



UBS Investor Day 2004 Market and Operational Risk

Walter Stuerzinger, Group Chief Risk Officer

Agenda

- ◆ Key elements of **market risk** control
 - Risk identification
 - Risk measurement and limits
 - Risk reporting

- ◆ Market risk development

- ◆ Market risk control principles

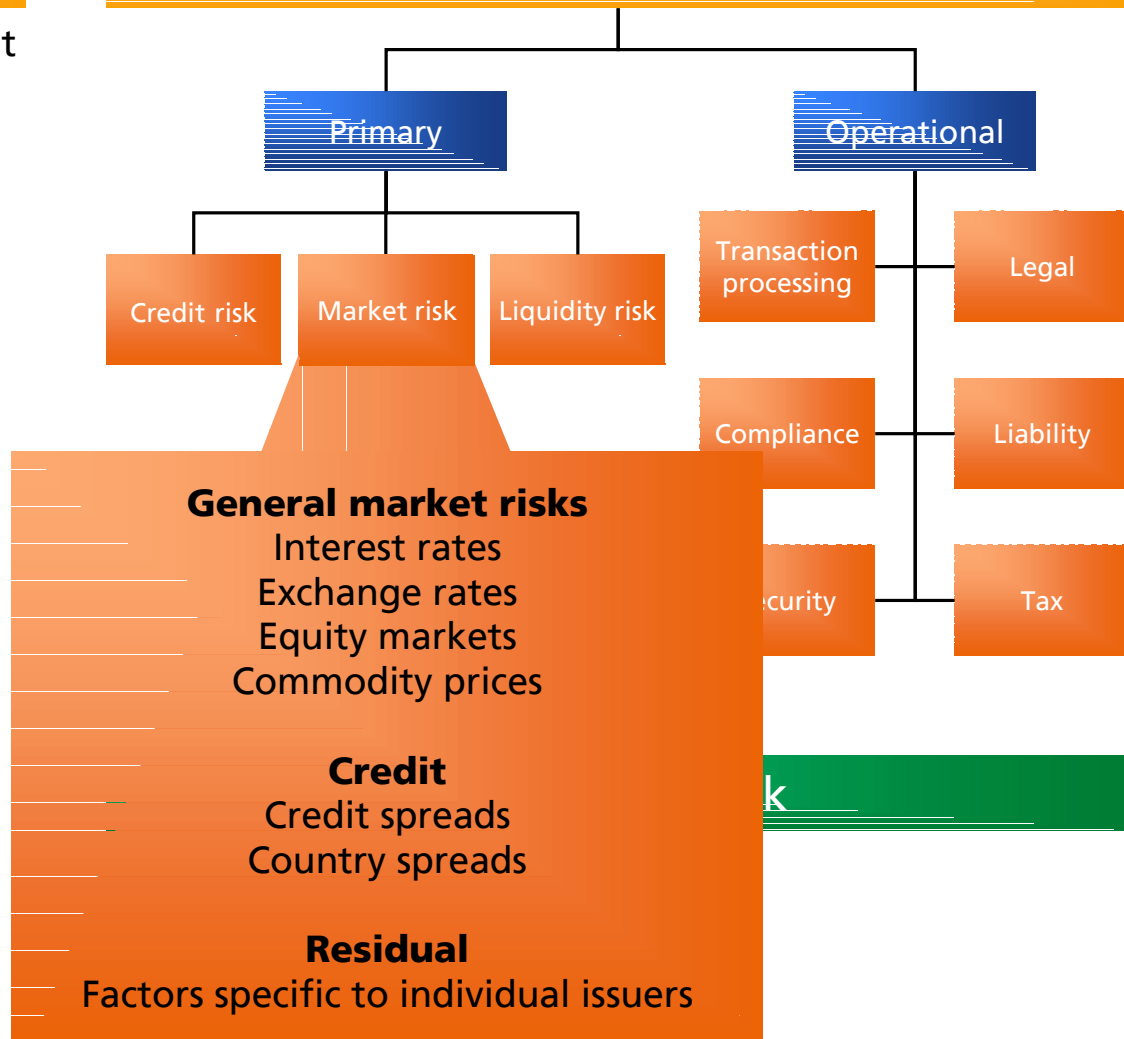
- ◆ **Operational risk** control

Risk categories

Business risks

- ◆ Business environment
- ◆ Economic cycles
- ◆ Industry cycles
- ◆ Industry trends
- ◆ Technology change
- ◆ Vision/strategy

Inherent risk



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- ◆ **Key elements of market risk control**
 - **Risk identification**
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 - **Risk reporting**
- ◆ Market risk development
- ◆ Market risk control principles
- ◆ Operational risk control

Risk identification

Existing risks

- ◆ Daily sign off and reporting
- ◆ Backtesting – consistency of P&L with risk
- ◆ P&L explanation – FCD and MRC jointly explain significant moves

New risks

- ◆ New business process
- ◆ Transactions requiring pre-approval
- ◆ Model approval process

