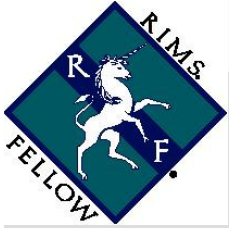
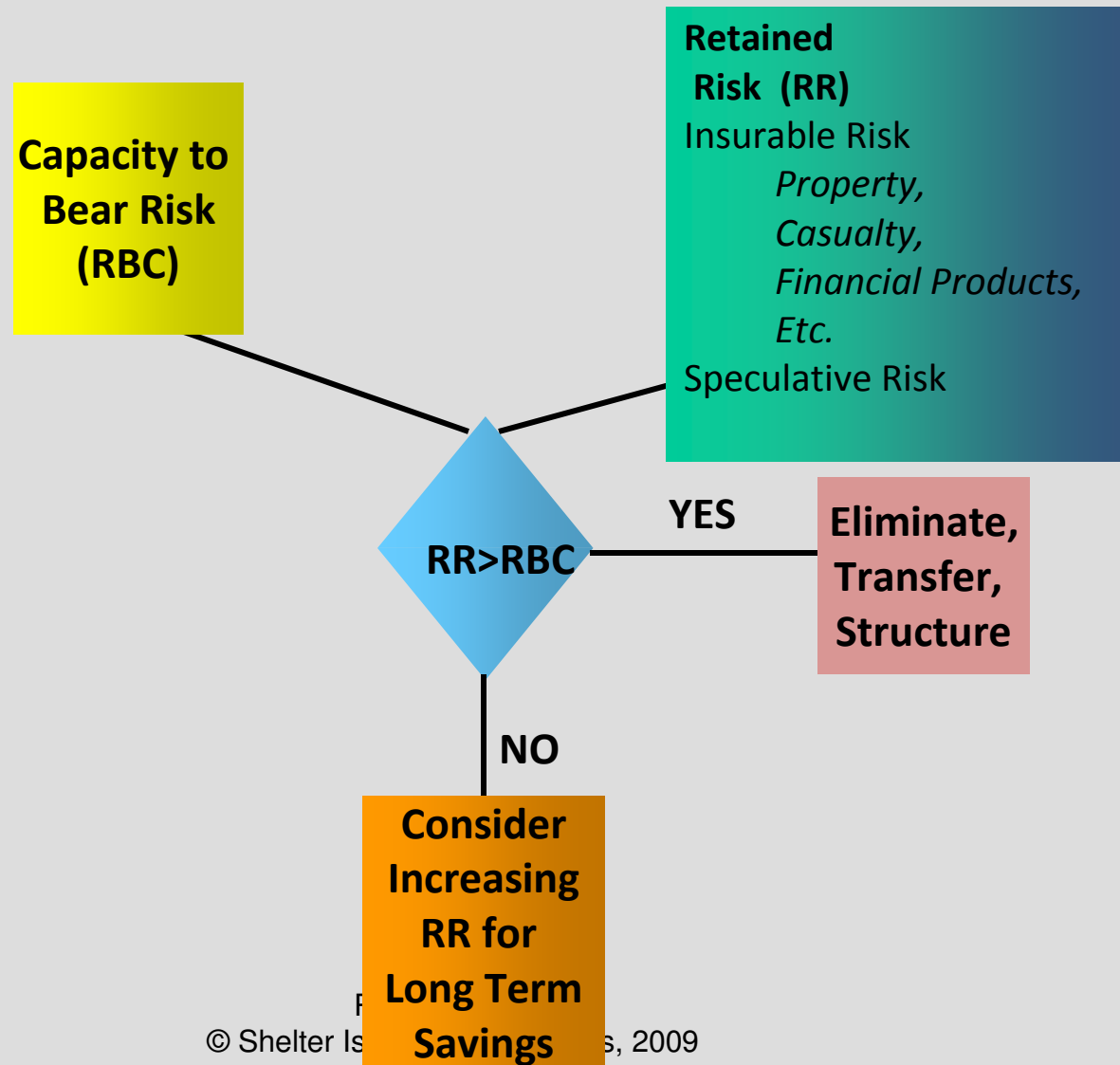


