



# EFFAS FINANCIAL RISK ANALYST®

Examination Syllabus



**EFRA**

EFFAS Financial  
Risk Analyst

<b>1</b>	<b>FINANCIAL RISKS</b>
1.1	Introduction: Overview of risk and risk management in banking
1.1.1	Definition
1.1.2	Types of risks
1.1.2.1	Credit
1.1.2.2	Market
1.1.2.3	Balance sheet (structural)
1.1.3	Fundamental Methodologies
1.1.3.1	Exposure
1.1.3.2	Sensitivity
1.1.3.3	Value At Risk
1.1.4	Capital implications
1.2	Risk framework
1.2.1	Risk appetite definition
1.2.2	Risk governance
1.2.3	Defenses lines
1.2.4	Limits definition
1.3	Credit risk
1.3.1	Definition
1.3.2	Types
1.3.2.1	Issuer
1.3.2.2	Counterparty
1.3.2.3	Delivery risk
1.3.2.4	Settlement
1.3.3	Measurements and indicators
1.3.3.1	Probability of default
1.3.3.2	Exposure
1.3.3.3	Add-ons
1.3.4	Limits definition
1.3.5	Key Risk indicators for the credit portfolio
1.4	Market risk
1.4.1	Definition
1.4.2	VaR methodologies
1.4.2.1	Parametric VaR
1.4.2.2	Historical simulation VaR
1.4.2.3	MonteCarlo simulation VaR
1.5	Asset liability risk
1.5.1	Definition
1.5.2	Types
1.5.3	Interest rate risk
1.5.3.1	Interest rate risk metrics
1.5.4	Liquidity risk
1.5.4.1	Liquidity risk metrics
1.5.5	Limits definition
<b>2</b>	<b>DERIVATIVE INSTRUMENTS</b>
2.1	Objectives
2.2	Introduction to derivatives
2.2.1	Typology of derivatives
2.2.1.1	Futures and forwards
2.2.1.2	Swaps
2.2.1.3	Options
2.2.2	Typology of markets
2.2.2.1	Organised
2.2.2.2	Unorganised

2.3	Futures and forwards
2.3.1	Definition
2.3.2	Forward contract
2.3.3	Futures contract
2.3.4	Underlying typologies
2.3.4.1	Equities
2.3.4.1.1	Equity futures
2.3.4.1.2	Stock options
2.3.4.1.3	Equity swaps
2.3.4.2	Currency
2.3.4.2.1	Forward exchange deal
2.3.4.2.2	Non-delivery forward
2.3.4.3	Short and long-term interest rates
2.3.4.3.1	Main markets
2.3.4.3.2	The FRA
2.3.4.4	Bond futures
2.3.5	Valuation
2.3.6	Management
2.3.6.1	Hedging
2.3.6.2	Speculation
2.3.6.3	Arbitrage 92
2.3.6.4	Portfolio management with bond futures
2.4	Swaps
2.4.1	Definition
2.4.2	Underlying typologies
2.4.2.1	Short and long-term interest rates
2.4.2.1.1	Coupon swaps (standard IRS)
2.4.2.1.2	The basis swaps
2.4.2.1.3	Non-generic Interest Rate Swaps (Interest Rate Swaps)
2.4.2.2	Currency
2.4.2.2.1	Standard currency swaps
2.4.2.2.2	Floating-rate currency swaps
2.4.2.2.3	Cross-currency coupon swaps
2.4.2.3	Equities
2.4.2.3.1	Total return swap
2.4.2.3.2	Dividend swaps
2.4.3	Valuation
2.4.4	Management
2.4.4.1	Hedging
2.4.4.2	Speculation
2.4.4.3	Arbitrage
2.4.5	Credit Default Swaps
2.4.5.1	Introduction and Basic Concepts
2.4.5.2	Credit Events
2.4.5.3	Conventions
2.4.5.4	ISDA Protocols
2.4.5.5	Accounting Constraints
2.4.5.6	Valuation
2.5	Option
2.5.1	Definition
2.5.2	Underlying typologies
2.5.2.1	Equities
2.5.2.2	Currency
2.5.2.3	Interest rates

2.5.3	Valuation
2.5.3.1	The Binominal Model
2.5.4	Management
2.5.4.1	Hedging
2.5.4.2	Speculation
2.5.4.3	Arbitrage
2.5.5	Exotic options
2.5.5.1	Digital Options
2.5.5.2	Compound Options
2.5.5.3	Chooser Options
2.5.6.4	Exchange Options
2.5.5.5	Asian Options
2.5.5.6	Barrier Options
2.5.5.7	LookBack Options
<b>3</b>	<b>FIXED INCOME</b>
3.1	Bonds with Warrants
3.1.1	Investment Characteristics
3.1.2	Value of Warrants
3.2	Convertible Bonds
3.2.1	Investment Characteristics
3.2.2	Value of Conversion Benefits
3.3	Callable Bonds
3.3.1	Investment Characteristics
3.3.1.1	Price-yield relationship for a callable bond
3.3.1.2	Negative convexity
3.3.1	Valuation and Duration
3.3.1.1	Determining the call option value
3.3.1.2	Option-adjusted spread
3.3.1.2	Effective duration and convexity
3.4	Floating Rate Notes
3.4.1	Investment Characteristics and Types
3.4.2	Valuation Method
3.5	Mortgage-Backed Securities
3.5.1	Types of Mortgages
3.5.1.1	Level-payment fixed-rate
3.5.1.2	Adjustable-rate (ARM)
3.5.2	Types of Securities
3.5.2.1	Pass-through securities
3.5.2.2	Collateralised mortgage obligations
3.6	Factors Affecting Market Price
3.6.1	Underlying collateral
3.6.2	Structure and seasoning
3.6.3	Prepayment rate
3.6.4	Level of interest rate
3.6.5	Liquidity
3.6.6	Credit risk
3.7	Valuation Methodologies
3.7.1	Static cash flow yield methodology
3.7.2	Structure Prepayment model