Risk measurement and limits

Portfolio measures

Concentration measures

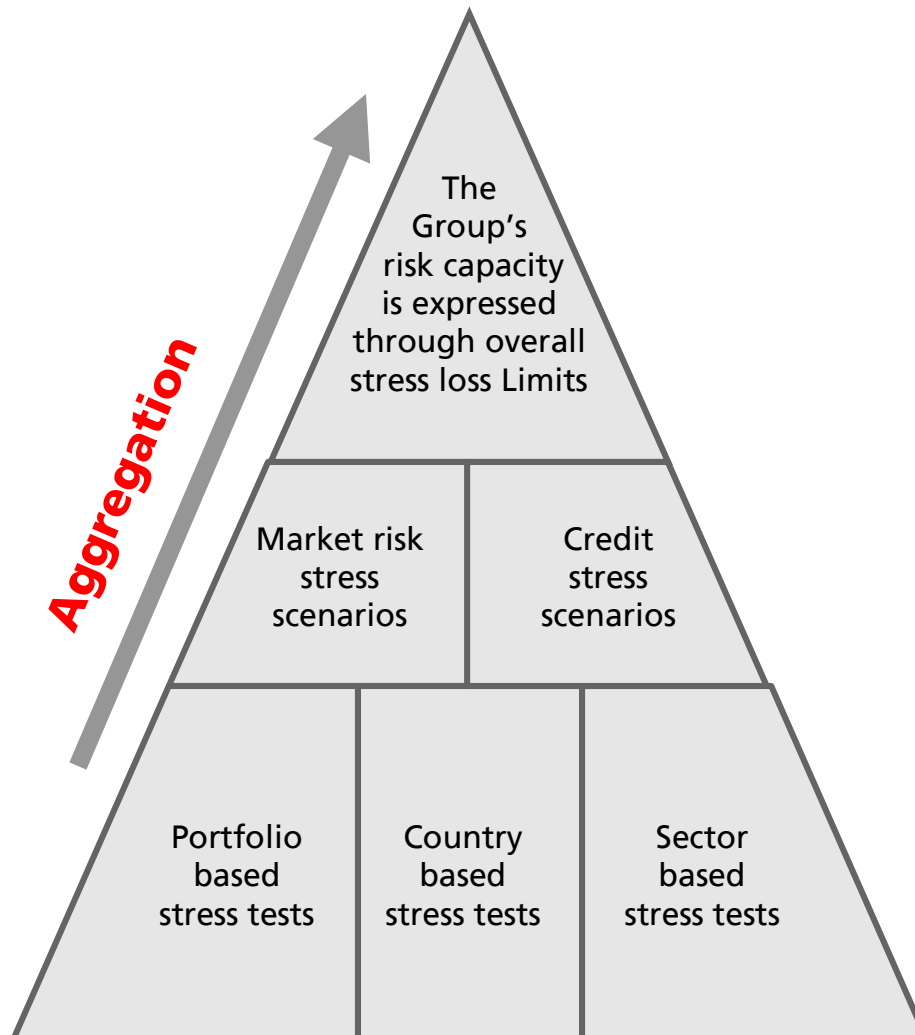
VaR

Statistical measure:

