

PSINet

Bankruptcy Retention Plan

Problem
Optimal allocation of retention funds

Constraints
Departmental representation

Issue
Identify appropriate individuals and determine adequate incentive

During bankruptcy proceedings, PSINet's creditors committee approved a proposal by the company's executive management team to set aside \$6 million of the company's remaining cash reserves for the purpose of paying retention bonuses.

Of the \$6 million, \$500K was designated for the general and administrative departments. Specifically, the funds should be allocated to one of three different staff levels (senior, managerial, staff) within each department with regard to their contributions to the successful completion of either an acquisition or a liquidation of the company's assets.

The retention plan stipulates that within each department senior-level, managerial-level, or staff-level employees will receive a 25%, 20%, or 10%* bonus based on the overall need for their functionality during the due diligence or bankruptcy proceedings.

This model will help the creditors committee determine the most appropriate allocation of the \$500K between the available departmental employees that would most contribute to the successful conclusion of an acquisition or bankruptcy proceedings given certain objectives.

*Note: Retention bonus percentages are applied to the total annual salaries of the individual.



Problem Approach

Action

Design an expert choice model

Goal

Maximize bankruptcy contributions from G&A department

Design an Analytic Hierarchy Processing (AHP) model within Expert Choice in order to determine the appropriate contributors from the company's G&A department via an Activity Level Resource Allocation.



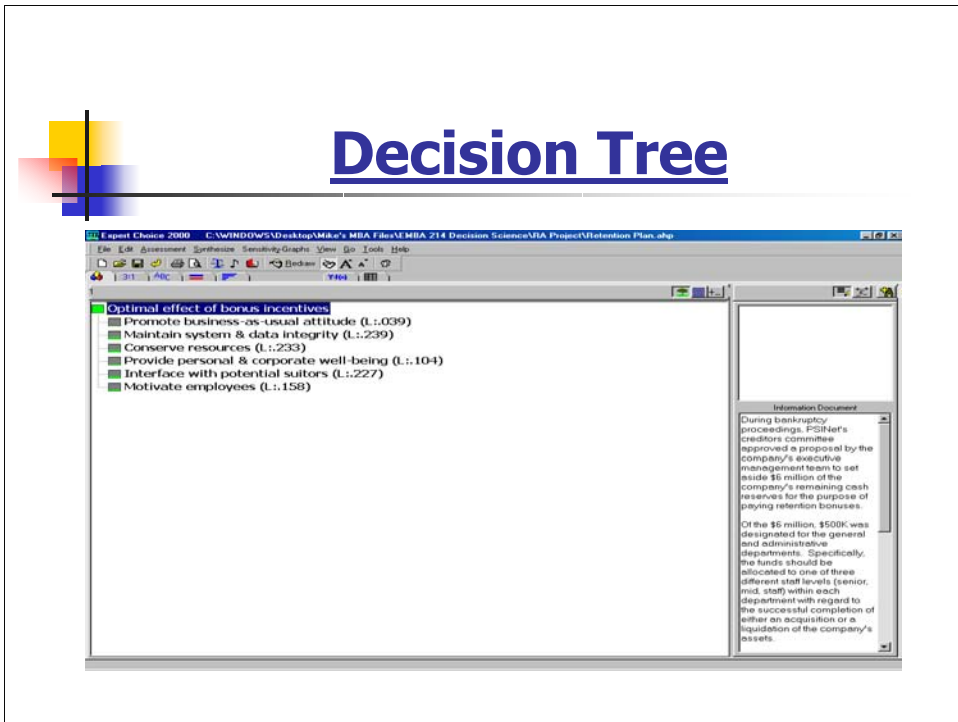
Objectives

- Promote business-as-usual attitude
- Maintain system & data integrity
- Conserve resources
- Provide for personal & corporate well-being
- Interface with potential suitors
- Motivate employees

In order to make the determination for the most appropriate assignment of funds, each staff level within each G&A department will be compared based on their effectiveness to promote a business-as-usual attitude, to maintain system and data integrity, to conserve resources, to provide for personal and corporate well-being, to interface with any potential suitors, and to motivate employees.

Measurements will be taken via pairwise comparison and will be conducted using the verbal mode.