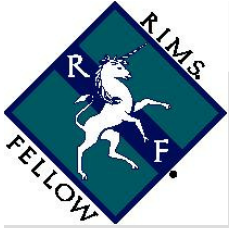
The Elements of Risk Financing

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Risk Financing Framework





Risk Bearing Capacity (an example)

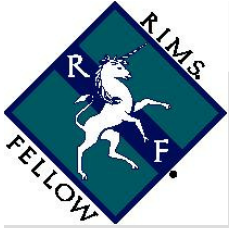
General View

Earnings Before Tax	$\$78.3\text{mm} \times 5\% = \3.9mm
Net Worth	$\$344.9\text{mm} \times 2\% = \6.9mm
Cash Flow From Operations	\$66.7mm
Capital Expenditures	(78.1mm)
Dividends	<u>(0)</u>
Free Cash Flow	<u>(\$11.4mm)</u>

Indicated RBC = \$3.9mm

Also Need To Consider:

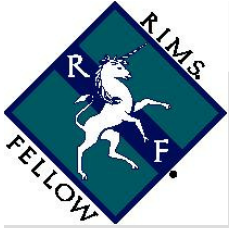
- Debt Covenants
- Rating Agencies
- Shareholder Expectations
- Management Attitude



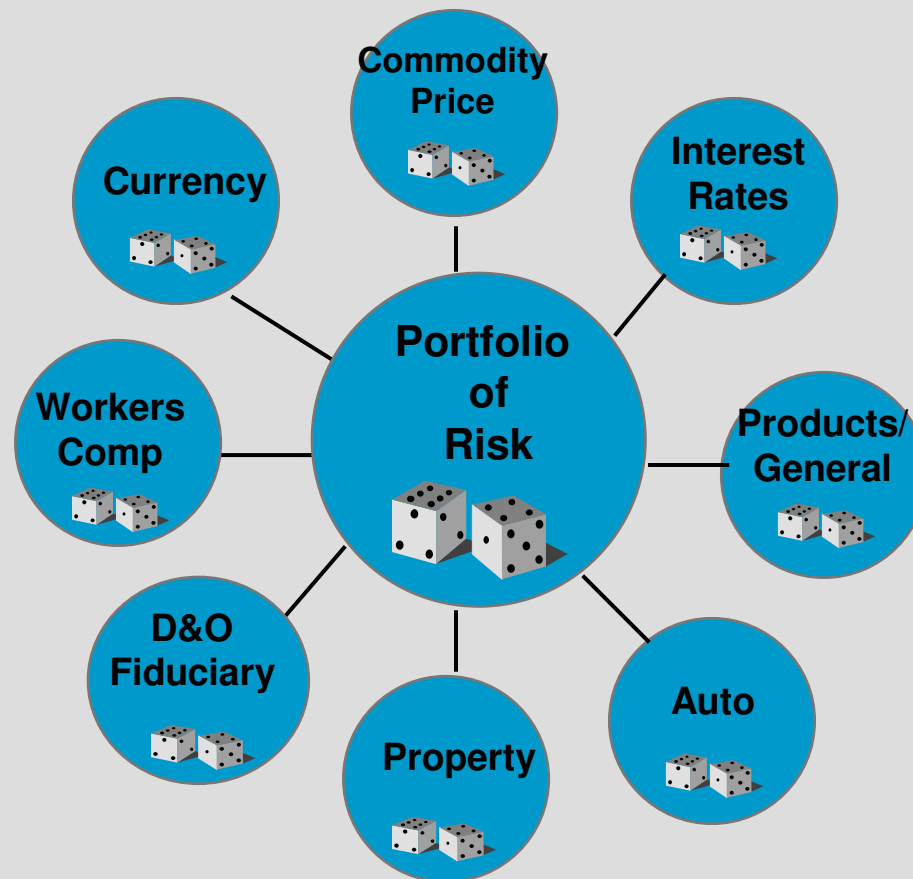
Retained Risk

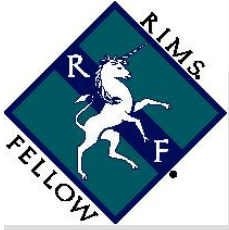


Usually determined through actuarial analysis, including the generation of probability distributions including the covariance of different risks.