- ◆ 99% confidence
- ◆ 10 day holding period
- ◆ 5 years' historical data

Stress

Stress testing framework



Level Three—full aggregation

- ◆ Protecting UBS from stress
 - earnings protection
 - reputation protection

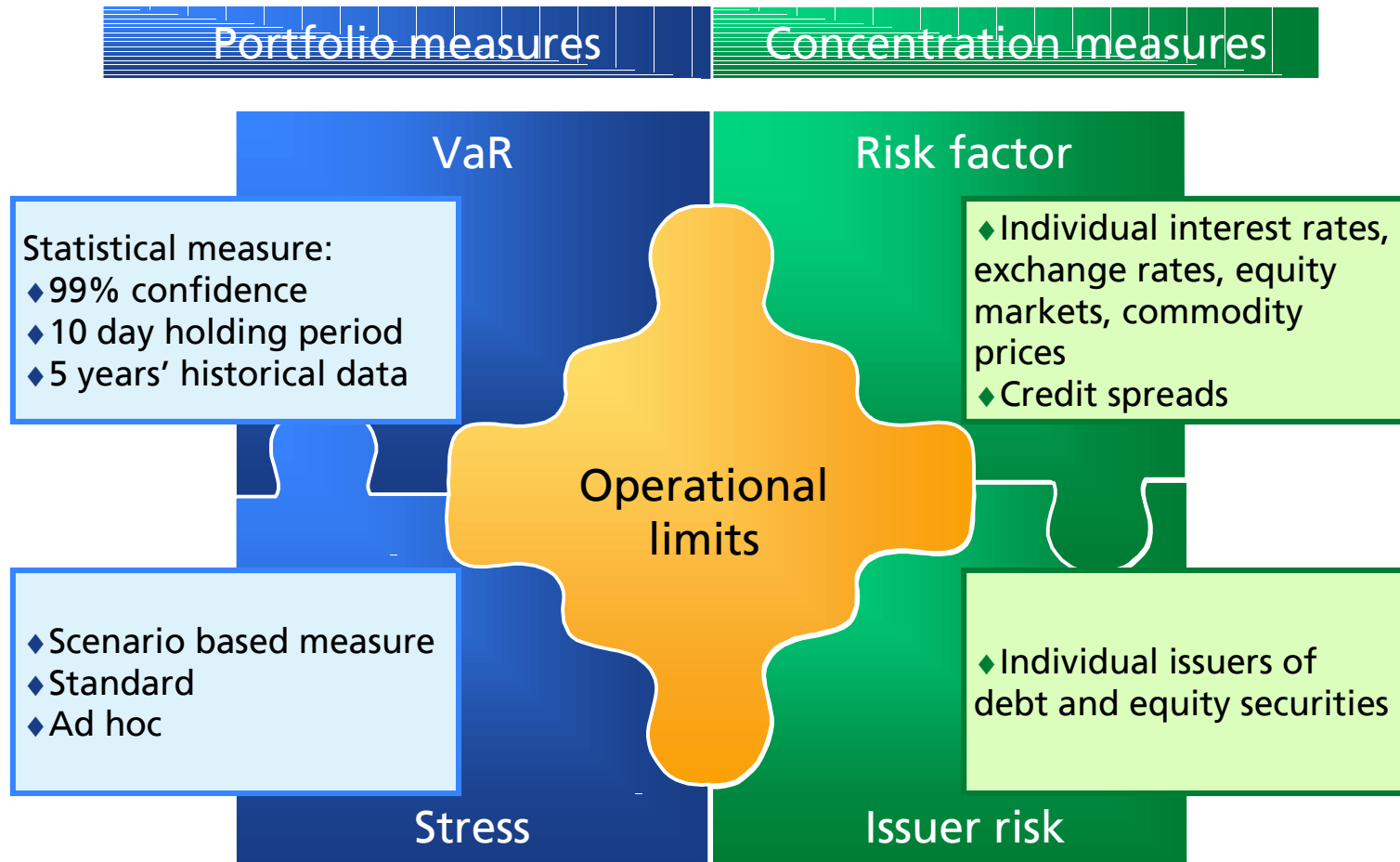
Level Two—aggregation by risk type

- ◆ Stress testing that is 'aligned' across business lines and where possible 'aligned' across risk types
