



Measuring the *Effect of Risk* on Your Business

Using ARQ™ to Measure Enterprise-wide Total Cost of Risk™

WHAT IS “ENTERPRISE-WIDE TOTAL COST OF RISK™” (ETCOR™)?

FORMALLY DEFINED

“The aggregate total of all net costs incurred by an enterprise, intentionally or unintentionally, as a direct or consequential result of the existence of *risk*.”

-Gary Bierc
ARQ™ Inventor

ETCOR™ SIMPLY STATED

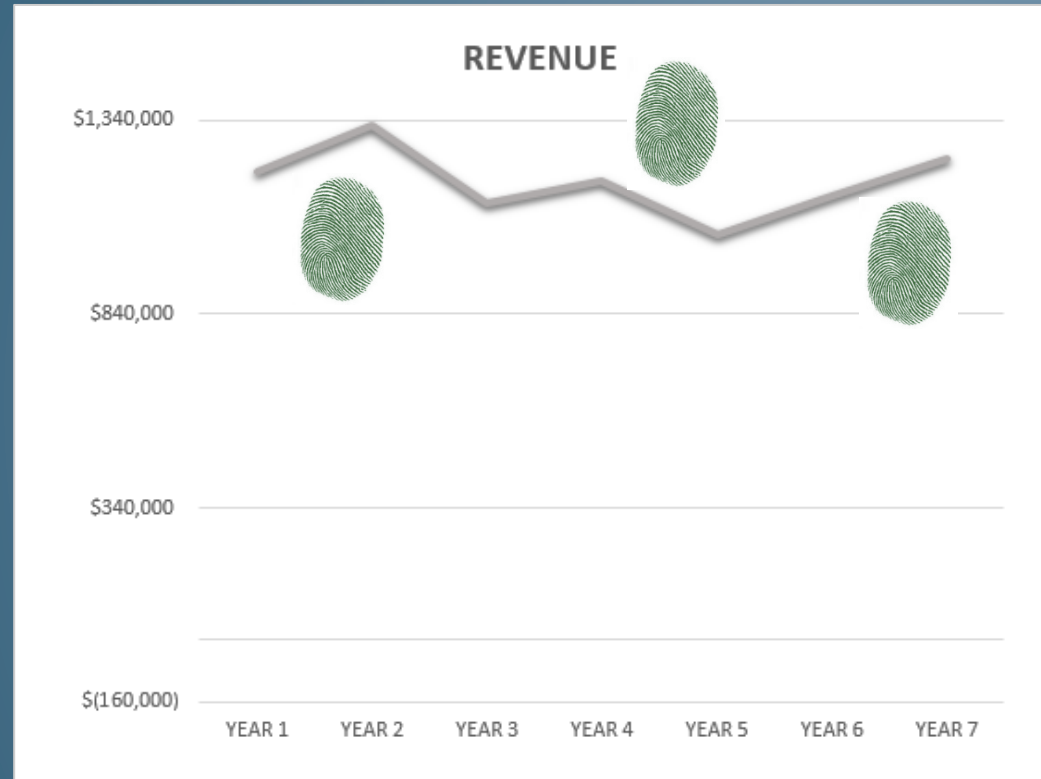


“All net costs that exist or are incurred because *risk* exists.”

–Gary Bierc
ARQ™ Inventor

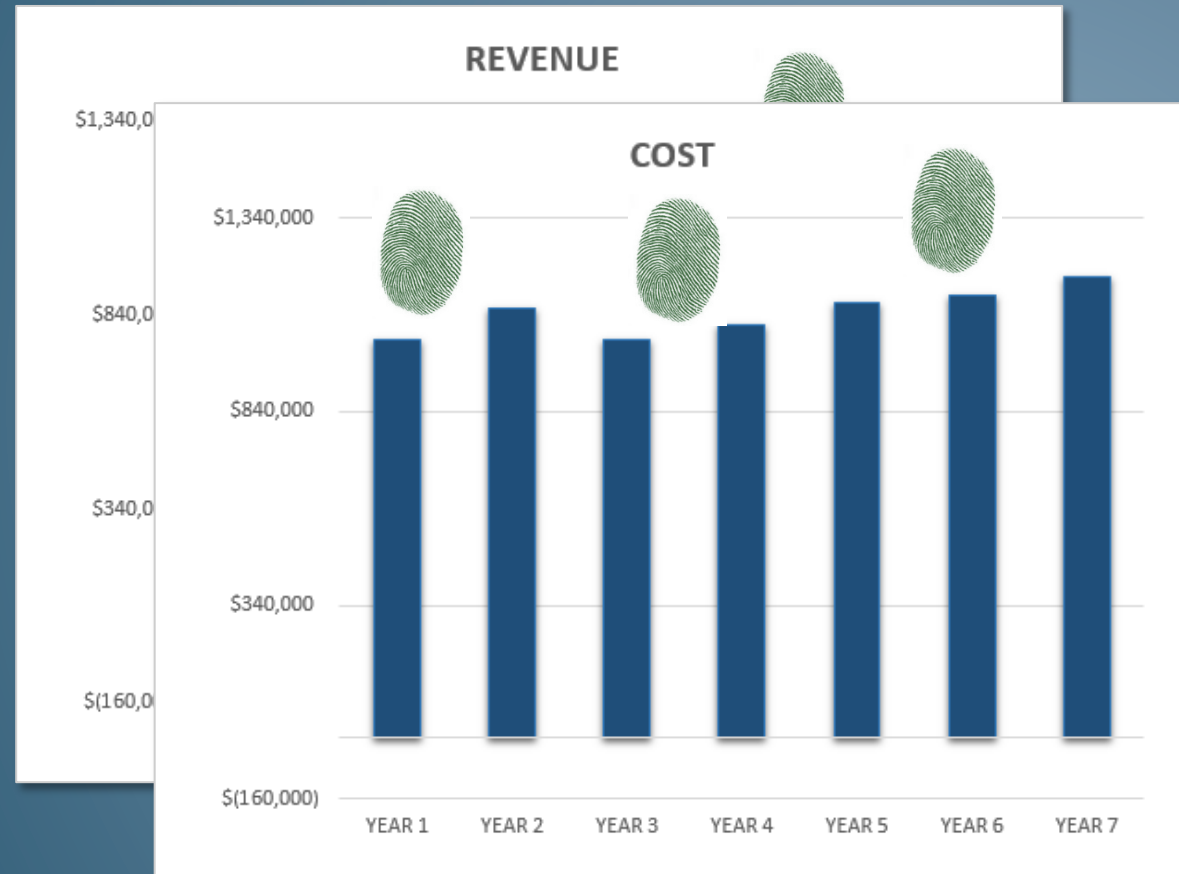
COR: THE FINGERPRINTS OF RISK

RISK CAN AFFECT EVERY ASPECT OF YOUR BUSINESS...



