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4 Decades of Fidelity*

XXXVIth Annual Monetary Studies Conference

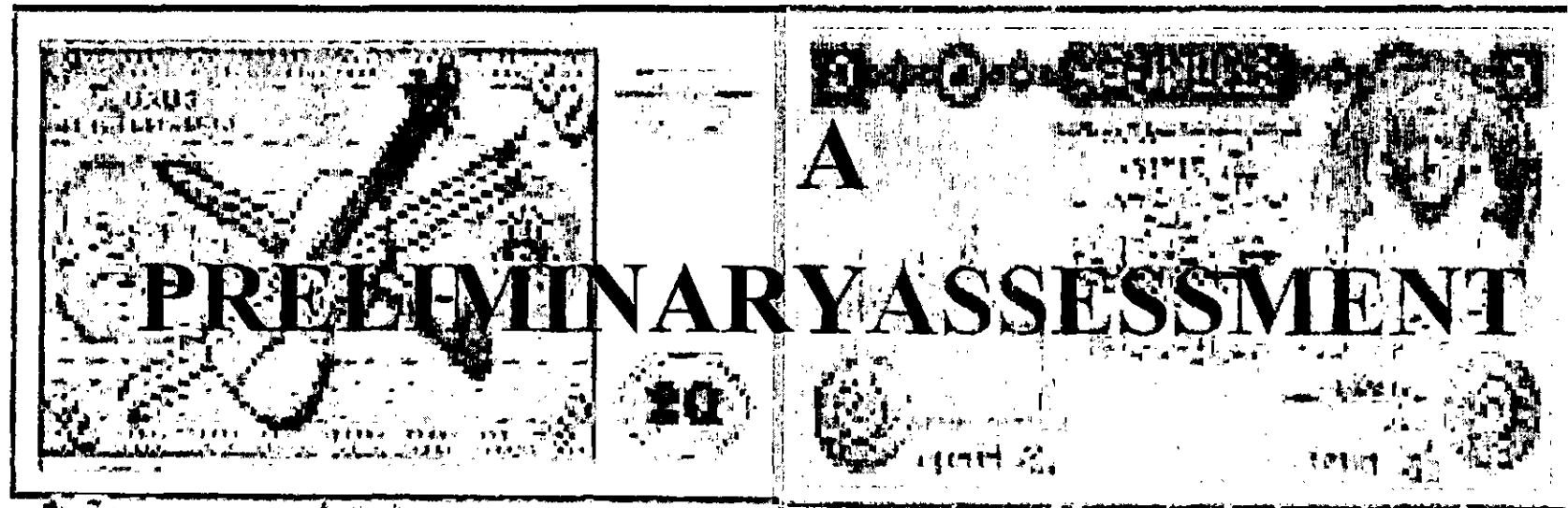


Risk Management Practices and Regulatory Capital in Two Caribbean Countries: *A Preliminary Assessment*

Courtney Christie-Veitch

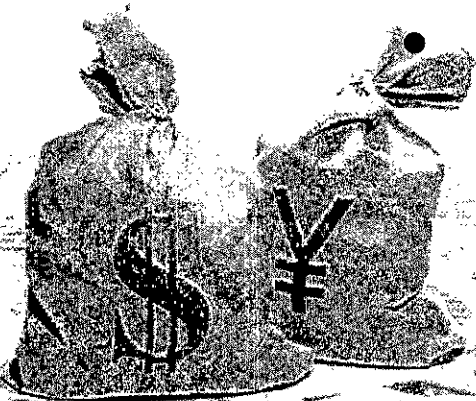
**Central Bank of Trinidad & Tobago
Conference Facilities, 16th Floor
November 1-4, 2004**

RISK MANAGEMENT PRACTICES AND REGULATORY CAPITAL IN TWO CARIBBEAN COUNTRIES



Presentation Outline

- Background to the Study
- Overview of the four risk categories
- Regulatory Capital
- Preliminary Findings
- The Way Forward



