
Implementing Risk Management: Adapting Normative Practice to Russian Specifics

Challenges and Compensatory Techniques

Adam Smith Conference – Russian Banking

London 6 December 2005

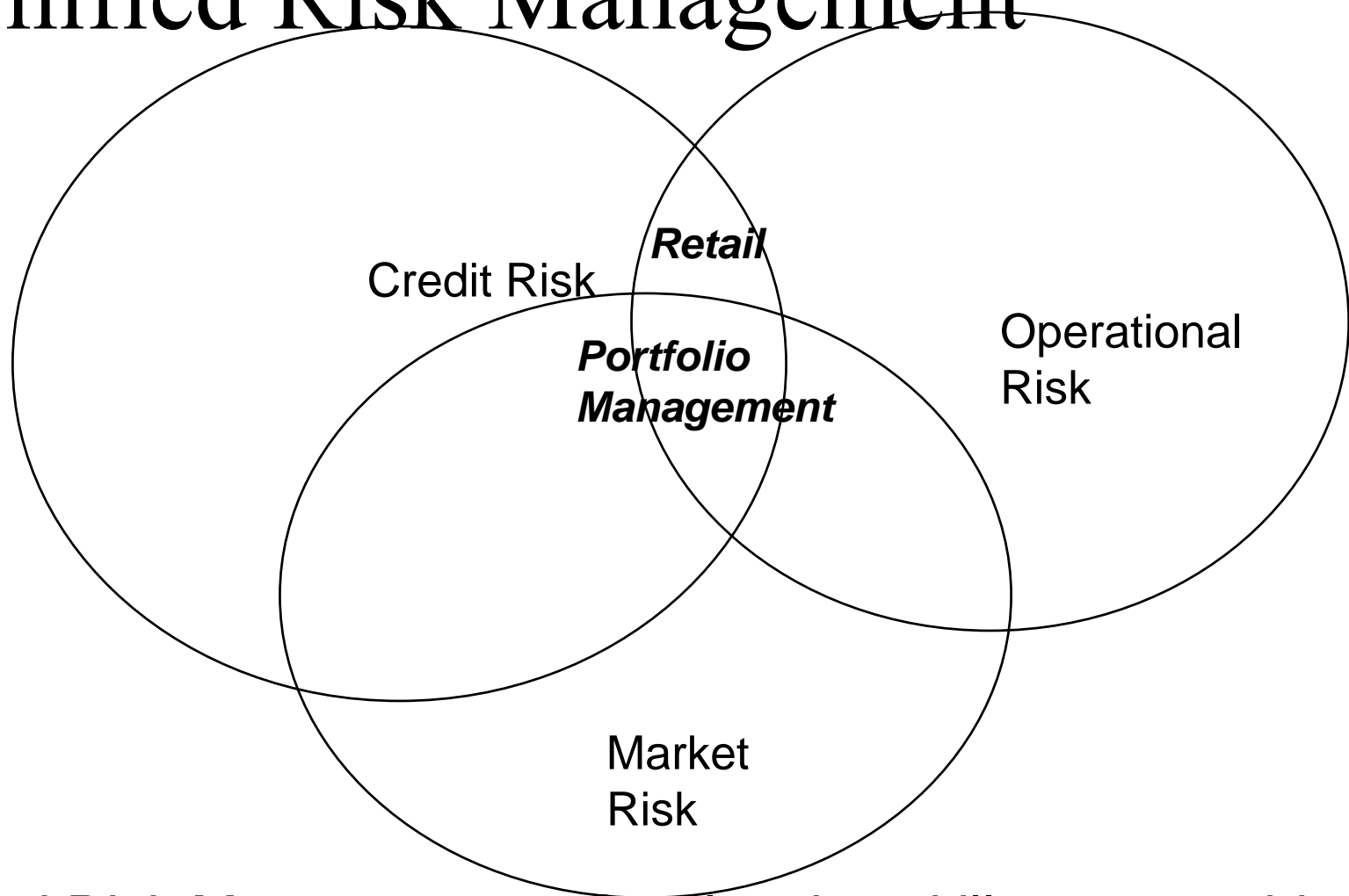
Philip M Halperin

Alfa Bank snapshot



- 112 branches in Russia, subsidiary banks in Ukraine and Kazakhstan, Holland, brokers in London and NYC
- Universal bank - Retail, Commercial, Investment and Asset Management lines of business

Conceptual underpinning of Unified Risk Management



- Unified Risk Management – Overlapping skills sets, avoid silos!