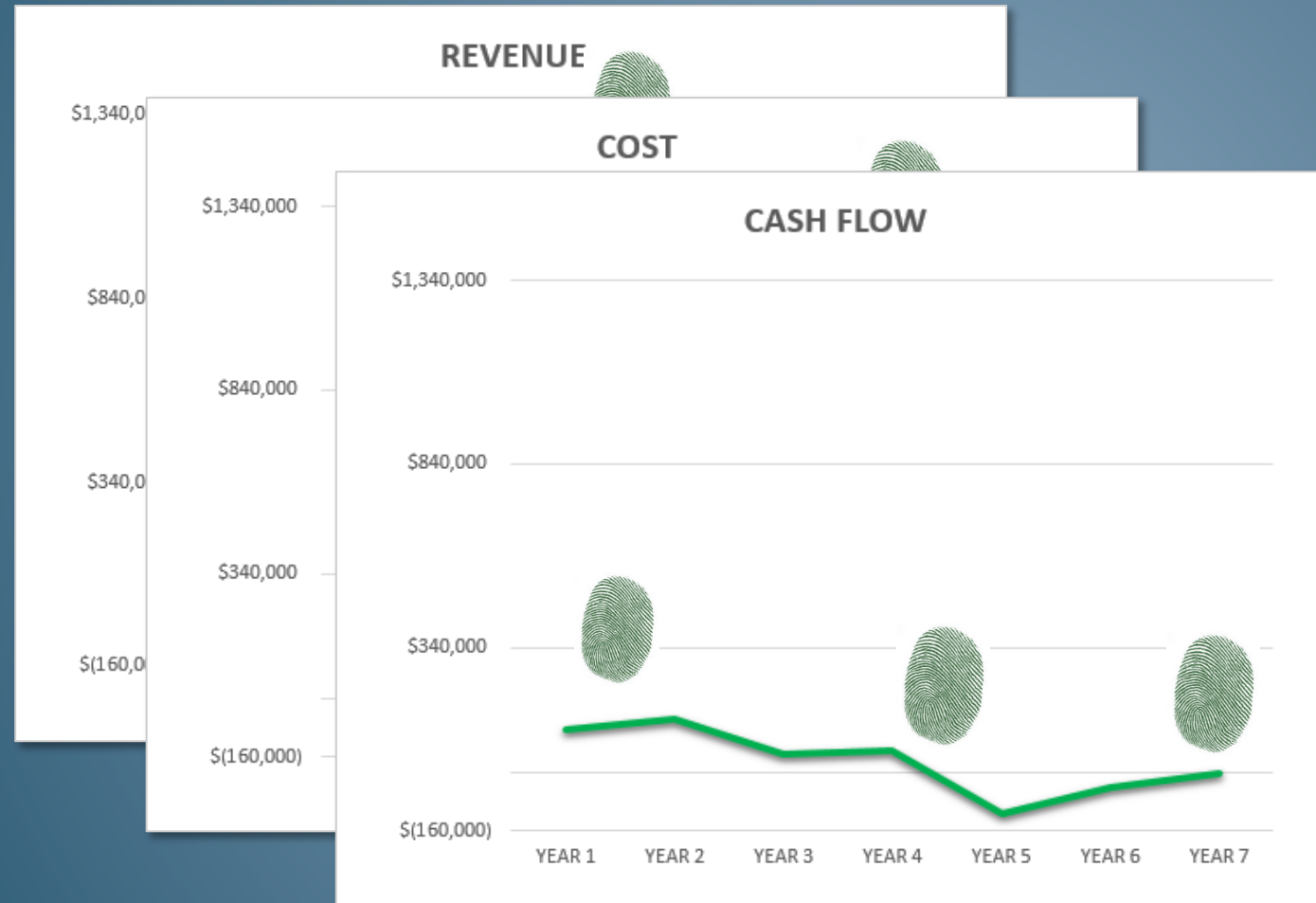
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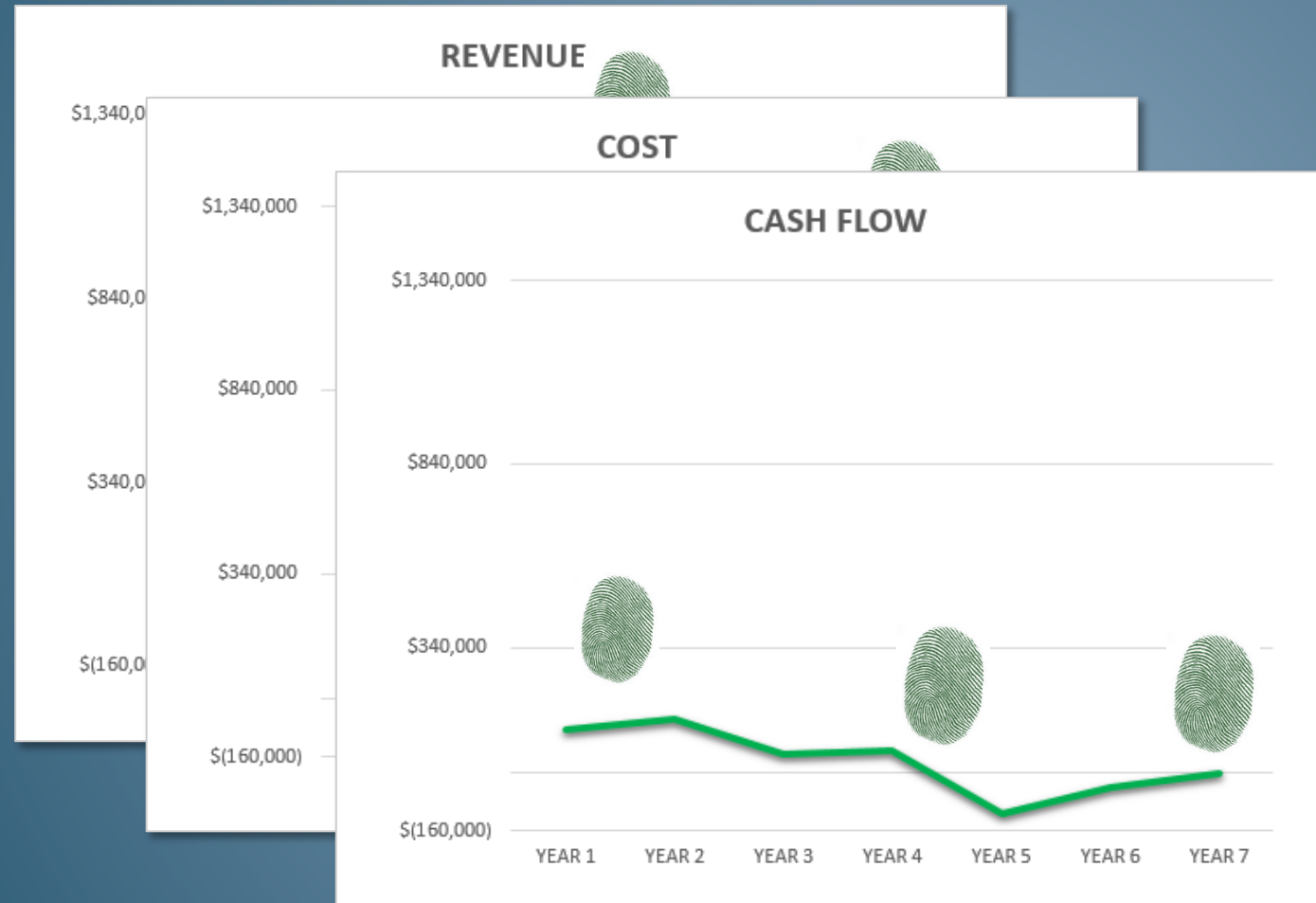
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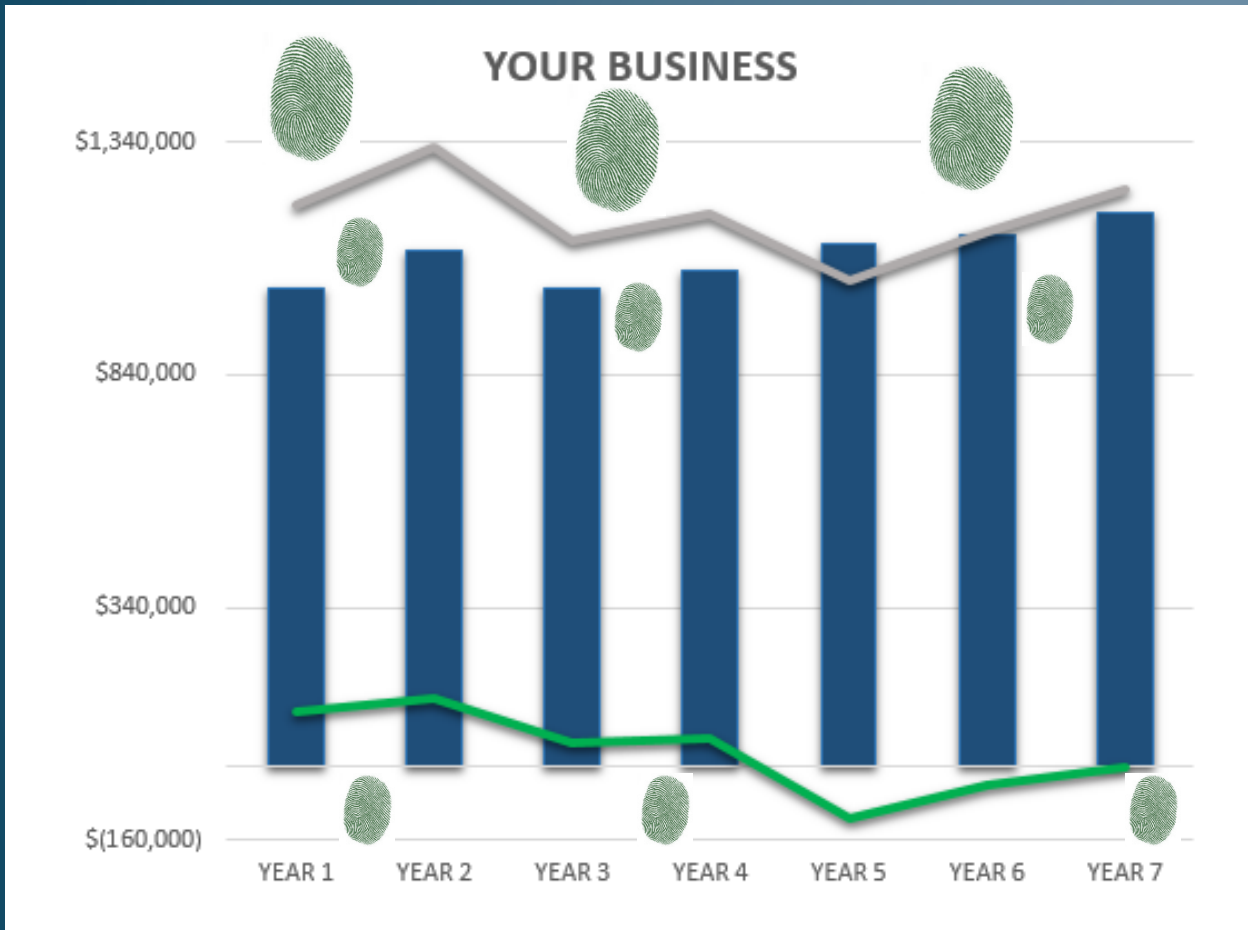


