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**Better Portfolio Information
for
Credit Risk Analyses and Valuation**

**Mortgage Landing in SEE:
Heading for International Best Practices
Bucharest, April 5-6, 2006**



Agenda:

- 1. Standardization in Risk Management Process**
- 2. Mortgage Loans Processes Standardization**
- 3. Mortgage Loans Portfolio Risk Management**
- 4. Regulatory Requirements in Mortgage Portfolio Management in Poland**



Standardization in Risk Management Process

- 1. Product standardization**
- 2. Documentation standardization**
- 3. Business practices standardization**
- 4. Data and information access standardization**
- 5. Property Appraisal Standardization**



Mortgage Loans Processes Standardization

- 1. Origination**
- 2. Underwriting**
- 3. Servicing**
- 4. Funding**



Mortgage Loans Processes Standardization

1. Origination

- Pricing
- Advertising and Marketing
- Consumer Education
- Closing of the mortgage
 - Consumer credit reporting
 - Settlement cost
 - o title insurance,
 - o survey,
 - o appraisals,
 - o credit checks,
 - o loan origination and documentation fees,
 - o commitment and processing fees,
 - o hazard and mortgage insurance
 - o interest prepayments.



Mortgage Loans Processes Standardization

2. Underwriting

- Collateral
 - o Appraised value of the home
 - o Down payment
- Credit reputation
 - o Credit history
- Capacity
 - o Income Verification
 - o Debt ratio
 - o Cash reserves (Verification of assets)
 - o Taxes
- Standard scoring methods across lenders



Mortgage Loans Processes Standardization

3. Servicing

- Payment Processing
- Collections
- Customer Service
- Loss Mitigation
- Reporting to Credit Bureau



Mortgage Loans Processes Standardization

4. Funding

- Source of funding
- Cost of funding
- Margin Determination
- Secondary Mortgage Market Conduit Requirements



Mortgage Loans Processes Standardization

In mortgage process a bank is required to analyze:

- **Mortgage loan application – borrower income is a fundamental source of mortgage payments**
- **Collateral valuation**

In proper designed mortgage loans process the final approval should be based equally on borrower and collateral analyses

In Polish practice borrower analyses is more important



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Mortgage Loans Portfolio Risk Management

Credit Risk of Mortgage Portfolio	Identification	Measurement	Modeling	Instruments
Borrower	Income	<ul style="list-style-type: none">• Credit history• Client's ability to repay• Client's credibility	<ul style="list-style-type: none">• Probability of Default• Prepayment Models• Debt Service Ratio• Net Disposable Income• Payment to Income Ratio	<p><i>Internal data base:</i></p> <ul style="list-style-type: none">• Scoring cards• Application score• Automated underwriting• Automated credibility assessment <p><i>External data base:</i></p> <ul style="list-style-type: none">• Credit Information Bureau• Tax office



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Mortgage Loans Portfolio Risk Management

Credit Risk of Mortgage Portfolio	Identification	Measurement	Modeling	Instruments
Collateral	Property Valuation	Loan to Value (LTV)	<ul style="list-style-type: none">• Standardized Appraisals Techniques• Statistical methods• Loss Given Default (LGD)	<ul style="list-style-type: none">• Standardized LTV evaluation• Property rating system• Effective foreclosure system• Cadastre data



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Mortgage Loans Portfolio Risk Management

Credit Risk of Mortgage Portfolio	Identification	Measurement	Modeling	Instruments
Enhancements	<i>Elementary risk table:</i> <ul style="list-style-type: none">•Credit Application•Borrower•Credit target•Credit collateral	<ul style="list-style-type: none">•Borrower's credibility•Current and future creditworthiness•Credit purpose•Possibility of recovering the invested capital in the event of foreclosure•Formal and legal conditions of the transaction and framework.	<ul style="list-style-type: none">•Scoring bank's procedures•Scoring bank's monitoring system	<ul style="list-style-type: none">•Mortgage gap insurance•Unemployment insurance•Mortgage guarantee insurance•Life insurance



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Mortgage Loans Portfolio Risk Management

Credit Risk of Mortgage Portfolio	Identification	Measurement	Modeling	Instruments
Economic Environment	<ul style="list-style-type: none">•Socio-demographic information•Inflation	<ul style="list-style-type: none">•Income changes•Cost of living changes•Interest rates	<ul style="list-style-type: none">•Probability of Default•Prepayment model	<ul style="list-style-type: none">•Property registration system•Title register system•Housing Price Index•Macroeconomic data



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Summary

Risk factors: loss of borrower's source of income, decrease of the collateral value below outstanding debt, interest rates movement,

Risk factors monitoring: observing by data collection on income and real estate prices trends,

Risk factors measurement: relation of real estate prices to different fundamental factors function as well as time function, income movement of social and professions groups and evolution in period of time,

Risk results assessment: decrease of the property value below the outstanding debt, mortgage default,

Risk premium valuation: credit margin estimation to cover risk results,

Risk transfer: risk transfer to insurance company,

Secure against risk results: insurance products development, including derivatives



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Summary

Thesis: 1

The knowledge on the average value of the property and its volatility is important for setting up instruments to control and manage risk of mortgage portfolio in the Polish financial sector.

Thesis: 2

Real estate transaction prices data base as an instrument for monitoring property value and its volatility should become important element in credit risk modeling.

Thesis: 3

The model which describes credit risk should be a base for risk premium valuation, mortgage-backed securities pricing, and insurance product purchase pricing.



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Thank you

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