

P&G Associates



What's your **Risk**?

# A Practical Approach to Enterprise Risk Management

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# Today's Agenda

- I. Defining ERM
- II. Implementation Challenge
- III. Framework for Practical Implementation
- IV. Three Phases for Implementation
- V. Benefits of ERM

# Defining Enterprise Risk Management

## ERM - Confusion over what to measure and how

- Measuring the potential for loss of assets
- Measuring the potential for loss of future earnings and capital
- Measuring risks for accidental losses
- Strategic, operational risks

# Defining Enterprise Risk Management

## **COSO Definition:**

A process, affected by an entity's Board of Directors, management and other personnel, applied in a strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives

# Defining Enterprise Risk Management

## In search of the Definition of ERM

- How to apply the concept, in a practical way, to a community financial institution
- What is the benefit of developing one?

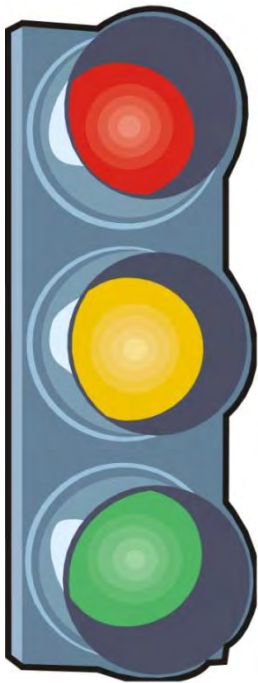


# Defining Enterprise Risk Management

In 1964, a Supreme Court Justice, having difficulty explaining pornography, simply said:

*“I can't explain it...but I know it when I see it.”*

# Defining Enterprise Risk Management



*A warning system*



# Defining Enterprise Risk Management

RED  
ALERT



# Defining Enterprise Risk Management

## Three Prong Approach

- Understanding our risks, internal and external environment
- Method to validate that the various processes and controls in place are working (*Is everyone doing what they are supposed to be?*)
- Method to ensure that the business strategy in place is generating the right results (*Is our strategy adequate?*)

# Hurdles for Implementation

- No clear regulatory guidance/road map
- COSO/BASIL standards that define measurement and quantification of risk are geared for large institutions
- Centralizing data needed to measure and identify risk is difficult
- Lack of Institution wide Support or Deemed Value of Implementation



# Framework for Practical Implementation

- Holistic Approach – Enterprise wide
- A mechanism that is understood and useful at the Board of Directors level



# Framework for Implementation

DEFINE



MEASURE



MANAGE

# Framework for Implementation

## Phase One

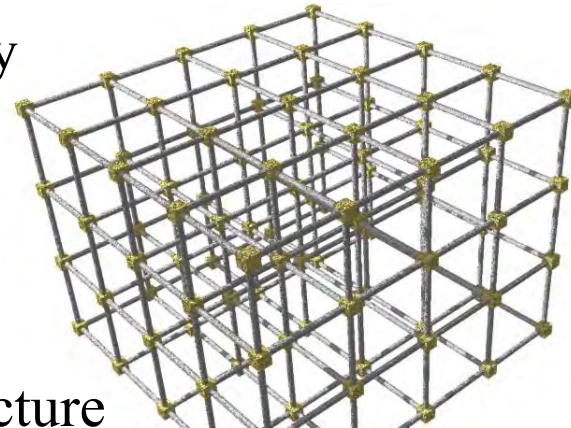
*Perform an Enterprise wide Assessment of:*

1. Internal Environment – Set Framework
2. Objective Settings – Identification of Risk Settings

# Framework for Implementation

## Phase One

1. Internal Environment – Set Framework
  - a) Document Risk Management Philosophy
  - b) Perform and Document Risk Culture Survey
  - c) Develop Risk Management Policy
    - Define Board Oversight
    - Identify Risk Committee
    - Identify CRO
    - Identify the Organization Structure



# Framework for Implementation

## Phase One – Internal Environment

Document Risk Management Philosophy:

- The Organization's risk culture
- How risks are identified and managed (i.e., written policies, performance indicators, meetings with managers, exception reports, etc.)

# Framework for Implementation

## Phase One – Internal Environment

Perform and Document Risk Culture Survey:

- How well does everyone in the organization understand:
  - Code of conduct
  - Work Environment
  - People/Resources
  - Risk Management
  - Access to Information





# Framework for Implementation

## Phase One – Internal Environment

Develop Risk Management Policy:

- Goals
- Roles and Responsibilities – Board, CEO, CRO, Management, Employees, Internal Audit, Compliance
- Definition of types of Risks – Inherent, Residual, Risk categories (i.e., Reputation, Market, IT, etc.)
- ERM Process – Frequency of updates, surveys, benchmarking, KPI indicators, risk assessments, etc.

# Framework for Implementation

## Phase One

### *Objectives*

- a) Define Functional Areas in the Bank
- b) Define Key Risks to measure
- c) Define measurable Key Performance Indicators (“KPI”) for each area (Internal And External)
- d) Define tolerances for each Key Performance Indicator
- e) Overall assessment of objectives for each functional area based on the level of tolerance accepted for each KPI

# Functional Areas

## Examples of areas to consider:

- Lending
- Financial
- Regulatory Compliance
- Retail/Branch Administration
- Human Resources
- Internal Audit
- Marketing
- Operations
- Board/Corporate Governance



# Risk Categories

- Financial Reporting
- Operational
- Credit
- Information System
- Reputation
- Strategic and Governance
- Legal and Compliance
- Liquidity
- Fraud
- Market

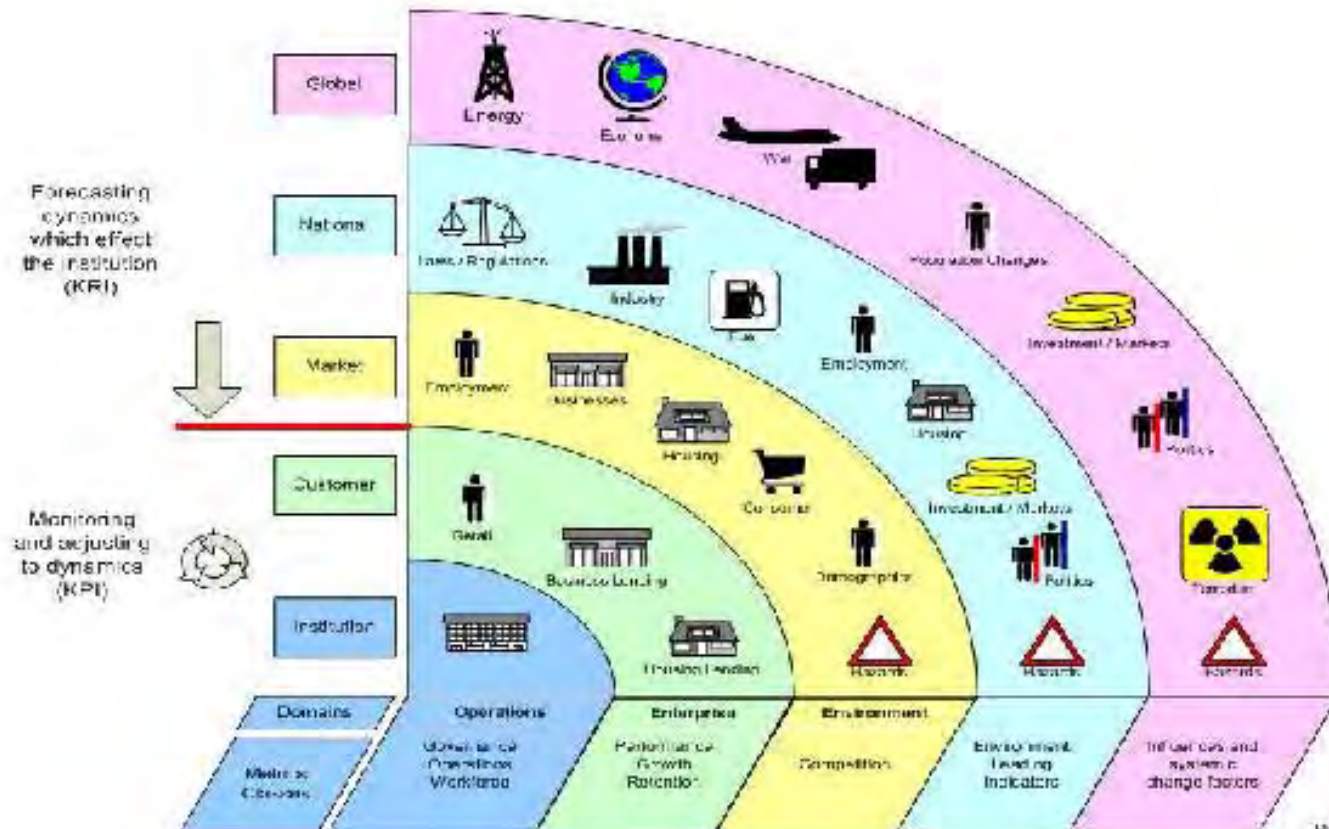




# Building the ERM

## Phase II

# Enterprise Risk Domains



# 9 Steps to an ERM Program Build

## Information Gathering and Strategy

### Gather Existing Information

Organization

Profit Centers

Programs and Assessments

Portfolio Composition

Workforce Profile

Infrastructure

### Establish Current Performance

Objectives  
Growth Retention  
Performance

Qualitative /Quantitative  
Metrics Use for KPI

Peer and Competition  
Groups

Customer Composition

Enterprise /Environment  
Factors

### Concerns in Operations Risk Management

Material Concerns  
(Cost, Accuracy,  
Efficiency)

