you through the key aspects of the FRM syllabus comprising of the subjects and covers you must cover in order to ace this exam.

Financial Risk Management (FRM)
There is no minimum eligibility criteria to sit in the exam,
but aspirants are advised to take the exam after graduation.
Exam is held thrice a year for Part 1 and Part 2 candidates (May, August, Noveml
Part 1 and Part 2

FRM Syllabus 2023 Update

GARP has announced that FRM exam will be held thrice a year for Part 1 and Part 2 students and will be conducted in multiple windows throughout the year. There is no specific change or new updates in FRM syllabus and the dates for the 2023 sessions for FRM have been announced.

Here are the dates for FRM exam 2023:

FRM Syllabus: Sections & Topics Covered

As the FRM exam is conducted in two parts, the syllabus and weightage for these two is different. The part 1 consists of four sections whereas part 2 has 5 sections. The following paragraphs elaborate the FRM syllabus for these two parts in further detail.

Levels	FRM Syllabus	Weight
FRM Part 1	1. Risk Management: Foundation	20%
	2. Quantitative Analysis	20%
	3. Valuation & Risk Models	30%
	4. Financial Markets & Products	30%
FRM Part 2	1. Credit Risk Management	25%
	2. Integrated Risk Management	25%
	3. Risk & Investment Risk Management	15%
	4. Market Risk Management	
	C C	25%

FRM Subjects

Here are the FRM subjects for Part 1 and Part 2:

Foundations of Risk Management

The Building Blocks of Risk Management How Do Firms Manage Financial Risk? The Governance of Risk Management Credit Risk Transfer Mechanisms Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM) Enterprise Risk Management and Future Trends Learning From Financial Disasters Anatomy of the Great Financial Crisis of 2007-2009 GARP Code of Conduct Multifactor Models of Risk-Adjusted Asset Returns Risk Data Aggregation and Reporting Principles

Financial Markets and Products

Banks **Insurance Companies and Pension Plans Fund Management Exchanges and OTC Markets** Introduction to Derivatives **Futures Markets Central Clearing Corporate Bonds Using Futures for Hedging Foreign Exchange Markets** Pricing **Financial Forwards and Futures Commodity Forwards and Futures Options Markets Properties of Options Trading Strategies Exotic Options SWAPS** Mortgages & Mortgage-backed Securities **Interest Rate Futures Properties of Interest Rates**

Quantitative Analysis

Fundamentals of Probability Random Variables Common Univariate Random Variables Multivariate Random Variables Sample Moments Hypothesis Testing Linear Regression Regression with Multiple Explanatory Variables Stationary Time Series Options Markets Properties of Options Trading Strategies Exotic Options Nonstationary Time Series Measuring Return, Volatility, and Correlation **Simulation and Bootstrapping**

Valuation and Risk Models

Measures of Financial Risk Calculating and Applying VaR Pricing Conventions, Discounting, and Arbitrage Measuring and Monitoring Volatility External and Internal Ratings Country and Operational Risk Credit Risk and Capital Modelling Interest Rates Measuring and Monitoring Volatility External and Internal Ratings Country Risk Binomial Trees Stress-Testing The Black-Scholes-Merton Model Modelling and Hedging Non-Parallel Term Structure Shifts

PART 2

Market Risk Measurement and Management

Estimating Market Risk Measures Non-Parametric Approaches Parametric Approaches (II): Extreme Value **Back testing VaR** VaR Mapping Messages from the Academic Literature on Risk Management for the Trading Book Some Correlation Basics: Properties, Motivation, Terminology **Empirical Properties of Correlation: How Do Correlations Behave in the Real World?** Financial Correlation Modeling – Bottom-Up Approaches **Empirical Approaches to Risk Metrics and Hedging** The Science of Term Structure Models The Evolution of Short Rates and the Shape of the Term Structure The Art of Term Structure Models: Drift The Art of Term Structure Models: Volatility and Distribution **Volatility Smiles Fundamental Review of the Trading Book**

Credit Risk Measurement and Management

The Credit Decision and Analysis **Classifications and Key Concepts of Credit Risk Capital Structure in Banks Rating Assignment Methodologies Credit Risks and Credit Derivatives Spread Risk and Default Intensity Models Portfolio and Structured Credit Risk Counterparty Credit Risk Portfolio Credit Risk** Structured Credit Risk **Counterparty Credit Risk** Netting, Compression, Resets, and Termination Features Collateral **Credit Exposure and Funding Credit and Debit Value Adjustment** The Credit Transfer Markets – And Their Implications An Introduction to Securitisation

