



# How to address policy lapsing by applying Big Data Analytics in Insurance business

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**Insurance business management  
based on precise information, not  
assumptions and beliefs**

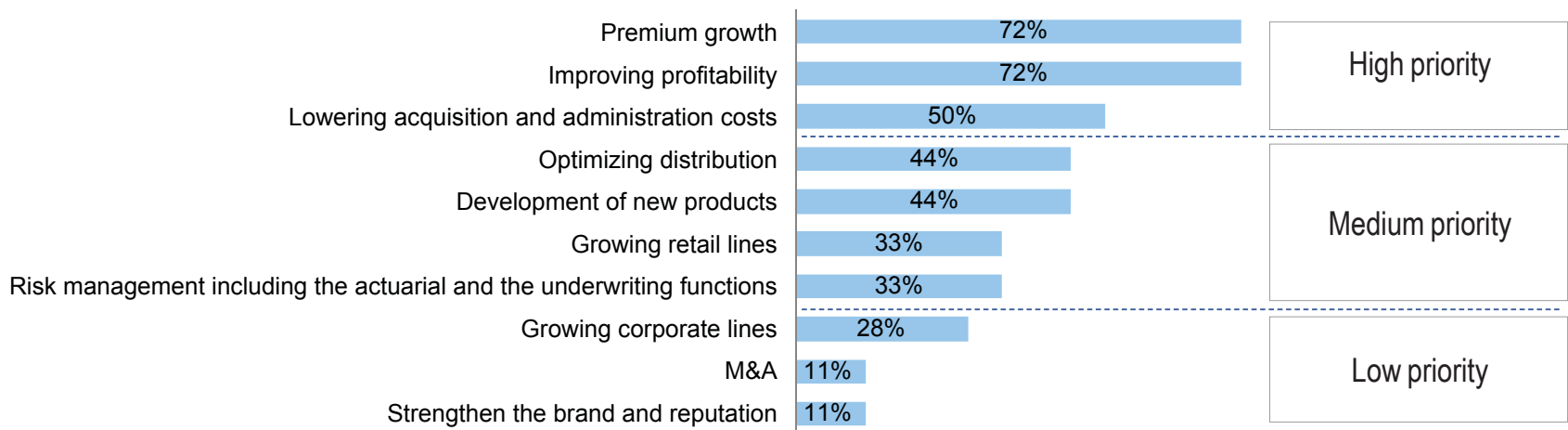
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# Russian Insurance Market

- Top business priorities



Source: KPMG analysis.



# Insurance lapses represent major business issue

- 35% of Life insurance policies typically lapse
- 20% of Life insurance policies cancelled due to unpaid premium



- Lapses should be TOP business priority



# Importance of Insurance Lapses

- Lapses represent significant business risk with severe impact on insurance profitability and capital reserves
- Capital reserves heavily dependent on lapse risk
- Lapses have negative impact on cash flow and consequently on margin and overall performance
- Lapses often represent fraudulent behavior and lead to complicated collections from distribution network
- Knowing reasons of lapses is very important due to correlation with product characteristics



# Complexity of Insurance Lapses

- Hard to recognize lapse causes, since it requires:
  - Skilled experts
  - Time consuming, iterative process “Finding a needle in haystack”
  - Multi-criteria analysis
  - Multi-factor correlation
  - Causal dependencies for categorical variables
  - Time series analysis
  - Data enrichment with external information related to lapses



# How to Address Lapses?

- Combination of new technologies enables radically different approach
  - Instant analysis of the whole contracts portfolio (N= All)
  - Using in-memory technologies
  - Advanced statistics at hand of users without statistical know how
  - Multifactor correlation matrices
  - Outlier identification and elimination
  - Decision trees for numerical and categorical variables
  - Analysis visualization for better understanding of causalities
- Innovative methodology supported by emerging technologies provides completely new capabilities



# Lapse Analysis in SAS VA

- Three main analytical requirements
  - Large data sets with instant analysis ✓
  - Statistical functions performed on whole data (N=All) ✓
  - Visualization capabilities ✓