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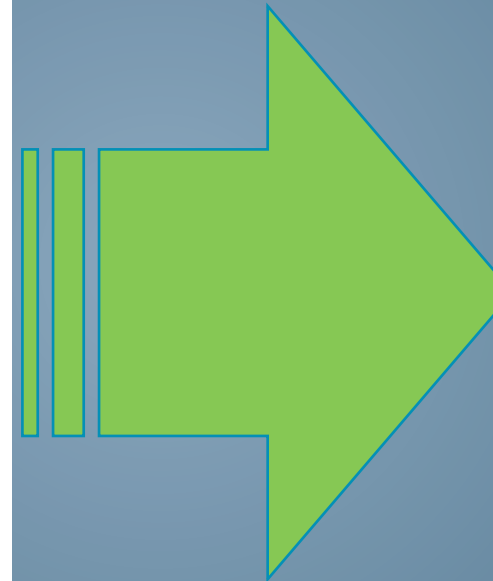


COR: THE FINGERPRINTS OF RISK



COR: THE FINGERPRINTS OF RISK

...“COST OF RISK” CAPTURES THEM ALL



Risk Creates Cost in 3 Ways:

1. The Cost Incurred to Manage Risk

- a. Risk Treatment or Risk Response Costs
- b. i.e., Mitigation, Elimination, Prevention or Controls Cost