Agenda

- 1) Institutional issues – transition economies (Russia, Kazakhstan, Ukraine):
- 2) Compensatory Technique – Implementation of Risk Management and RM Culture
- 3) Compensatory Technique – Adaptation of Normative Best Practice to Meet Challenges
 - Examples from Risk Management Areas – Market, Credit, Operational RM.

Institutional issues – transition economies (Russia, Kazakhstan, Ukraine):

Former Soviet Union:

- Lack of standard ways of operating – everything is new
- Lack of historic memory – commercial bank system just 14 years old
- Formalist documentary culture. Partially compensates for lack of historic memory.
- Lack of standard Western corporate institutions (Internal Audit, Compliance)
- Special Soviet-legacy institutions (Chief Accountant, “Internal Control”, Economic Security)
- Transition from Russian Accounting System to IFRS

Institutional issues – transition economies (Russia, Kazakhstan, Ukraine):

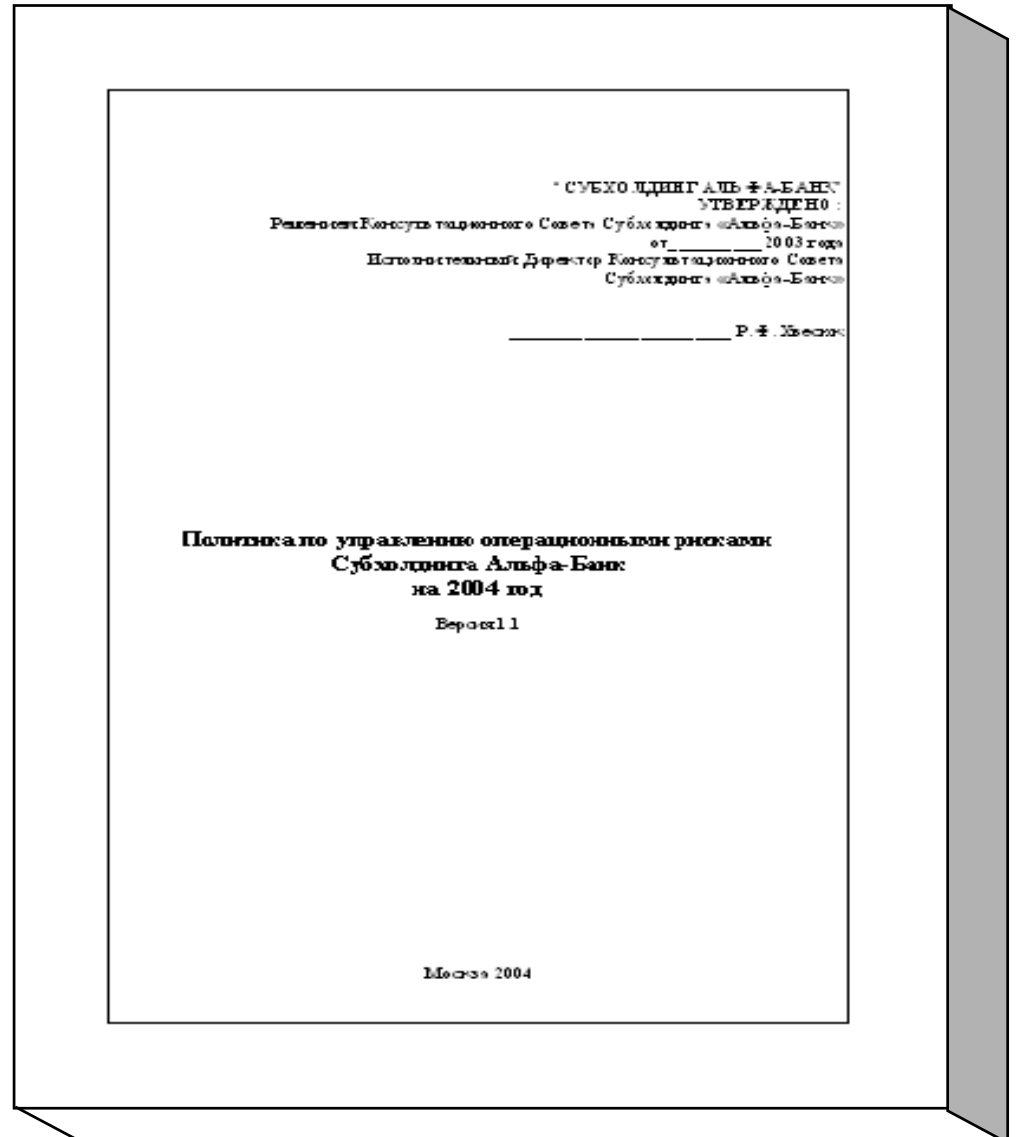
- Information-poor environment
 - Lack of liquidity, transparency in markets
 - Mismatch between risks and controls due to fast business, processes, and automation change
- Most importantly ... lack of risk culture ... of managerial responsibility and systemic risks solutions