# Limewood Value Proposition

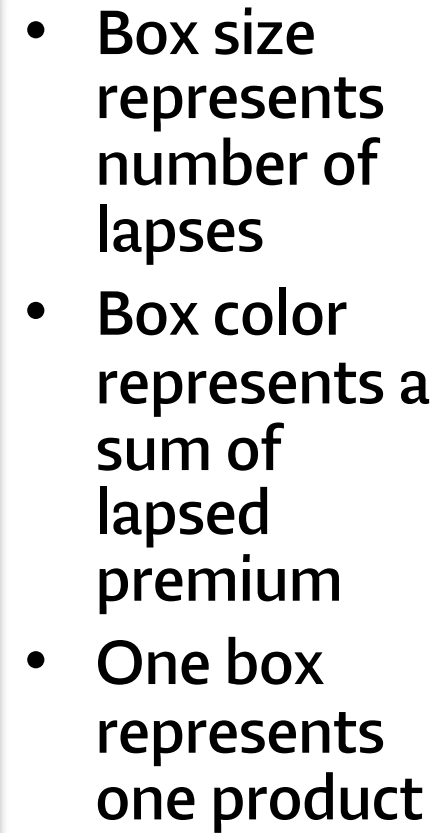
- Proprietary Methodology to measure Lapsing
- Set of Performance Indicators
  - Profiling individual Portfolios
  - Detecting Salespeople, Channels and Territories with negative bottom-line Impact
  - Discovering product-related problems causing Lapsing