- ◆ Consistent Credit Risk scenarios and Market Risk scenarios

Level One - 'Bottom up' approach

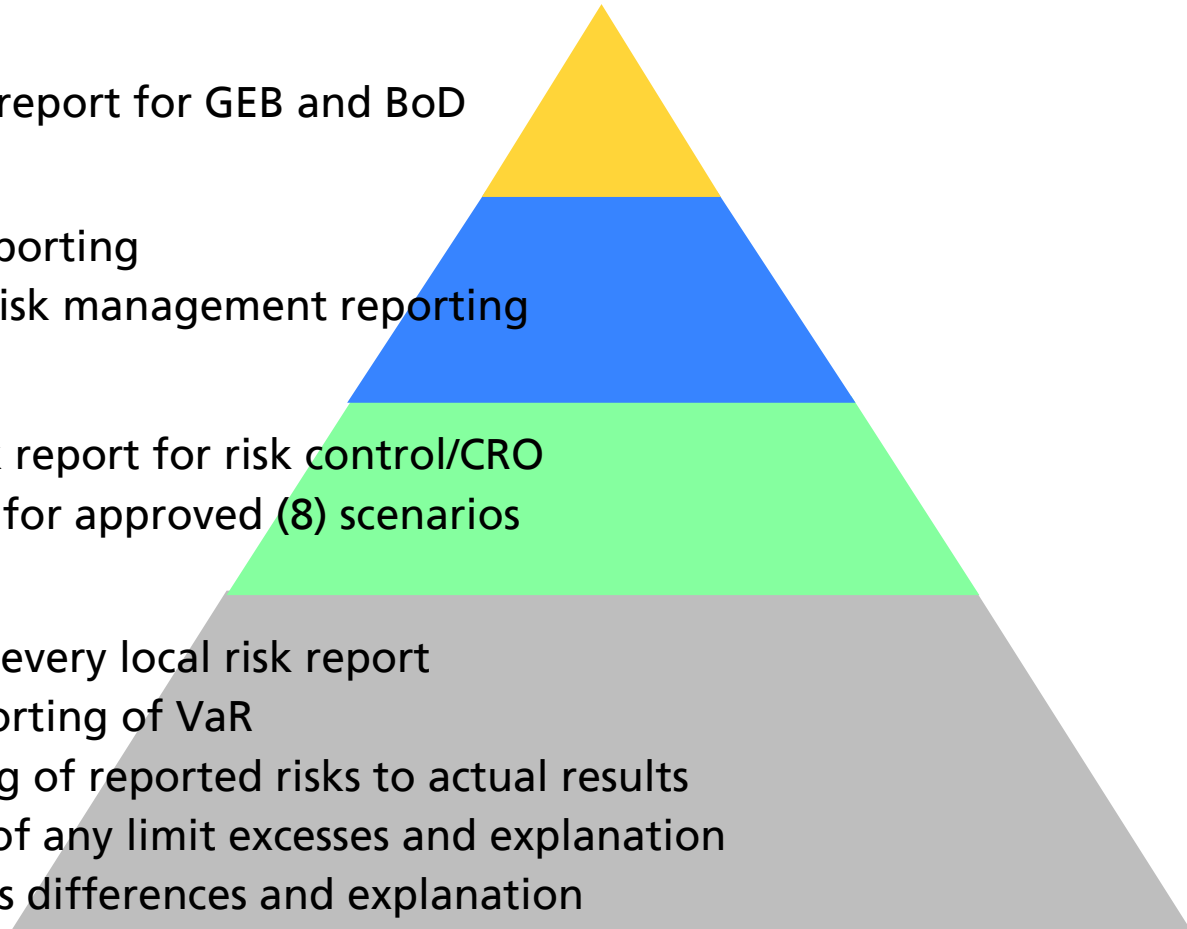
- ◆ For each business line, identify risk factors and develop business specific stress tests
- ◆ Sector and country linkages
- ◆ Scenarios reflecting the fact that the behaviour of exposures or risk factors may be linked