Institutional issues – transition economies (Russia, Kazakhstan, Ukraine):

- The environment and institutions of a transition economy are not conducive to standard technique only!
- One must be creative, and seek compensatory technique.

Achieving Management Buy-In – Document Ju-Jitsu

- Developed and promoted Group level Risk Policies
- Agreed and signed by every business leader
- Established business responsibility as Principle #1
- (Regulators like it as well!)



Examples of Compensatory Techniques - Implementation

- Use formal 'Document Culture' to implement new risk culture.
- Convert 'Economic Security' to be an active partner in the loss-collection process.
 - Threshold level to ensure business responsibility
- Use former-Soviet style collegial-bodies meetings to new goals.

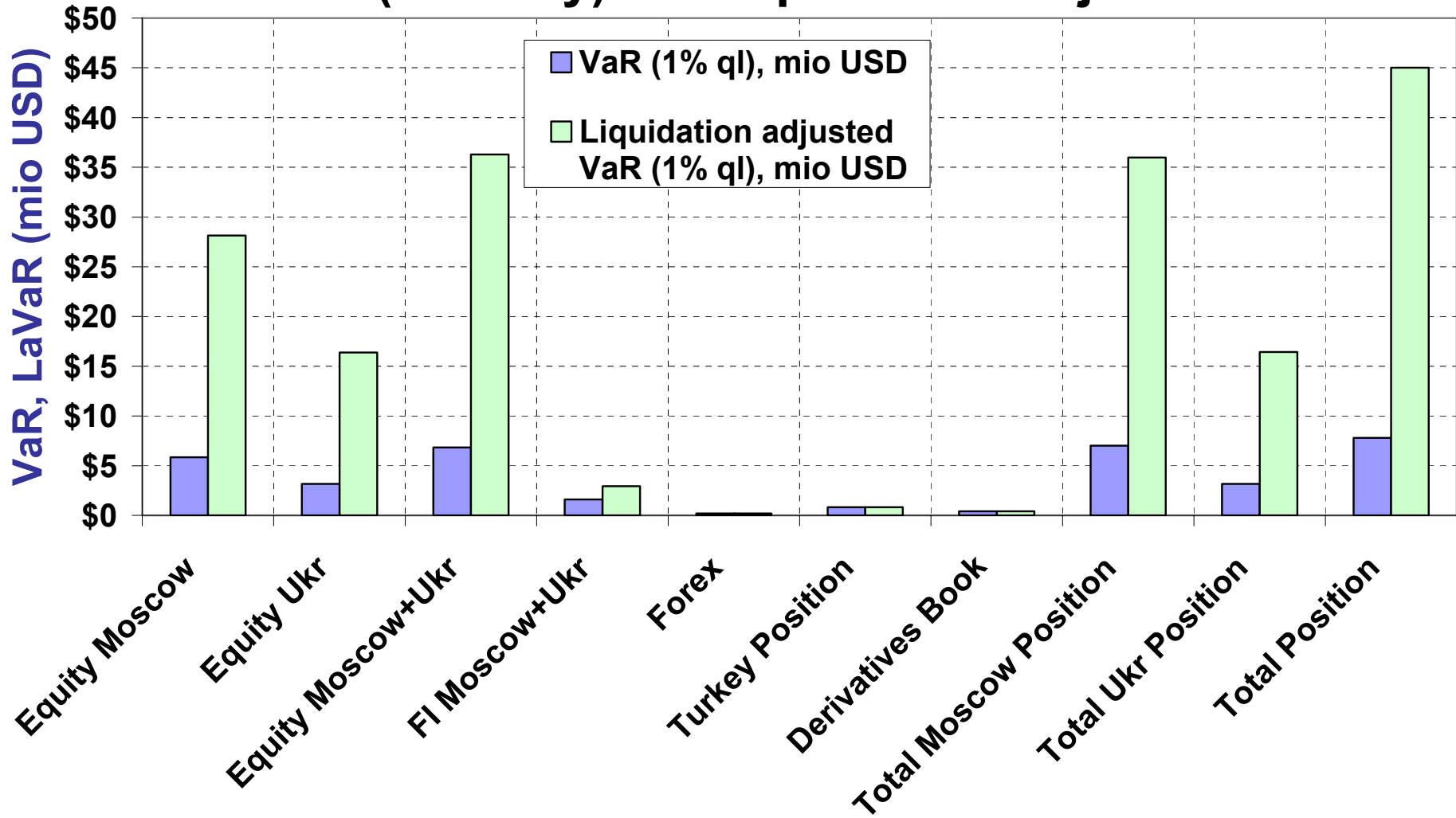
Market Risk Management - Challenges

Challenges:

- Lack of transparency in pricing
- Fat tails – market moves “squirtier” than in developed markets
- Illiquidity in pricing
- Crises come along every 7 years or so