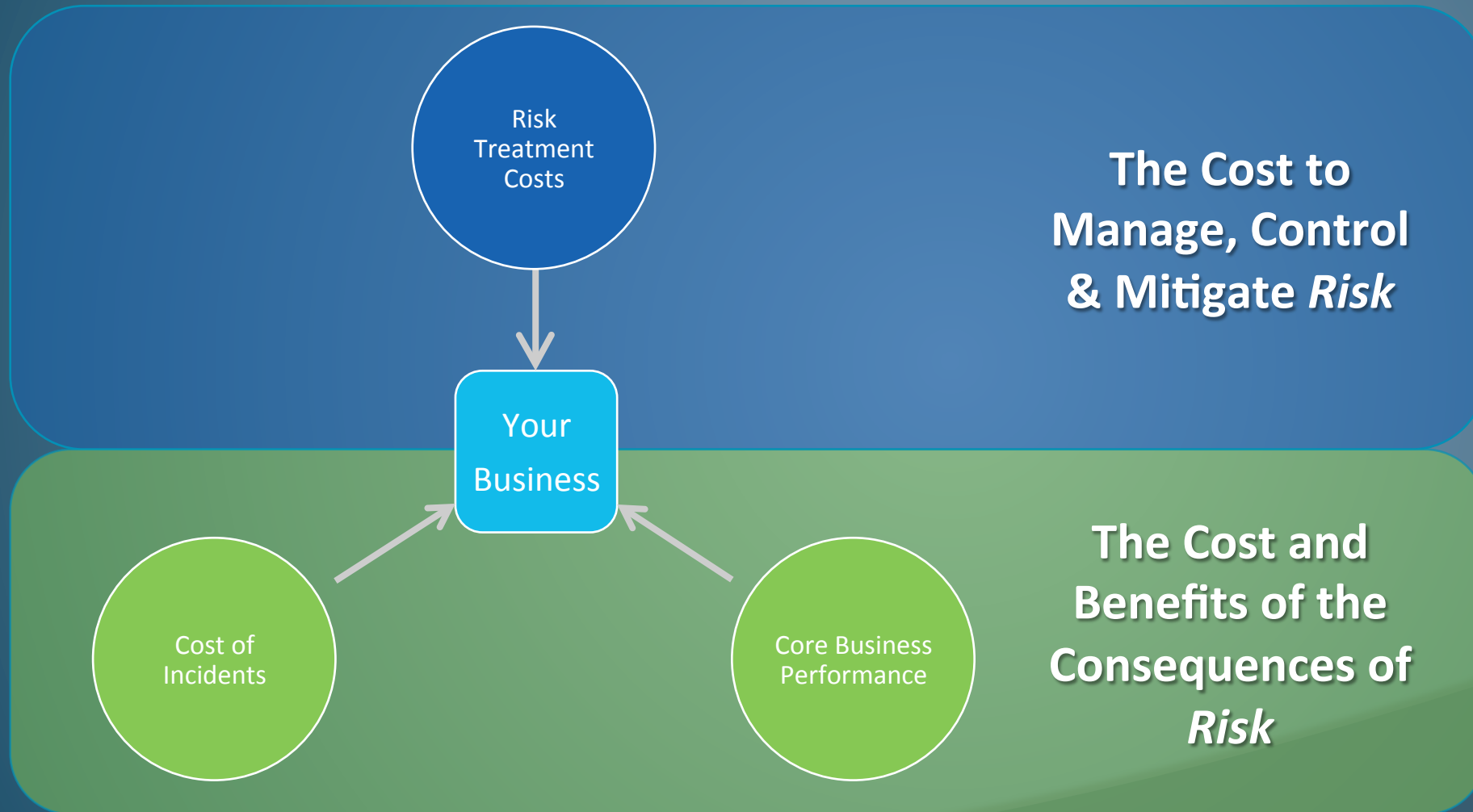
2. Cost of Incidents or Consequential Losses

- a. Direct consequential impacts of risk
- b. Unforeseen cost increases or damages

3. Core Business Performance

- a. The net sum total of the portfolio of risk events which have determined the final performance outcome of your core business

RISK AFFECTS YOUR BUSINESS IN 3 WAYS, BUT IN 2 FORMS



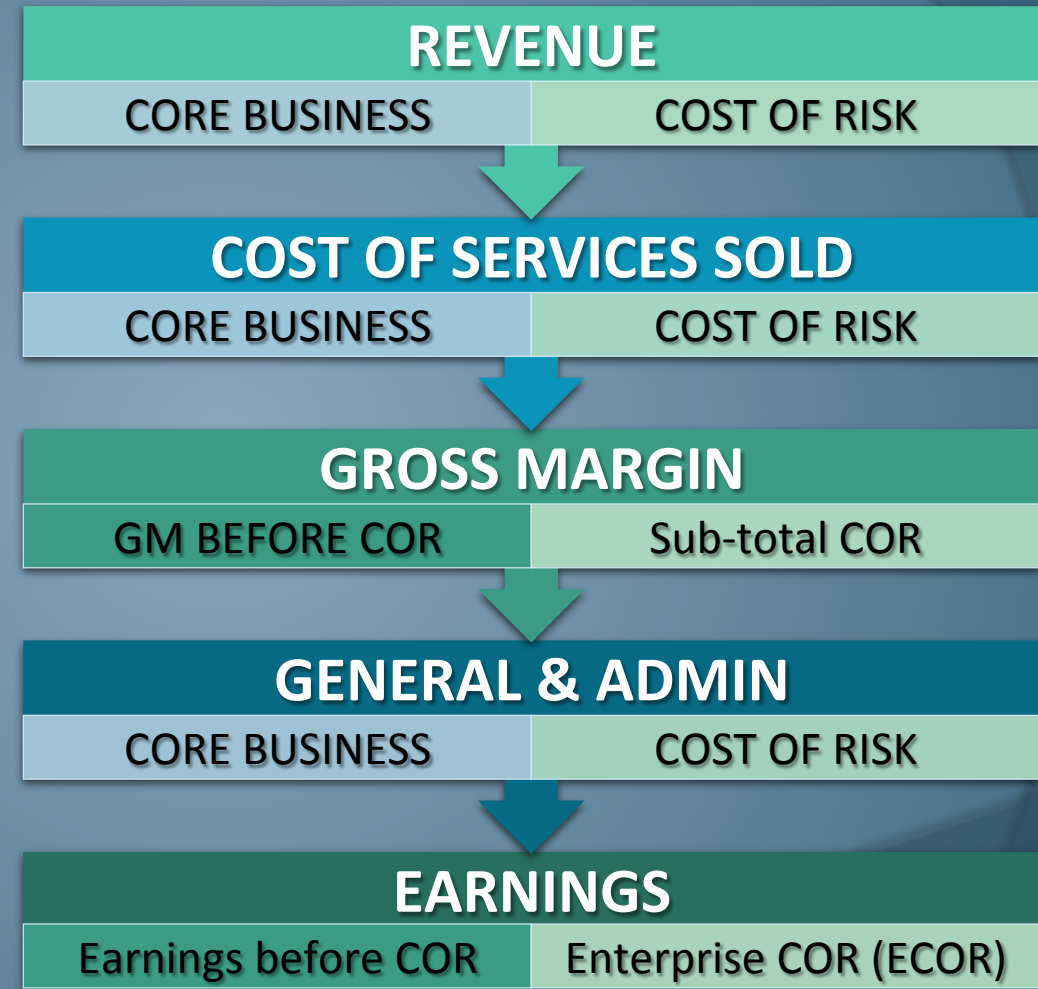
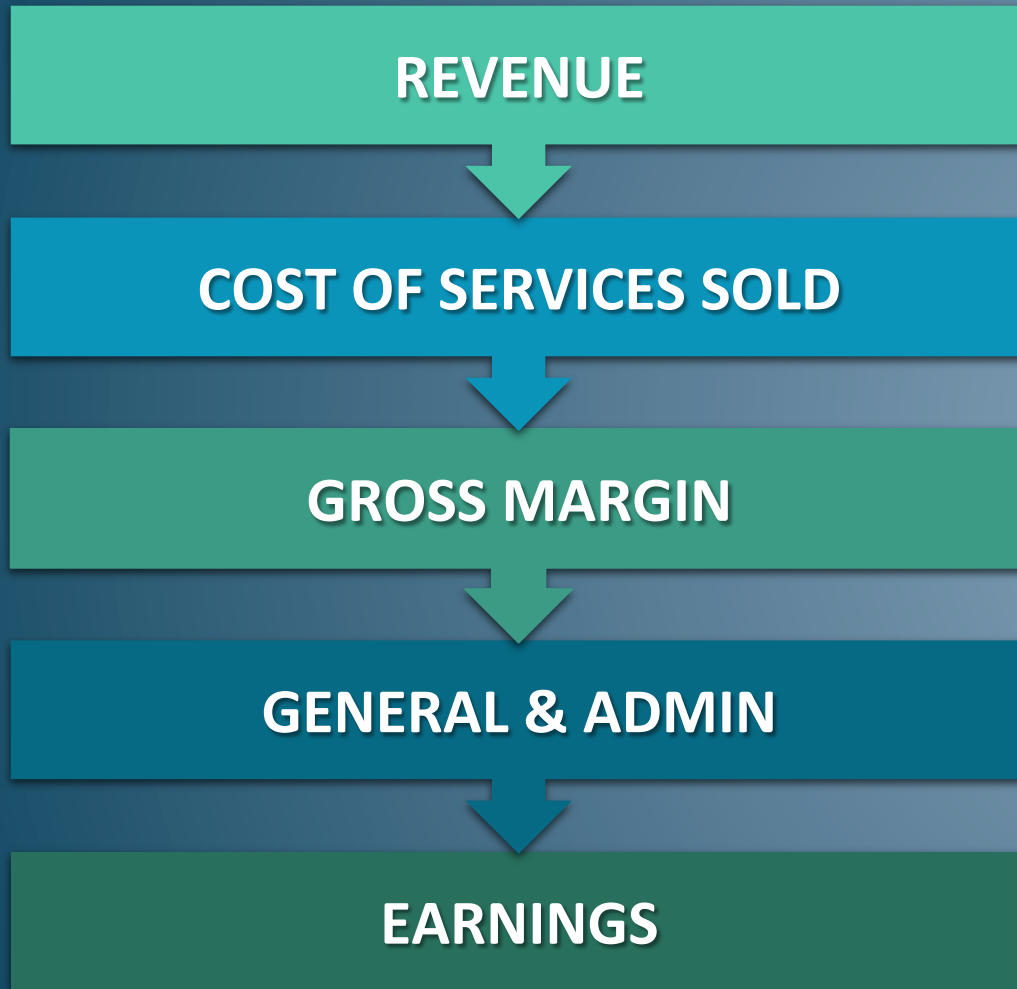
WHAT DOES “COST OF RISK” (COR) MEASURE?



