

# VALUE AT RISK

## (Risk Fundamentals & Application)

Value at Risk (VaR) was hailed two decades ago as the new way to measure and manage market risk. Risk managers loved it, traders mistrusted it, regulators "hard-wired" it and Boards were confused. Nevertheless, it's now widely used. Its advantage is clear, it adds a statistical measure or level of confidence. Unfortunately, its major weakness is that in times of stress (the very time you rely on it) it doesn't work. Does that mean that VaR is a pointless or even dangerous measure? That's not an easy question to answer. It depends on how you calculate it, what you use it for and importantly what other risk measures you use. It's understandable that many smaller firms don't use VaR. It's a decision based on what they do and the resources at hand. Larger firms use it. They recognize its strengths and weaknesses. They explore outliers, look for changes and trends and apply more severe tests to simulate what could happen when markets "gap down". 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.

### Target Participants

- Investment professionals
- Treasury professionals
- Balance sheet and capital managers
- Asset and liability managers and analysts
- Risk managers and portfolio managers
- Treasury middle office and operations personnel
- Liquidity funding managers
- Treasury auditors
- Financial controllers, accountants, and analysts
- Investment bankers
- Regulatory and compliance personnel

### Course Objectives:

- What this workshop does is to provide you with a fundamental understanding of the topic.
- Training will be in a workshop format.
- This will include a mixture of presentation and case study material.

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

## COURSE CONTENTS

### Module 1 - Market Risk

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.

- What it is
- How it occurs
- Combinations of risk reports
- Simple measures
- Interest rate gaps and deltas
- Strengths & weaknesses

### Module 2 - Value at Risk

We will consider what goes into a VaR model and importantly what comes out. Is VaR fit for purpose,

or does it lead to overconfidence in the management of risk?

- What it is
- Inputs into the VaR calculation
- Volatility
- What it is, two measures
- Normal Distribution
- Using volatility and normal distribution
- How much can we lose?
- Confidence intervals
- Increasing volatility
- How much risk do we have?
- Risk appetite & risk limits – what's appropriate?
- Time horizon

- Should we use one day, ten day or some other holding period?

### Module 3 - Revisiting Normal Distribution

Why do markets behave differently and what can we do about it?

- Skewness, Kurtosis and Leptokurtosis
- The tail problem and “fat-tails”
- Expected shortfall.

### Module 4 - VaR & Diversification

They say diversification reduces risk. That may be true, but should we rely on it with our VaR model?

- Portfolio theory
- Correlation – what it is, how it’s used in VaR
- Two measures- diversified and undiversified VaR, what’s appropriate?
- What happens when “predictable” correlations breakdown?

### Module 5 - VaR Methodologies

Which is best? A hard question to answer but something we need to think about in terms of what we are trying to do and the resources at hand.

- Parametric (variance, covariance model)
- Historic simulation
- Monte Carlo simulation
- What they are, strengths and weaknesses

### Module 6 - Backtesting

Does your VaR model work?

- How and why it is undertaken.

### Module 7 - The Governance of Risk

We know it's important but just how does VaR impact on governance? How does it fit in with risk appetite?

- Quantitative and qualitative measures of risk and their impact on VaR
- Risks VaR doesn't hedge.

### Module 8 - Additional Risk Measures

Do you need other measures to get a better picture of the risks you face?

- Drawdowns
- Point of ruin (concentration risk)
- Expected Loss
- Stress testing

### Module 9 - Contingency Planning

The things you constantly need to monitor that may give you an indication that something is not quite right.

- Early warning indicators
- Improved management information
- Simple and effective estimates of VaR

### Module 10 - Three Lines of Defence

Don't let complexity overrule robust operating procedures.

- VaR and the risk of fraud

## End of workshop & Wrap Up

COURSE DURATION	DELIVERY MODE	DELEGATE CLASS SIZE	COURSE FEE/PARTICIPANT
3 DAYS	In-Plant	8 (Guaranteed Minimum)	For quote, please click <a href="http://demvros.com/contact/">http://demvros.com/contact/</a>
Discount is available for class size above the minimum. Please visit <a href="http://www.demvros.com">www.demvros.com</a> or call 08056154199 or e-mail for enquiries.			