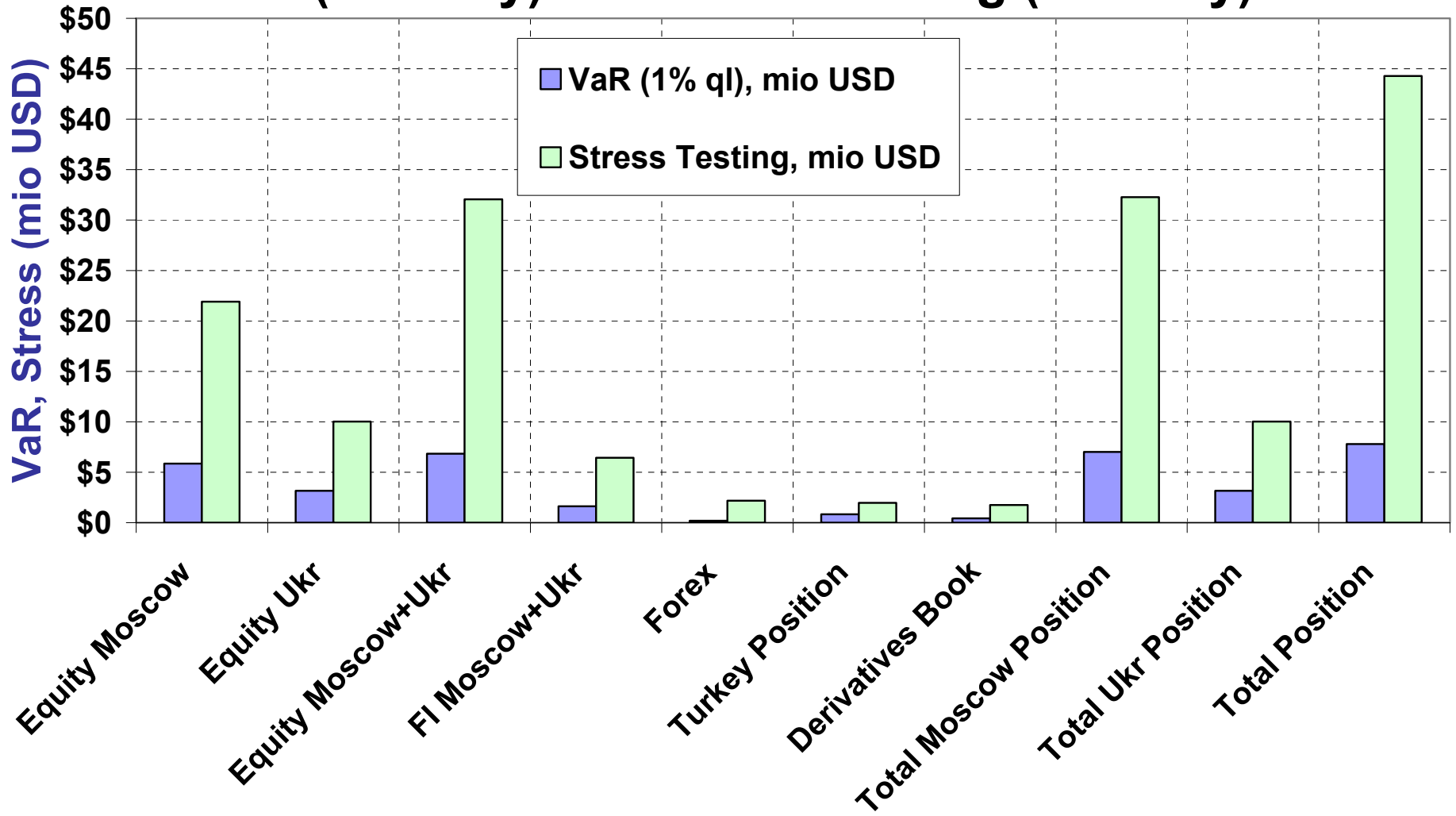
Compensatory Techniques – Market Risk

VaR (one day) vs. Liquidation Adjusted VaR



