



Measuring the Total Cost of Risk in Academic Institutions

Presented by:
John McLaughlin
Managing Director
Higher Education Practice
Arthur J. Gallagher & Co.



• Take Aways ...



- Basic Understanding of TCOR
- Uses for TCOR on Campus
- Measurement Metrics
- Evolution of TCOR
- Case Study



Definition of Total Cost of Risk (TCOR)



- **Insurance Dictionary**

Quantitative measurement of the total costs (losses, risk control costs, risk financing costs, and administration costs) associated with the ***Risk Management*** function, as compared to an organization's risk factors.

- **URMIA Definition**

All costs borne by a university or college due to the possibility of risk. These costs are typically illustrative of a point in time that can be used to create an institution's own benchmark comparison.



Risk Identification



Financial Risks

Strategic Risks

Hazard Risks

Operational Risks



Risk Identification



Financial Risks

Investment Performance

Loss of
Research
Funding

Cash Flow

Strategic Risks

Increased Distance
Learning

Foreign
Expansion

Reputational

Hazard Risks

Public Liability

Visitors and Contractors

Pollution Exposures

Operational Risks

Regulatory Compliance

Internet Security

Campus Safety



Risk Identification



Financial Risks

Investment Performance
Donor Pledge Defaults
Fluctuating Interest Rates
Cash Flow
Loss of Research Funding
Tuition Defaults

Strategic Risks

Changes in Student Needs
Foreign Expansion
Reputational
Succession Planning
Increased Distance Learning
Corporate and Institutional Alliances
Intellectual Capital

Hazard Risks

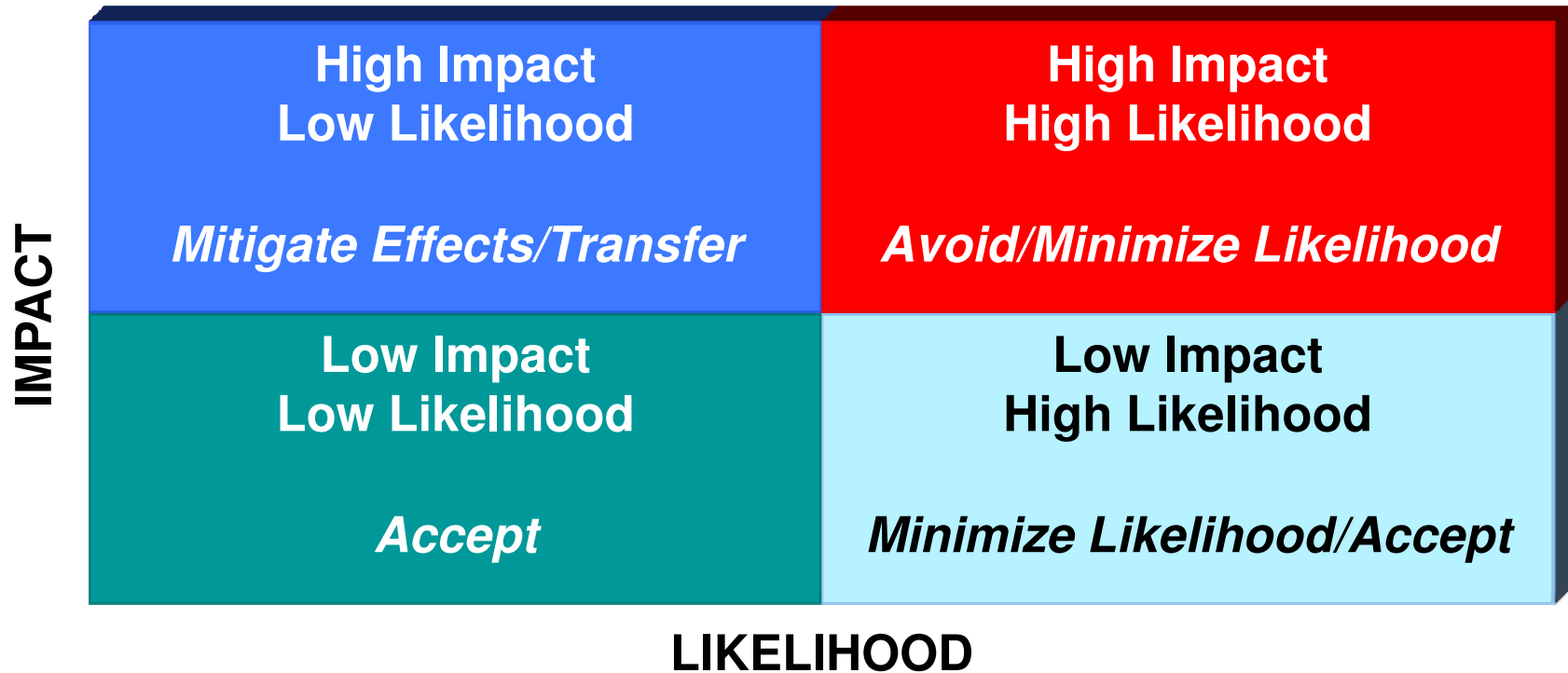
Public Liability
Visitors and Contractors
Property damage
Natural Disasters
Employee Injury
Pollution Exposures