Risk measurement and limits



Risk reporting

- ◆ Quarterly
 - Group risk report for GEB and BoD
- ◆ Monthly
 - GEB risk reporting
 - Divisional risk management reporting
- ◆ Weekly
 - Market risk report for risk control/CRO
 - Stress tests for approved (8) scenarios
- ◆ Daily
 - Sign off of every local risk report
 - Global reporting of VaR
 - Back-testing of reported risks to actual results
 - Reporting of any limit excesses and explanation
 - Profit & loss differences and explanation



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- ◆ **Market risk development**

- ◆ Market risk control principles

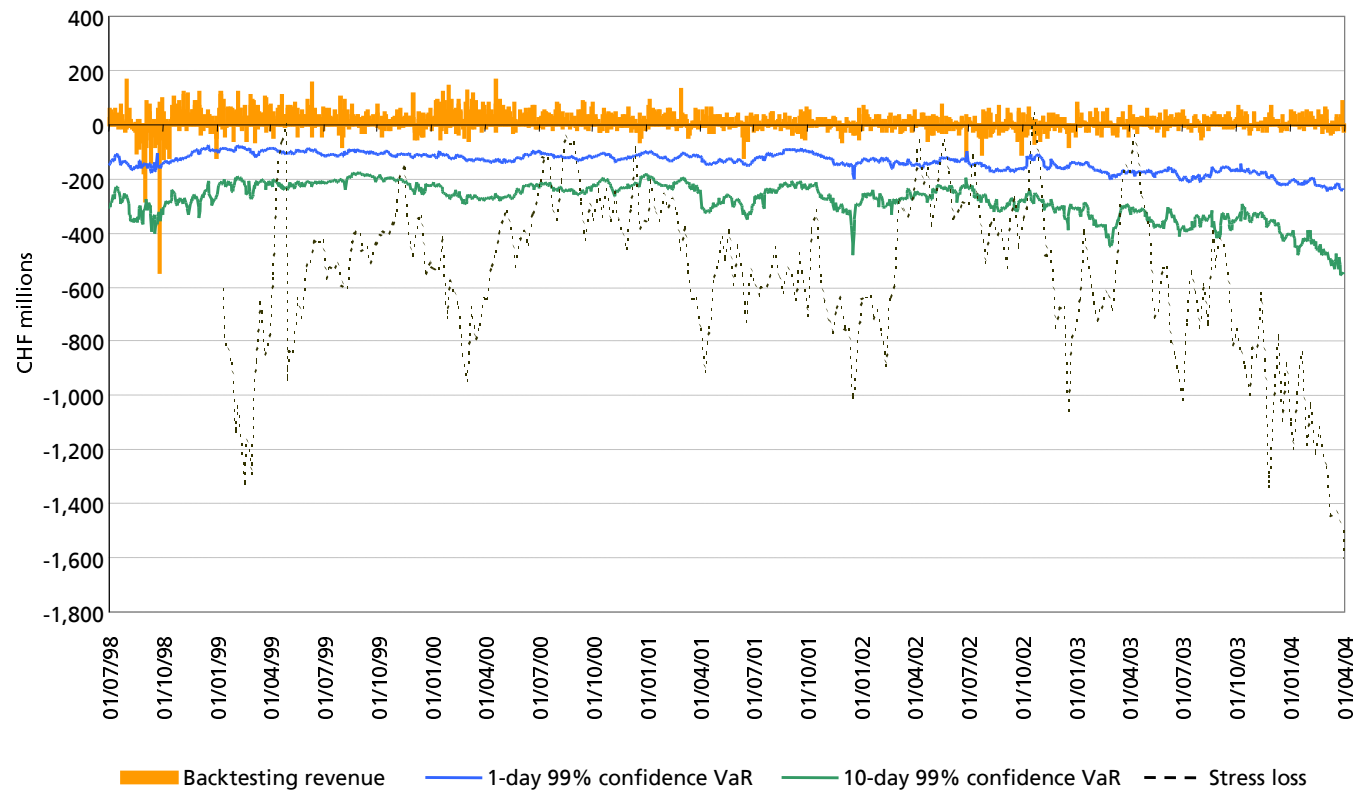
- ◆ Operational risk control

UBS Value at Risk

CHF million	Limits	Quarter ended 31.3.04			31.3.04
		Min.	Max.	Average	
Business Groups					
Investment Bank	600	388.9	555.5	465.6	518.4
Wealth Management USA	50	12.7	27.4	17.2	17.8
Global Asset Management	30	7.2	15.8	10.6	7.7
Wealth Management & Business Banking	5	0.5	1.1	0.8	0.9
Corporate Center	150	46.9	69.0	57.8	52.4
Diversification effect				(69.7)	(57.5)
Reserve	170				
Total	750	397.5	557.7	482.3	539.7

VaR and stress loss 1998-2004

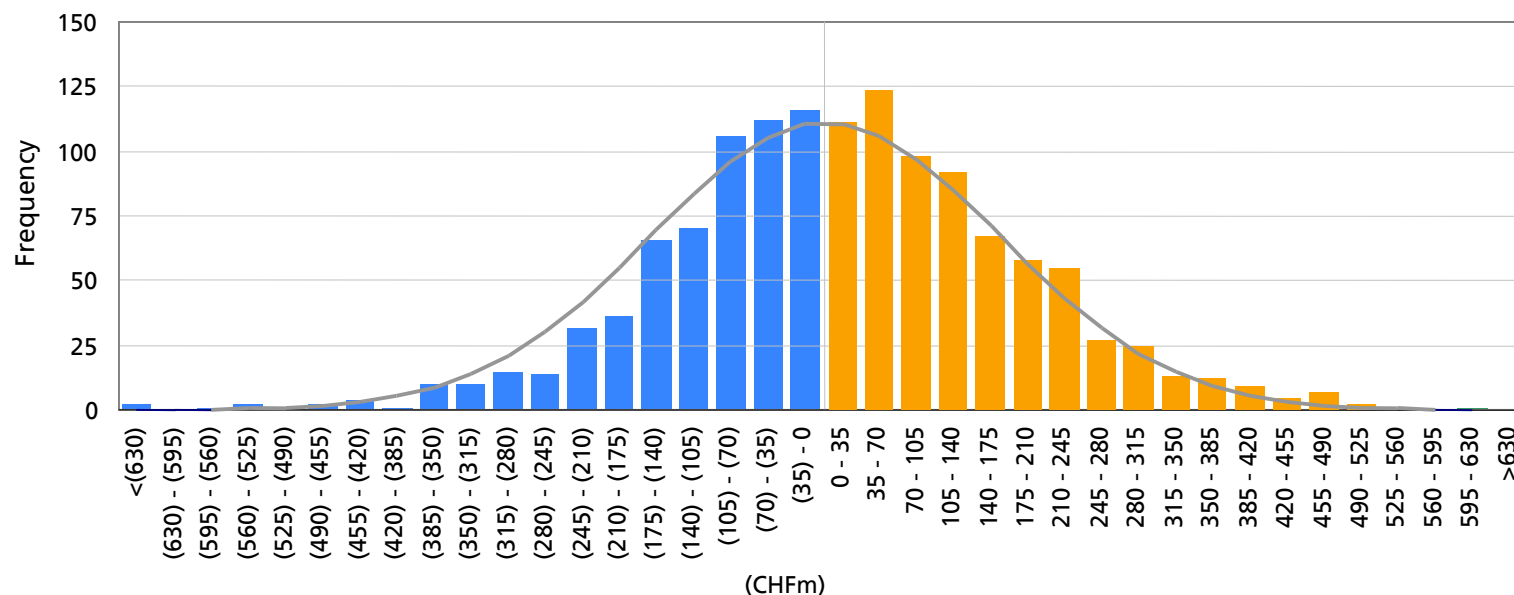
Investment Bank market risk measures (1 July 1998 – 31 March 2004)



- ◆ This graph shows the daily MTM P&L, 1-day and 10-day 99% VaR and stress loss for UBS Investment Bank 1998 to 2004

VaR tail analysis

Distribution of VaR simulations (31 December 2003)