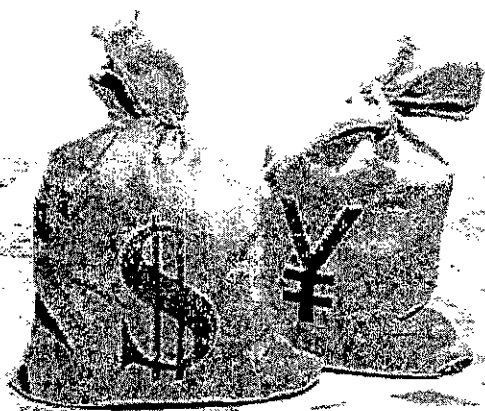
Statement of the Problem

- Absence of formalized processes for identifying, measuring, mitigating, monitoring and reporting risks inherent in financial institutions in the region
- Risk management tools and techniques used are not linked to formalized processes
- Risk management culture, practices, tools vary according to core business activities, geographic location or size



Objectives of the Study

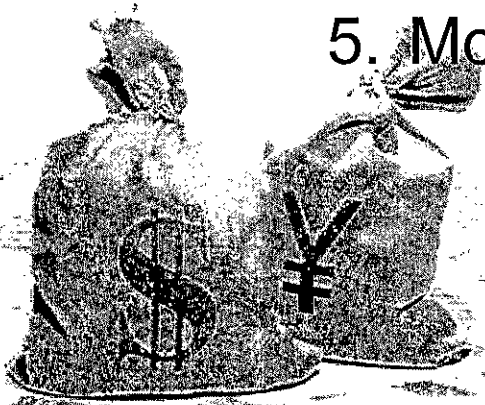
- Present principles, procedures, approaches, models and concepts in risk management in the Caribbean
- Analyze balance sheet exposure to credit risks, liquidity risks, market risks and operational risks for Caribbean Financial Intermediaries.



Credit Risk Management

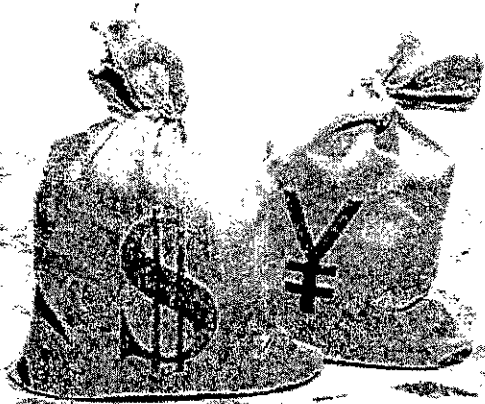
- Credit Risk is the risk that a counterparty will be unable or unwilling to fulfill its financial obligations

- Credit Risk Models:
 1. KMV's Portfolio Manager
 2. JP Morgan's CreditMetrics
 3. Kamakura's Risk Manager
 4. CSFP's Actuarial Based CreditRisk+
 5. McKinsey's Econometric Based Portfolio View



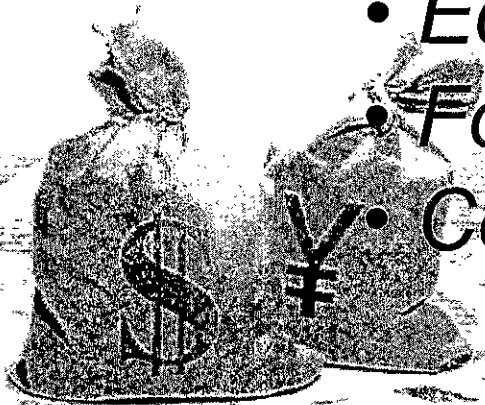
Liquidity Risk Management

- Liquidity risk is the risk that an institution will be unable to meet its current and future payment obligations as they fall due.
- Funding risk, a special form of liquidity risk, arises when the necessary liquidity cannot be obtained on the expected terms when required.