- The net burden of *risk* on your business – the net and aggregate cost of the trade-off decisions made by your company regarding *risk*.
 - In other words, the trade-off decisions between choosing to spend money to manage risk or do nothing and just hope for the best.
- The financial relationship between your business performance and your risks & risk management actions.
- The Value of ERM – you can definitively measure the return on your inherent risk management dollar.

BUSINESS PERFORMANCE

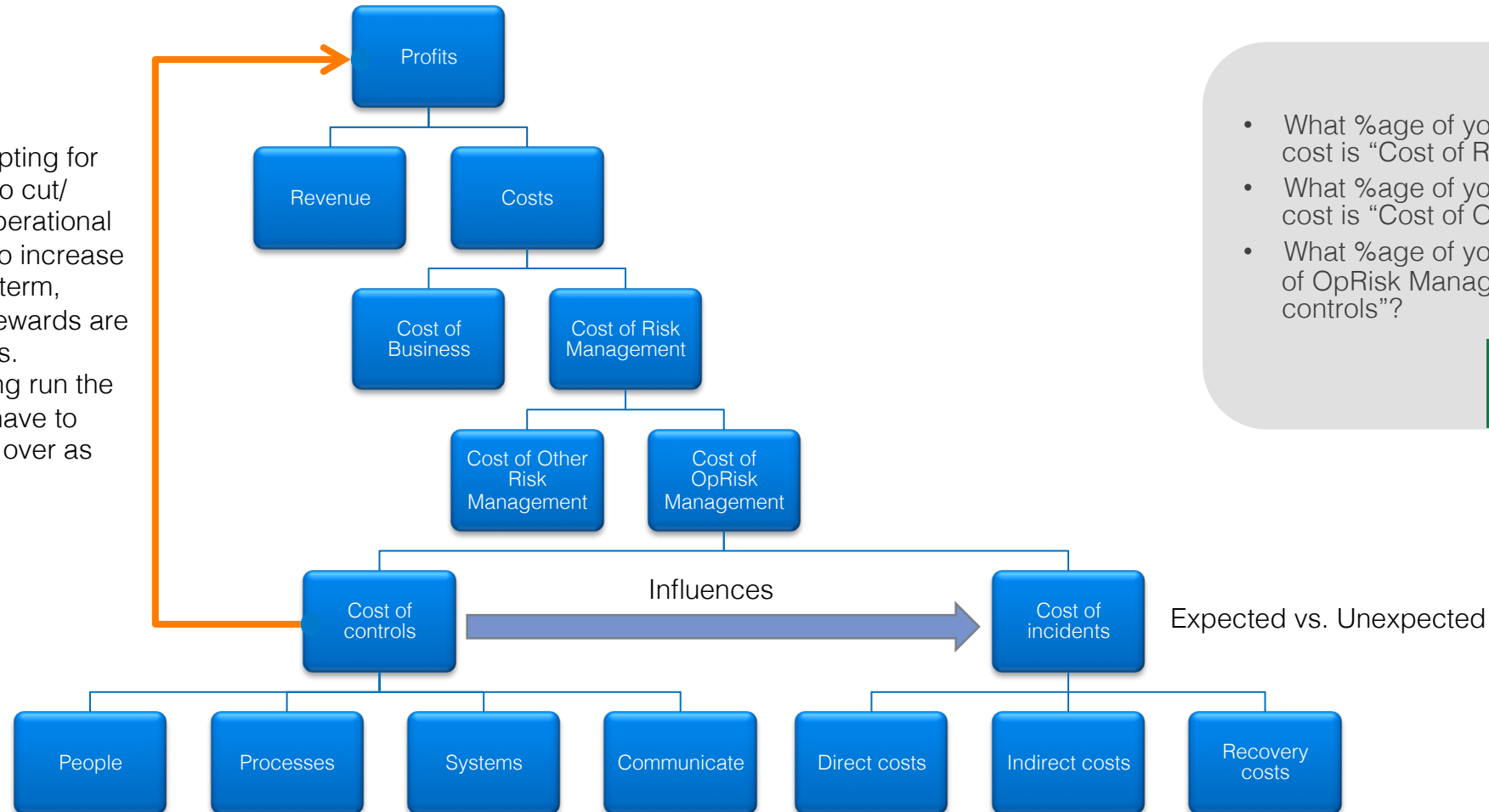
Traditional View vs. “Lens of Risk”(COR)