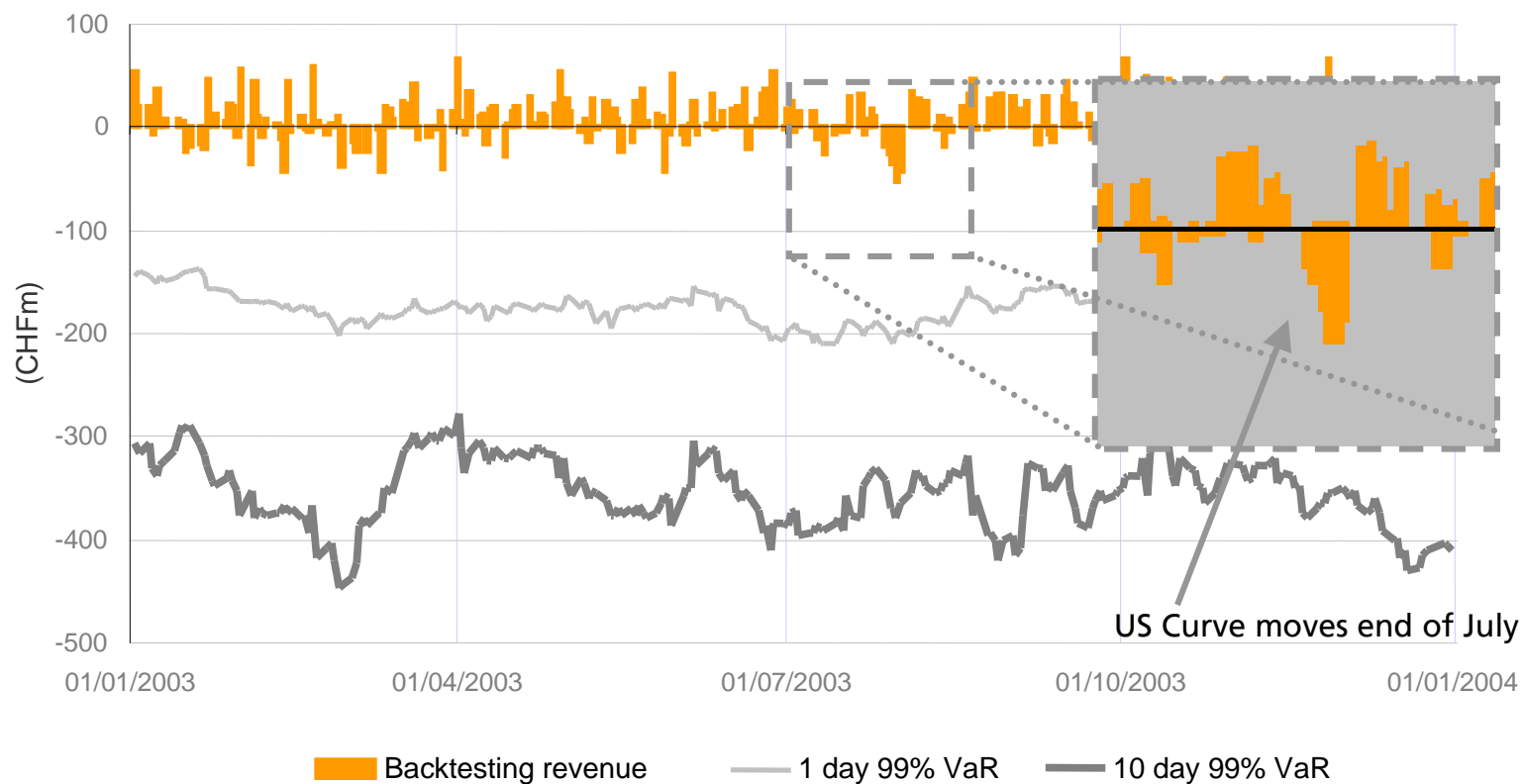


Summary of events leading to worst case loss

- ◆ USD corporate spreads widened significantly following the September 11th terrorist attack. This was particularly noticeable within sub investment grade paper, signaling a flight to quality. Yields in US Treasuries and LIBOR curves decreased as equity markets saw sharp falls and increased volatility

Backtesting 2003

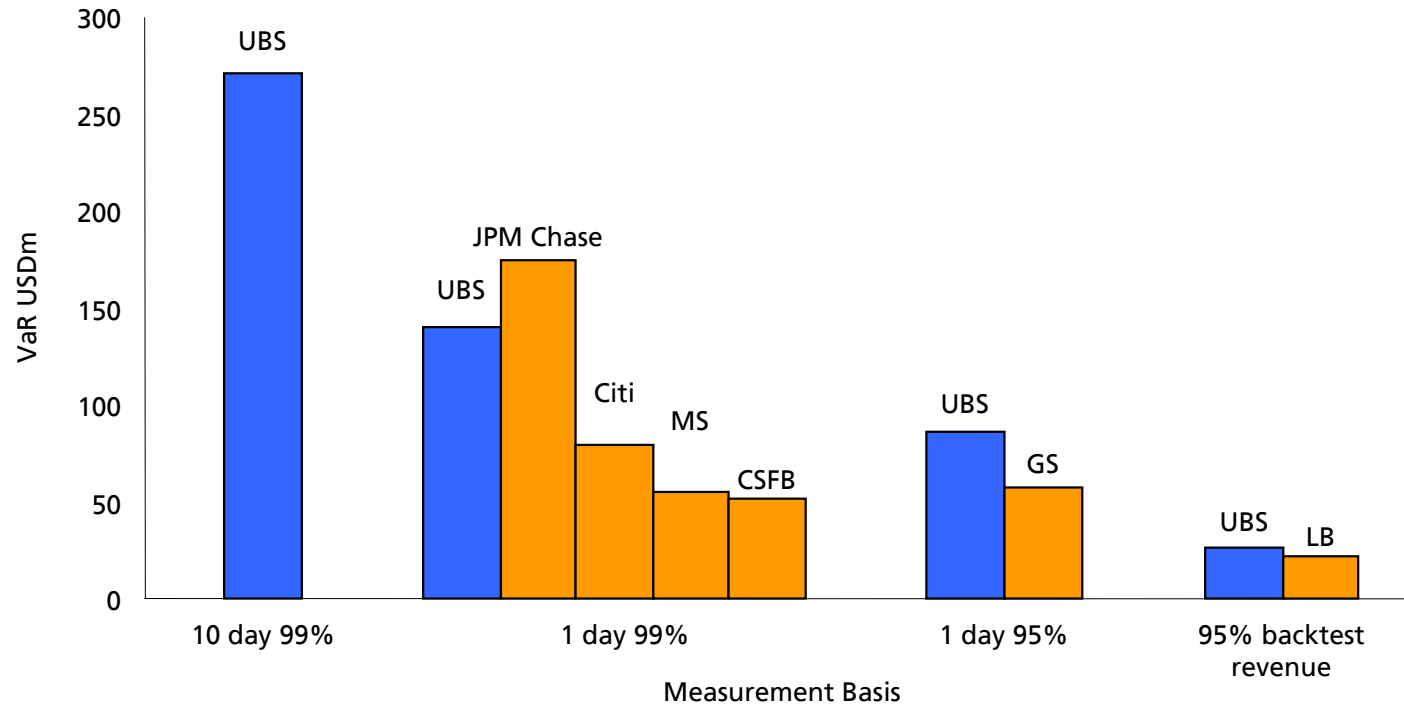
Investment Bank — backtesting revenue and VaR 2003