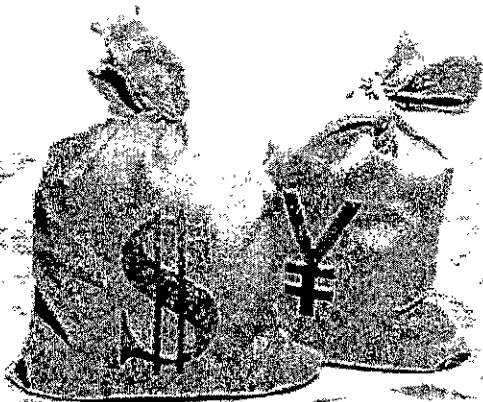
Market Risk Management

- Market risk is the exposure of an institution's financial condition to adverse movements in macro-economic factors that influence asset prices (Basel Committee)
 - *Interest rates*
 - *Equity prices*
 - *Foreign exchange rates*
 - *Commodity prices*



Operational Risk Management

- The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.



Operational Risk Management

Operational risk event types (Identified by *Basle Committee*):

- Internal fraud
- External fraud
- Employment practice and work place safety
- Client products and business practices
- Damage to physical assets
- Business disruption and system failures
- Execution, delivery and process management



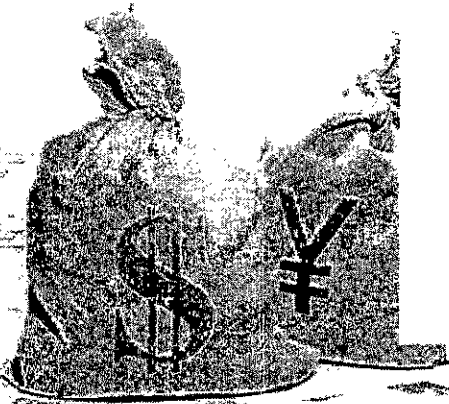
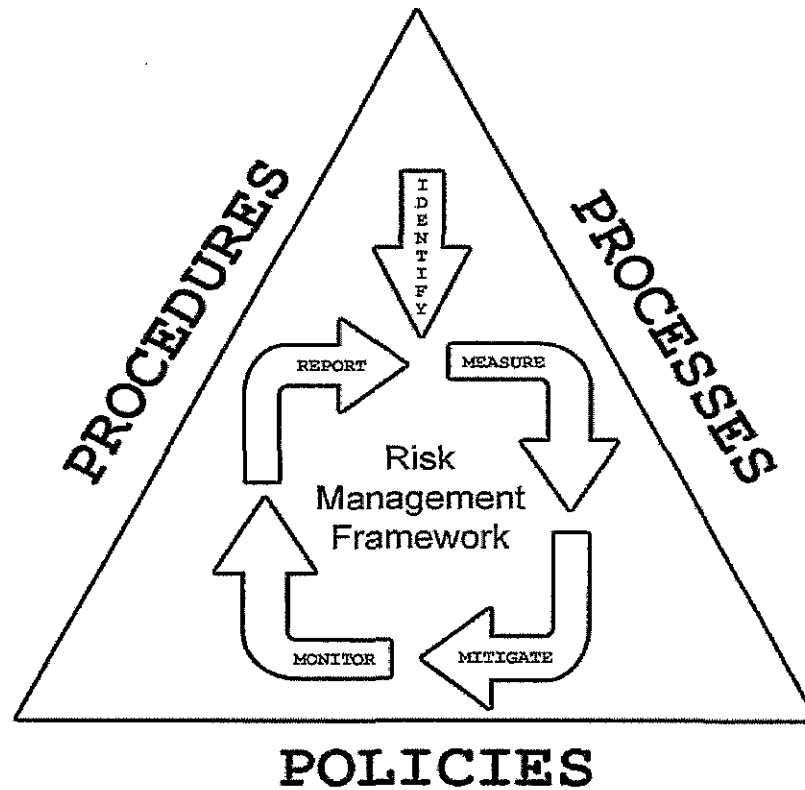
Regulatory Capital

Regulatory Capital is guided by:

- Basel Capital Accord
- Core Principles for effective banking supervision
- Capital Adequacy Regulations