Expanded Risk Portfolio

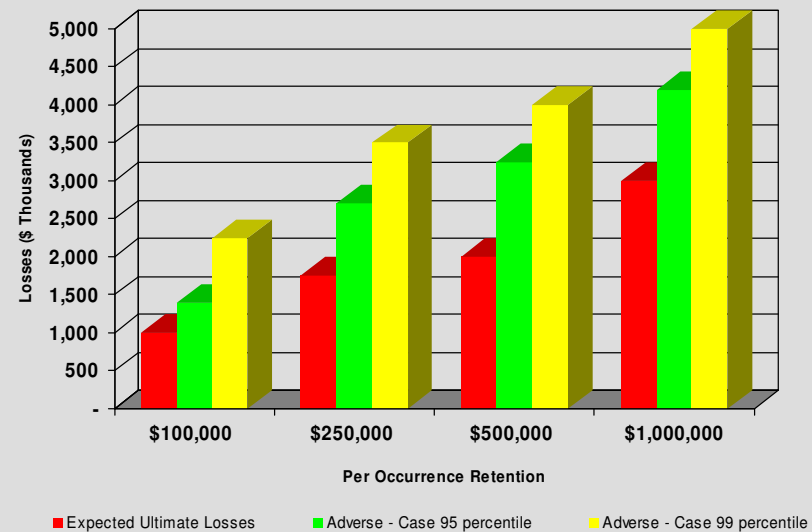


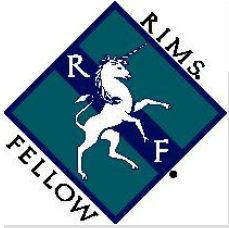


Integrated Risk Management Risk Retention Analysis

By determining the adverse losses at various retention levels, management can select an optimum retention level.

- Determine appropriate retention level
- Quantify potential variability to ascertain adverse case