Operational Risks

Regulatory Compliance
Student Activities
Campus Safety
Deferred Maintenance
Internet Security
Transportation



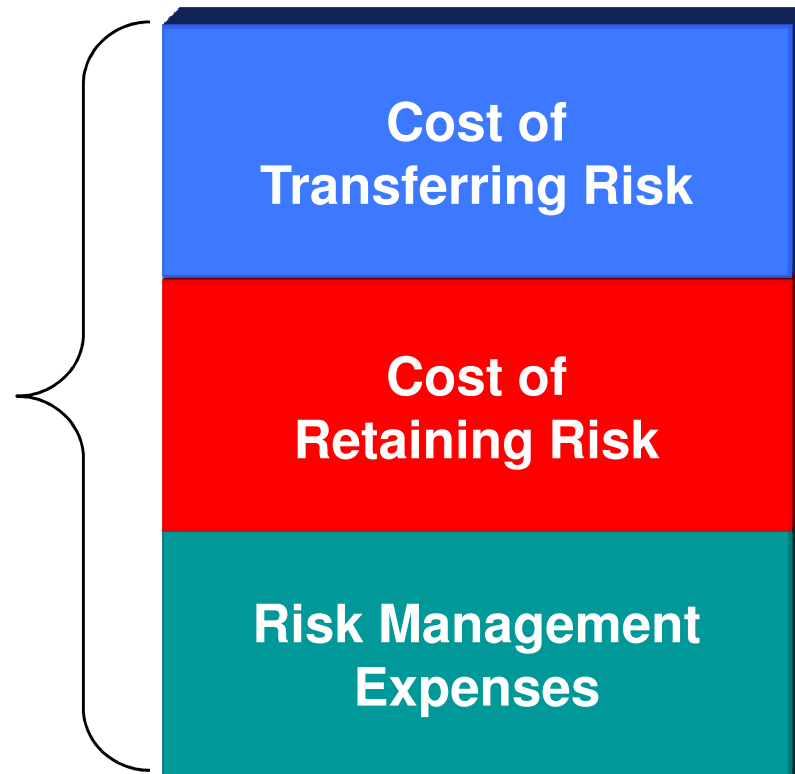
Risk Map



Total Cost of Risk



TCOR



Cost of Transferring Risk



- Insurance Premium, LOCs, Dividends, Audits

- Property
- General Liability
- Auto Liability
- Educators' Legal Liability
- Excess Liability
- Workers' Compensation

Traditionally collected for external benchmarking

- Medical Malpractice
- Professional Liability
- Crime/Special Crime
- Foreign Liability
- Aviation
- Marine
- Clinical Trial
- Fiduciary Liability
- Ancillary Lines (Special Events, Summer Camps, Athletic Injury)

Internal TCOR

Note: Report retro adjustments, premium audits, dividend payments, etc. to year earned.



Cost of Retaining Risk

AURIMS
CONFERENCE 2009

- **Ultimate Losses by Line of Coverage**
 - Self-Insured Losses
 - Deductible Losses
 - Allocated Loss Adjustment Expenses (ALAE)
 - Uninsured/retained losses
- **Cost of Capital**
 - Pre-Loss Funding Strategy (Opportunity Cost)
 - Post-Loss Funding Strategy (Cost of Obtaining and Repaying Debt Instrument)