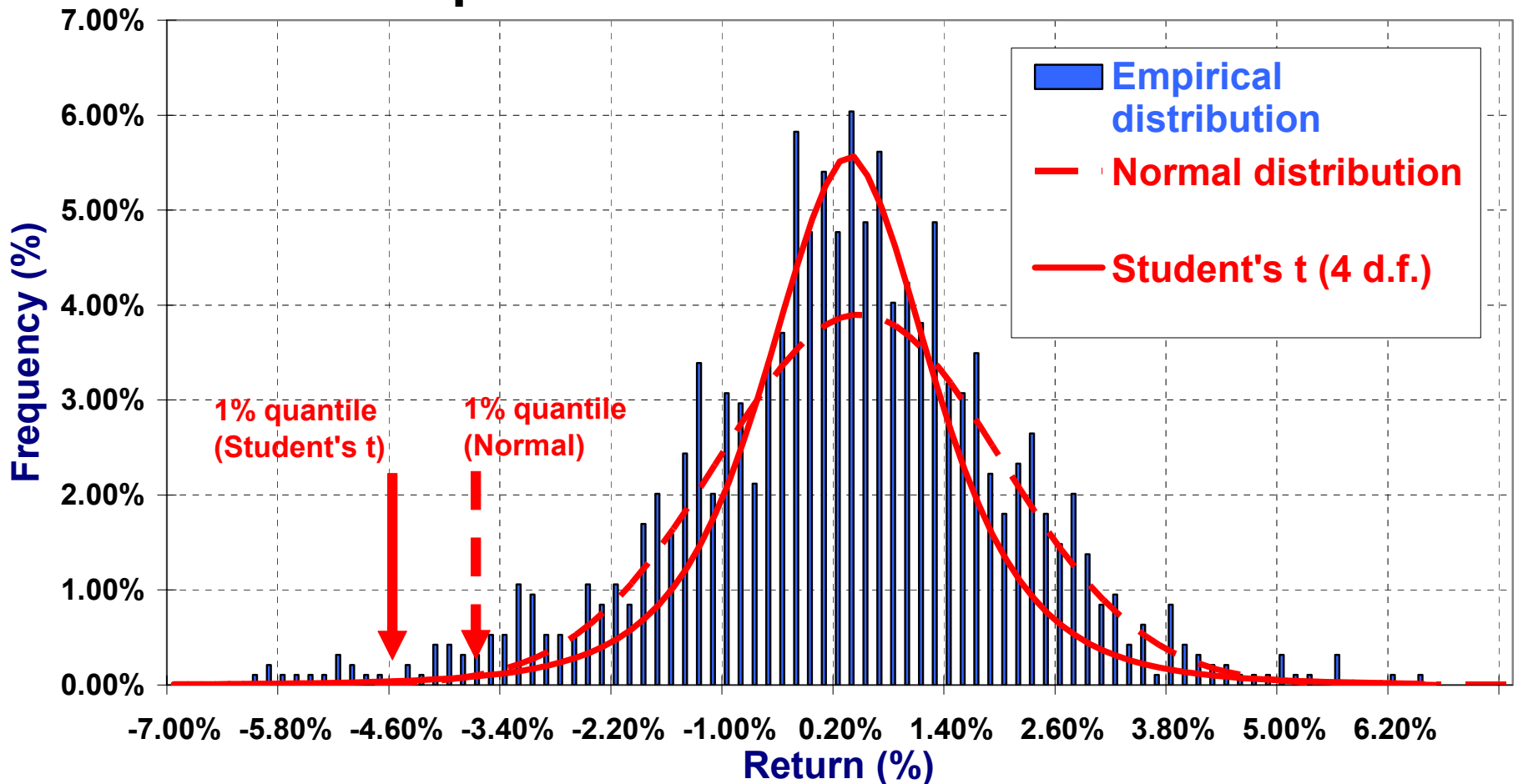
Compensatory Techniques – Market Risk

VaR (one day) vs. Stress Testing (one day)