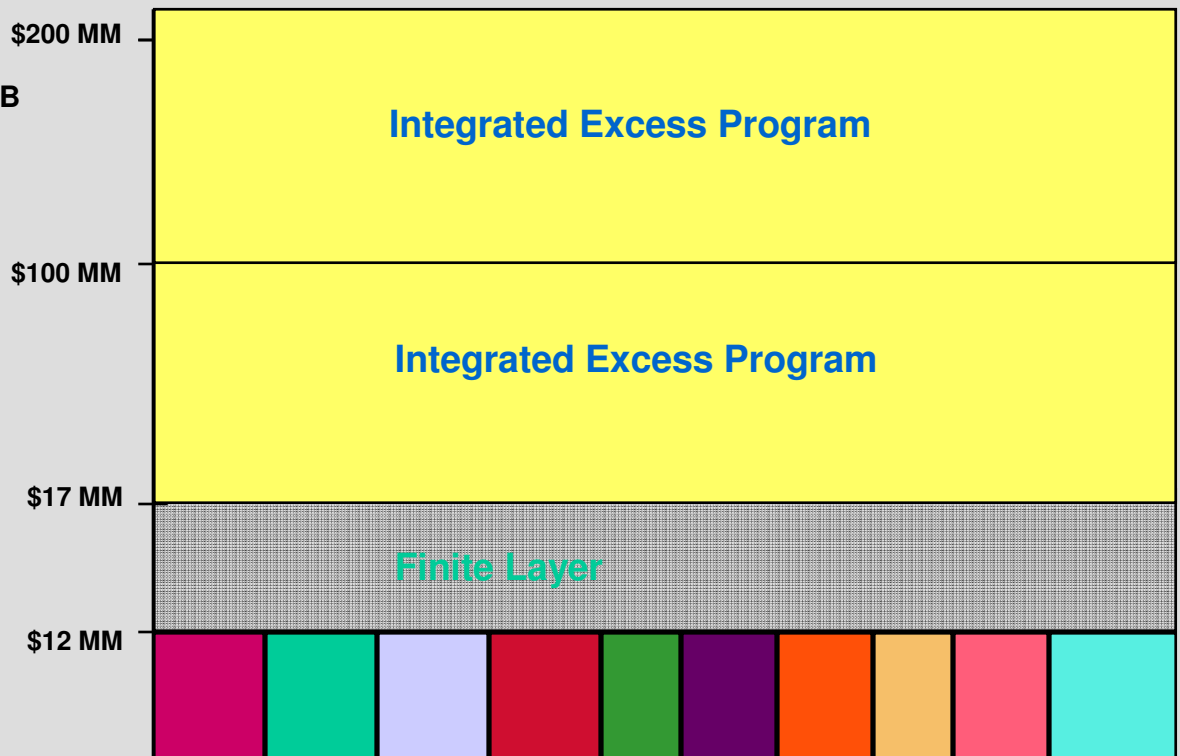


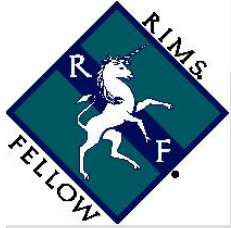


Integrated Risk

Potential Retention

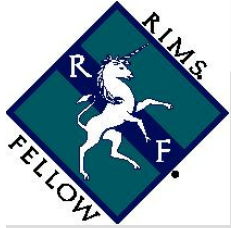
- Casualty
- Property
- Environmental Impairment
- Directors & Officers Coverage B
- Fiduciary Liability
- Malicious Product Tamper
- Accidental Product Tamper
- Seedsman's Liability
- Interest Rates
- Commodity Risk



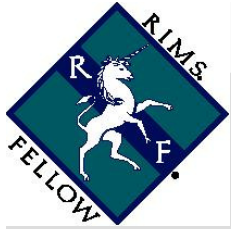


Integration Example

Rank*	Coverage	Expected**	95th Percentile	99th Percentile
1	Professional Liability	75	241	384
2	Residual Value	39	200	282
3	Unauthorized Trading	38	176	233
4	Bond (Including Computer Crime)	20	61	210
5	Directors & Officers	31	122	168
6	Employment Practices	8	16	151
7	e-Commerce	13	98	135
8	Property (Including BI and CBI)	6	37	67
9	Liability	10	24	67
10	Mortgage Impairment	1	1	20
11	Workers' Compensation	10	13	14
12	Fiduciary Liability	5	8	11
	All Lines [1-12] Individual Risk Projection	255	997	1,742
	All Lines [1-12] Integrated Projection	255	558	691
	Portfolio Volatility Reduction	0	439	1,051

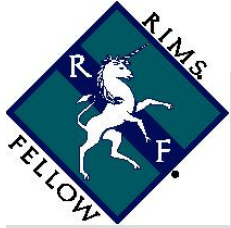


Cash Flow Analysis

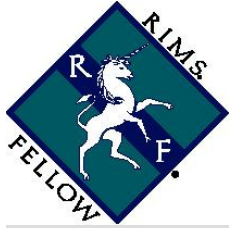


Cash Flow Analysis

Auto Liability							
Simplified Cash Flow Analysis							
Self-Insurance							
			Paid		Tax Shield		
Year	Incurred Loss	Paid Loss	Expense @ 10%	Pre-Tax Cost	@ 35%	After-Tax Cost	P.V. @ 5%
2009	1000	230	23	253	89	164	160
2010		240	24	264	92	172	159
2011		210	21	231	81	150	133
2012		150	15	165	58	107	90
2013		80	8	88	31	57	46
2014		90	9	99	35	64	49
Totals	1000	1000	100	1100	385	715	638
Insurance							
		Tax Shield					
Year	Premium	@ 35%	After-Tax Cost				
2009	1200	420	780				



