

Market Risk for Non-Market Risk Professionals

DURATION

3 days

SUBJECT CONTENT

- Recognising when market risk arises in the financial markets by market factor / asset class within the cash and derivatives markets
- A generic framework for the management of market risk within a financial institution, including market risk:
 1. *measurement*, in both the trading and banking book
 2. *analysis*, including:
 - factor sensitivity concepts (eg. PV01, CV01, the greeks)
 - VAR
 - Stress testing
 3. *control*, including use of both limits and triggers
- Appropriateness & suitability issues
- Basis / correlation / liquidity risk
- Counterparty credit risk – and the links with market risk
- Market risks in structured products
- Option risk
- The role of the regulators
- Understanding the market risk numbers

COURSE OBJECTIVES

The course is targeted toward those who need to have some knowledge of market risk arising from the various activities and products within traded markets – specifically when it arises, and how it is quantified and controlled – and understand the role of the market risk management function within a financial institution.

The session studies the risks across a variety of asset classes and is designed to demystify the language and the processes within market risk management without being overly technical.

The course would be ideal for those from the credit risk side of the bank (for whose clients' credit exposure is driven by market risk in combination with default), but would also be appropriate for relationship managers and those who directly or indirectly support the trading function.

METHODOLOGY

The workshop will comprise presentations, problem sets, computer spreadsheet exercises and cases in order to give participants an understanding of how market risk is analysed and managed within a financial institution. Internet connection permitting, Bloomberg may also be used as an instructive tool.

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Pre-read: (1) Regional Bancorp (2) Product Background

DAY/ TIME	SUBJECT	DETAIL	POINTS OF EMPHASIS
DAY 1			
AM	Welcome and Introduction <i>Presentation</i>	The changing nature of the markets and the importance of managing risk.	<ul style="list-style-type: none"> • Evolution of RM techniques • Role of the regulators
	Market Risk Measurement: CASH <i>Case: Regional Bancorp</i> <i>Group work & class discussion</i>	Regional Bancorp (“RBC”) is analysed for market risk residing within its financials	<ul style="list-style-type: none"> • Interest rate risk <ul style="list-style-type: none"> - Gap analysis - Duration analysis
	Market Risk Measurement: Interest Rate Forwards <i>Presentation & exercises</i>	RBC uses interest rate forwards to manage its gap exposure	<ul style="list-style-type: none"> • Market risk of: <ul style="list-style-type: none"> • FRAs & futures • IRS & non-generic swaps
PM	<i>Case: Oregon Foods</i> <i>Group work & class discussion</i>	A company seeking to hedge its interest rate exposure using leverage and swaps of different tenors.	<ul style="list-style-type: none"> • Corporate hedging policies • Leverage risk • Right-way & wrong-way swaps
	Market Risk Measurement: FX Derivatives <i>Presentation & exercises</i>	RBC uses interest rate options to manage its gap exposure	<ul style="list-style-type: none"> • FX forwards v cross currency swaps • Intuitive option pricing • Volatility concepts
	FX Option Sensitivity <i>Computer exercises OR demo</i>	A look at the sensitivity of an option to changes in spot, rates, volatility and time	<ul style="list-style-type: none"> • Option greeks: delta, gamma, vega, theta & rho

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DAY 2			
AM	Market Risk Analysis: CASH <i>Presentation</i> <i>Computer exercises OR demo</i>	Overview of a generic market risk management framework for a variety of cash instruments within a bank.	<ul style="list-style-type: none"> • Market factors and sensitivity • Fixed income analysis (DV01) • FX analysis
	Market Risk Analysis: DERIVATIVES <i>Presentation</i> <i>Computer exercises OR demo</i>	Overview of a generic market risk management framework for a variety of derivative instruments within a bank.	<ul style="list-style-type: none"> • VAR, stressed VAR & expected shortfall • Risk within portfolios - correlation • Stress testing
	Market Risk Control <i>Presentation & exercises</i>	Overview of a generic market risk management framework for a variety of derivative instruments within a bank.	<ul style="list-style-type: none"> • Limits v triggers • Linking market risk analysis & control.
PM	Case: Oz Minerals <i>Group work & class discussion</i>	An Australian miner with both commodity and FX exposure attempts to hedge one exposure only with disastrous consequences.	<ul style="list-style-type: none"> • Correlation risk • Leverage • Quanto products
	The Market Risk of Credit Instruments <i>Presentation & exercises</i>	A more detailed look at credit as a traded market factor, the implications for market risk management and how that risk is managed.	<ul style="list-style-type: none"> • CDS, TRS, spread products & CDOs • CS01 v CV01
	Case: Global Bank's Credit Exposure <i>Presentation & exercises</i>	A bank's credit exposures are identified across a number of portfolios, the various credit risks are identified and the risk numbers are interpreted.	<ul style="list-style-type: none"> • CVA v DVA • FVA • CVA VAR

DAY/ TIME	SUBJECT	DETAIL	POINTS OF EMPHASIS
DAY 3			
AM	Counterparty Credit Risk in Derivatives <i>Group exercise/ class discussions</i>	A study of how market risk could lead to counterparty credit risk and how those risks are quantified and managed.	<ul style="list-style-type: none"> • Settlement risk • Pre-settlement risk • EFE, PFE • Risk mitigation techniques
	Option Greeks <i>Presentation</i> <i>Computer exercises OR demo</i>	A study of the option greeks, the ways that option traders monetize views and market risk control.	<ul style="list-style-type: none"> • Option trading strategies • Option risk management
	Market Risk Management: Structured Products <i>Presentation</i> <i>Computer exercises OR demo</i>	Some structured products are reverse-engineered and analysed for market risk, including transactions embedding swap options and exotic options	<ul style="list-style-type: none"> • Cancellable / extendable swaps • Exotic option structures including: path-dependent / multi-factor /modified-payout options
	The Role of the Regulators <i>Presentation & exercises</i>	The regulators approach to the management of market risk and reporting requirements are studied.	<ul style="list-style-type: none"> • Basle II – III Market/ counterparty credit risk charges • VAR, Stress VAR and IRC
PM	Main Street Bank's Market Risk Management <i>Exercises</i>	Participants play the part of MSB's market risk managers analysing risk reports and making recommendations.	<ul style="list-style-type: none"> • Market risk report analysis • Market risk decision-making
	Review Exercise <i>Group work & class discussion</i>	A review of all the topics covered within an end-of-session group quiz	<ul style="list-style-type: none"> • 20-question multi-choice quiz