

PMSinfo Risk Management

“...good managers manage risks, poor managers manage problems”

This statement of unknown origin accurately reflects the situation many risk managers find themselves in against the backdrop of ever increasing supervisory requirements.

Risk management — what to do?

In the finance industry, minimum requirements on risk management answer this question in their respective variants. Risk management thus comprises the definition of risk strategies, the assessment of risk-bearing abilities and the creation or further development of internal control procedures.

The following management and controlling processes for instance are identified as part of the control procedures:

- Risk identification
- Risk evaluation
- Risk control
- Risk monitoring and communication.

These aspects are accompanied by requirements on activities in new products and on new markets as well as the question of the resources equipment.

Risks — which risks should be taken into account?

This seemingly “simple” question is in fact highly complex. The supervisory authorities’ current explanations for the finance industry classifies the following as the main types of risk:

- a) Counterparty risks (including country risks)
- b) Market price risks (including interest rate risks)
- c) Liquidity risks and
- d) operational risks.

Possible risk correlations between these risks need to be observed. Accompanying measures must be taken into account also for risks that are not considered to be substantial by a company’s management.

Requirements on a modern risk management system

- Full support of all risk management processes (from front office to back office)
- Support of risk control by using risk perspectives that can be flexibly parameterised (depending on the selected investment style), by implementing optimisation and hedging strategies as well as extensive simulation possibilities
- Consistent and quality-assured data pool for an integrated risk control and measurement
- State-of-the-art instrument modelling (very broad coverage and flexible extensibility based on activities with regard to new products and on new markets) and evaluation (pricing)
- Risk parameters based on transparent calculation procedures
- Full applicability of the results for a limit and report display
- Extensive stress tests on various levels (including correlation and macro-economic analyses)
- Coverage of all substantial types of risk including a representation of the interactions and of possible risk concentrations
- Transparent risk quality assessment procedure: System support of backtesting analyses on the level of instruments, portfolios etc.
- Modular structure to meet customer requirements in a cost-effective way

Depending on the resources equipment, a cost-effective implementation either as on-site or outsourcing solution.

Who we are

much-net AG can look back at nearly 30 years of experience in the finance industry, which allows us to offer established solutions and services currently in use all over Europe. much-net AG has created the PMS risk management system, a system that meets the requirements on finance companies and industrial enterprises by offering an integrated, module-based solution.



Risk management in PMS

PMS provides various risk control features on the front office level:

- Trade capturing, pre-trade limit simulation and monitoring, various exposure representations and key figures based on an integrated provision of data
- Independent pricing also of highly complex structures, cash flow analyses, representation of various key figures by applying the latest risk models
- Calculation of different risk hedge variants, hedge optimisation proposals, portfolio optimisation according to Markowitz approach
- Freely selectable benchmark structures enable an extensive asset allocation in comparison with sample portfolios (if desired).

PMS supports a flexible parameterisation of the risk perspectives, in other words they can be customised to a portfolio manager's individual needs. This flexible portfolio composition allows for different analysis levels: for example, analyses on the security level, limits on portfolio level and monitoring on different levels of aggregation.

Counterparty Risk

(inclusive country risk)

- Expected Loss
 - Rating-based
 - Spread-based
- Unexpected Loss (CVaR)
- Exposure at Default (EAD)
- Loss Given Default (LGD)
- CVaR CreditMetrics
- CVaR CreditRisk+
- CVaR Gordy
- Credit Spread VaR
- Rating / Scoring
- Collateral Management
- Credit Risk Mitigation
 - Netting
 - Collateralisation
 - Hedging
- Stresstests
- Reporting

It is no longer possible to answer the question "What is still safe nowadays?" without an adequate credit risk measurement. Whereas government bonds used to be perceived as "safe harbour" in the past, it is now necessary to analyse meticulously (also on the government level) which debtor to entrust with one's money.

Company-threatening crises may be caused by many aspects. In the end, the problem situation always manifests itself in a threatening liquidity situation. This is one of the reasons why supervisory authorities have repeatedly addressed tighter liquidity risk requirements as "lessons learnt" from the financial crises.

Liquidity Risk

- Cash Flow Projections
- Proof of Liquidity
- Liquidity Spread
- Capturing of Plans
- Comparison Actual Liquidity Plan Liquidity
- Stresstests
- Liquidity VaR with Monte Carlo Simulation
- Liquidity GAPS
- Cash Flow Hedge
- Liquidation-Adjusted VaR
- Fund Liquidity Metrics
- Liquidity Spread VaR
- etc.