Workforce  
Compliance  
Financial Controls

Consider ORM initiatives



# Risk Assessment Buildout

## Risk Profile

Profit Center Focus

Risk Scenario Considerations

CAMELS Baseline Ratio Model

Workforce Model  
Int, Ext, Counterparty

Effects of Change Scenarios against Baseline

## Risk Appetite

Performance Metrics Available  
(UBPR, FID, Other)

Review Comparative Trends and Set Thresholds

Scenarios /PIR Factors  
Growth / Loss / Forecast

Confirm Risk Baseline with Management and set KRI

Define processes for support to ERM review and adjustment

## Risk Tracking & Reporting

Align Risk Scenarios to Objectives

Combine Risk Scenarios into Risk Weighted Profiles

Combine Risk Profiles into Risk Weighted Composites

Review and consider results and commentary

Prepare and organize management reporting



# Risk Mitigation and Adjustment

## Review and Conclusions

Establish review processes for each Profit Center

Prepare Management and Board Reporting

Apply decision making to identify risk mitigation opportunities

Review and approve performance objectives and program changes

## Business Strategy Adjust

Identify appropriate metrics to monitor against objectives

Identify operational programs to effect changes

Identify risk avoidance changes based on trends and forecasts

Identify workforce, operations, financial changes

Incorporate changes into business plans and ERM model

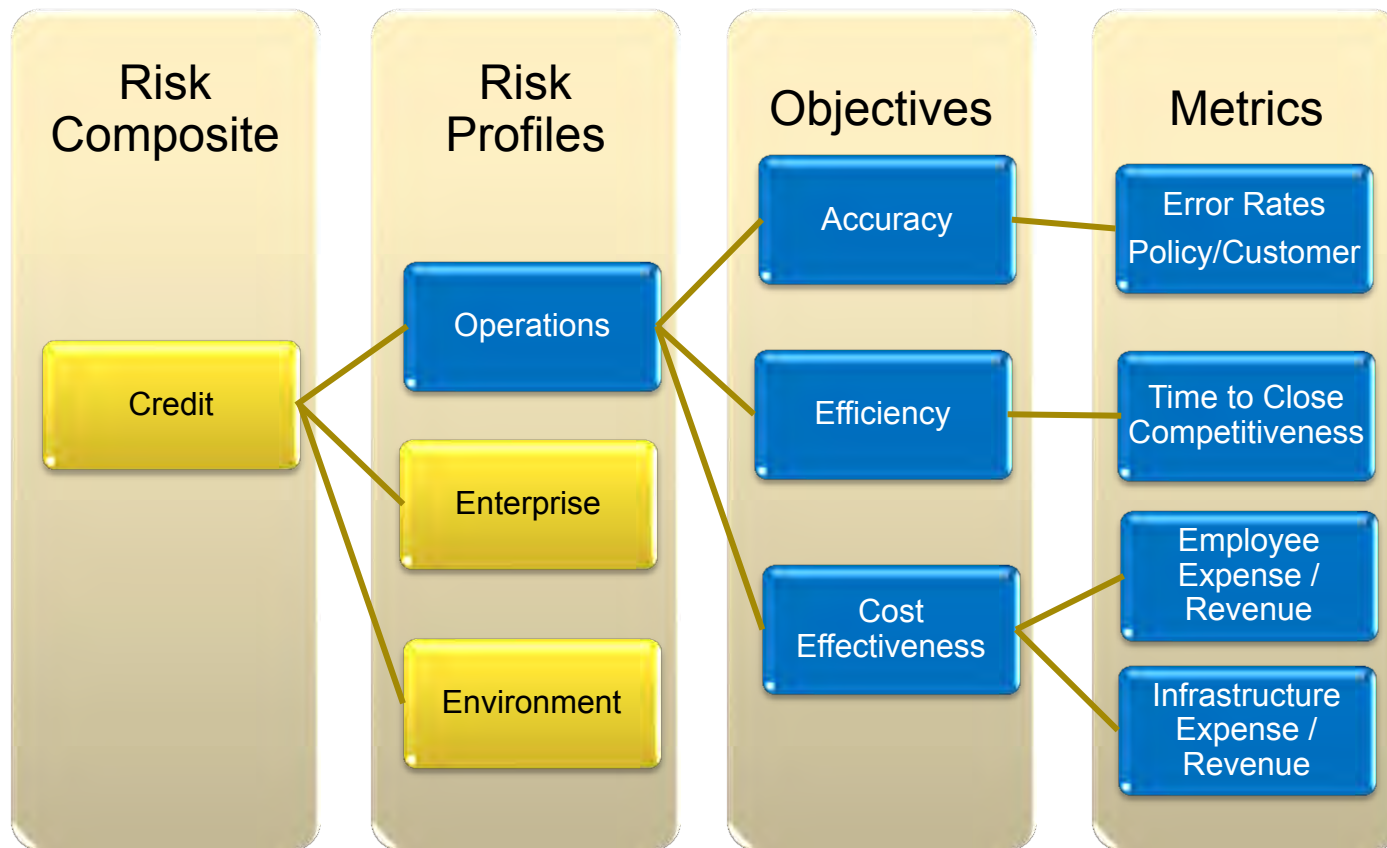
## Expand and Refine ERM Program

Monitor and Review Program Effectiveness and Performance

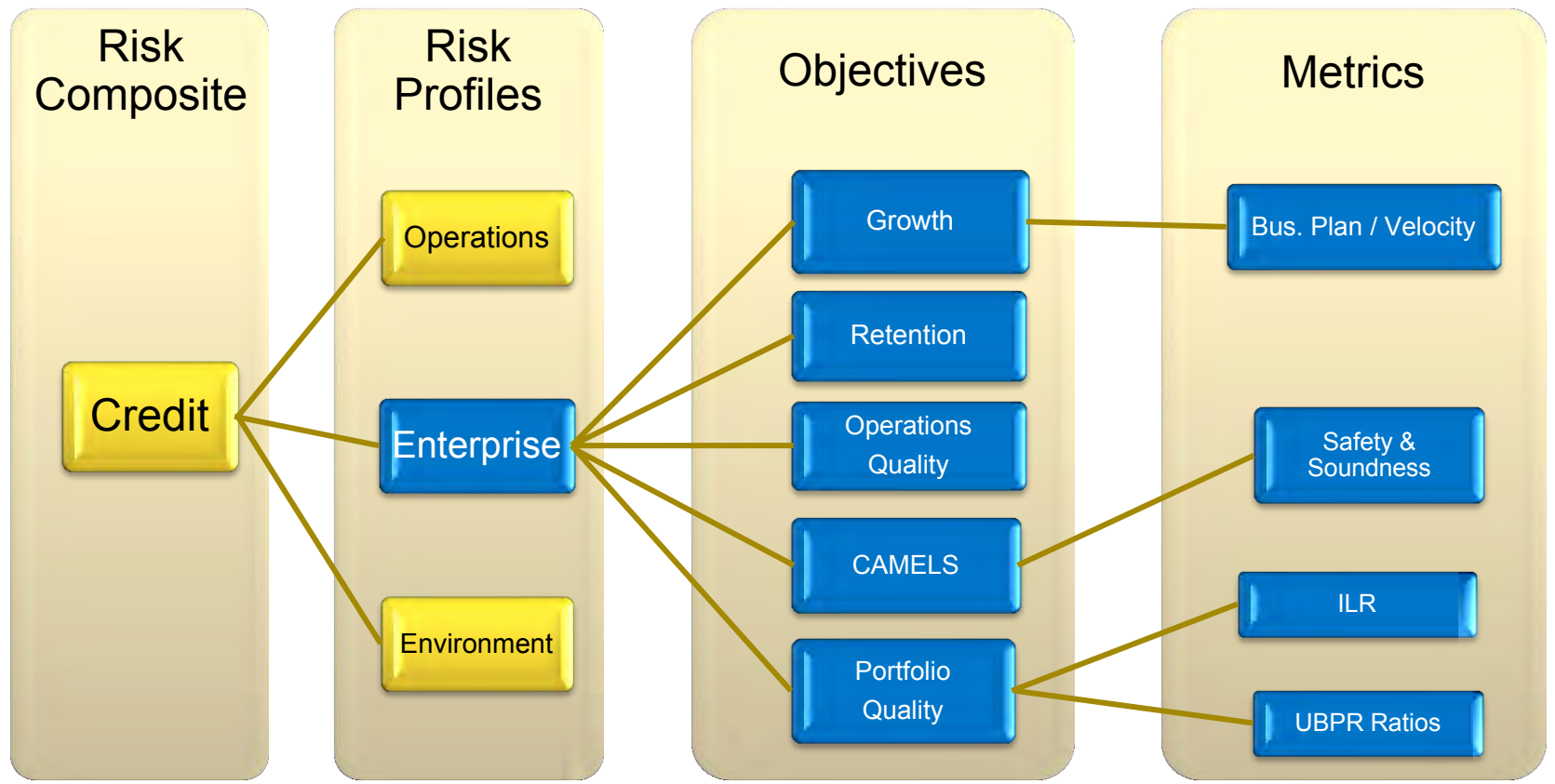
Adjust Program and Expand in concert with operations, enterprise or business environment changes