Risk Management and Investment Management

Liquidity Risk Liquidity and Leverage The Failure Mechanics of Dealer Banks Repurchase Agreements and Financing Illiquid Assets

Operational and Integrated Risk Management

Principles for the Sound Management of Operational Risk Enterprise Risk Management: Theory and Practice What is ERM **Banking Conduct and Culture: A Permanent Mindset Change Risk Culture Stress Testing Banks Guidance on Managing Outsourcing Risk** Management of Risks related to Money Laundering and Financing of Terrorism **Risk Capital Attribution and Risk-Adjusted Performance Measurement Range of Practices and Issues in Economic Capital Frameworks** Capital Planning at Large Bank Holding Companies: Supervisory Expectations and **Range of Current Practice OpRisk Data and Governance** Supervisory Guidance on Model Risk Management **Information Risk and Data Quality Management Validating Rating Models Stress Testing Banks High-level summary of Basel III Reforms Basel III: Finalising Post-Crisis Reforms Regulation of the OTC Derivatives Market**

Current Issues in Financial Markets

Factor Theory Factors Alpha (and the Low-Risk Anomaly) Portfolio Construction Portfolio Risk: Analytical Methods VaR and Risk Budgeting in Investment Management Hedge Funds Performing Due Diligence on Specific Managers and Funds

FRM Syllabus: Part 1

FRM Exam Part 1 consists of 100 MCQ type questions which need to be completed in the maximum duration of 4 hours. FRM syllabus for this part is as follows:

Sections in FRM Syllabus- Part 1	Weightage
Foundations of Risk Management	20%
Financial Markets and Products	30%
Quantitative Analysis	20%
Valuation and Risk Models	30%
Career in Financial Rick Management	

Career in Financial Risk Management

Foundations of Risk Management

Focusing on the basics of Risk Management, this section of the FRM syllabus covers the following topics:

- The Building Blocks of Risk Management
- How Do Firms Manage Financial Risk?
- The Governance of Risk Management
- Credit Risk Transfer Mechanisms
- Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM)
- Enterprise Risk Management and Future Trends
- Learning From Financial Disasters
- Anatomy of the Great Financial Crisis of 2007-2009
- GARP Code of Conduct
- Multifactor Models of Risk-Adjusted Asset Returns
- Risk Data Aggregation and Reporting Principles

Quantitative Aptitude

Since a career in Finance requires aspirants to be dextrous at calculations coupled with <u>analytical skills</u>, <u>quantitative aptitude</u> find an essential place in the FRM syllabus for Part 1 and comprises of the following concepts:

- Fundamentals of Probability
- Random Variables
- Common Univariate Random Variables
- Multivariate Random Variables
- Sample Moments
- Hypothesis Testing
- Linear Regression
- Regression with Multiple Explanatory Variables
- Stationary Time Series
- Options Markets
- Properties of Options
- Trading Strategies
- Exotic Options
- Nonstationary Time Series
- Measuring Return, Volatility, and Correlation
- Simulation and Bootstrapping

Valuation and Risk Models

Valuation and Risk Models play a central part in measuring and deciphering the level of financial risk in a firm or in an investment portfolio for a specific time period. Here is a list of sub-disciplines that you need to cover for this section of the FRM syllabus:

- Measures of Financial Risk
- Calculating and Applying VaR
- Pricing Conventions, Discounting, and Arbitrage
- Measuring and Monitoring Volatility
- External and Internal Ratings
- Country and Operational Risk
- Credit Risk and Capital Modelling
- Interest Rates
- Measuring and Monitoring Volatility
- External and Internal Ratings
- Country Risk
- Binomial Trees
- Stress-Testing
- The Black-Scholes-Merton Model
- Modelling and Hedging Non-Parallel Term Structure Shifts

FRM Syllabus: Part 2

Moving to the second part of the FRM syllabus, it is constituted of 80 MCQs with a maximum duration of 4 hours. The below-mentioned table enlists the sections of FRM exam part 2 as well as the weightage of marks.