- ◆ This graph shows the daily MTM P&L, 1-day and 10-day 99% VaR for UBS Investment Bank during 2003

How big is our VaR?

Average group Value at Risk 2003 (USD m)

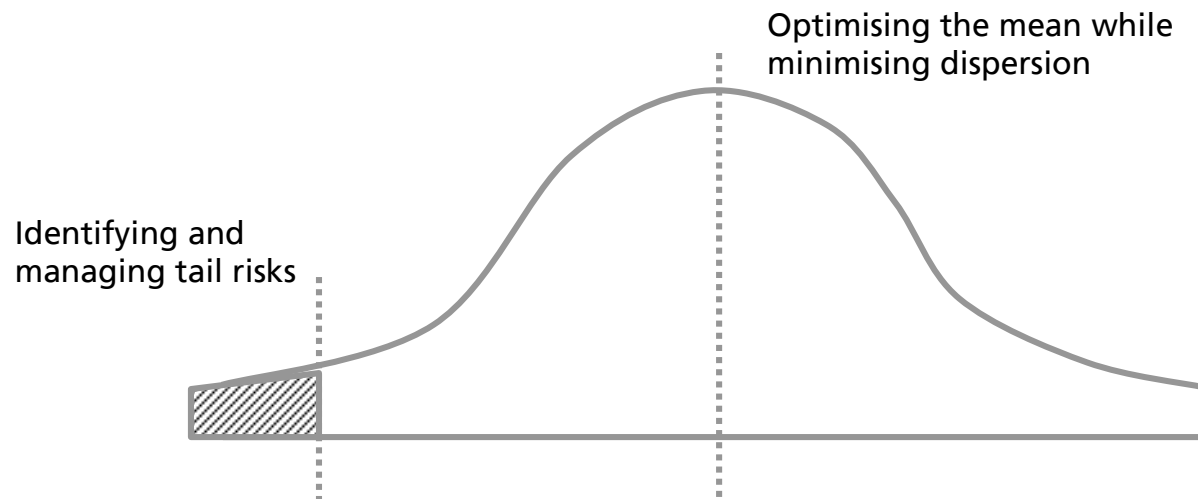


Note: 95% BT Rev = (Mean – 1.654 standard deviations) of past 250 days backtesting revenues

- ◆ Value at Risk is not directly comparable across banks due to different reporting currencies, different holding periods, different confidence intervals and different models

Market risk control principles

- ◆ We apply our Risk Management & Control Principles rigorously to market risk
- ◆ Avoid the left tail, and manage dispersion about the mean
- ◆ Avoid concentrations of risk
- ◆ Avoid unhedgeable and unmanageable market risks – we are a distributor of risk, not a re-insurer