Risk Management Expenses

AURIMS
CONFERENCE 2009

Internal

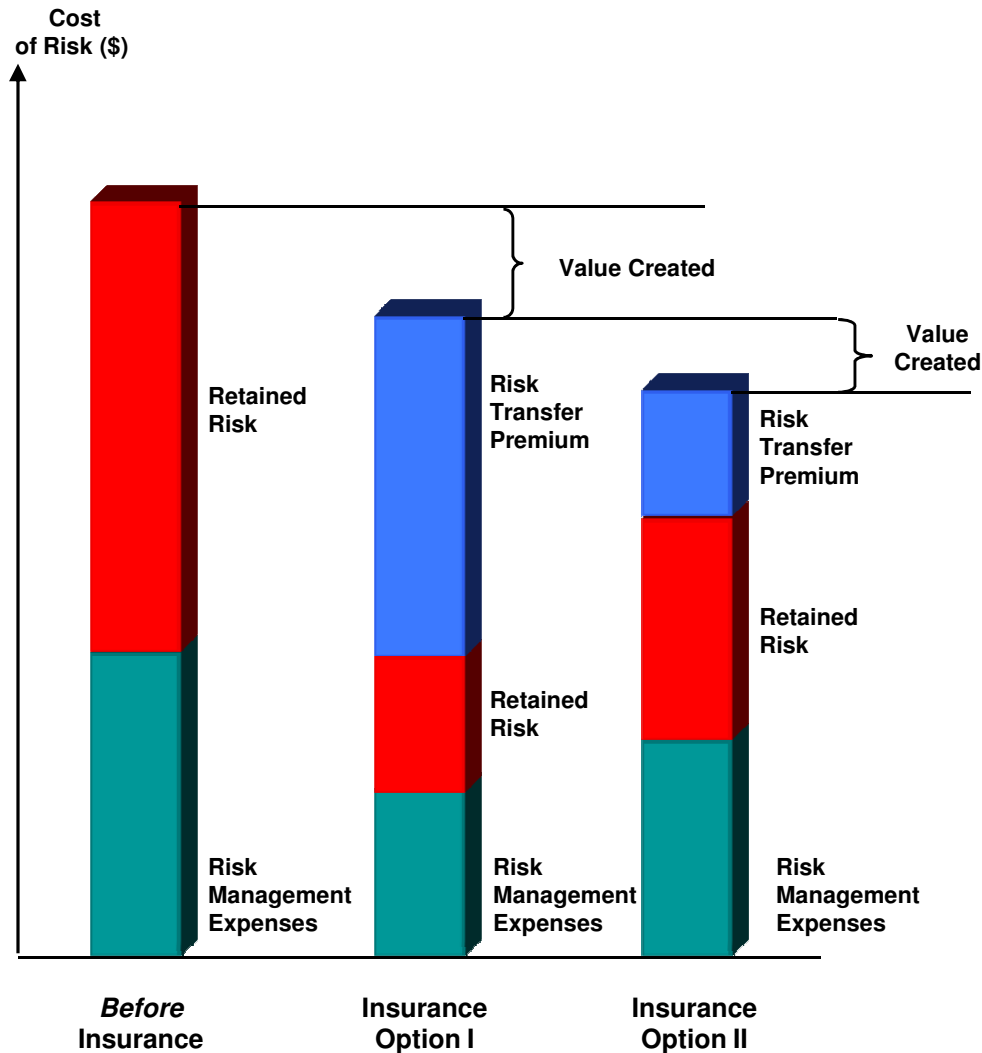
- Risk Management Dept.
 - Salaries
 - Overhead
 - Office Expenses
 - Insurance Premiums
 - In-house Claims
 - In-house Loss Control
- In-house Legal Services
- Internal Audit (Regulatory Compliance)

External

- Broker Fees
- TPA Costs
- Unallocated Loss Adjustment Expense (ULAE)
- Outside vendor costs (actuarial, consultants, legal, etc.)



TCOR Paradigm



Uses for TCOR



- To analyze Risk Management costs over time
- To validate selection of Risk Management techniques
- To select alternative risk financing options
- To allocate risk management costs throughout the institution and to outside parties
- To communicate Risk Management strategy to senior administrators
- To benchmark against other institutions



Measurement Metrics

Management Reports



Institutional Level	Expressed as
Total Cost of Risk	Per thousand of Gross Operating Expenses
Total Cost of Risk	Per 100 of Total Insurable Values
Total Cost of Risk	Per square foot
Total Cost of Risk	Per Student
Total Cost of Risk	Per 100 of Payroll



Measurement Metrics

Internal Benchmarks



Risk Management Dept. Level	Expressed as
TCOR for Property Program	Per 100 of Total Insurable Values
TCOR for Liability Program(s) – GL, AL, ELL, Excess Liability	Per thousand of Gross Operating Expenses
TCOR For Workers' Compensation	Per 100 of Payroll
Internal Risk Management Expenses	Per thousand of Gross Operating Expenses
Total Risk Management Expenses	Per thousand of Gross Operating Expenses
TCOR for Foreign Liability Program	# of trips or # of Students