Compensatory Techniques – Market Risk

Russian Trading System (RTS) Index: Empirical vs. Student's t Distribution



Credit Risk Management - Challenges

- Lack of reliable balance sheet data (IFRS desirable), difficulty of correct factors choice
- Lack of default data for calibration
- Few borrowers have quoted liquid bonds
- Few borrowers have liquid stocks
- Asset market value and its volatility are usually unobserved

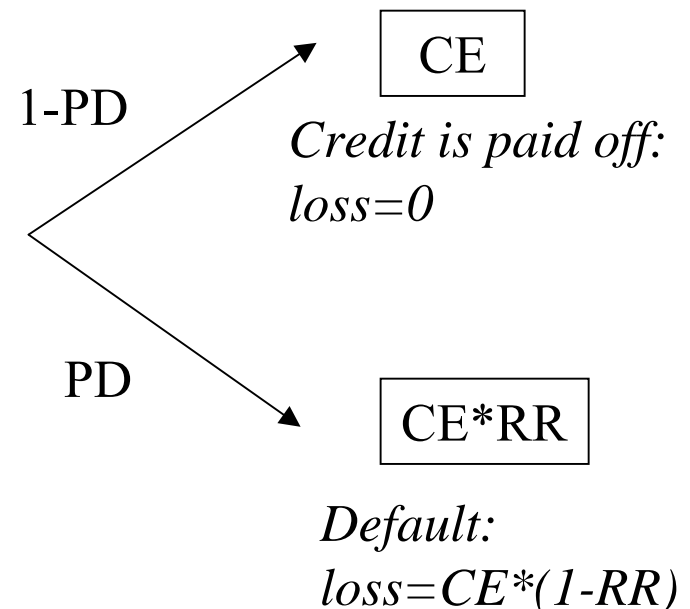
Credit Expected Loss Estimation

Components of credit risk estimation:

1. Credit exposure (CE)
2. Probability of default (PD)
3. Loss given default (LGD) or Recovery rate (RR)

$$\text{LGD} = 1 - \text{RR}$$

«Event tree» of the credit:



Credit Expected Loss estimation:

$$\text{Expected Loss} = (1 - \text{PD}) * 0 + \text{PD} * \text{CE} * (1 - \text{RR}) = \text{PD} * \text{CE} * (1 - \text{RR})$$

Approaches to credit risk estimation (1)

1. Altman Z-model.

Construct a formula for a borrower's 'score' (which determines default rate) depending on balance sheet ratios.

Doesn't suit Russia:

- Lack of reliable balance sheet data (IFRS desirable), difficulty of correct factors choice
- Lack of default data for calibration

2. Market bond prices as an indicator of the issuer's credit risk.

Corporate bond spread can be transformed into market estimation of default probability.

Limited applicability to Russia:

- Few borrowers have quoted liquid bonds.

Approaches to credit risk estimation (2)

3. Structural models (Merton).

Default process is endogenous and relates to borrower's capital structure. (Analogous to option pricing B-S model for Market Value of borrower's assets). Default happens when value of assets fall below face value of debt.

Limited application to Russia:

- Few borrowers have liquid stocks
- Asset market value and its volatility are usually unobserved