Sections	Weighta
Market Risk Measurement and Management	25%
Credit Risk Measurement and Management	25%
Risk Management and Investment Management	15%
Operational and Integrated Risk Management	25%
Current Issues in Financial Markets	10%

Market Risk Measurement and Management

Market risks occur when financial markets go through certain changes and eventually affect the organisations operating in them. Market Risk Measurement and Management is concerned with minimising these impacts and effectively handling the risks. Here are the topics included under this element of the FRM syllabus:

- Estimating Market Risk Measures
- Non-Parametric Approaches
- Parametric Approaches (II): Extreme Value
- Backtesting VaR
- VaR Mapping
- Messages from the Academic Literature on Risk Management for the Trading Book
- Some Correlation Basics: Properties, Motivation, Terminology

- Empirical Properties of Correlation: How Do Correlations Behave in the Real World?
- Financial Correlation Modeling Bottom-Up Approaches
- Empirical Approaches to Risk Metrics and Hedging
- The Science of Term Structure Models
- The Evolution of Short Rates and the Shape of the Term Structure
- The Art of Term Structure Models: Drift
- The Art of Term Structure Models: Volatility and Distribution
- Volatility Smiles
- Fundamental Review of the Trading Book

PGDM in Canada

Credit Risk Measurement and Management

Credit Risk Measurement and Management evaluate your understanding of counterparty risks and credit products such as credit deviations and collateral debt obligations. Below is a list of some subtopics covered under this component of the FRM syllabus:

- The Credit Decision and Analysis
- Classifications and Key Concepts of Credit Risk
- Capital Structure in Banks
- Rating Assignment Methodologies
- Credit Risks and Credit Derivatives
- Spread Risk and Default Intensity Models
- Portfolio and Structured Credit Risk
- Counterparty Credit Risk
- Portfolio Credit Risk
- Structured Credit Risk
- Counterparty Credit Risk
- Netting, Compression, Resets, and Termination Features
- Collateral
- Credit Exposure and Funding
- Credit and Debit Value Adjustment
- The Credit Transfer Markets And Their Implications
- An Introduction to Securitisation

Risk Management and Investment Management

This section tests the knowledge of risk management techniques and how it is exercised in the process of investment management. A list of topics covered under this component of the FRM syllabus are:

- Liquidity Risk
- Liquidity and Leverage
- The Failure Mechanics of Dealer Banks
- Repurchase Agreements and Financing
- Illiquid Assets

Operational and Integrated Risk Management

This sub-field of Risk Management is concerned with the assessment of the operational risks, implementation of risk controls which further leads to mitigation, avoidance of risk or acceptance. Concepts you must study in this part of the FRM syllabus are:

- Principles for the Sound Management of Operational Risk
- Enterprise Risk Management: Theory and Practice
- What is ERM
- Banking Conduct and Culture: A Permanent Mindset Change
- Risk Culture
- Stress Testing Banks
- Guidance on Managing Outsourcing Risk
- Management of Risks related to Money Laundering and Financing of Terrorism
- Risk Capital Attribution and Risk-Adjusted Performance Measurement
- Range of Practices and Issues in Economic Capital Frameworks
- Capital Planning at Large Bank Holding Companies: Supervisory Expectations and Range of Current Practice
- OpRisk Data and Governance
- Supervisory Guidance on Model Risk Management
- Information Risk and Data Quality Management
- Validating Rating Models
- Stress Testing Banks
- High-level summary of Basel III Reforms
- Basel III: Finalising Post-Crisis Reforms
- Regulation of the OTC Derivatives Market

Current Issues in Financial Markets

The awareness of contemporary trends and happenings in the financial markets across the globe is also pivotally examined in the second part of the FRM syllabus. Here is a list of relevant topics that this section entails:

- Factor Theory
- Factors
- Alpha (and the Low-Risk Anomaly)
- Portfolio Construction
- Portfolio Risk: Analytical Methods
- VaR and Risk Budgeting in Investment Management
- Hedge Funds
- Performing Due Diligence on Specific Managers and Funds

FRM: Career Prospects

Now that you are aware of the FRM syllabus, you must also understand the scope that this designation encompasses. After clearing both the exam and getting relevant work experience, the candidate is provided with the FRM certification by GARP. Below is a list of most sought-after jobs in FRM:

- Risk Analytics Client Consultant
- Corporate Risk Manager
- IT Management Analyst
- Regulatory Risk Specialist
- Credit Risk Specialist
- Market Risk Specialist
- Enterprise Risk Manager
- Risk Manager
- IT Risk Management Analyst
- Regulatory Risk Analyst
- Senior Operational Risk Manager

What is the passing score for FRM exam? 70% is the minimum passing score that one needs to clear FRM exam.

Does FRM require maths?

Since FRM is a finance-oriented qualification, maths is a part of its syllabus though not directly but more through financial calculations. FRM syllabus comprises of different subjects that provide learners with a good overview of mathematical subjects and tools utilised in <u>Financial Management</u>, Risk Management, Valuation, etc.

BUILD YOUR CAREER

BE WISE

BE RICH

THANK YOU

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