

iCo-op™ Basel II Risk Manager (iCo-op™ iVurisk) is a software solution that provides banks and financial institutions with a suite of IT tools to comply with the regulatory requirements of the Basel II Accord. Today's financial and investment markets are increasingly volatile and the frequency of financial crisis is increasing. The most recent ones are the 1997 Asian financial crisis and 2007 sub-prime mortgage crisis. iCo-op™ Basel II Risk Manager helps banks and financial institutions to address the issues arising from risk and uncertainty. It helps banks and financial institutions to implement the Basel II risk management framework (i.e. risk policies, organization structure, methodology to measure and control risks, and the data and technologies infrastructure), and to enforce their risk management process and comply with regulatory reporting and disclosure requirements.

◆ Product Description

iCo-op iVurisk addresses the challenges of banks and financial institutions to comply with the regulatory requirements of Basel II and best practices in risk management. It allows senior management to control risks in a timely manner while ensuring the independence of risk management function.

iCo-op iVurisk adopts step-by-step approach to implementation of the three pillars of Basel II framework. It adopts best practices based on statistical and financial models for determining the **Capital Adequacy Requirement (CAR)**. iVurisk provides a step-by-step implementation to Basel II CAR requirements:

- Basic Indicator Approach
- Standardised Approach
- Advanced Measurement Approach

iCo-op iVurisk provides a **web-based embedded workflow** for a disciplined and systematic risk management process. Each task is assigned an owner so that the monitoring and reviewing processes are built into the workflow. **Incidents** (lost and near lost events) are captured as historical data. Email **alerts** are for auto-triggered by critical activities like assigning of tasks, reviews, incidence reports, changes made, and due dates.



SINGLE AND INTEGRATED RISK MANAGEMENT SOLUTION

Incident Report

Incident Report Information

Report Title: Denial-of-Service Attack Report

Date: 26 August 2004

Reported By: Ho Yew Hwa

Description:

A Denial-of-Service attack on our bank's online banking system was carried at 12 noon on 26 August 2004.

1. A "denial-of-service" attack is characterized by an explicit attempt by attackers to prevent legitimate users of a service from using that service. Examples include:

- o attempts to "flood" a network, thereby preventing legitimate network traffic
- o attempts to disrupt connections between two machines, thereby preventing access to a service
- o attempts to prevent a particular individual from accessing a service
- o attempts to disrupt service to a specific system or person

Not all service outages, even those that result from malicious activity, are necessarily denial-of-service attacks. Other types of attack may include a denial of service as a component, but the denial of service may be just of

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Detailed Risk

Objective Dash Board -> Risk Dash Board

Risk: the spread of SARS

Budget Approved(\$):	500,000.00	
Budget Required(\$):	480,000.00	
Requested Budget(\$):	480,000.00	Review Status:
Allocated Budget(\$):	480,000.00	Total Expenditure(\$):

Allocate Budget

Description: N/A

Risk	Trigger Level	Target Level	Controlled Frequency	Controlled Impact	Absolute Risk	Control Risk
Define a Strategic IT Plan	\$300,000	\$200,000	3	\$100,000	◆	◆
Business IT Alignment	\$400,000	\$350,000	2	\$230,000	◆	◆
Enterprise Information Architecture Model	\$300,000	\$200,000	4	\$120,000	◆	◆
Monitoring of In-line Trends and Regulations	\$800,000	\$400,000	5	\$100,000	◆	◆
Vendor Automated Solutions	\$380,000	\$300,000	5	\$250,000	◆	◆
Acquire and Install Application Software	\$400,000	\$240,000	4	\$150,000	◆	◆
Service Level Management Framework	\$300,000	\$250,000	2	\$200,000	◆	◆
IT Resources Availability	\$500,000	\$240,000	3	\$150,000	◆	◆

Risk Dash Board

Financial Impact(\$)