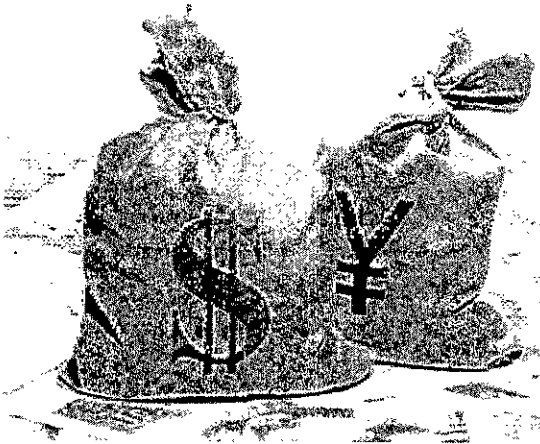
A Proposed Risk Management Framework



Preliminary Findings

Risk Management Policies

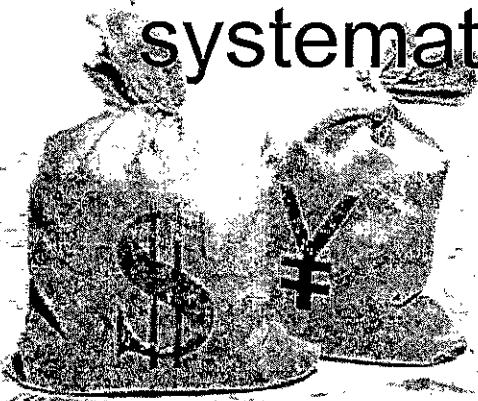
Policies were generally in place to manage credit, liquidity and market risks. However most institutions have not yet developed and implemented operational risk management policies.



Preliminary Findings

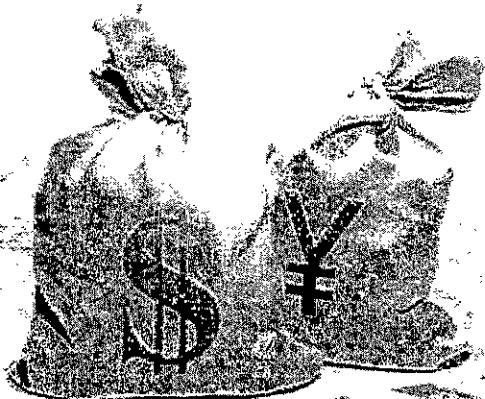
Risk Management Processes

In practice, financial institutions employed several processes to guide risk identification, assessment and management. These processes however were not documented in a systematic/schematic manner



Preliminary Findings

Challenges in distinguishing between risk management processes and procedures

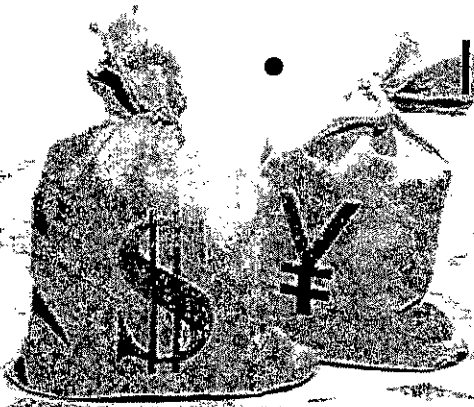


Preliminary Findings

Credit Risk Management Tools

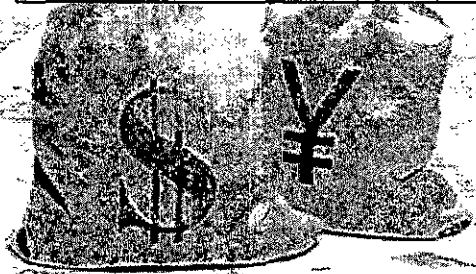
Several tools/techniques are being used in financial institutions to manage credit risks:

- Limits
- Trend analysis
- Internal Rating Systems



CREDIT RISK TOOLS

	SUMMARY		SIZE						TYPE				LOCATION			
	#	%	SMALL		MEDIUM		LARGE		COMMERCIAL BANK		MERCHANT & TRUST CO.		TRINIDAD		BARBADOS	
			#	%	#	%	#	%	#	%	#	%	#	%		
Policy	16	100	3	100	7	100	6	100	11	100	5	100	6	100	10	100
Trend Analysis	3	18.7	1	33.3	0	0	2	33.3	3	27.3	0	0	2	33.3	1	10
Stress Testing	1	6.3	0	0	1	14.3	0	0	1	9.1	0	0	1	16.7	0	0
Internal Rating System	12	75	2	66.7	5	71.4	5	83.3	11	100	1	20	5	83.3	7	70
Limits	16	100	3	100	7	100	6	100	11	100	5	100	6	100	10	100
Proprietary Software	3	18.7	0	0	1	20	2	33.3	3	27.3	0	0	2	33.3	1	10
Credit Scoring	1	6.3	1	33.3	0	0	0	0	0	0	1	20	0	0	1	10



Preliminary Findings

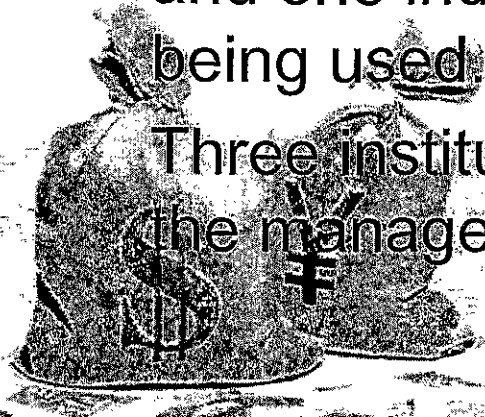
Credit Risk Management Tools

Limits were the most frequently used tools in credit risk assessment, (used by all respondents) followed by Internal Rating Systems, (75% of Respondents)

18.7% of respondents used Trend Analysis

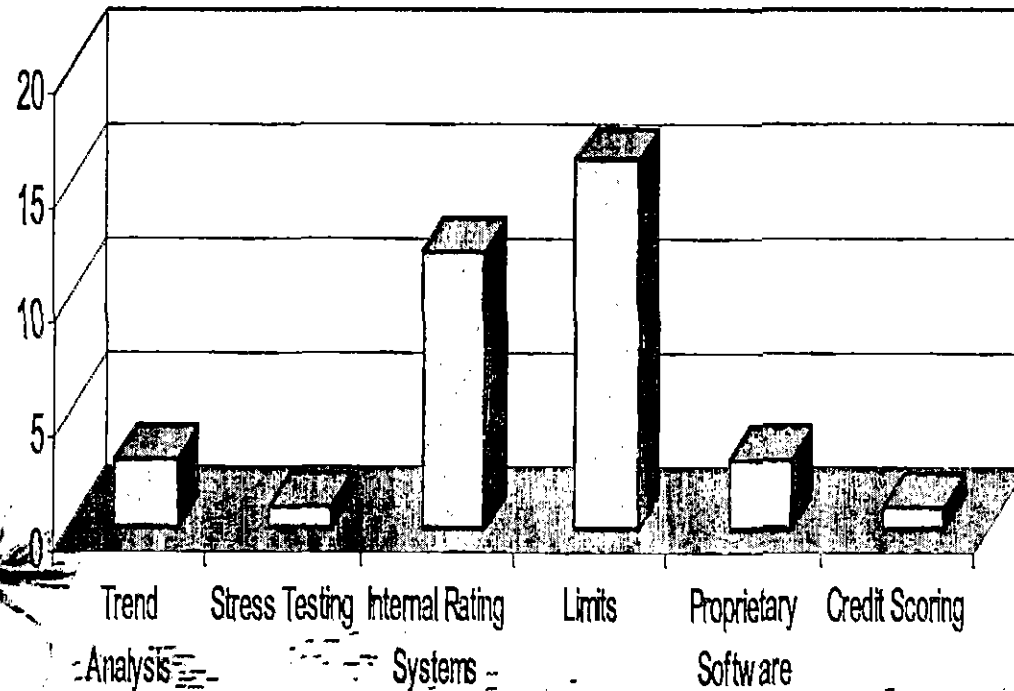
One institution indicated that it uses stress testing and one indicated that a credit scoring model was being used

Three institutions used proprietary software in the management of credit risks.