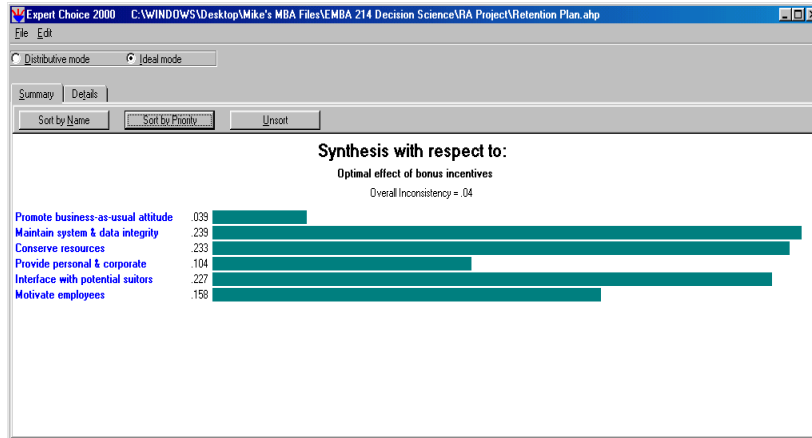
Decision Tree



This is a screen-shot of the model's decision tree from Expert Choice.



Synthesis of Objectives



This is a screen-shot, from Expert Choice, of the synthesis of the objectives with respect to the goal.



Rating Intensity Scale

Optimal effect of bonus incentives\Promote business-as-usual attitude

Intensity Name	Priority
Minimal	1.000
Somewhat	.853
Moderate	.453
None	.289
Significant	.276

This is a screen-shot, from Expert Choice, of the intensity of the rating system designed for measurement.

Objective Rating Formulas

Covering Objectives / Formulas	Type	Low / 11	High / 12	Curve / 13	14	15	16	17	18	19
Promote business-as-usual attitude	RATINGS	Minimal	Somewhat	Moderate	None	Significant				
Maintain system & data integrity	RATINGS	Significant	Moderate	Somewhat	Minimal	None				
Conserve resources	RATINGS	Significant	Moderate	Somewhat	Minimal	None				
Provide personal & corporate well-being	RATINGS	Moderate	Somewhat	Minimal	Significant	None				
Interface with potential suitors	RATINGS	Significant	Moderate	Somewhat	Minimal	None				
Motivate employees	RATINGS	Significant	Moderate	Somewhat	Minimal	None				

This is a screen-shot of the model's objective rating formulas from Expert Choice.



Alternatives

Departments

- Finance
- Accounting
- Legal
- Human resources
- Computer services
- Facilities

One level of G&A representation from Finance, Accounting, Legal, Human Resources, Computer Services, and Facilities will be identified as the key contributors during the bankruptcy process.



Alternatives (cont.d)

Employee levels

- Senior
- Managerial
- Staff

Retention

- Senior – 25%
- Managerial – 20%
- Staff – 10%

The company's G&A functions are made up of senior-level, managerial-level, and staff-level employees. If they are determined to be critical to the bankruptcy process, senior-level employees will receive a 25% bonus, managerial-level employees will receive a 20% bonus, and staff-level employees will receive a 10% bonus.

Bonus percentages are applied to each employee's total annual salary.



Expert Choice Results

Expert Choice 2000 C:\WINDOWS\Desktop\MAA's MBA Files\EMBA 214 Decision Science\MAA Project\Intention Plan.shp

File Edit Assessment View Go Tools Formula Type Totals Help

Freeze Judgments

Minimal 1 (1.000) Somewhat 2 (1.853) Moderate 3 (4.53) None 4 (1.289) Significant 5 (1.276)

Index	Ideal mode Alternative	Total	Costs	RATINGS	
				Promote business-as-usual attitude	Maintain system & data integrity, Consi
1	Finance: 10%	358	35000	0.46	0.94
2	Finance: 20%	584	70000	0.37	0.82
3	Finance: 25%	590	67500	0.54	0.15
4	Accounting: 10%	351	42500	0.35	0.92
5	Accounting: 20%	675	85000	0.49	0.74
6	Accounting: 25%	639	106250	0.69	0.81
7	Legal: 10% Bonus	416	75000	0.41	0.63
8	Legal: 20% Bonus	488	150000	0.5	0.71
9	Legal: 25% Bonus	371	107500	0.85	0.08
10	HR: 10% Bonus	390	27500	0.82	0.42
11	HR: 20% Bonus	397	55000	0.83	0.35
12	HR: 25% Bonus	655	68750	0.93	0.27
13	Comp Svcs: 10%	323	30000	0.07	0.94
14	Comp Svcs: 20%	365	60000	0.2	0.77
15	Comp Svcs: 25%	530	75000	0.37	0.83
16	Facilities: 10%	370	20000	0.74	0.12
17	Facilities: 20%	315	40000	0.73	0.1
18	Facilities: 25%	327	50000	0.28	0.12

Optimal off. Promote Maintain Conserve Provide Interface Motivate

This is a screen-shot of the results of each alternative, including its total rating and applicable costs.



Optimization

- “Solver” tool from Excel utilized to determine the appropriate allocation
- “Solver” configures the optimization problem to maximize the benefit objectives subject to the cost of each alternative

Excel Solver is used to configure the optimization problem, to maximize the benefit objectives, and ultimately to determine the appropriate allocation.