Risk management in PMS

Market Risk I

- BP Risk
- Duration
- Modified Duration
- Convexity
- Greeks
- Beta
- Tracking Error ex-post
- Tracking Error ex-ante
- Jensen's Alpha
- Various Ratios
- Volatility
- Correlations
- Parametric VaR
- Historical Simulation
- Monte Carlo VaR
- Backtesting (clean & dirty)
- Reporting

Market Risk II

- Expected Short Fall
- Long Term VaR
- Incremental VaR
- Marginal VaR
- Component VaR
- Stresstests with
 - Correlations
 - FX
 - Interest Rates
 - Indices
 - CDX
 - Spreads
 - Ratings
 - Volatilities
 - Volumina
 - Inflation
 - Commodities
 - Gross Domestic Product
 - Unemployment Rate

The market price risk includes the analysis of potential losses resulting from negative market parameter changes. The focus has increasingly broadened in the past few years. In the past, it was only necessary to examine interest rates, shares and currencies, but today this risk also encompasses commodities, volatilities and credit spreads for example.

PMS also offers freely definable stress tests.

Interest Rate Risk

- Interest Commitment
- Capital Commitment
- Interest Income Analysis
- Contribution Margin
- Conditional Margin
- Margin Calculation
- Cost Price Reporting for Treasury Results
- Transition from net present value to periodic and profit loss statement
- Moving average for variable products
- Treasury Result
- Interest VaR
- Stresstests
- Hedging
- Reporting
- etc.



Risk management in PMS

Risk Control

- Limit
 - Definition
 - Monitoring
 - Reporting
 - internal, contractual, regulatory Limits
- Hedging with
 - Interest Derivatives
 - Credit Derivatives
 - Equity Derivatives
 - Commodity Derivatives
 - FX Derivaten
- Hedge Proposals
- Hedge Efficiency
- Optimisation Proposals

This topic deals with the main aspects of monitoring limits and controlling the risk quality (backtesting) for instance. As an integrative system, PMS makes it possible to use consistent evaluation models during backtesting for a pricing of OTC instruments in particular and for a risk assessment. This is a considerable advantage in the argumentation towards financial auditors and supervisory authorities.



Measuring operational risks certainly represents the least quantifiable requirement. It is therefore important to reserve sufficient system space for company-specific approaches and processes. Expert/specialist estimations, self-assessments and other qualitative procedures need to be supported by the system as well.

Operational Risk

- Identification
- Capturing
- Loss Event Databases
- Self Assessment
- Stresstests
- Measurement Basel II
- Basic Indicator Approach (BIA)
- Standard Approach (STA)
- Advanced Measurement Approach (AMA)
- Reduction of Operational Risk
- Audit/Logging Features
- User Rights Concept
- Sorbanes Oxley

External Reporting

- MaRisk
(banks, funds, leasing)
- Legal Reporting I + II
- GroMiKV
- Solvabilitätsverordnung
- Basel II
- IFRS 7 + 9, IAS 32, IAS 39
 - Categorisation
 - Hedge Accounting
 - Profit/Loss
 - Accounting Records
 - Subledger
- BilMoG
- XML Interface to
Deutsche Bundesbank
- CAD Austria
- Liquidity Ordinance
- UCITS III & IV

A number of supervisory requirements are accompanied by reporting obligations, like the derivatives regulation in asset management for instance: Periodic reporting of backtesting outliers to supervisory authorities. PMS provides information on the fulfilment of numerous reporting obligations on the German as well as European level.



Interfaces

- PMS Standard Import Interface
- Reuters
- Bloomberg
- vwd
- Telekurs
- WM
- JP Morgan
- Dow Jones
- SAP
- GEOS
- Diamos
- MultiCash
- Multifonds
- PARIS
- MS Excel
- Cognos OLAP
- Crystal Reports
- etc.

PMS offers various interfaces with other systems for the purposes of providing or processing data. In addition to the defined interfaces, PMS also offers a standard import interface for a flexible use as well as our own financial data operations tool (FDOT) including an Excel converter. These interfaces make it possible to directly connect PMS with any new systems.

much-net AG

Kennedyallee 1-5
53175 Bonn (Germany)
Phone (02 28) 9 11 46-0
Telefax (02 2) 9 11 46-46
Email office@much-net.de

If you have any questions, please contact:
Nikolai Bukureschtiew - 30
Eduard Tolmatschjow - 58

Being an independent, medium-sized company, our focus lies on our customers. You may contact our support and consulting team members for any change or extension proposals which will then be embedded in our ongoing further development process of PMS.

Outsourcing and many other services round off our broad range of services.

YOU CAN ALSO FIND US IN THE WEB:

WWW.MUCH-NET.DE