Credit RM – Compensatory Technique

4. Reduced-form models.

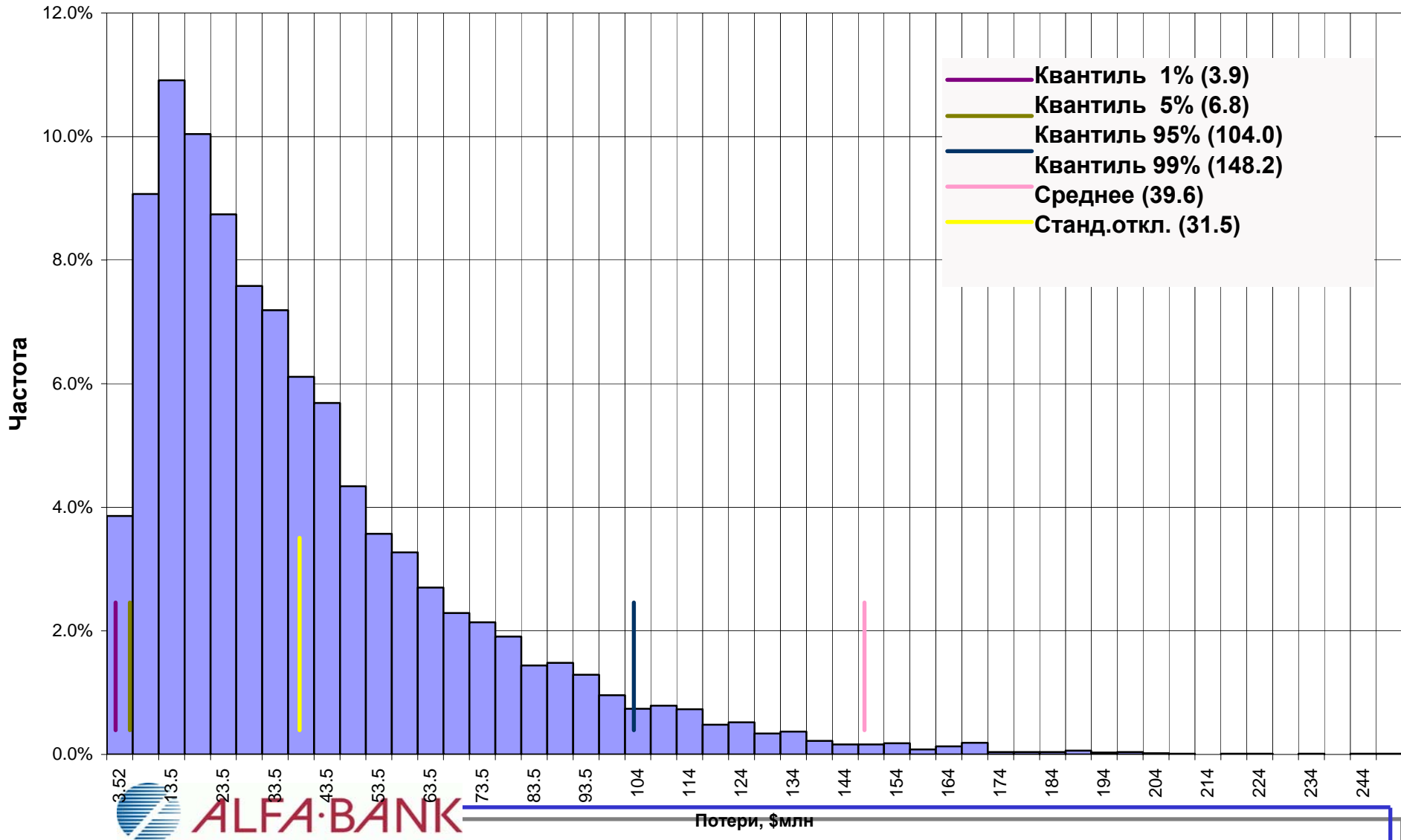
Default probability depends on exogenous factors (borrower's characteristics, general economic variables); the dependency can be specified by logit or probit model.

This works in Russian environment.

- Statistically significant estimates of default probability were obtained using Bank's proprietary credit portfolio payments and default information

Credit RM – Compensatory Technique

Goal: Credit VaR Model: Loss Distribution



Operational RM - Challenges

- Loss collection structure reveals native collusion
 - Many low impact events
 - Few high impact events
 - Medium-size events missing (!)
- Essentially no external loss data in our region – difficult in the existing environment
- Consortia not helpful
- Press monitoring – low usefulness

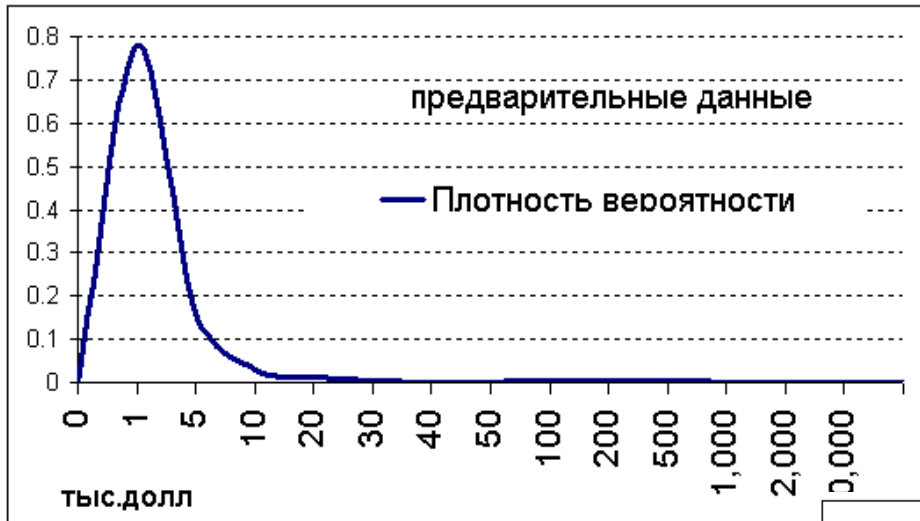
Operational RM – Compensatory Techniques