ISOLATING “*COST OF RISK*” FROM THE COST OF DOING BUSINESS



It may be very tempting for senior executives to cut/ minimise cost of operational risk management to increase profits in the short-term, especially if their rewards are tied to such metrics. However, in the long run the organisation may have to spend many times over as cost of incidents.



- What %age of your organisation's overall cost is "Cost of Risk Management"?
- What %age of your organisation's overall cost is "Cost of OpRisk Management"?
- What %age of your organisation's "Cost of OpRisk Management" is "Cost of controls"?

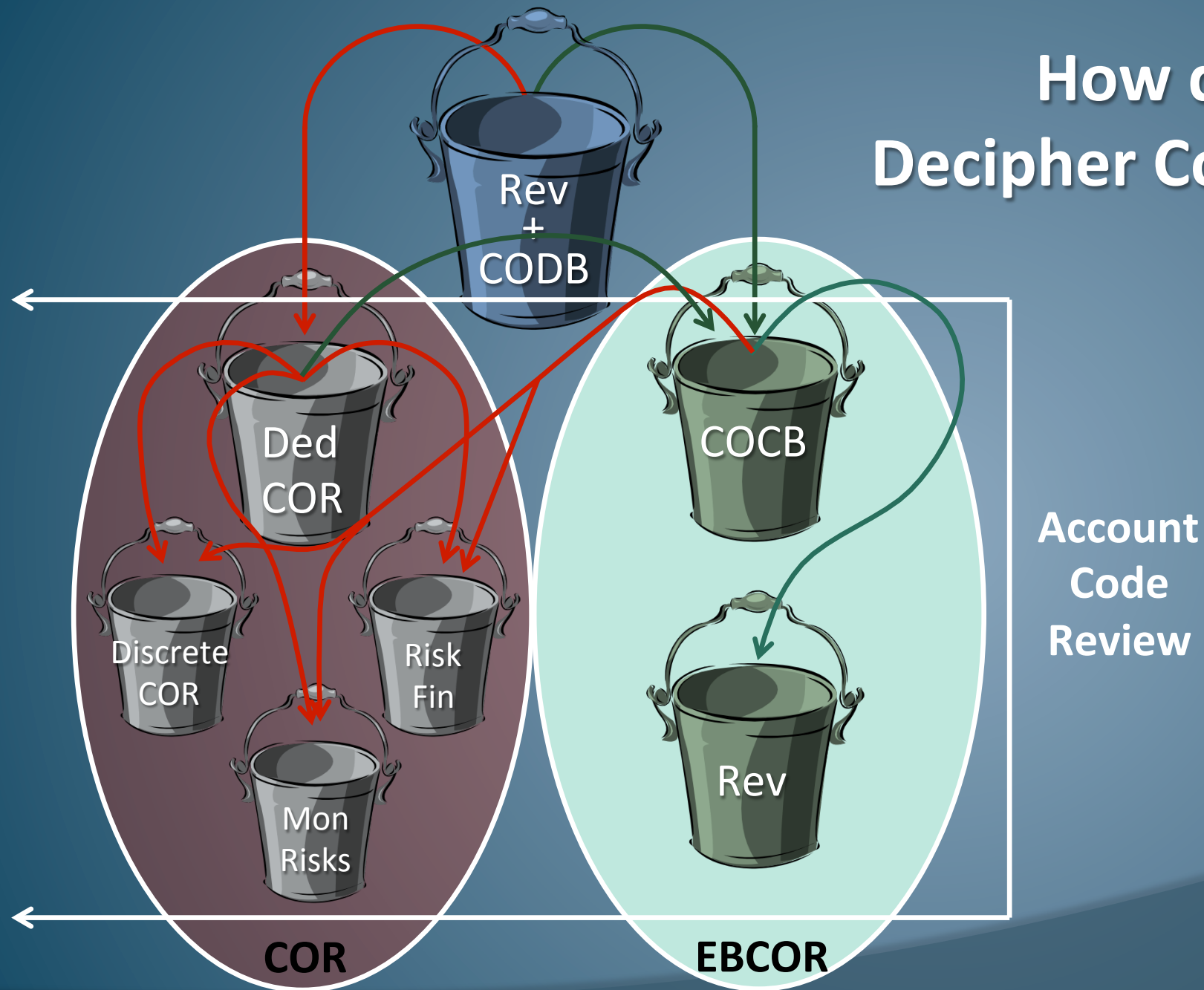


Aggregate Risk Quantification™ (ARQ™)

- USPTO Patent #: **US7809634 B1**
- Invention Name:
Enterprise-wide total cost of risk management using ARQ
- Inventor: Gary J. Bierc
- ABSTRACT OF INVENTION – “The invention relates to the business disciplines known as Enterprise Risk Management, or ERM and with the addition of this invention, Strategic Risk Management, or SRM. It specifically relates to the quantification or measurement and validation of the historical impact of all risks and risk management activity on an organization. The invention provides a methodology to measure, baseline, track and benchmark the total cost of all historical risk events, including both positive and negative events, and risk-related activities that impact the earnings of an organization.”
- Learn more: <https://www.google.com/patents/US7809634>



How does ARQ™ Decipher Cost of Risk?