Establish new KPI and KRI

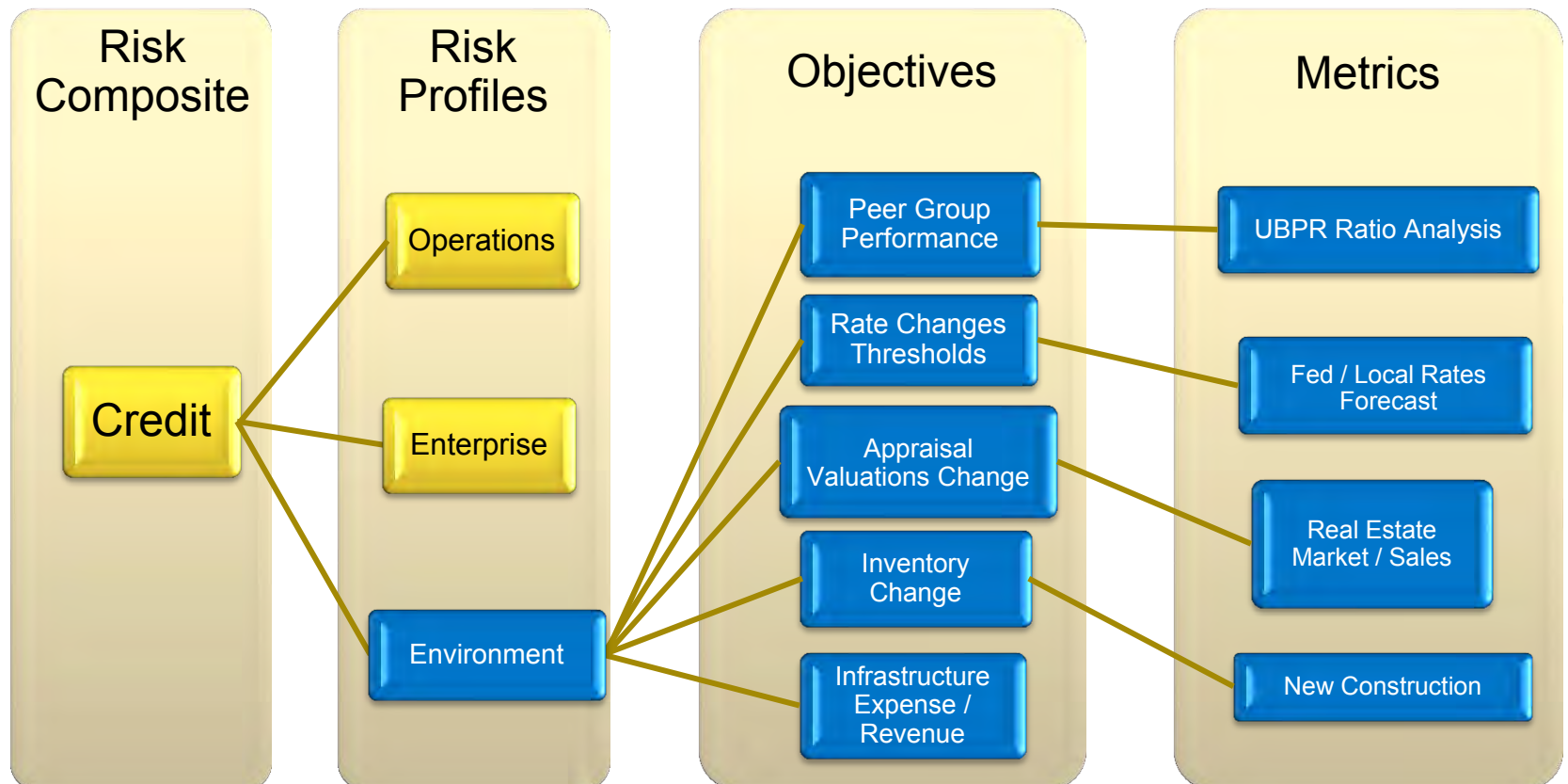
# Operations Risk Contributors



# Enterprise Risk Contributors

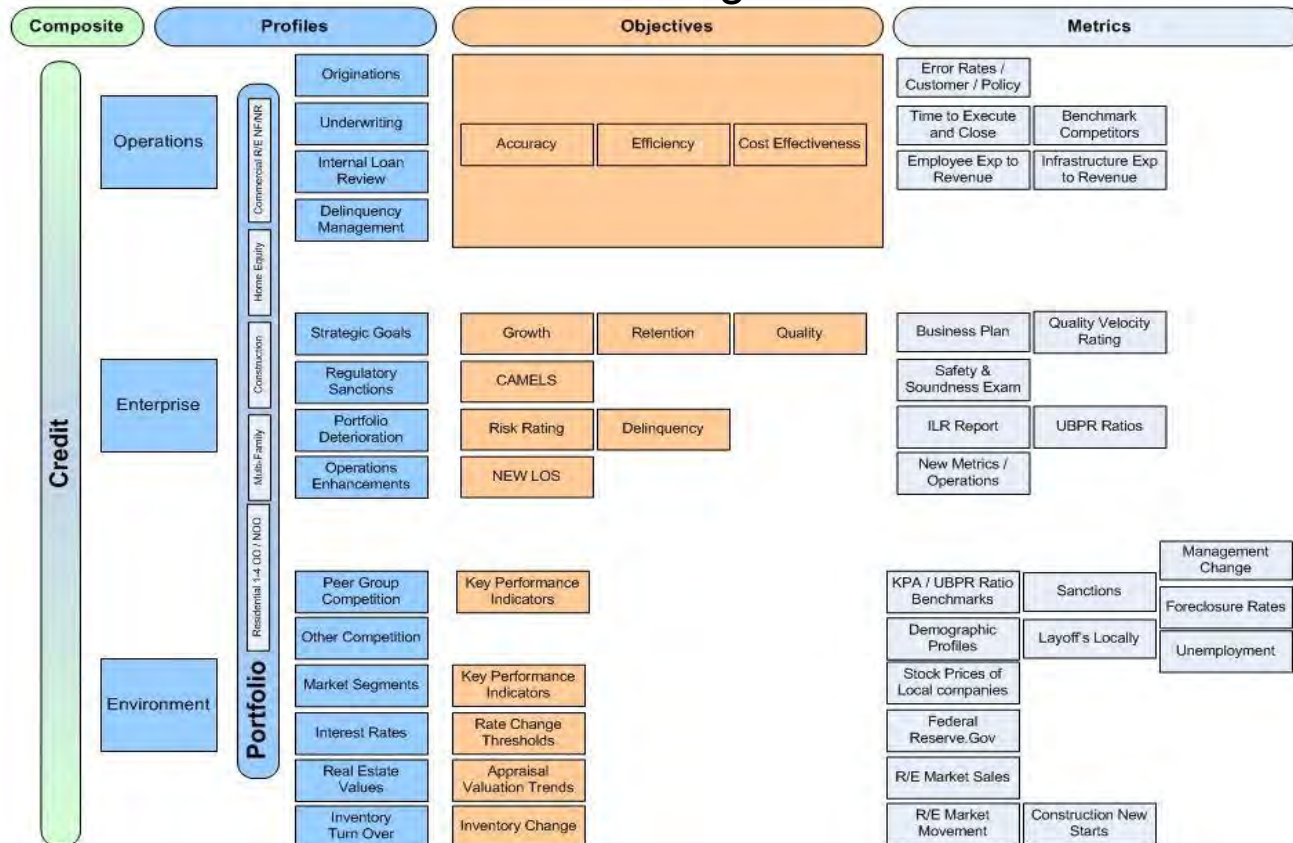


# Environment Risk Contributors



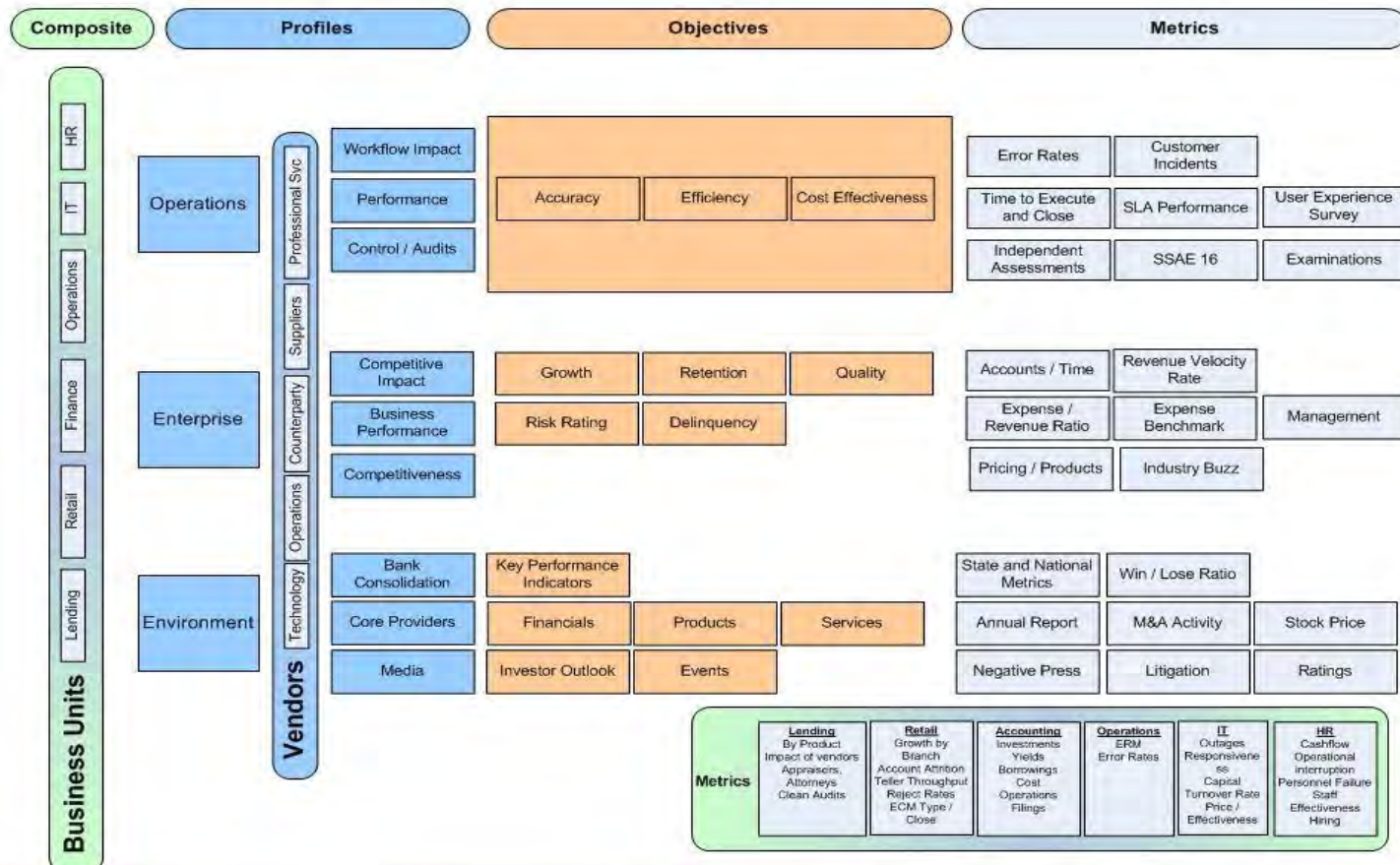
# Building a Risk Profile

## Credit Management





# Operations Risk Profile



# Key Performance Indicators

## KPI Ratings

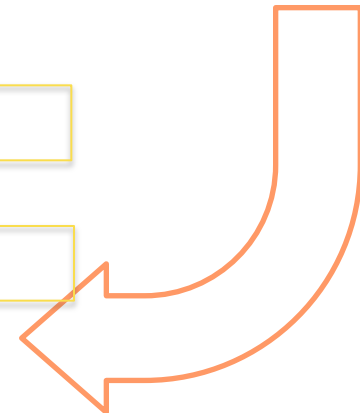


# Enterprise Composite – By the Numbers

## Credit Risk Management

	Prior		Latest	
Overall Risk Index	11/2011	<b>3.18</b>	12/2011	<b>3.13</b> 

	Prior		Latest			
Ops - Credit Admin	11/2011	<b>4.05</b>	12/2011	<b>4.05</b>	15.0%	
Enterprise - Regulatory Sanctions	11/2011	<b>3.00</b>	12/2011	<b>3.64</b>	15.0%	
Ops - Underwriting	11/2011	<b>3.27</b>	12/2011	<b>3.27</b>	10.0%	
Credit	11/2011	<b>3.00</b>	12/2011	<b>3.24</b>	10.0%	
Enterprise - Portfolio Deterioration	11/2011	<b>3.00</b>	12/2011	<b>2.97</b>	30.0%	
Enterprise - Competition	11/2011	<b>3.00</b>	12/2011	<b>2.50</b>	5.0%	
Environment - Interest Rates	11/2011	<b>3.00</b>	12/2011	<b>2.45</b>	5.0%	
Enterprise - Strategic	11/2011	<b>3.00</b>	12/2011	<b>2.00</b>	10.0%	