Expected Cost Plus Risk



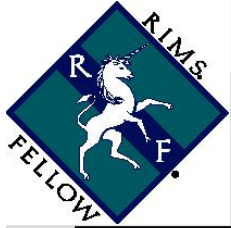
Tactical Risk Analysis

Alternate Retention Levels - Auto Liability						
	expected amounts			95th percentile		
	retention	retention	effect of	retention	retention	effect of
	<u>250,000</u>	<u>500,000</u>	<u>change</u>	<u>250,000</u>	<u>500,000</u>	<u>change</u>
retained	141	148	7	319	371	52
insurance	<u>179</u>	<u>135</u>	<u>(44)</u>	<u>179</u>	<u>135</u>	<u>(44)</u>
total	320	283	<u>(37)</u>	498	506	8

The higher retention has a net benefit "expected" and a small cost at the once-in-20-years level.

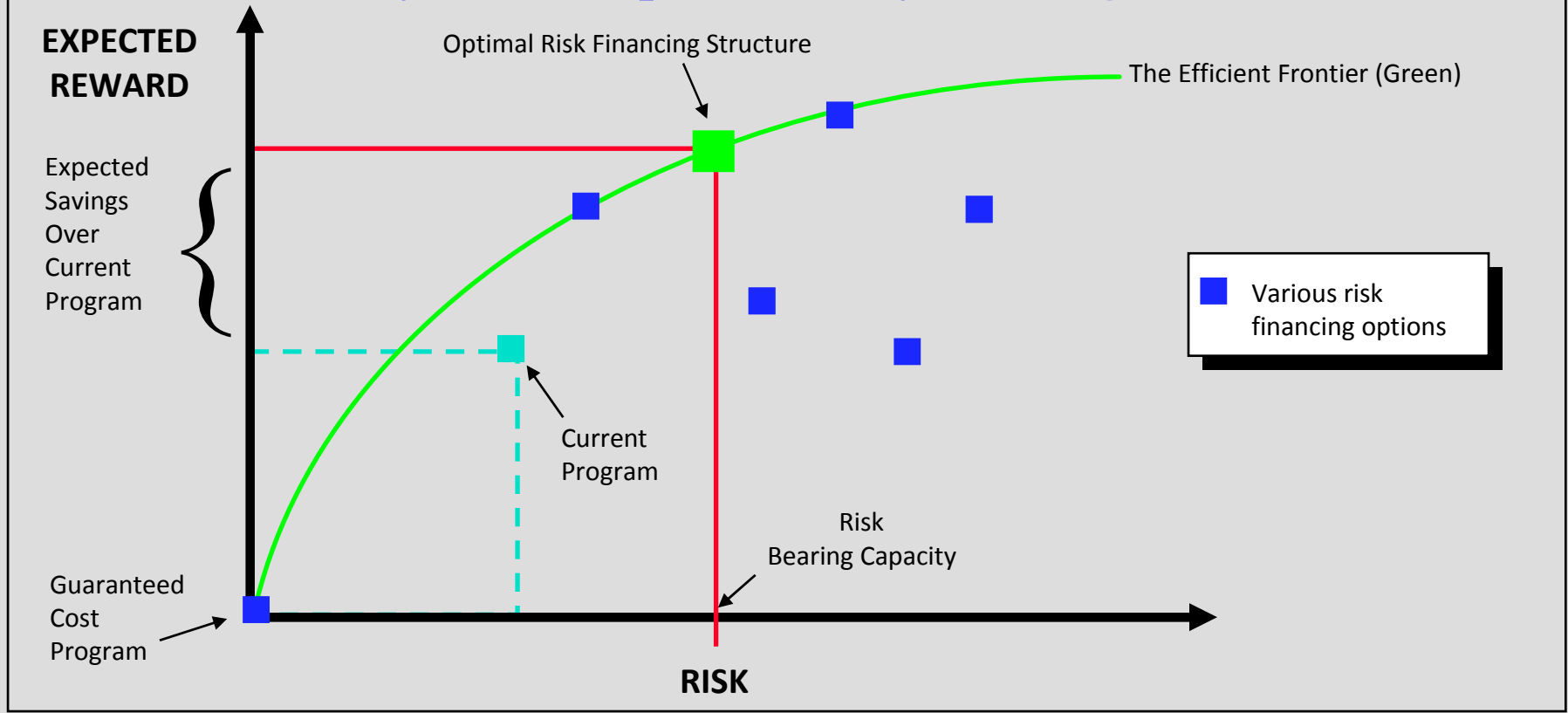
Alternate Retention Levels - Workers Comp						
	expected amounts			95th percentile		
	retention	retention	effect of	retention	retention	effect of
	<u>500,000</u>	<u>1,000,000</u>	<u>change</u>	<u>500,000</u>	<u>1,000,000</u>	<u>change</u>
retained	1,736	1,752	16	2,205	2,593	388
insurance	<u>437</u>	<u>352</u>	<u>(85)</u>	<u>437</u>	<u>352</u>	<u>(85)</u>
total	2,173	2,104	<u>(69)</u>	2,642	2,945	303