Preliminary Findings

Use of Credit Risk Management Tools

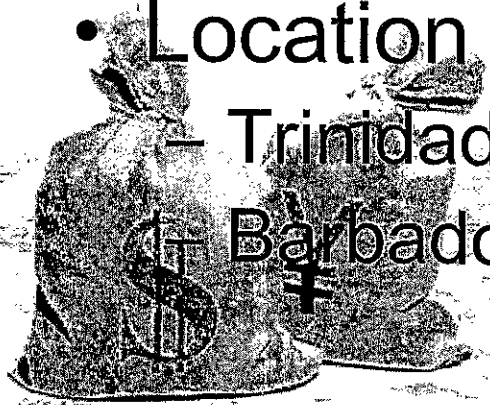


Preliminary Findings

Credit Risk Management Tools

The use of Internal rating systems

- Size
 - Small (<US\$500mn) - 66.7%
 - Medium (US\$500mn - US\$1bn) - 71.4%
 - Large (>US\$ 1bn) - 83.3%
- Location
 - Trinidad – 83.3%
 - Barbados – 70%

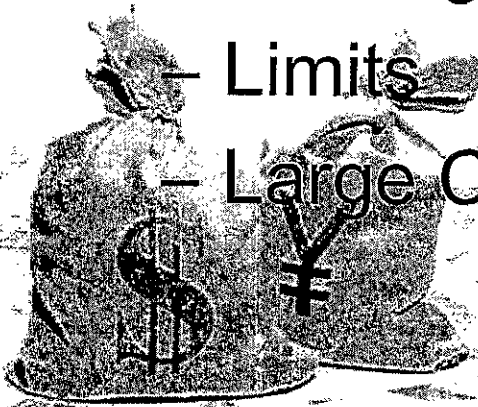


Preliminary Findings

Liquidity Risk Management Tools

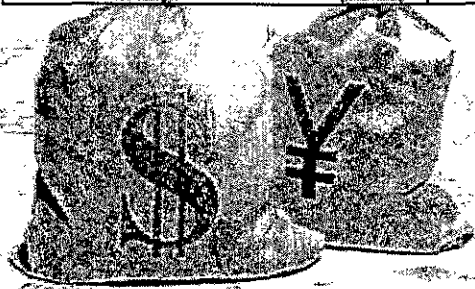
Several Liquidity Risk management tools were being used including:

- ALCO
- Gap Analysis
- Contingency Plans
- Limits
- Large Customer Activity Reports



LIQUIDITY RISK TOOLS

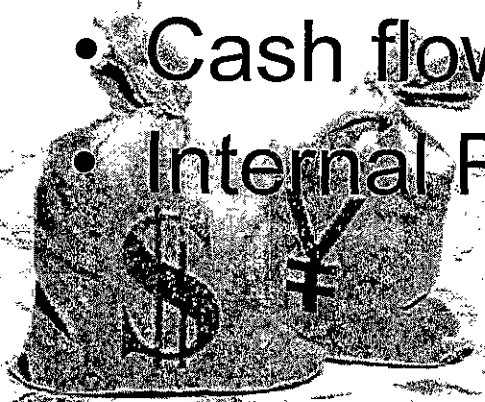
	SUMMARY		SIZE						TYPE				LOCATION			
	#	%	SMALL		MEDIUM		LARGE		COMMERCIAL BANK		MERCHANT & TRUST CO.		TRINIDAD		BARBADOS	
			#	%	#	%	#	%	#	%	#	%	#	%		
Policy	8	50	0	0	3	42.9	5	83.3	8	72.7	0	0	5	83.3	3	30
ALCO	9	56.3	2	66.7	3	42.9	4	66.7	9	81.8	0	0	4	66.7	5	50
Gap Analysis	7	43.7	1	33.3	2	28.6	4	66.7	7	63.6	0	0	3	50	4	40
Yield Curve	1	6.25	1	33.3	0	0	0	0	1	9.1	0	0	0	0	1	10
Contingency Plan	3	18.8	1	33.3	0	0	2	33.3	2	18.2	1	20	2	33.3	1	10
Cash Flow Model	2	12.5	0	0	1	14.3	1	16.7	2	18.2	0	0	1	16.7	1	10
VaR Model	1	6.3	0	0	0	0	1	16.7	1	9.1	0	0	0	0	1	10
Scenerio Analysis	1	6.3	0	0	0	0	1	16.7	1	9.1	0	0	3	50	1	10
Limits	16	100	3	100	7	100	6	100	11	100	5	100	6	100	10	100
Large Customer Activity Report	4	25	0	0	1	14.3	3	50	4	36.4	0	0	1	16.7	0	0
Proprietary Soft ware	1	6.3	0	0	1	14.3	0	0	1	9.1	0	0	1	16.7	0	0
Sensitivity Analysis	1	6.3	0	0	0	0	1	16.7	1	9.1	0	0	1	16.7	0	0
Internal Rating System	2	12.5	0	0	0	0	2	33.3	2	18.2	0	0	2	33.3	0	0