Example of report highlighting quarterly changes in cost of controls for operational risk categories

	People			Processes			Systems			Communicate			Total Cost of OpRisk Controls		
Risk Categories	Q1-2017	Q2-2017	Change	Q1-2017	Q2-2017	Change	Q1-2017	Q2-2017	Change	Q1-2017	Q2-2017	Change	Q1-2017	Q2-2017	Change
Business Process Execution Failures	1,663,200	1,862,784	12%	1,995,840	2,395,008	20%	2,661,120	2,395,008	-10%	332,640	329,314	-1%	6,652,800	6,982,114	5%
Technology Failures & Damages	2,772,000	3,049,200	10%	1,995,840	1,397,088	-30%	2,661,120	2,528,064	-5%	332,640	385,862	16%	7,761,600	7,360,214	-5%
Improper Business Practices	2,494,800	1,995,840	-20%	1,496,880	1,721,412	15%	1,995,840	2,015,798	1%	249,480	294,386	18%	6,237,000	6,027,437	-3%
Internal Theft & Fraud	166,320	216,216	30%	598,752	808,315	35%	798,336	878,170	10%	99,792	113,763	14%	1,663,200	2,016,464	21%
External Theft & Fraud	1,108,800	776,160	-30%	997,920	898,128	-10%	1,330,560	532,224	-60%	166,320	161,330	-3%	3,603,600	2,367,842	-34%
Third-party Risks	3,326,400	1,995,840	-40%	1,496,880	2,245,320	50%	1,995,840	2,594,592	30%	249,480	281,912	13%	7,068,600	7,117,664	1%
Employment Practices & Workplace Safety	554,400	665,280	20%	399,168	459,043	15%	532,224	590,769	11%	66,528	72,516	9%	1,552,320	1,787,607	15%
Damage to Tangible & Intangible Assets	1,386,000	1,524,600	10%	997,920	1,047,816	5%	1,330,560	1,437,005	8%	166,320	176,299	6%	3,880,800	4,185,720	8%
Total Cost of OpRisk Controls	13,471,920	12,085,920	-10%	9,979,200	10,972,130	10%	13,305,600	12,971,629	-3%	1,663,200	1,815,383	9%	38,419,920	37,845,063	-1%

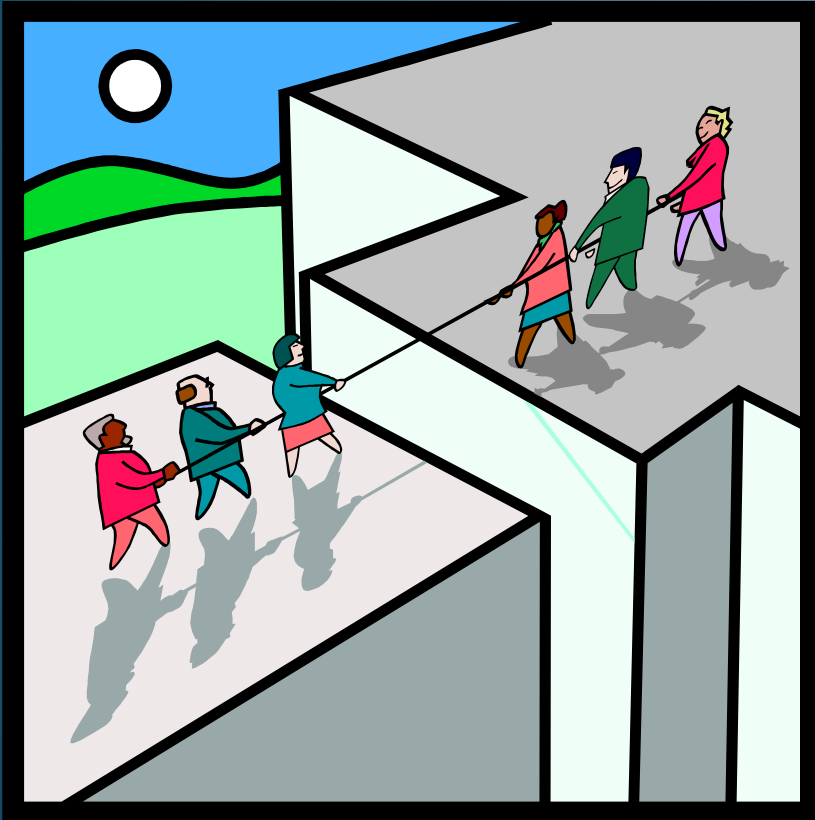
- For more details refer to a patented methodology developed by Gary Bierc (email: gbierc@rpm3solutions.com or visit www.rpm3solutions.com)
- Watch interview with Gary Bierc at <https://www.youtube.com/watch?v=MjBEySdw9R4>

Why is COST OF RISK important?



IT'S ALL ABOUT THE "Q"!!

WHAT MAKES THIS TYPE OF QUANTIFICATION SO CRITICAL?



- Essential, yet commonly overlooked, Business Intelligence that points to hidden savings, and growth opportunities
- Prevents cost cutting errors – COR operates differently than the general cost of doing business.
 - COR reflects the inherent cost resulting from real “trade-off” decisions made about risk.
- Measures ERM performance
- Reveals how risk assessment and risk management is a critical component to successful strategic planning and execution- \$\$\$

Cost of Risk – Why now?

- The world is more risky now than ever before...
- The “Cost of Risk” (COR) on business is reaching staggering levels – 20%-50% of Rev
- Quantifying, managing & optimizing COR is now **critical** to be competitive!



Key Strategic Benefits of “Cost of Risk”



1. Reveals previously unseen correlations and relationships between your cost structure and company performance
2. Provides knowledge and insights into your company's performance in advance of conventional financial reporting (KPI)
3. Quantifies your company's risk appetite and tolerances in simple dollars terms
4. Establishes definitive metrics upon which to measure your overall risk management effectiveness across the enterprise

A Real-life Application of ARQ Technology™

Edit STEP 3, Responsibility Center Decipher - MIS code(080.961.840)

Decipher Questions Account Details Instruction Attachments Workflow History Log

? Questionnaire

DECIPHER Decision

Number	Question	Answer
FIRST	Make a DECIPHER decision. ?	COR
THEN	Explain your "COR" Decipher decision. ?	Costs related to the financial crime risk management team.
NOW	If you chose "Must Allocate", enter the COR %. ?	
AND	IF REQUIRED, select the Individual that must Review and Approve your Decipher decision. ?	

Risk Category Assignment & Allocation (COR Only)

Number	Question	Answer
ALLO?	Do you need to ALLOCATE COR to more than 1 Risk? If NO, assign one category only in RISK 1 below. ?	<input checked="" type="radio"/> Yes <input type="radio"/> No
RISK 1	Assign a Risk Category. ?	External Fraud Risk
% 1	% to be Allocated to Risk 1. (ONLY if Allocating) ?	70
RISK 2	Assign a 2nd Risk Category. (ONLY if Allocating) ?	Internal Fraud Risk
% 2	% to be Allocated to Risk 2. (ONLY if Allocating) ?	30
RISK 3	Assign a 3rd Risk Category. (ONLY if Allocating) ?	