Measurement Metrics

Cost Allocation



Lines of Coverage	Expressed as Rate
TCOR for Property Program	Per Square foot
TCOR for Liability Program(s) – GL, Excess Liability	Per thousand of Gross Operating Expenses
TCOR For Workers' Compensation	Per 100 of Payroll
Internal Risk Management Expenses	Per thousand of Gross Operating Expenses
Total Risk Management Expenses	Per thousand of Gross Operating Expenses
TCOR for Foreign Liability Program	# of trips or # of Students
TCOR for Auto Liability	Per Vehicle
TCOR for ELL	Per employee or per thousand of Gross Operating expenses
Ancillary Coverage lines (Aviation, Marine, Professional Liability, etc.)	Per thousand of Dept. Gross Operating Expenses



Measuring Total Cost of Risk

AURIMS
CONFERENCE 2009

Case Study



Billabong University Case Study

AURIMS
CONFERENCE 2009

The Billabong University risk management department has been invited to present their 2009/2010 budget to the Finance Committee. Ms. Cawley, the University risk manager, brings two of her key staff members together, Mr. Norman and Mr. Lavar, to strategize on how to approach the meeting.

“It has been over three years since we have been invited to present the departmental budget,” Ms. Crawley says, “I’m delighted with the opportunity to show how much progress we’ve made in managing the risks of the University.”

“Greg, how do you suggest we illustrate the Department’s performance over the last three years,” Evonne asks, “we only have 15 minutes for the entire presentation.”



Billabong University Case Study

AURIMS
CONFERENCE 2009

“Well we have been working on developing an internal report to illustrate the financial impact of our decision to take some large self insured retentions two years ago,” Greg says. “Maybe we can expand on that to show changes in the Total Cost of Risk for the whole department during the last three years.”

“That’s a great idea ,” says Evonne. “Lets get started. I will need the report by the end of the week.”

“Rod, you have come to me with a recommendation to self insure or Workers’ Compensation,” says Ms. Cawley. “I think it is a good idea and I think now is the time to put the concept in front of the committee. Can you prepare a report that illustrates the financial impact if this recommendation?”

Let’s help Greg and Rod prepare their report using what we have learned about calculating TCOR.



Billabong University Case Study



- First, why do we want to measure the department's TCOR?
- What are the three major elements of the report Evonne is asking for?
- How do we measure the impact of the decision to “take some large self-insured retentions two years ago?”
- Would you want to use the findings in your TCOR study for benchmarking purposes with other institutions? If yes, why; if no, why not?
- If you choose to use your TCOR findings to benchmark against other Institutions, what factors need to be defined to assure a credible benchmarking study?



Billabong U

Total Cost of Risk Report



Exposure Metrics

	2006	% Change	2007	% Change	2008	% Change
TIV	\$1,300,000,000	0	\$1,400,000,000	7.7	\$1,500,000,000	15.4
Operating Expenses	\$400,000,000	0	\$450,000,000	12.5	\$500,000,000	25.0
Total Payroll	\$160,000,000	0	\$170,000,000	6	\$180,000,000	12.5
Full-Time Students	10,000	0	11,000	10	12,000	20.0
Full-Time Employees	3,750	0	4,000	6.7	4,250	13.0
Vehicles	200	0	215	7.5	220	20.0
Gross Square Footage	1,000,000	0	1,100,000	10	1,200,000	20.0
TCOR	2,690,000	0	2,537,000	(5.6)	2,910,000	8.1



Billabong U

2006



	Premium	Ultimate Losses	Risk Management Expenses	Cost of Capital	TCOR
Property	800,000	20,000	20,000	0	840,000
General Liability	625,000	0	30,000	0	655,000
Auto Liability	125,000	0	15,000	0	146,000
Workers' Compensation	800,000	0	50,000	0	850,000
ELL	160,000	30,000	15,000	0	205,000
Billabong U TCOR	2,510,000	56,000	130,000	0	2,690,000



Billabong U 2007



	Premium	Ultimate Losses	Risk Management Expenses	Cost of Capital	TCOR
Property	560,000	100,000	50,000	5,000	715,000
General Liability	350,000	150,000	75,000	5,000	580,000
Auto Liability	125,000	0	15,000	0	140,000
Workers' Compensation	830,000	0	50,000	0	880,000
ELL	115,000	75,000	30,000	2,000	222,000
Billabong U TCOR	1,980,000	325,000	220,000	12,000	2,537,000