# Enterprise – Regulatory Sanctions

Restriction on Business

## Risk Profile

Prior

Latest

**Enterprise - Regulatory Sanctions**

11/2011

3.00

12/2011

3.64

15.0%



## Risk Distribution Indicators

Prior

Latest

Credit - Regulatory Sanctions - Monetary Penalties

11/2011

3.00

12/2011

3.80

20.0%



Credit - Regulatory Sanctions - Restrictions on business

12/2011

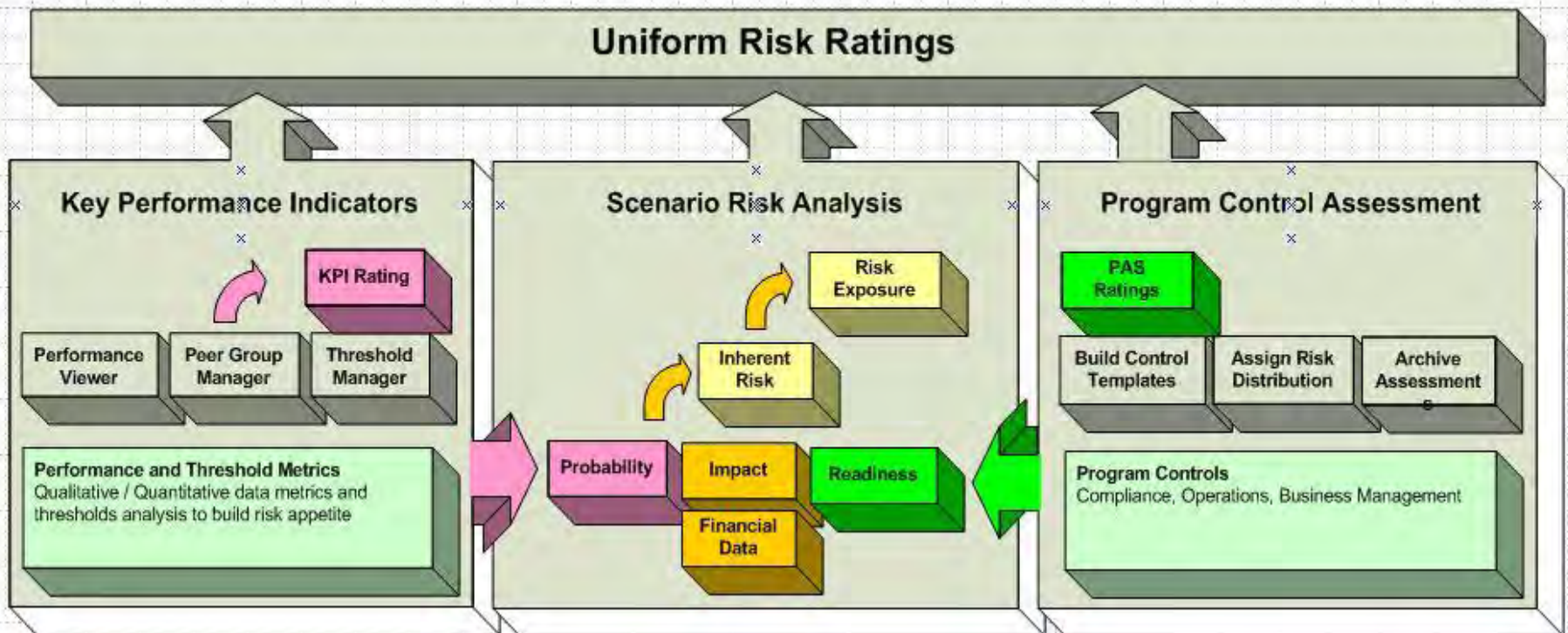
3.60

80.0%



# Risk Assessment

Probability / Impact / Readiness



# Risk Scenario Scorecards

	Probability		Impact		Readiness		Risk		Risk Exposure	
Enterprise (Business/Product Growth and Retention)										
Credit - Operations Improvements	5.000	Assured	4.000	Critical	5.000	Undemonstrated	4.500	Elevated	4.750	Extreme
Credit - Portfolio Deterioration - Commercial Real Estate (NF/NR)	5.000	Assured	4.000	Critical	4.000	Uncertain	4.500	Elevated	4.250	High
Credit - Portfolio Deterioration - Construction	5.000	Assured	4.000	Critical	4.000	Uncertain	4.500	Elevated	4.250	High
Credit - Portfolio Deterioration - Multi-Family	5.000	Assured	4.000	Critical	4.000	Uncertain	4.500	Elevated	4.250	High
Credit - Regulatory Sanctions - Restrictions on business	4.750	Assured	3.600	Critical	2.000	Intermediate	4.175	Elevated	3.088	Medium
Credit - Regulatory Sanctions - Monetary Penalties	4.750	Assured	3.400	Manageable	2.000	Intermediate	4.075	Elevated	3.037	Medium
Credit - Strategic - Multi-Family	5.000	Assured	3.000	Manageable	2.000	Intermediate	4.000	Elevated	3.000	Medium
Credit - Portfolio Deterioration - Home Equity	2.000	Unlikely	2.000	Insignificant	2.000	Intermediate	2.000	Insignificant	2.000	Low
Credit - Portfolio Deterioration - Residential 1-4	2.000	Unlikely	2.000	Insignificant	2.000	Intermediate	2.000	Insignificant	2.000	Low
Credit - Strategic - Commercial Real Estate (NF/NR)	4.000	Likely	2.000	Insignificant	1.000	Strong	3.000	Moderate	2.000	Low
Credit - Strategic - Construction	4.000	Likely	2.000	Insignificant	1.000	Strong	3.000	Moderate	2.000	Low
Credit - Strategic - Residential 1-4 Family	3.000	Possible	2.000	Insignificant	1.000	Strong	2.500	Insignificant	1.750	Low
Credit - Strategic - Home Equity	1.000	None	1.000	None	1.000	Strong	1.000	None	1.000	Insignificant

# Scenario – Regulatory Sanction Risk

Probability Factor	
Non Current ASSETS as Percent of Total	5 @ 60%
Provisions Loan Receivables / Avg Assets	5 @ 15%
Loans and Leases Allowances to Total Ln&LS	4 @ 25%
Impact Factor	4.75
Community / Customer	3 @ 40%
Reputation	4 @ 60%
Controls / Readiness	3.6
Regulatory / Legal Management	2 @ 100%
Exposure / Risk	3.088 / 3.6



# Non Current ASSETS as Percent of Total Probability Factor

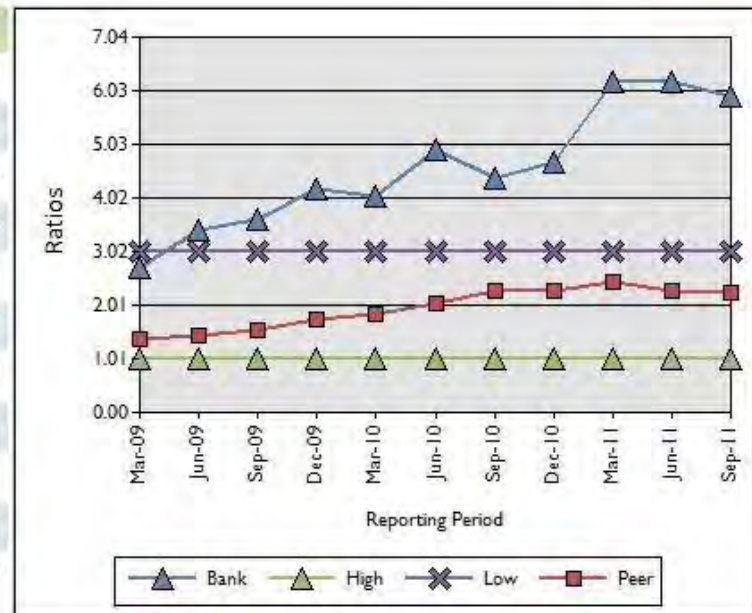
**Noncurrent Assets As Percent Of Total Loans And Leases**

NONCURRENT ASSETS AS PERCENT OF TOTL

Summary Ratios

5

Period	Bank	High	Low	Peer	PctL	Rank	PgTl
9/30/2011	5.94	1.00	3.00	2.243	0.0%	1	11
6/30/2011	6.22	1.00	3.00	2.268	0.0%	1	11
3/31/2011	6.21	1.00	3.00	2.456	0.0%	1	12
12/31/2010	4.70	1.00	3.00	2.295	0.0%	1	12
9/30/2010	4.38	1.00	3.00	2.28	0.0%	1	11
6/30/2010	4.92	1.00	3.00	2.053	0.0%	1	11
3/31/2010	4.04	1.00	3.00	1.848	99.6%	2	11
12/31/2009	4.20	1.00	3.00	1.756	97.3%	2	11
9/30/2009	3.63	1.00	3.00	1.541	0.0%	1	11
6/30/2009	3.43	1.00	3.00	1.436	0.0%	1	11
3/31/2009	2.72	1.00	3.00	1.378	96.9%	2	9



# Provisions Loan Receivables / Ave Assets

## Probability Factor

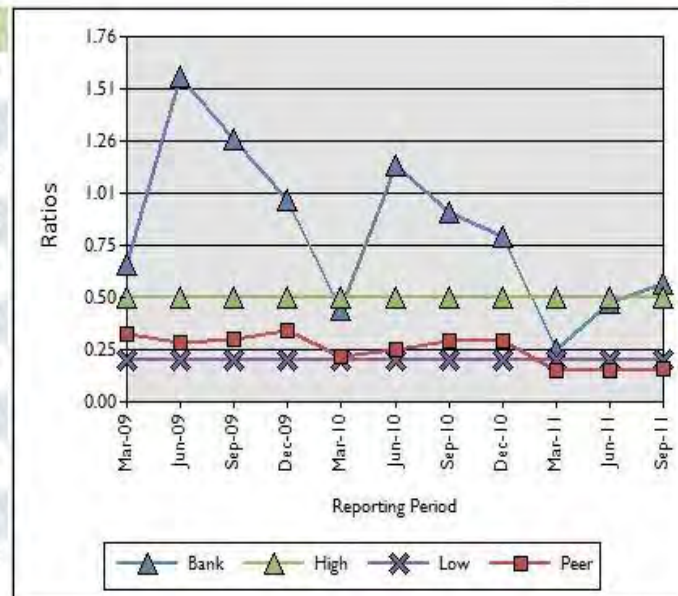
**Provision: Loan&Lease Losses**

Provision for loan and lease receivables losses divided by average assets.