Workflow Comment

Change COR Decipher Cancel

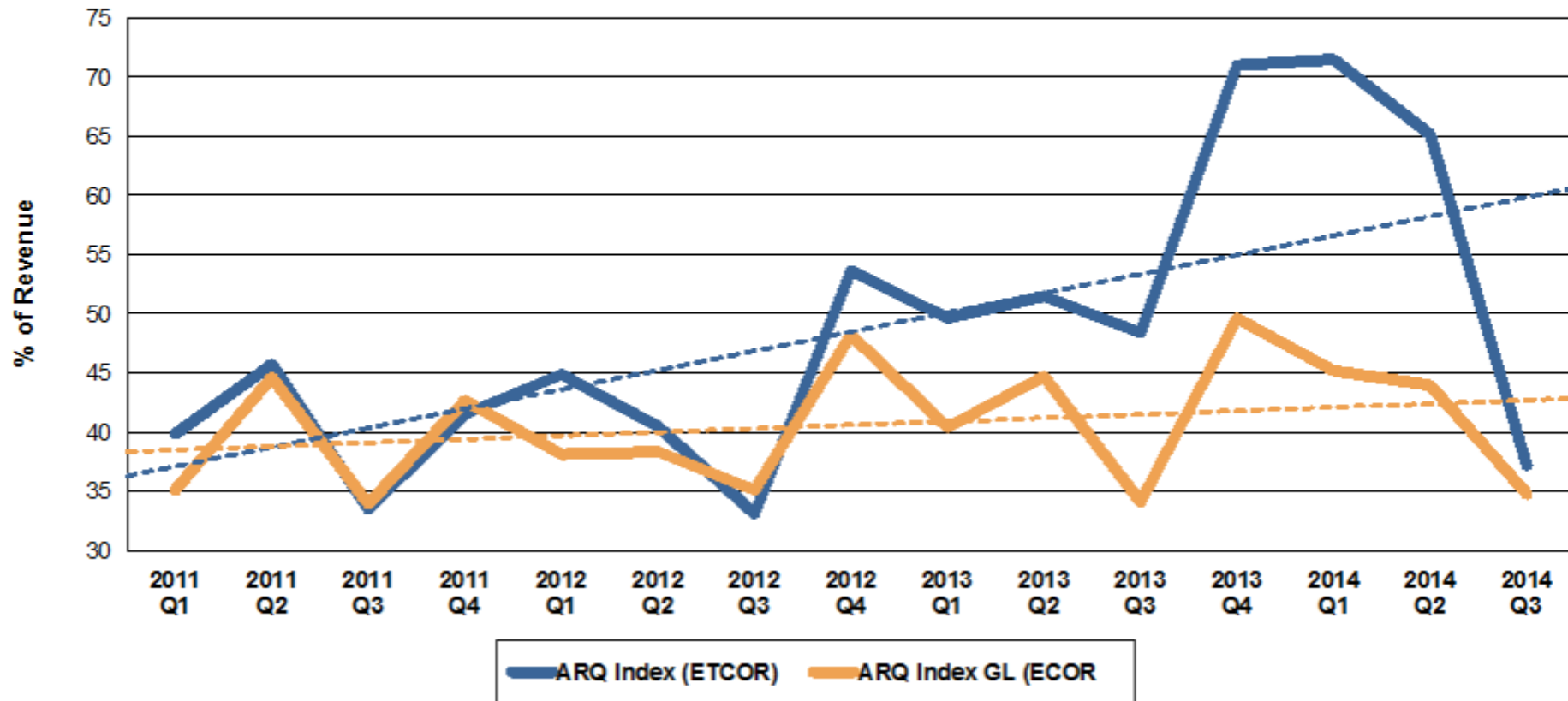
ARQ
Technology™
enables you to
decipher your
Cost of Risk
easily and
systematically.

The system tracks and trends your results over time for consistent analysis and accurate interpretation.

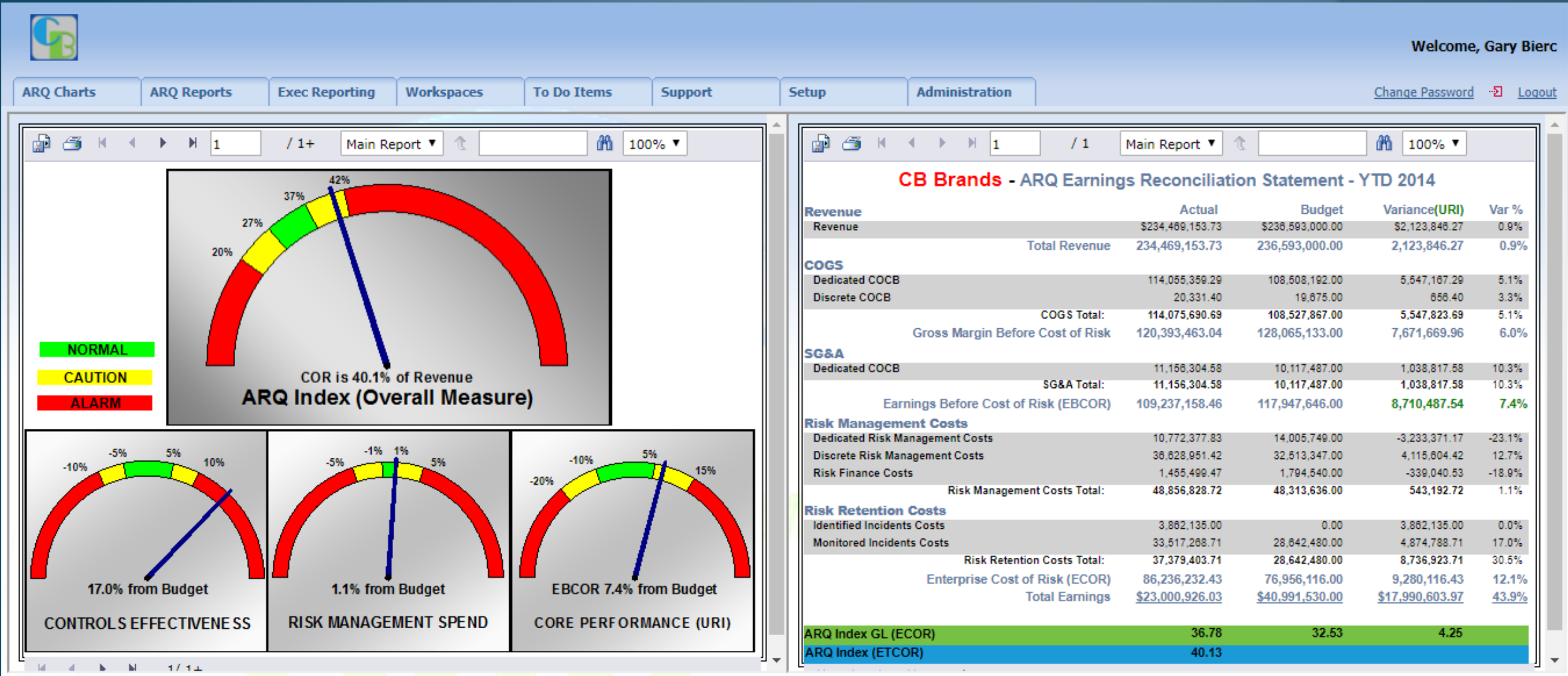
ALL Companies

ARQ Index Analysis

Time Period: Quarterly



System dashboard summarizes your results and provides drill-down.



For more information, contact:

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