Solver Results

Microsoft Excel - Retirement Plan

File Edit View Insert Format Tools Data Window Resource Allocation Help

Excel

A	B	C	D	E	F	G	H	I	J	AK	AL	AM	AN
1	Index	Alternative	Benefits	Costs	DVS	F. Benefits	F. Costs	BC	Musts	Musts	Notes		
2	1	Finance 10% Bonus	0.366	35000	0	0.000	0.0	1.01714	0	1			
3	2	Finance 20% Bonus	0.584	70000	0	0.000	0.0	0.83429	0	1			
4	3	Finance 25% Bonus	0.590	87500	0	0.590	87500.0	0.67429	0	1			
5	4	Accounting 10% Bonus	0.351	42500	0	0.000	0.0	0.62598	0	1			
6	5	Accounting 20% Bonus	0.675	85000	1	0.675	85000.0	0.79412	0	1			
7	6	Accounting 25% Bonus	0.639	106250	0	0.000	0.0	0.60141	0	1			
8	7	Legal 10% Bonus	0.416	75000	0	0.000	0.0	0.55467	0	1			
9	8	Legal 20% Bonus	0.488	150000	1	0.488	150000.0	0.32533	0	1			
10	9	Legal 25% Bonus	0.371	187500	0	0.000	0.0	0.19787	0	1			
11	10	HR 10% Bonus	0.390	27500	0	0.000	0.0	1.41818	0	1			
12	11	HR 20% Bonus	0.397	55000	0	0.000	0.0	0.72182	0	1			
13	12	HR 25% Bonus	0.655	88750	1	0.655	88750.0	0.96273	0	1			
14	13	Comp Svcs 10% Bonus	0.323	30000	0	0.000	0.0	1.07667	0	1			
15	14	Comp Svcs 20% Bonus	0.365	60000	0	0.000	0.0	0.60833	0	1			
16	15	Comp Svcs 25% Bonus	0.630	75000	1	0.630	75000.0	0.70667	0	1			
17	16	Facilities 10% Bonus	0.370	20000	1	0.370	20000.0	1.85000	0	1			
18	17	Facilities 20% Bonus	0.316	40000	0	0.000	0.0	0.78750	0	1			
19	18	Facilities 25% Bonus	0.327	50000	0	0.000	0.0	0.65400	0	1			
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Resource Allocation / Dependencies / Parameters / Instructions

Ready

This is a screen-shot of the Excel Solver results indicating which staff level, from each G&A department, provides the most benefit to the bankruptcy process in relation to their costs.



Conclusion

Provide bonus incentives to:

- Finance – Senior members
- Accounting – Managerial members
- Legal – Managerial members
- HR – Senior members
- Computer Services – Senior members
- Facilities – Staff members

Based on the judgments made in Expert Choice, and the results from Excel Solver, PSINet should allocate their bonus retention funds for the G&A function to senior members of the Finance, HR, and Computer Services departments, managerial members of the Accounting and Legal departments, and staff members of the Facilities department.



Implementation

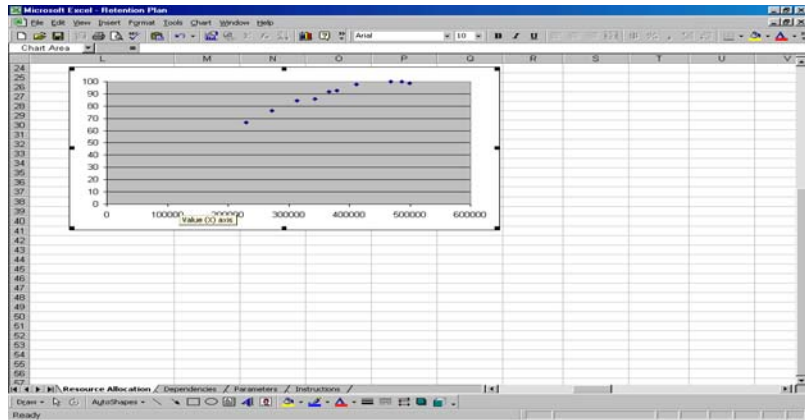
The creditors committee can expect the following costs associated with the G&A retention budget:

- Finance – \$87,500
- Accounting – \$85,000
- Legal – \$150,000
- HR – \$68,750
- Computer Services – \$75,000
- Facilities – \$20,000

Based on the judgments made in Expert Choice, and the results from Excel Solver, the retention plan for the G&A department should cost a total of \$486,250 and should be broken down as indicated on the slide.



Consideration



Since the G&A retention plan did not optimally utilize the entire \$500K designated, it would make no sense to increase retention levels in the future. This can be seen graphically by the decreasing rate that occurs beyond the \$500K level.