5

Summary Ratios

Period	Bank	High	Low	Peer	PctL	Rank	PgTl
9/30/2011	0.57	0.50	0.20	0.161	0.0%	1	11
6/30/2011	0.48	0.50	0.20	0.152	79.0%	4	11
3/31/2011	0.25	0.50	0.20	0.15	79.5%	4	12
12/31/2010	0.80	0.50	0.20	0.294	62.2%	6	12
9/30/2010	0.92	0.50	0.20	0.294	62.6%	5	11
6/30/2010	1.14	0.50	0.20	0.252	71.6%	4	11
3/31/2010	0.45	0.50	0.20	0.219	0.0%	11	11
12/31/2009	0.97	0.50	0.20	0.342	0.0%	1	11
9/30/2009	1.27	0.50	0.20	0.304	0.0%	1	11
6/30/2009	1.57	0.50	0.20	0.286	0.0%	1	11
3/31/2009	0.66	0.50	0.20	0.327	0.0%	1	9



# Loan Loss Allowances / Total Loans

## Probability Factor

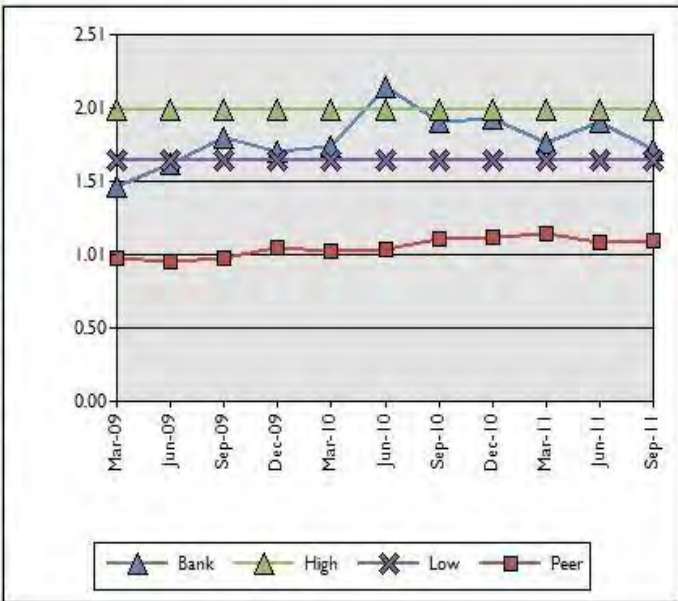
**Ln&Ls Allowance To Total Ln&Ls**

Summary Ratios

Ending balance of the allowance for possible loan and lease losses divided by total loans and lease-fi nancing receivables not held for sale. Available from March 31, 2001 forward.

4

Period	Bank	High	Low	Peer	Pctl	Rank	PgTI
9/30/2011	1.73	2.00	1.65	1.106	81.4%	3	11
6/30/2011	1.91	2.00	1.65	1.087	65.8%	5	11
3/31/2011	1.77	2.00	1.65	1.147	63.1%	6	12
12/31/2010	1.94	2.00	1.65	1.13	74.7%	4	12
9/30/2010	1.91	2.00	1.65	1.11	62.7%	5	11
6/30/2010	2.15	2.00	1.65	1.04	51.3%	6	11
3/31/2010	1.75	2.00	1.65	1.033	76.5%	4	11
12/31/2009	1.72	2.00	1.65	1.048	67.8%	5	11
9/30/2009	1.80	2.00	1.65	0.979	78.7%	4	11
6/30/2009	1.63	2.00	1.65	0.953	80.3%	3	11
3/31/2009	1.47	2.00	1.65	0.987	0.0%	1	9



# Controls

## Risk Mitigation / Readiness Factor

<Best--Worst> Index <- Str-><-Sat-><-NI-><-UnSat-><-Fail-> <----- Assessment Counts by Rating ----->

18 | 41 | 90 | 14 | 0 | 5 | 1 | 0 | 0 | Complete 8 of 8

Risk Index **2.3**

Control Group	Control	SubControl	ControlType	Review Date	Apply	Key	Std	Proc	Prac	Activity	Rating	Notes
CAMELS Compone	Asset Quality			2/2/2012	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		NI	...
CAMELS Compone	Capital			2/2/2012	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SAT	...
CAMELS Compone	Community Reinvestment Act			2/2/2012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SAT	...
CAMELS Compone	Compliance			2/2/2012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SAT	...
CAMELS Compone	Earnings			2/2/2012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SAT	...
CAMELS Compone	Management			2/2/2012	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SAT	...



# Credit Risk

## Loan Portfolio

Risk Profile	Prior	Latest
Credit	11/2011 3.00	12/2011 3.24 10.0%

This profile reflects the credit risk portfolio positions considering community and regional issues.

Risk Distribution Indicators	Prior	Latest
Credit - Originations - Multi-Family	3.00	12/2011 3.75 20.0%
Credit - Originations - Commercial Real Estate (NF/NR)	3.00	12/2011 3.75 16.0%
Originations - Residential 1-4	3.00	12/2011 3.00 53.0%
Credit - Originations - Home Equity	3.00	12/2011 2.75 4.0%
Credit - Originations - Construction	3.00	12/2011 2.75 7.0%

# Building Risk Appetite

Identity Peer Group Benchmarking / Savings > \$1B  
Similar Style and Region

ID	Name	Reporting Period	3/31/2009	City	State	Average Assets
546003	BANKNEWPORT			NEWPORT	RI	1,069,500
1000100	EAST BOSTON SAVINGS BANK			BOSTON	MA	1,839,608
882701	FAIRFIELD COUNTY BANK			RIDGEFIELD	CT	1,537,054
1009804	FARMINGTON BANK			FARMINGTON	CT	1,486,857
958204	FIRST COUNTY BANK			STAMFORD	CT	1,304,380
587800	LIBERTY BANK			MIDDLETOWN	CT	3,338,992
362007	NEWALLIANCE BANK			NEW HAVEN	CT	8,352,942
249872	PARKVALE SAVINGS BANK			MONROEVILLE	PA	1,820,211
443205	UNION SAVINGS BANK			DANBURY	CT	2,433,535

# Enterprise Risk / Performance Ratios

## Baseline Key Ratios for using CAMELS Analysis

### Capital

- Tier 1 Leverage Capital / Average Total Assets
- Tier 1 Risk-based Capital / Risk Weighted Assets
- Total Risk-based Capital / Risk weighted Assets
- Retained Earnings / Average Total Equity
- Asset Growth Rate
- Cash Dividend / Net Income

### Asset Quality

- Loans and Leases
- Securities
- Real Estate
- Contingent Liabilities
- Special Mention
- Adversely Classified Items Coverage Ratio
- Total Adversely Classified Assets / Total Assets
- Past Due and Nonaccrual Loans and Leases / Gross Loan and Leases
- ALLL/ Total Loans and Leases

### Earnings

- Net Income (After Tax) / Average Assets
- Net Interest Income (TE) / Average Earning Assets
- Total noninterest Expense / Average Assets

### Liquidity

- Net non-core Funding Dependence
- Net Loans and Leases / Assets

# Average Assets per Employee

## Institution versus Selected Peer Group

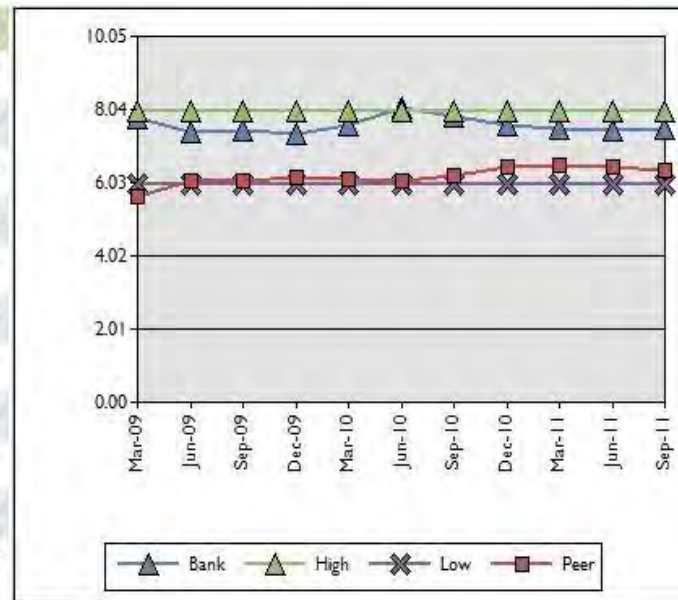
**Assets Per Employee (\$Million)**

Non Int Income, Expense, Yields

Average assets divided by the number of full-time equivalent employee on the payroll at the end of the period. Result is shown in millions of dollars.

