Data Mining in Theorie und Praxis
Teil 2: Praxis am Beispiel der Analyse von Sonderkonditionen

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Introduction: Optimal Pricing

- Price too high ⇒ clients at risk
- Price too low ⇒ lost margin

Optimal Price
Business goal of the analysis

Analysis of special conditions in fees in a private bank

- How much
- Who
- To whom
- Why

Find potential reductions in fees

- List of PB with potential to review
- List of clients to be reviewed

Example:

100’000 CHFm AuM
100 bps revenue = 1’000 Mio CHF
20% special conditions = 200 Mio CHF
19% special conditions = +10 Mio CHF
EBIT
Data sources for the analysis of special conditions and fee waiving

- Data Mining analysis can be based on operational data and data sourced directly from the operative system.
- You don't have to wait for the DWH solution to be „fully finalized“ to profit from such analysis.
How much, who, to whom: descriptive analysis

- Time series
- Distributions
- Bubble charts
- Pareto charts

‡ An early explorative analysis in the project is crucial to get the big picture
Measuring special conditions

- Amount of special conditions (CHF)
- % special conditions of target
- % of customers receiving special conditions
- Analysis of KPIs per wealthband

Graphical analysis must reflect decision process of private banker

All data have been modified for confidentiality.
Why and how do we give special conditions

Approach: Model using decision trees

- Step 1: decision for special conditions (yes/no)
- Step 2: define % of special conditions on target fees

Factors included in decision trees (32 variables)

FEE_TYPE, REVENUE_STREAM, BOOK_KIND_PROC, EVT_STATUS_ID_PROC, MGMT_TYPE_CAT, MGMT_TYPE_GROUP, MGMT_TYPE, PORTFOLIO_STRATEGY, PRICING_TYPE, CONTAINER_TYPE, CONT_AVG_QTLY_AUM, CONT_TOT_QTLY_REVENUES, BPCON_DOM, BPCON_NAT, BPCON_HOLDMAIL, BPCON_CUSTOMER_TYPE, BPCON_GENDER, BPCON_AVG_QTLY_AUM, BPCON_TOT_QTLY_REVENUES, BPCON_WEALTH_BAND, BPCON_LEGAL_FORM, PB_NAME, PB_PC, PB_TEAM, PB_REGION, PB_MARKET_AREA, PB_AVG_QTLY_AUM, PB_TOT_QTLY_REVENUES, IBPCON_WEALTH_BAND, IBPCON_WEALTH_BANDr, PB_MARKET_AREA_red, BPCON_ISCLOSED

Data Mining methods are used to identify the relevant variable set (without having to go through all combinations of the 32 variables)
How does the PB decide to grant special conditions to a client?

A classification tree models the decision of the private banker if he gives special conditions to a client.

A group of PBs give special conditions to female clients with AuM less than 5 Mio CHF.

Legend:
- no SpC
- SpC > 0%

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How does the PB decide how much special conditions (% of target) to give to a client?

Legend:
- SpC < 40%
- SpC > 40%

A regression tree models the decision of the private banker how much % special conditions he gives to a client.

‡ Weights can be used to include economical importance of decision classes.

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Decision tree modeling: identification of Private Banker for reviewing their ‘policy’ on special conditions

Goal: Identify group of Private Bankers for review
- high probability to give overrides
- high overrides in % of target fee
- high absolute amount of overrides vs. group average
What happens if we reduced special conditions?

- Effect 1: reduced special conditions -> more revenue
- Effect 2: reduced special conditions -> increased churn rates -> less revenue

Business case

Example:

100’000 Mio CHF AuM
100 bps target fee = 1’000 Mio CHF
20% special conditions = 200 Mio CHF for 5% of clients (100 Mio CHF revenue)

19% special conditions = +10 Mio CHF EBIT
5% additional churn = -5 Mio CHF

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+5 Mio CHF EBIT

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Conclusions

- The private bank gives 200 Mio CHF of potential revenue as special conditions to its clients.
- Decision trees helped us to quickly focus on the private banker as the driving force in special conditions.
- We have identified clients and PBs with special patterns for review. We expect 5 Mio CHF of additional EBIT by reducing special conditions for selected clients.
When do you start data mining?

EIGHT LEVELS OF ANALYTICS

- Standard Reports
- Ad Hoc Reports
- Query Drilldown
- Alerts
- Statistical Analysis
- Predictive Modeling
- Forecasting
- Optimization
When do you start data mining?

Starting early with data mining allows you to understand your data earlier and shape your data warehouse and reporting along business needs.
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