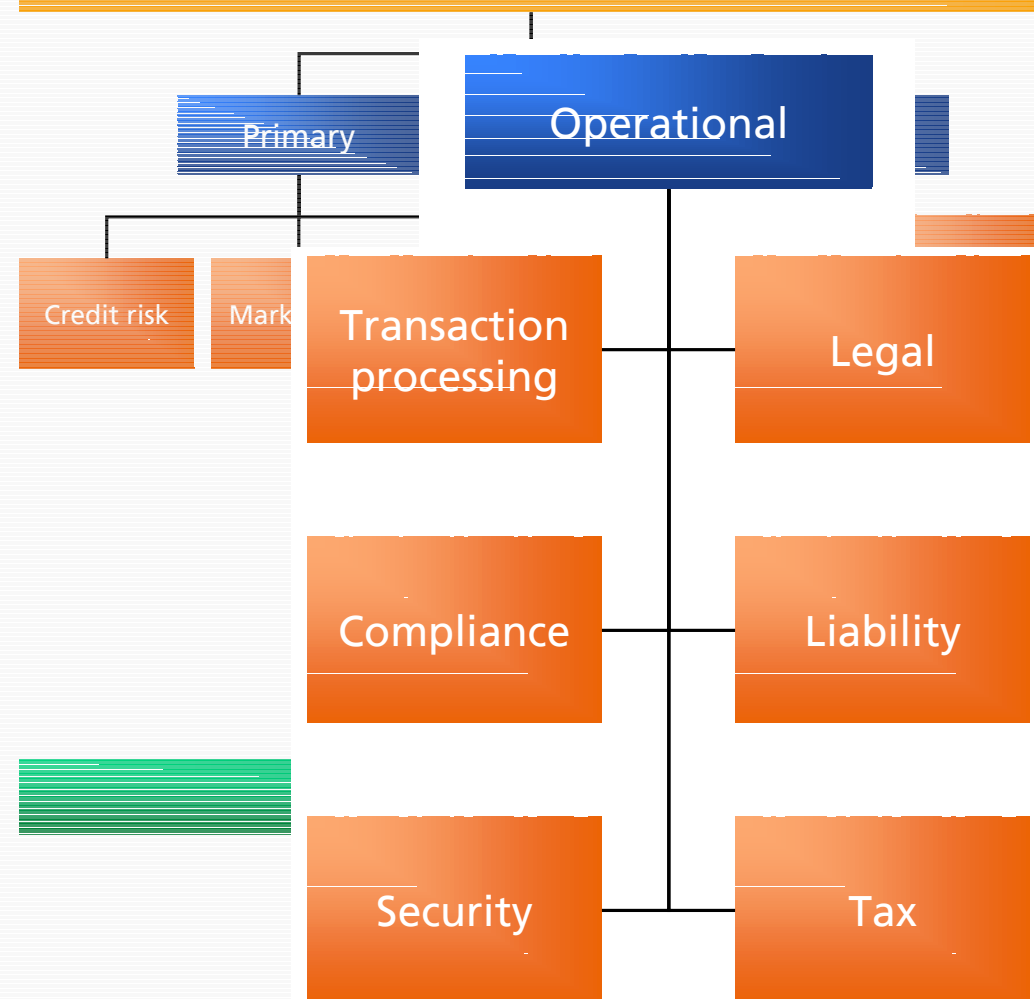


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Inherent risk



Operational risk

Business continuity management

- ◆ Business contingency planning
- ◆ Crisis management concept

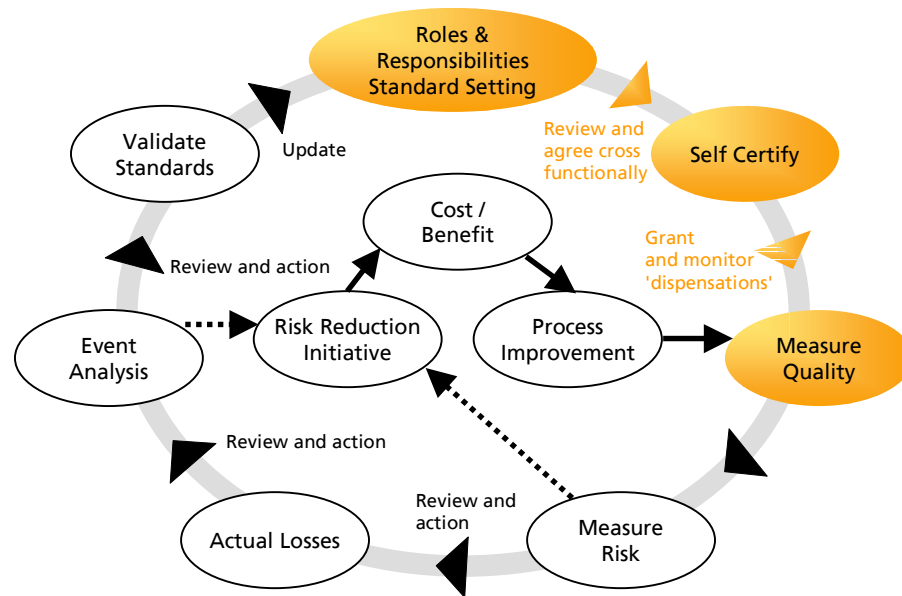
Compliance

- ◆ Know Your Customer
- ◆ Politically exposed persons
- ◆ Anti-money laundering
- ◆ Suitability

Security

- ◆ Fraud prevention
- ◆ Information risk

Operational Risk Framework – How does it work?



- ◆ Cross functional governance structure
- ◆ Definition of roles and responsibilities
- ◆ Setting of control standards
- ◆ Self-certification process against those standards
- ◆ The collection of key risk indicators and other quality measures of compliance with control standards
- ◆ Reporting mechanisms

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