2

Period	Bank	High	Low	Peer	PctL	Rank	PgTl
9/30/2011	7.51	8.00	6.00	6.358	0.0%	I	11
6/30/2011	7.47	8.00	6.00	6.459	0.0%	I	11
3/31/2011	7.52	8.00	6.00	6.526	0.0%	I	12
12/31/2010	7.59	8.00	6.00	6.482	0.0%	I	12
9/30/2010	7.87	8.00	6.00	6.241	0.0%	I	11
6/30/2010	8.07	8.00	6.00	6.087	0.0%	I	11
3/31/2010	7.61	8.00	6.00	6.143	0.0%	I	11
12/31/2009	7.35	8.00	6.00	6.156	0.0%	I	11
9/30/2009	7.45	8.00	6.00	6.092	0.0%	I	11
6/30/2009	7.43	8.00	6.00	6.085	0.0%	I	11
3/31/2009	7.82	8.00	6.00	5.646	0.0%	I	9





# Total Equity Capital

## Institution versus Selected Peer Group

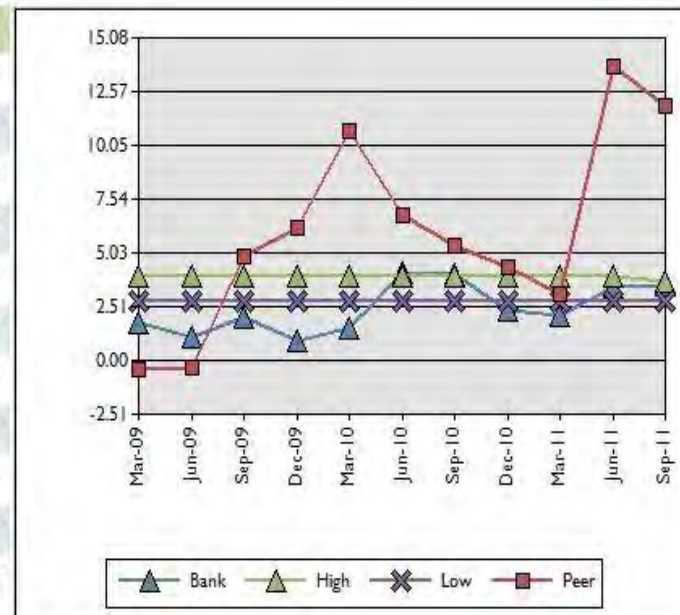
Total Equity Capital

Total Equity Capital

4

Capital Analysis-a

Period	Bank	High	Low	Peer	PctL	Rank	PgTl
9/30/2011	3.50	3.70	2.80	11.925	85.4%	3	11
6/30/2011	3.46	3.90	2.80	13.782	78.8%	4	11
3/31/2011	2.06	3.90	2.80	3.07	0.0%	1	12
12/31/2010	2.35	3.90	2.80	4.331	0.0%	1	12
9/30/2010	4.04	3.90	2.80	5.369	0.0%	1	11
6/30/2010	4.14	3.90	2.80	6.80	94.7%	2	11
3/31/2010	1.55	3.90	2.80	10.696	17.6%	10	11
12/31/2009	0.95	3.90	2.80	6.207	85.6%	3	11
9/30/2009	1.98	3.90	2.80	4.853	0.0%	1	11
6/30/2009	1.07	3.90	2.80	(0.319)	0.0%	1	11
3/31/2009	1.78	3.90	2.80	(0.432)	0.0%	1	9



# Net Income

## Institution versus Selected Peer Group

### Net Income

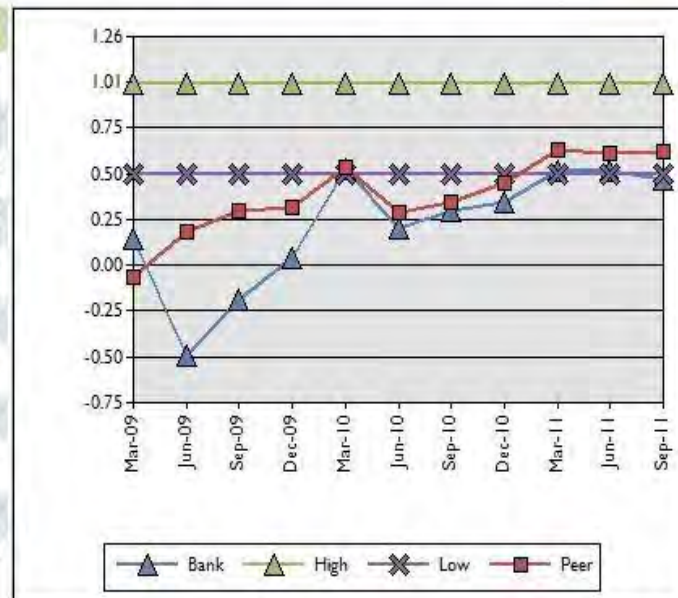
Net income after securities gains or losses, extraordinary gains or losses, and applicable taxes divided by average assets.

5

#### Summary Ratios

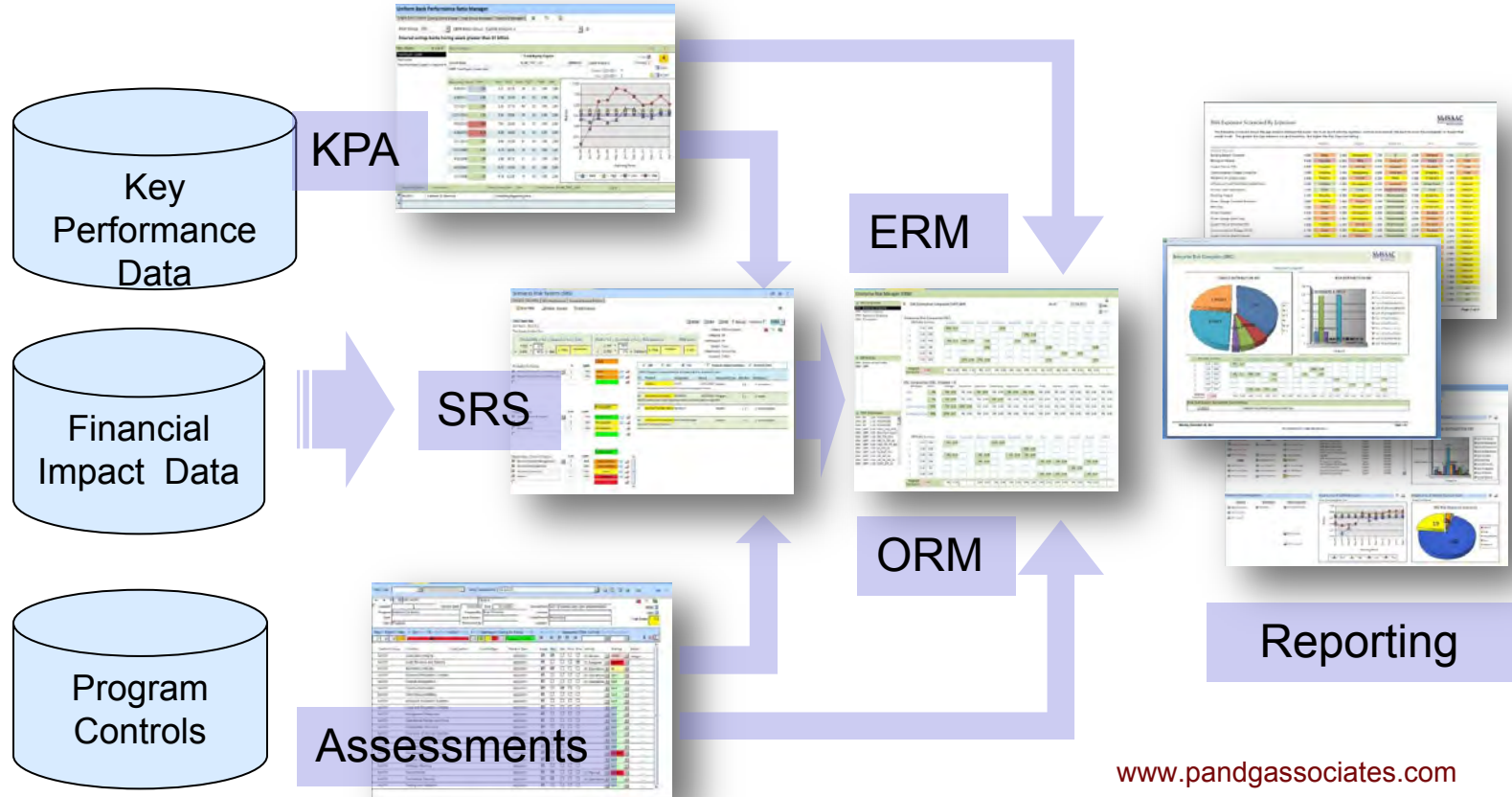
Percent Of Average Assets

Period	Bank	High	Low	Peer	PctL	Rank	PgTI
9/30/2011	0.48	1.00	0.50	0.628	25.8%	9	11
6/30/2011	0.52	1.00	0.50	0.618	51.8%	6	11
3/31/2011	0.52	1.00	0.50	0.633	56.3%	6	12
12/31/2010	0.34	1.00	0.50	0.455	89.0%	3	12
9/30/2010	0.30	1.00	0.50	0.346	49.8%	7	11
6/30/2010	0.20	1.00	0.50	0.293	45.5%	7	11
3/31/2010	0.52	1.00	0.50	0.537	84.2%	3	11
12/31/2009	-0.04	1.00	0.50	0.321	0.0%	12	11
9/30/2009	-0.19	1.00	0.50	0.298	0.0%	12	11
6/30/2009	-0.49	1.00	0.50	0.184	0.0%	12	11
3/31/2009	0.14	1.00	0.50	(0.063)	0.0%	10	9