- Pre-packaged in an analytical Application provides imminent financial Impact
- To be used by business Users in field on daily basis while no analytical and statistical know how is required



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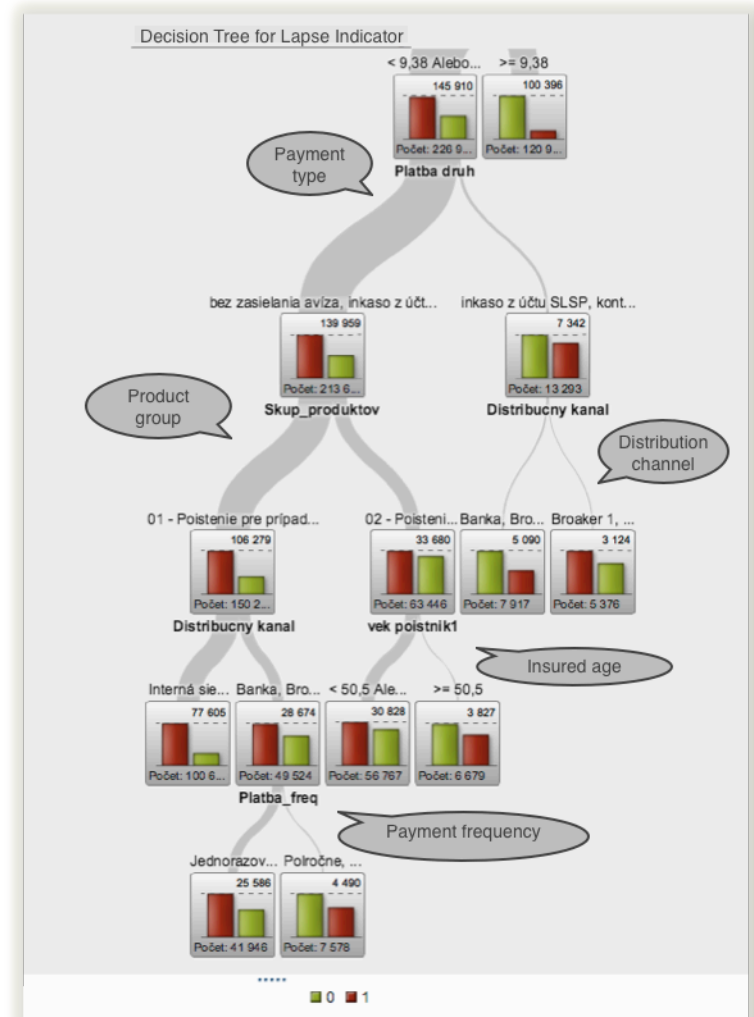
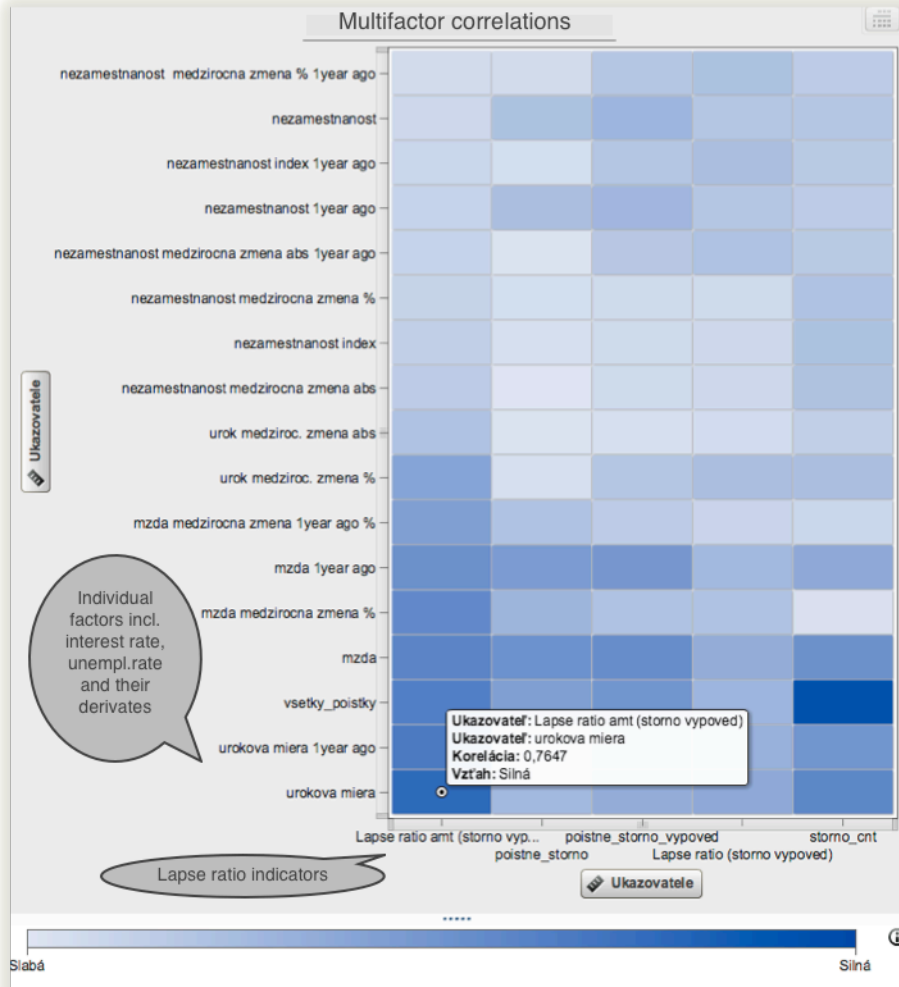
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## DEMO