Preliminary Findings

Liquidity Risk Management Tools

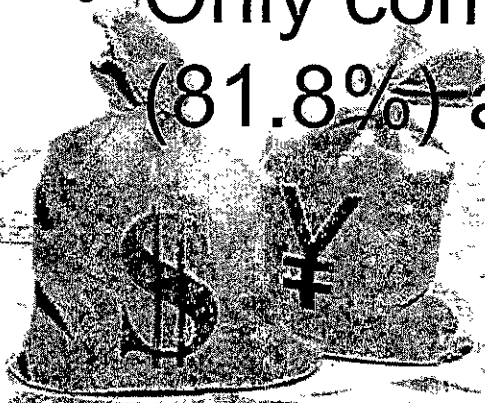
- Limits were being used by 100% of the Respondents.
- ALCO – 56.3%
- Gap Analysis – 43.7%
- Contingency Plans – 18.8%
- Cash flow model 12.5%
- Internal Rating System – 12.5%



Preliminary Findings

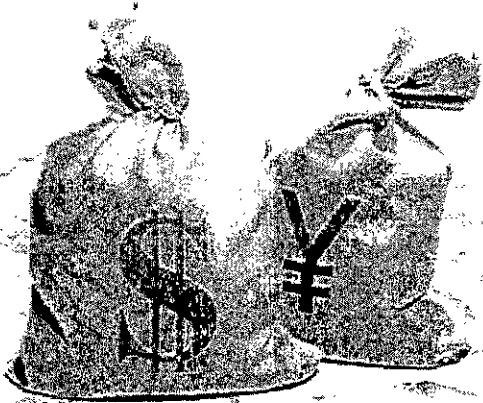
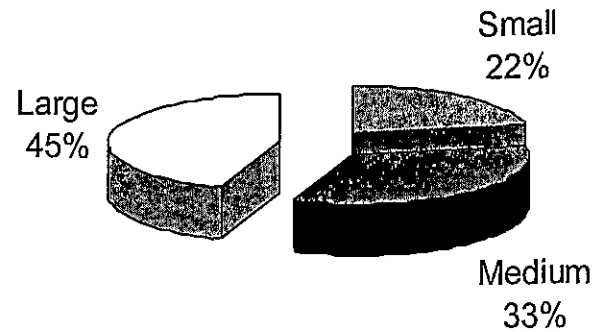
Liquidity Risk Management Tools

- Scenario analysis was used by one institution
- VAR model (one institution)
- Yield curve analysis (one institution)
- Only commercial banks used ALCO (81.8%) and gap analysis (63.6%)