# Putting It Together / Risk Analysis

Key Performance Indicators, Risk Thresholds and Metrics Management

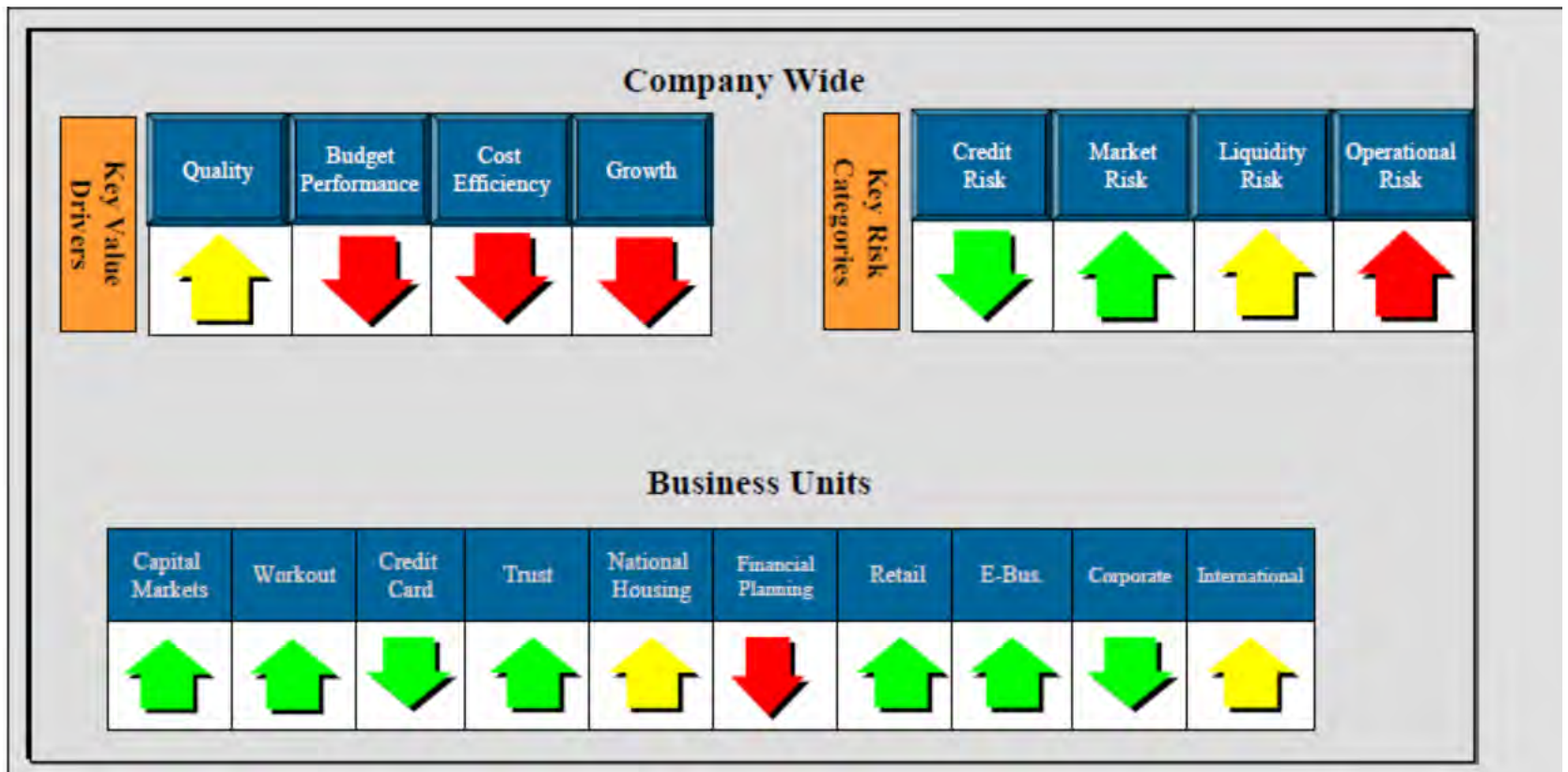


## Phase III - Monitoring

- **Ongoing Monitoring** – Update ERM Data to Provide Direction of Risk - Dynamic
- **Separate Evaluations** – Provide Drilled Down Reporting at Functional Area Level
- **Reporting Deficiencies** – Negative Trends are Identified to Help Develop Strategy to Achieve Established Objectives



# Phase III



Source - COSO - Enterprise Risk Management Framework

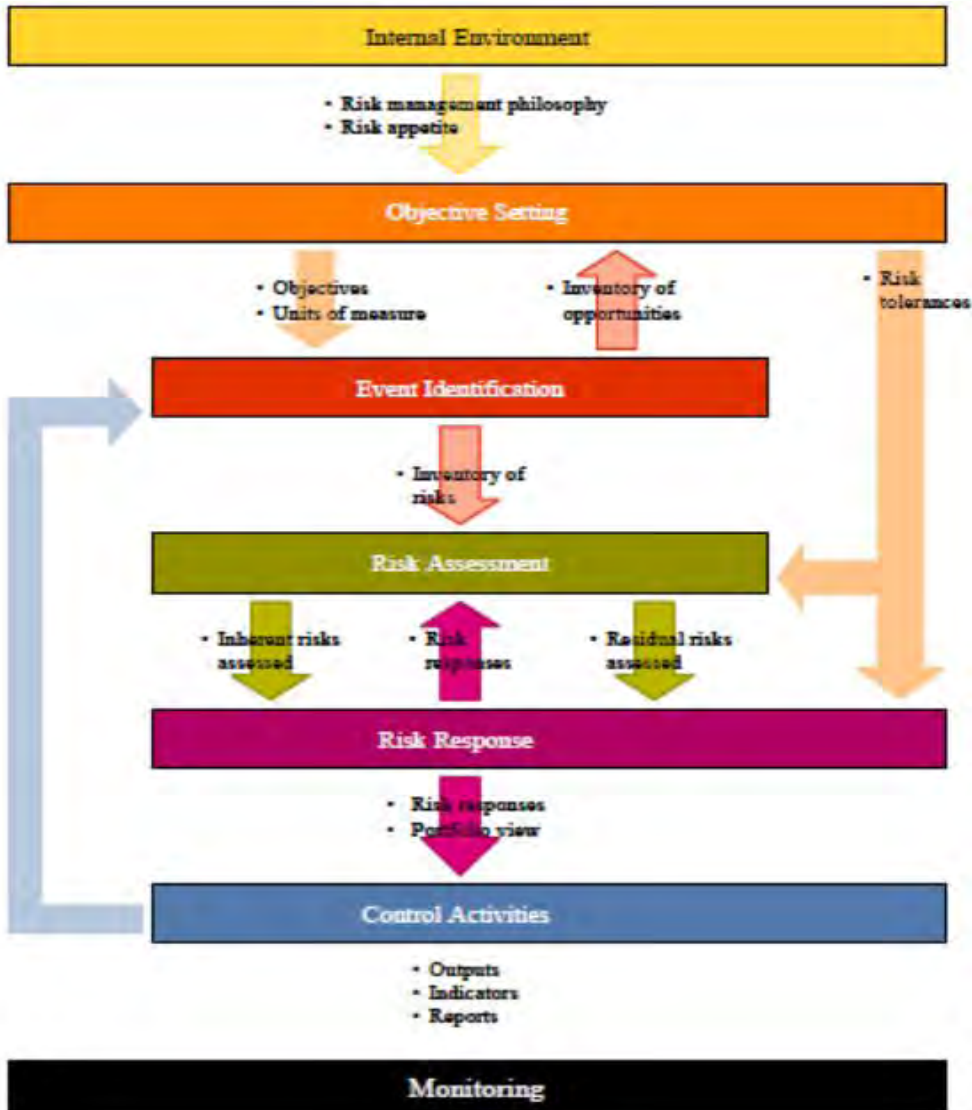
## Phase III

### Benefits of identifying Direction of Risk

#### Modify Strategies

- Transfer the risk to another party
- Avoid the risk
- Reduce the negative effect of the risk
- Accept some or all of the consequences of a particular risk

Continuous evaluation of processes to identify efficiencies throughout product lines



## Information Flows Within Enterprise Risk Management

# A Practical Approach to Enterprise Risk Management

## Questions/Comments?

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