Billabong U 2008



	Premium	Ultimate Losses	Risk Management Expenses	Cost of Capital	TCOR
Property	595,000	300,000	52,000	5,000	952,000
General Liability	350,000	300,000	75,000	5,000	730,000
Auto Liability	65,000	25,000	30,000	3,000	123,000
Workers' Compensation	870,000	0	52,000		927,000
ELL	115,000	30,000	30,000	3,000	178,000
Billabong U TCOR	\$1,995,000	\$655,000	\$239,000	\$16,000	\$2,910,000



Workers' Compensation Option to Self Insure



2008 Payroll 170,000,000

2009 Payroll 175,000,000

	2008	2009 Insured	2009 Self Ins. 50% CF	2009 Self Ins. 75% CF
Premium	875,000	870,000	80,000	80,000
Risk Management Expense	52,000	52,000	150,000	150,000
P.V. Expected Losses 50% CF	0	0	450,000	0
P.V. Expected Losses 75% CF	0	0	0	600,000
Cost of Capital	0	0	15,000	15,000



Measuring Total Cost of Risk

AURIMS
CONFERENCE 2009

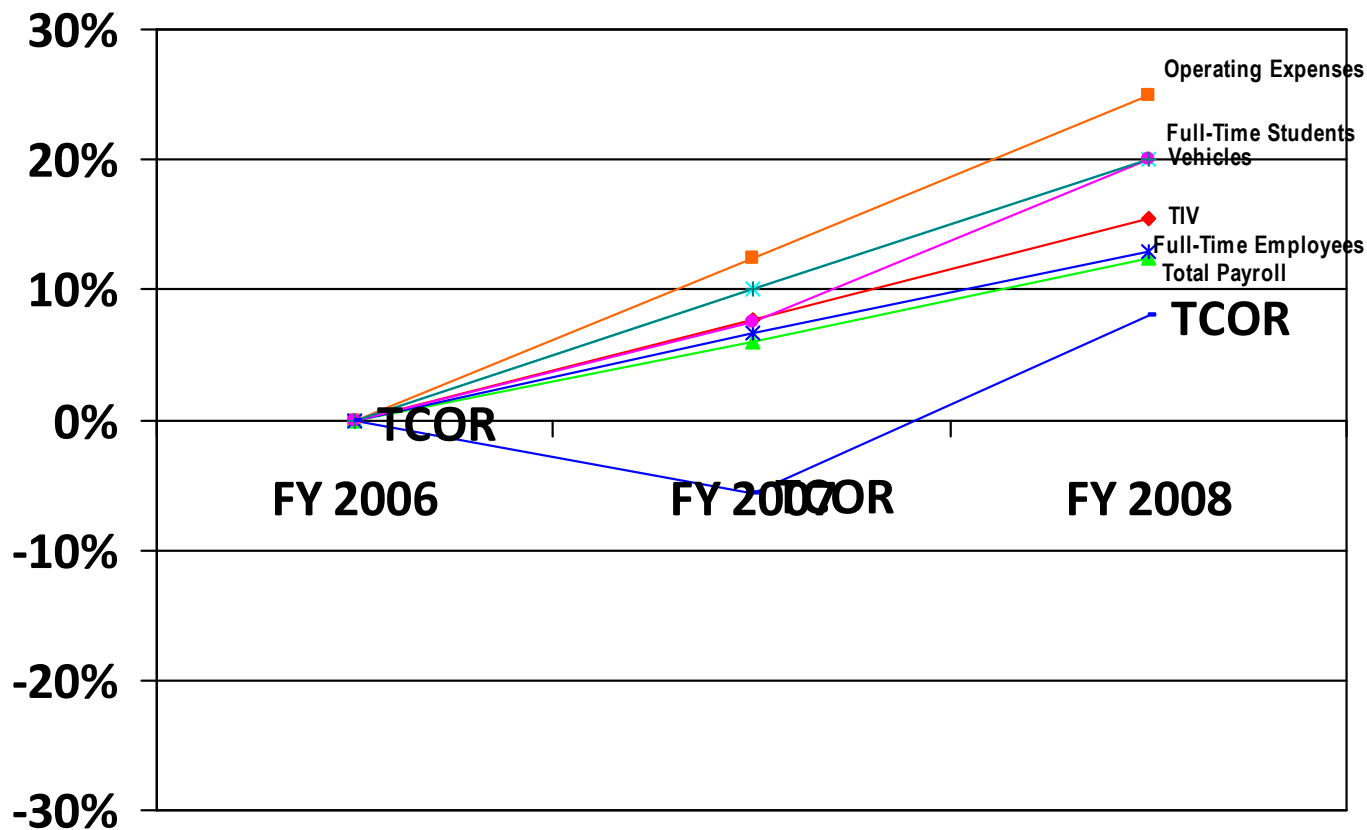
Solutions



Total Cost of Risk Compared to Exposure Metrics



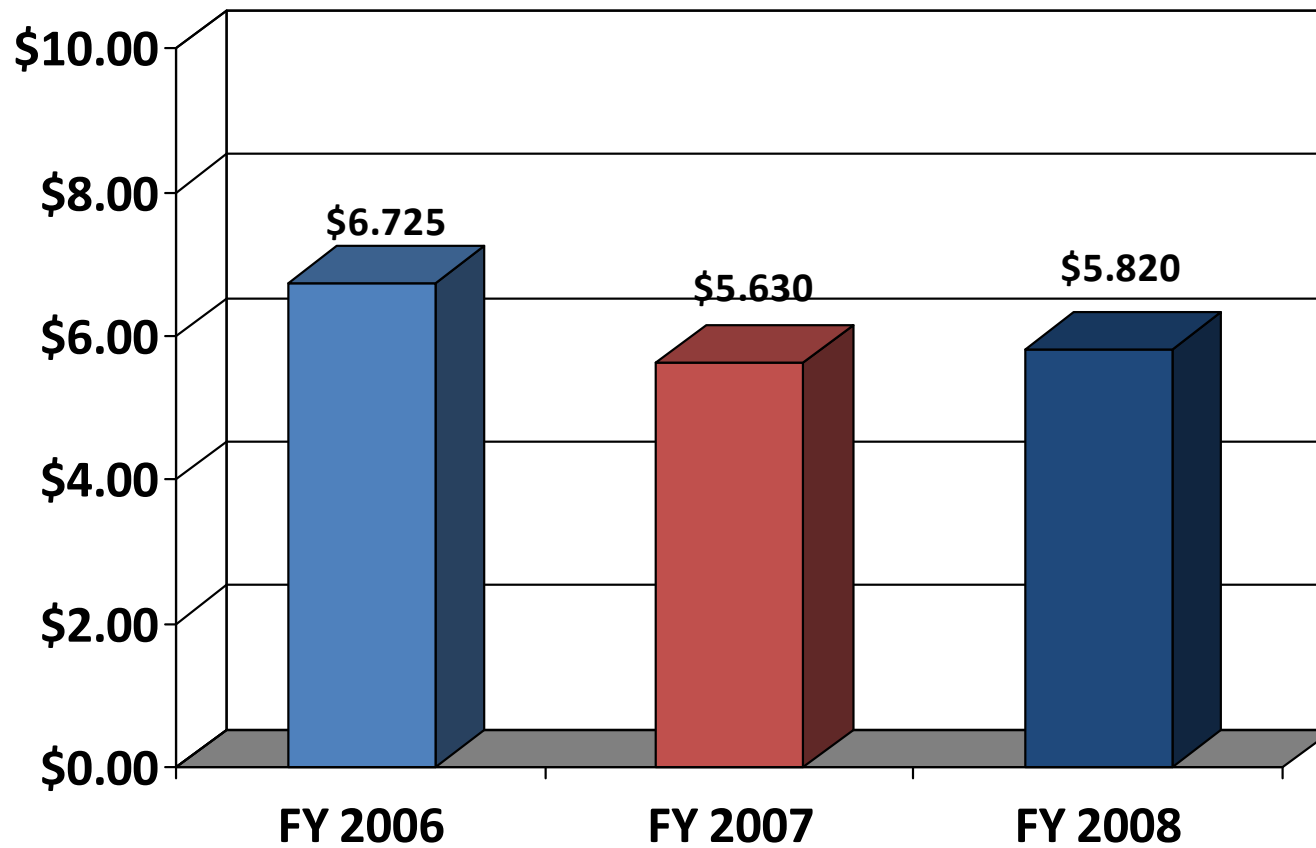
Percent Change over Baseline Year (FY2006)