>3.0E7

>2.0E7 - 3.0E7

>1.0E7 - 2.0E7

>5000000.0 - 1.0E7

>1.0 - 5000000.0

12	18	24	24	25
10	14	19	22	23
6	9	15	17	20
3	5	8	13	16
1	2	4	7	11

Expected Frequency

>1.0 - 3.0 >3.0 - 6.0 >6.0 - 9.0 >9.0 - 12.0 >12.0

iCo-op iVurisk provides real-time **dashboard views** and **reports** that summarizes all the risk exposures of the organization and tracks how the risks are mitigated dynamically as the action plans are implemented. Each risk is downward drillable to provide more detailed information.

iCo-op iVurisk adopts the best practices in data and technological infrastructure:

- Web-based and LDAP compliance to allow easy integration to the existing IT infrastructure
- Struts II (Spring) software framework for scalability and extensibility
- Double-byte coding to support for multi-lingual user interface (English, Malay/Indonesian, Chinese, etc)
- Administration and security

◆ **System Requirements**

- **Server Requirements:**
 - ✓ J2EE Platform
 - ✓ OS: Windows 2003 Server, Sun Solaris or IBM AIX
 - ✓ App Server: BEA WebLogic or IBM WebSphere
 - ✓ Database: MS SQL, Oracle or IBM DB2
- **Workstation Requirements:**
 - ✓ Browser: IE5.5 or higher

Key Features

Web-based Enterprise Solution

- ✓ Web-based integrated solutions that supports enterprise wide Basel II risk management
- ✓ Real-time visibility and accountability
- ✓ Intuitive and user friendly interfaces

Basel II Features

- ✓ Supports the three pillars of the Basel II framework:
 - Minimum Capital Requirements:
 - Basic Indicator Approach
 - Standardized Approach
 - Advanced Measurement Approach
 - Supervisory Review Process
 - Market Discipline Requirements
- ✓ Basel II Framework:
 - Policies
 - Organization structure
 - Methodologies:
 - Measurement of risks (credit, market and operational risks)
 - Process to control risk
 - Reporting and disclosure requirements
 - Data and technological infrastructure

Organization Structure

- ✓ Supports clearly defined organization structure from risk management perspective
- ✓ Allows configuration of organization chart structure (hierarchical and/or matrix) to define the work flow, authority level, access rights and security

Configurable Templates

- ✓ Configurable templates that allow organization to build their frameworks for identification, assessment, control, treatment, and management risks
- ✓ Supports both quantitative and qualitative assessment of risks
- ✓ Allows organizations to define their risk appetite, both quantitatively and qualitatively

Workflow

- ✓ Provides work flow for disciplined and systematic management of risks
- ✓ Provides assignment of owners to risk mitigation tasks
- ✓ Allows prioritization of tasks
- ✓ Provides surveys for determination of risk levels

Risk Alerts

- ✓ Provides auto email (optional: SMS) notifications triggered by risk levels, assignment of tasks, reviews, incident reports, changes made, and due dates

Risk Dashboard

- ✓ Allows selection and filtering of dashboard view by end-user or business units
- ✓ Each risk is downward drillable for more details, to as granular as control/treatment plans and reports

Reports

- ✓ Provides intuitive tabular, statistical and graphical risk reports which can be saved in MS Word or PDF format
- ✓ Allows attachment of document for incidence reports

Administration and Security

- ✓ Provides Group ID and User ID access control
- ✓ Supports SSL data encryption for secured communication for intranet or extranet environment
- ✓ Provides audit trail of all risk management activities

Scalability

- ✓ Designed and developed based on robust, modular, and scalable J2EE framework for ease of integration and implementation
- ✓ LDAP compliance to allow easy integration to the existing IT infrastructure
- ✓ Struts II (Spring) framework for scalability and extensibility
- ✓ Double-byte coded for multi-lingual support

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About iCo-op.net

iCo-op.net provides Governance, Risk Management and Compliance (GRC) products and solutions targeting the mandatory/regulatory demands of Basel II and CDO Risk Management, and anti-money laundering requirements by the banks, financial institutions, governments, and large enterprises.