Value at Risk Workshop, (One Day)

This is a one day workshop. It is designed to explain more about market risk. How it arises, how traders manage it and how firms measure it. The course explains the basic techniques and then introduces Value at risk, (VaR). This will include the strengths and weaknesses of VaR, how VaR limits are used, and the additional risk reporting that is normally used to complement VaR.

The workshop will also demonstrate that the quantitative measurement of risk is closely linked to reward, (or P&L). This means that risk measures can not only be used to limit exposures but can also provide a test of reasonableness for profit and loss reporting. There is a final case study that shows what happened when a bank ignored the VaR limit.

Training will be in a workshop format. This will include a mixture of presentation and case study material. The course is designed for up to twelve staff. Knowledge of risk management is not required but knowledge of financial products and markets would be helpful.

Below is a summary of the workshop. The content has been placed in a logical sequence and addresses the techniques, application, strengths and weaknesses of VaR.

Morning

Introduction
This section explains why market prices move, how traders attempt to hedge market risk and the impact that this can have on the P&L. It will also explain the need for quantitative measurement.
-Why prices move
-Defining market risk
-How this affects P&L
-Why hedging is not perfect
-Impact on finance & control
-Methods of measurement

Traditional measures of market risk
This section will explain the classic measures of market risk and will use case study material. This will demonstrate how to use some simple techniques in order to estimate the potential P&L change that will arise from a market exposure.
-Spot equivalency
-Basis point value, (PV01)
-Duration
-Credit PV01
-Strengths & weaknesses of these measures

Value at Risk
This section provides an introduction to the topic, it explains the uses, advantages and disadvantages of VaR and relates these issues to risk limits.
-Where it comes from & why firms use it
-What it shows
-What it does not show
-VaR limits on risk

Afternoon

Calculating VaR
This section will involve some simple case study work where we will calculate the value at risk associated with an individual dealing position. We will use statistical techniques and historic data. This will include:
-Normal/lognormal distribution
-Standard deviation
-Calculating daily VaR for a single position
-The effect of time on VaR
-The effect of confidence intervals on VaR

Extending VaR to a portfolio
This will introduce diversification, we will use a simple model to see how adding positions to a portfolio should, (in theory), reduce risk. We will also consider the merits of diversified and undiversified VaR.

Additional risk reports & back testing
VaR only explains what should happen on a "normal" trading day. This is why we use additional risk measures to complement VaR.
-Simulation
-Stress testing
-Backtesting VaR: the importance of finding out how accurate our model is.

Summary: Practical application of VaR
-How we should look at VaR numbers
-What VaR tells us about the risks being run
-Some of the pitfalls of VaR
-What happens when VaR is ignored
This will include a case study on National Australia Bank where breaches in VaR limits were ignored and significant losses were incurred.

End of workshop & review

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