Total Cost of Risk



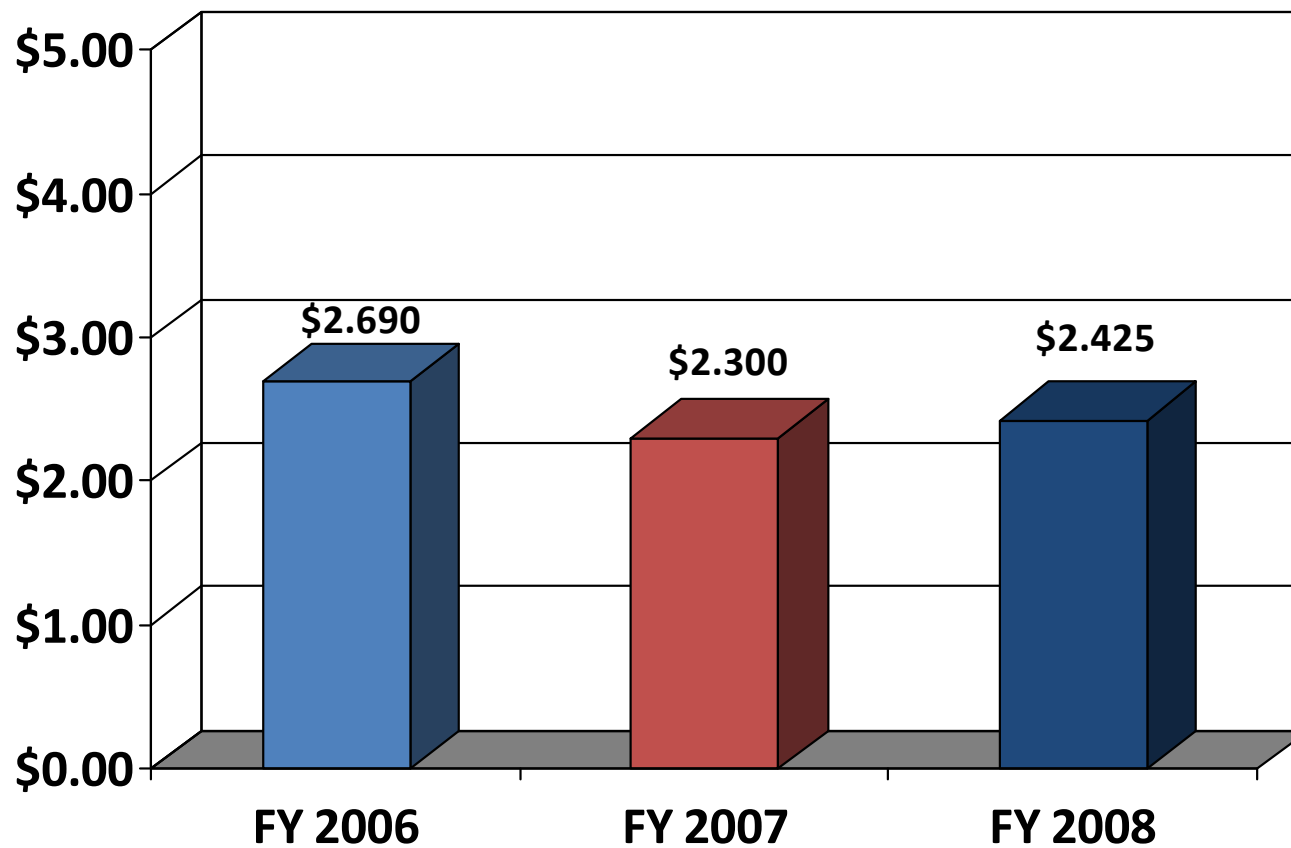
1000 Gross Operating Expenses



Total Cost of Risk

AURIMS
CONFERENCE 2009

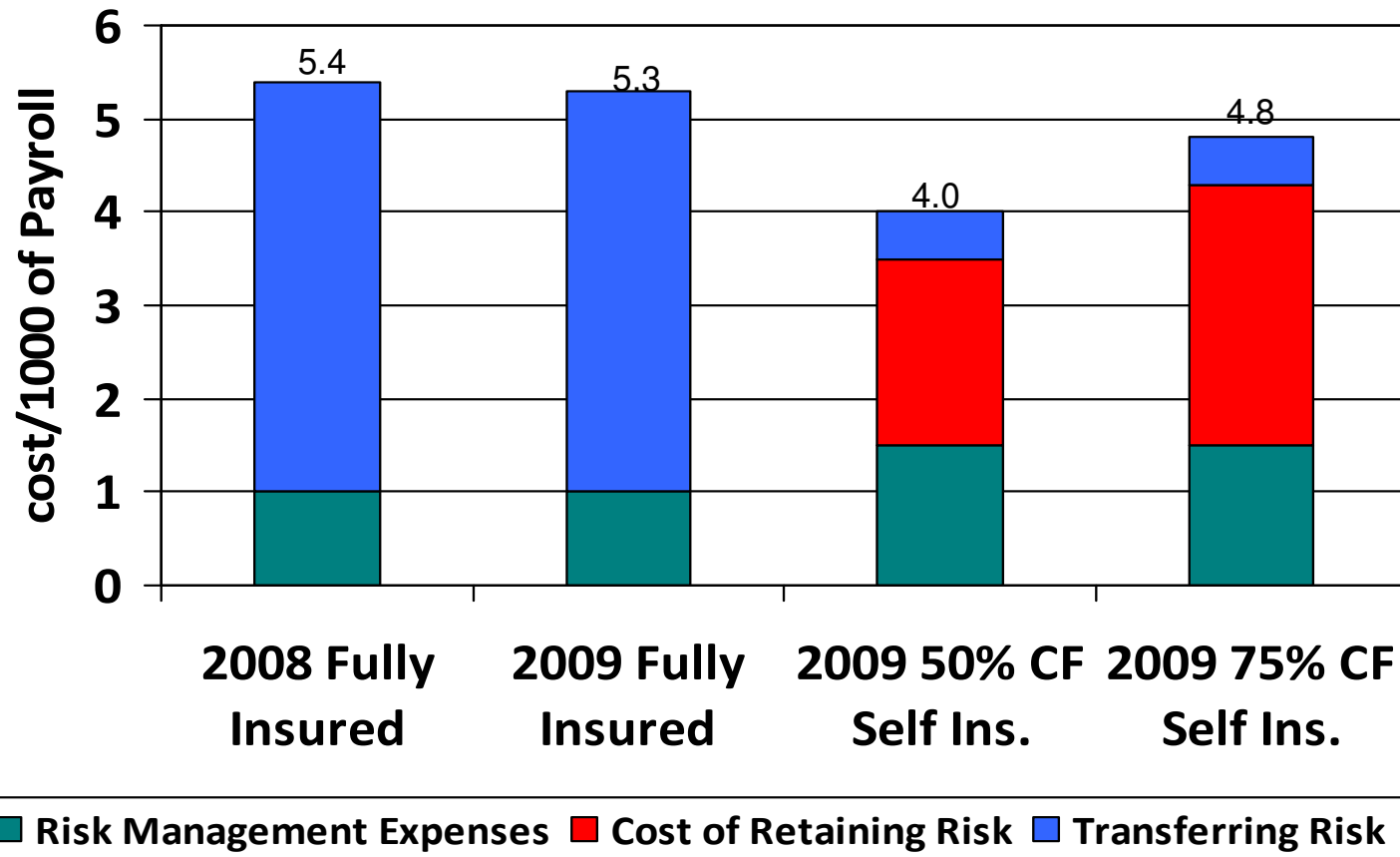
Sq. Feet



Billabong University Case Study



Workers' Compensation Illustration of 2009 Options



Support Material



- Enterprise Risk Management Integrated Framework – Committee of Sponsoring Organizations, Treadway Commission (COSO)
- *Risk Assessment Made Simple*, by Sayer Vincent
- *Measuring the Total Cost of Risk*; University Risk Management and Insurance Association, November 2008
- *Risk Alert, an Executive's Guide to Risk Management and Total Cost of Risk*, October 2004
- *Measuring the Cost of Risk*, by Joanne Summer; Business Finance Magazine, March 1, 2006
- *Beyond Traditional Risk Management*, by Steven NyBlom; Published by Warren, McVeigh & Griffre, Inc., May/June 2008



TCOR by Program Area



Total Cost of Risk Data by Program Area for Upper Falls University and Percentage from Baseline Values, FY2006-FY2008

Program Area	FY2006	% Increase Over FY2006	FY2007	% Increase Over FY2006	FY2008	% Increase Over FY2006
Total Gross Payroll						
Operating Expenses						
Student Enrollment						
Full-Time Employees						
Gross Square Footage						
Property Values						
Vehicles						
Laboratory Square Footage						
Research Funding						
Risk Management Budget						
EH&S Budget						
Total Cost of Risk						