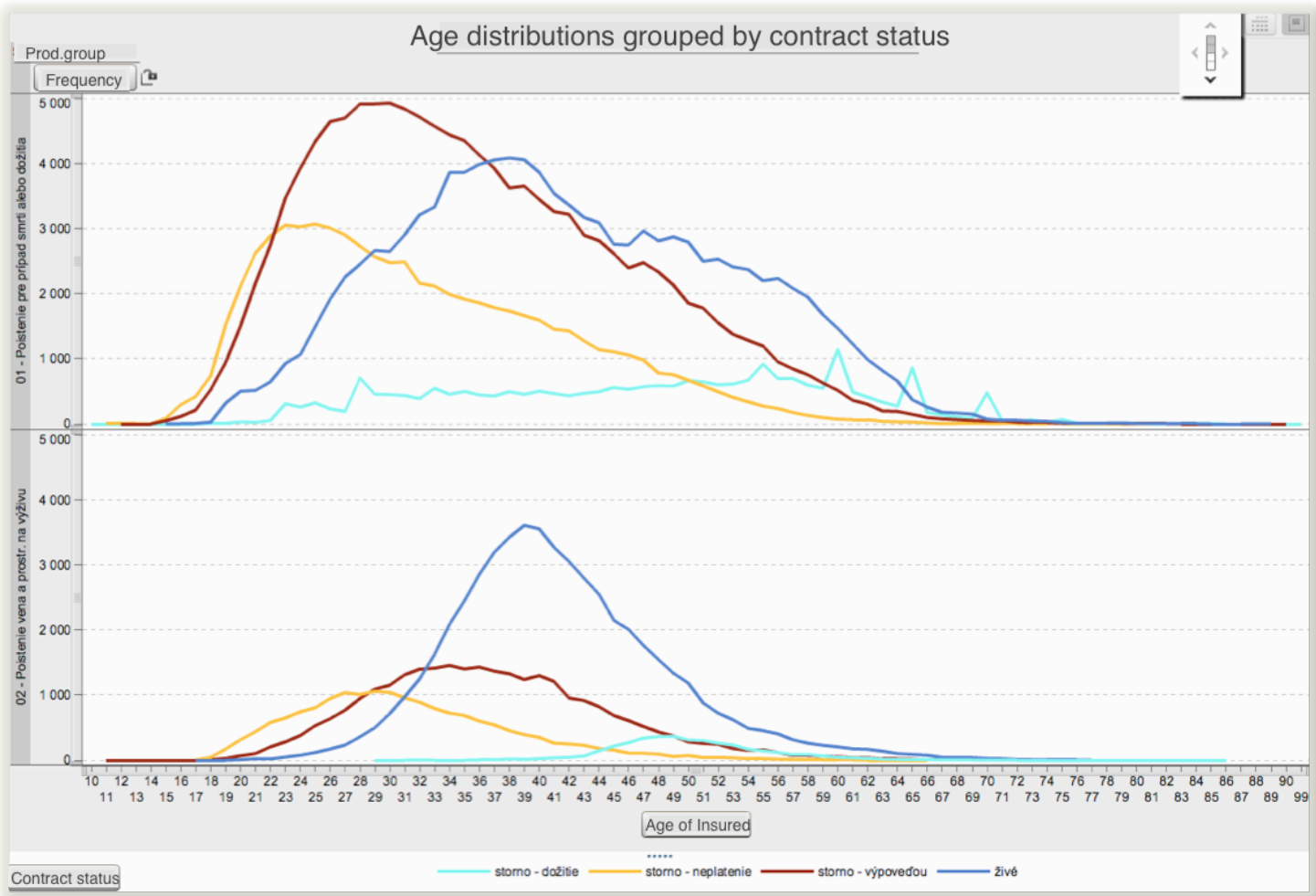


# Multifactor Correlation Matrices and Decision Trees





# Various Contract Status Frequencies by Insured Age





# Outcomes of Lapse Analysis

- Using lapse analysis results for:
  - Threatened contract identification and retention activities
  - Product parameter modification to minimize lapse risk
  - Individual salesperson's portfolio profiling
    - Identification of outliers
    - Geographical abnormalities
  - Non-transparent behavior of the distribution channel
    - Portfolio migrations
    - Cancel-and-replace activities to gain compensations
    - Organized fraud



# Portfolio Optimization Strategies

## New Production

- Production parameters
- Active distribution management
- Continuous monitoring

## Healthy Contracts

- Segmentation
- Retention activities
- Upsell/ Crosssell
- Continuous monitoring

## Healed Contracts

- Segmentation
- Desired policy modifications
- Rate corrections
- Timing
- Continuous monitoring

## Outplacement

- Identification
- Strategy definition
- Proactive/ Reactive
- Continuous monitoring



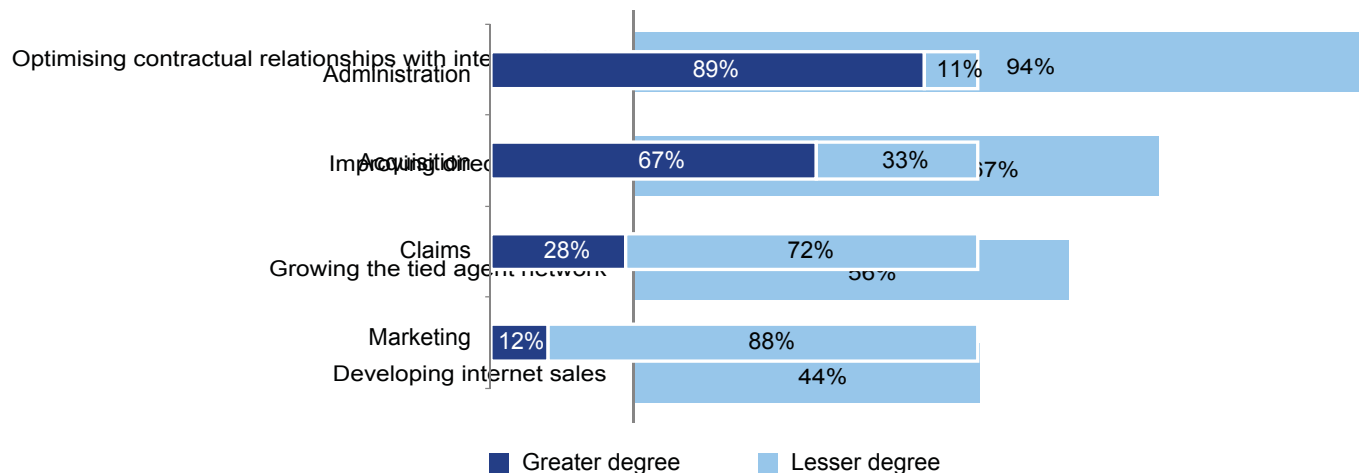
# Backup





# Russian Insurance Market

- Improving acquisition cost and distribution network management turning into top priorities



Source: KPMG analysis.