The higher retention has a net benefit "expected", but a net cost at the once-in-20-years level.



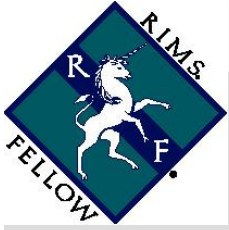
Efficient Frontier

.... defines the optimal risk financing structure.



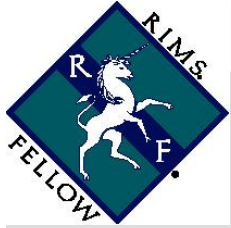
- **Expected Reward** is measured in terms of the expected savings of the risk financing structure being considered as compared to a no-risk guaranteed cost program
- **Risk** is measured in terms of variability from expected reward
- **Optimal Risk Financing Structure** determined such that risk bearing capacity is attained

Risk Financing



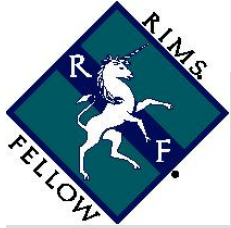
Financial Reporting Issues

- True Risk Transfer
 - ✓ Payment is current expense
- Retained Risk (Self-Insurance)
 - ✓ Estimated Ultimate Loss is expensed with unpaid portion credited to loss reserve.
 - ✓ Future payments reduce reserve rather than impacting expense
 - ✓ Changes in estimated ultimate loss do impact current expense.



Income Statement Impact of Risk Transfer Decision

Simplified Income Statements for 2009			
Insurance Buyer			
Sales		1000	
Cost of Sales		700	
Gross Margin			300
Insurance Premium	50		
Other Admin	100		
Total Admin			150
Pre-Tax Profit			150
Tax @	35%		52.5
After Tax Profit			97.5
Note: Risk is transferred so actual losses within the limits, have no impact on current or future income statements			
Accounting Entry:			
Insurance Expense	50		
Cash*			50
*Reduces asset on balance sheet			
Self-Insured			
Sales		1000	
Cost of Sales		700	
Gross Margin			300
Expected Loss	40		
Other Admin	100		
Total Admin			140
Pre-Tax Profit			160
Tax @	35%		56
After Tax Profit			104
Note: Risk is self insured, so changes in the estimated ultimate loss do impact current or future income statements			
Accounting Entry:			
Loss Expense	40		
Loss Reserve*			40
*Increases liability on balance sheet			



Other Areas of Focus

- Structured Insurance
- Captives
 - ✓ Traditional Use
 - ✓ Stakeholder Risks
 - ✓ Tax Efficient Structures
- Capital Market Risk Transfer
 - ✓ Cat bonds
 - ✓ Contingent Equity