Compensation:

We got External
Data from
Insurance brokers:



Operational RM – Compensatory techniques



Compensation:

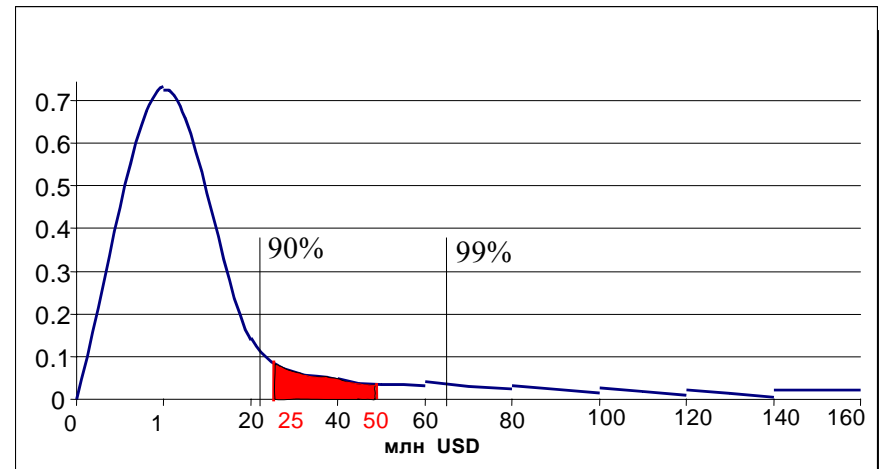
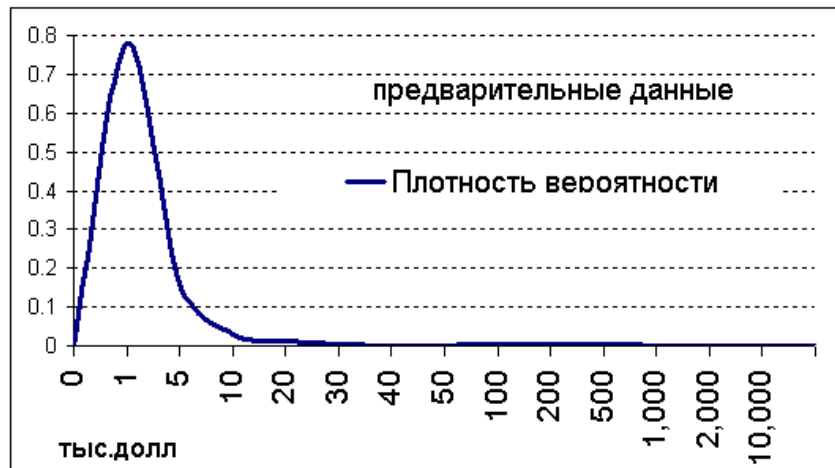
Work with
'Economic
Security Forces'

Patch and match
external
Insurance Broker
sources



Operational RM – Compensatory Techniques

- Redesigned BBB Insurance Policy
- Were able to keep reasonable limit, instead of silly coverage suggested by cost-cutting activists, for similar money (higher limit, higher excess).
- This actually paid off



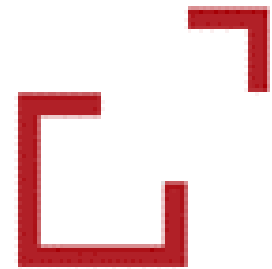
Summary

- Russia is a market like any other market, and different from all others like any other.
- We must be
 - creative in our implementation.
 - compensatory in our adaptation of technique.

Operational Risk
Achievement
Awards
2005



Operational Risk
Achievement
Awards
2004



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