Source: KPMG Analysis "The Russian insurance market in 2012: The quest for profitable growth"



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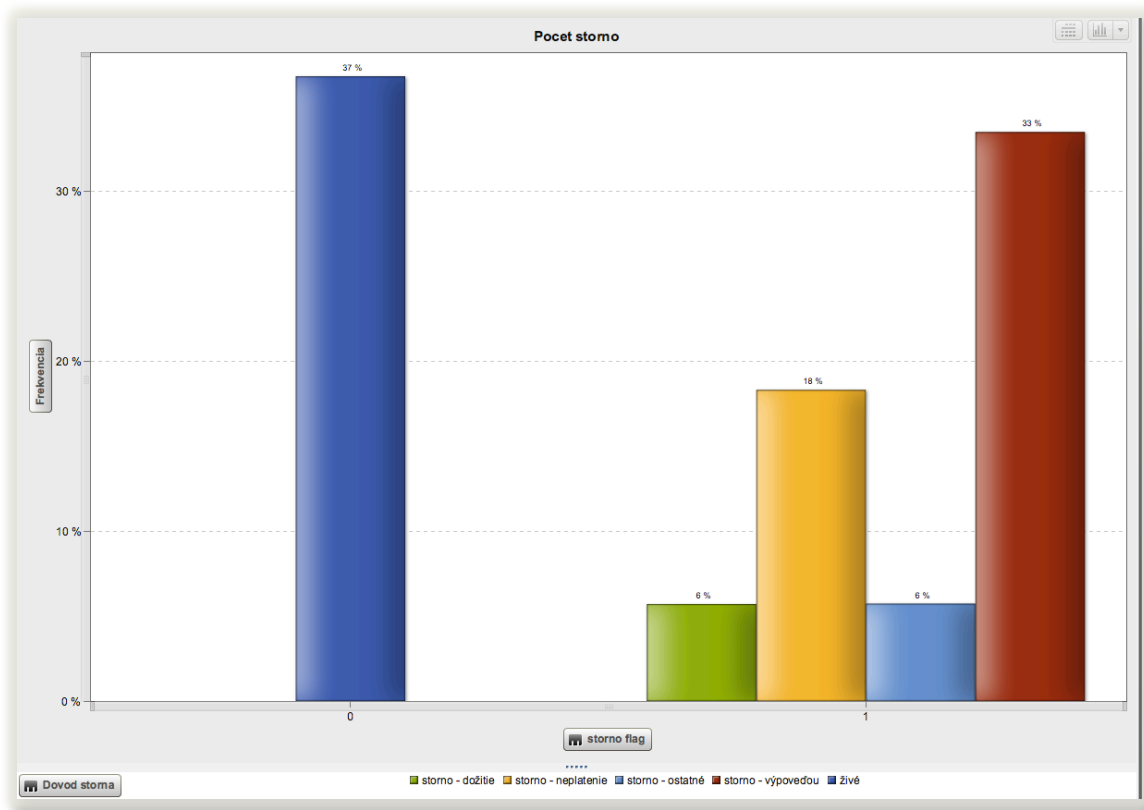


# Reality behind insurance business

- Most conservative business segment
- Often run by “best practice” and “common wisdom”
- Advanced use of statistical tools, but mostly in product management/actuarial space, with little/no use in insurance sales and distribution
- Very little insight on deeper level – individual portfolio analysis, real sales/channel bottom line impact



# Typical Insurance Portfolio - Structure



- Dark Blue – life contracts
- Brown – lapsed contracts
- Yellow – contracts cancelled due to unpaid premiums
- Green - endowments
- Light Blue – other



# Limewood & Expertise

- **Applied Big-data Solutions Start-up**
  - Targeting Insurance & Banking Sector with proprietary analytical Applications and Consulting Services solving critical business Pains
  - Established by a Group of senior Executives (CEOs, COOs) and Visionaries
- **Bridging the Gap between state-of-art Technology and business Know-how**
  - Identifying critical industry Pains and Pain Drivers
  - Transforming the issues into analytical Tasks, Actions and Approaches leveraging Big-data Technology capabilities
  - Building analytical Applications to overcome the Pain Drivers and to monitor them



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