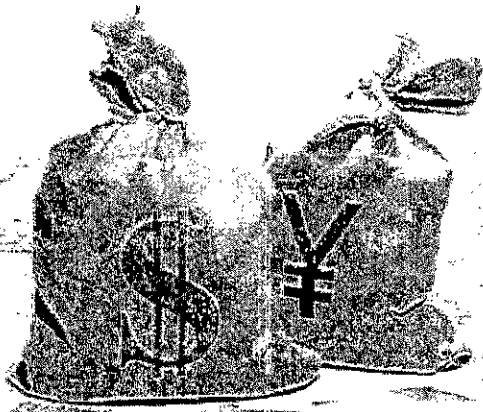
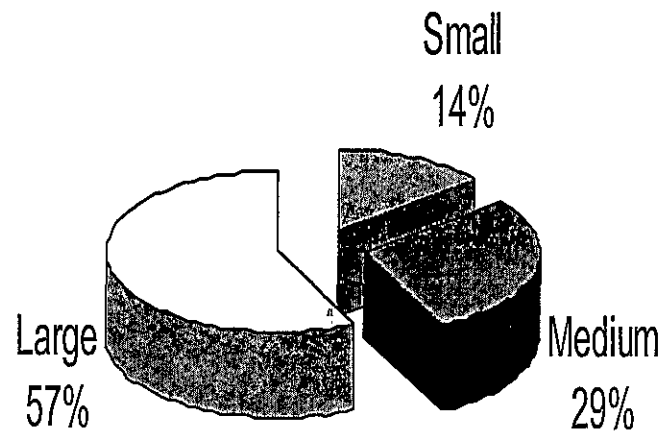
Preliminary Findings

Use of ALCO based on Institution size



Preliminary Findings

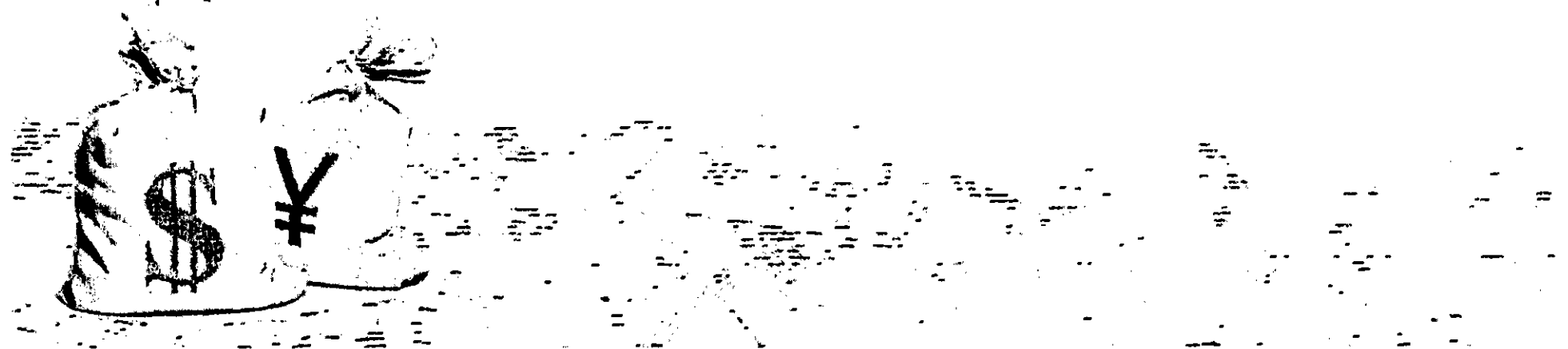
Use of Gap Analysis based on Institution size



Preliminary Findings

Operational Risk Management Tools

- None of the institutions have started quantifying their operational risk exposure
- 3 institutions indicated that they have started the process of identifying operational risks



The Way Forward

- **Outside the scope of this study**
 - Further work should focus on an integrated approach to Risk Measurement (Credit/Liquidity/Market/Operational)
 - More studies to be done on risk management practices in the region (none noted to date/importance of study)
- **Within the Scope of this study**
 - Financial sector crises in the region, extent to which inadequate risk management practices contribute
 - CSME and its implications for the financial sector
 - Continue work on Credit Classification and Provisioning model
 - Refine data collection instrument for further field work to include Jamaica