

**An Analysis of Disaster Risks and Prevention Methods of
Government Commercial Banks in Sri Lanka**

By

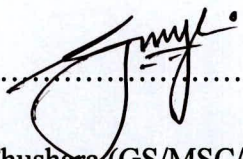
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GSIMSCIMGT/3451/2008

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award of the Degree of Master of Science in Management**

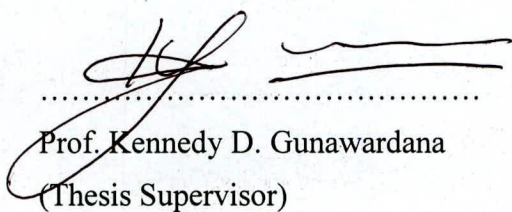
DECLARATION

The work described in this thesis was carried out by me under the supervision of Professor Kennedy D Gunawardana and a report on this has not been submitted in whole or in part to any university or any other institution for another Degree/Diploma.


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CERTIFICATION

I certify that the above statement made by the candidate is true and that thesis is suitable for submission to the University for the purpose of evaluation.


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List of abbreviations

AC	Air Conditioner
ATM	Automated Teller Machine
BCP	Business Continuity Plan
BIA	Business Impact Analysis
BOC	Bank of Ceylon
CBSL	Central Bank of Sri Lanka
CCTV	Closed Circuit Television
CEB	Ceylon Electricity Board
DBMS	Data Base Management Systems
DRP	Disaster Recovery Plan
DRT	Disaster Recovery Team
EDP	Electronic Data Processing
IS	Information Systems
ISO	International Standard Organization
ICT	Information and Communication Technology
IT	Information Technology
LAN	Local Area Network
LPS	Lightning Protection Systems
PB	People's Bank
RTGS	Real Time Gross Settlement
SLT	Sri Lanka Telecom
SPSS	Statistical Package for Social Scientist
UPS	Uninterrupted Power Supply

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V.G.C. Thushara (GS/MSc/MGT/3451/2008)

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Abstract

Past incidents show that the chance for disasters irrespective of the cause is in an increasing trend. Natural, Manmade and Technically generated disasters occurred in a higher frequency than before. Some of these disasters can be avoided if correct prevention measures were practiced and some disaster situations such as Tsunami cannot be controlled.

However a properly designed disaster recovery plan helps to recover in a greater success in an event of a disaster. It will guide to establish the essential functions within a fairly considerable time period.

The world is moving towards a knowledge economy where the key strategic resource becomes the knowledge or “Information”. At present, organizations consider data and information as the most valuable asset or strategic weapon which determines the survival and the competitive position of an organization. Information is treated as important as with or higher than labor and capital. Thus, most organizations now are information based and utilize ICT in a greater extent for their business purposes. Same time, the consumers also consider that the time is more precious than before and expect always on, quick services from the business organizations.

Thus, the need of ensuring the business continuity cannot be undermined. To the far extent possible, the chance for the discontinuities should be avoided and effective strategies should be pre set to practice to recover from the discontinuities if happened.

Banking industry is an industry which has a high utilization of information and information communication technologies for their businesses. In the absence of the information and ICT they cannot operate. Thus with in this study analyses the government commercial banks of Sri Lanka – Bank of Ceylon and People’s Bank and the disaster recovery plans of them in order to assess the risks for disaster situations and to evaluate the existing disaster recovery plans in terms of their appropriateness, practice and operation. A cross comparison also made among the banks to identify the differences among the risk and prevention / recovery measures.

Research reveals that the both banks possess the same or similar levels of risks among the risk categories except the possibilities for natural fire related disaster risks and possibilities for Electricity and Power related risks. No significant differences were identified between the two banks among the other risk categories such as manmade disaster risk and technical failure risk. It was identified that People’s Bank virus risk and software related risk is higher than those risks of Bank of Ceylon. The measures taken to prevent the chance for the disasters as well as to recover from disasters if happened are almost same between the banks. One reason for this situation is the common guidelines issued by Central Bank of Sri Lanka for the commercial banks on disaster prevention and recovery. Thus, preventing and recovering from natural fire disasters and avoiding electricity generating fire risk were still shown as the challenges for the both banks.

CHAPTER 01

INTRODUCTION

1.1. Background to the study

Several decades ago, people used to consider the physical resources such as coal and minerals as the most valuable assets to human beings. However, later, it was identified at several organizations that human resources are more powerful and important than the physical resources, especially in the field of business. With the advancement of Science and Technology in the modern world, in the 20th century, the contribution of both physical and human resources were underestimated to a certain extent, in the commercial world: people began to realize that an information-rich organization is significantly efficient in the field of business: an organization with much information can gain much competitive advantage, in any business.

Commercial banks play a major role in the field of business in Sri Lanka. Sri Lanka is fairly rich with private banks such as Sampath Bank, Hatton National Bank, Saylan Bank, Commercial Bank and state-run banks such as People's Bank and Bank of Ceylon. However, since the majority of Sri Lankans seem to rely on state run banks and since they are situated in almost all the areas in the country, the service rendered by the state-run banks is quite significant in the commercial world, in monetary transactions.

In the past, the banks processed their data through the manual data processing systems. Manual data processing was done with pen and paper with traditional data processing method's its tough and complicating as it consumes more pages and filling it makes the

data processing work more tedious and tiresome. Many faults/disadvantages could be seen in this manual data processing method. Among them the low speed, low accuracy, storage problems, security issues were there. But all these addressed with the Electronic Data Processing. Electronic Data Processing (EDP) can refer to the use of automated methods to process commercial data. Typically, this uses relatively simple, repetitive activities to process large volumes of similar information.

Thus, it is imperative for these banks to maintain and manipulate the data of their customers in a regular, systematic way. To address this need, the banks have taken action to maintain a data-base system at their organizations: it is reported that the data-base management system (DBMS) has been beneficial for the organizations to run their business smoothly and efficiently. For instance, due to the data-base system, any customer has the access to his/her financial transactions in any part of the world. Thus, the data-base system available in the commercial banks has been very important for the customers as well to the authorities of the banks to run their business efficiently.

However, what is equally important is to maintain ways and means to protect this data and information because data is easily subject to destruction. People have typically associated disasters with catastrophic events such as fires, hurricanes, and tornadoes. Accordingly, data and information are destroyed due to many reasons. As Wrobel (1997) points out there are three main phenomena that can cause data destruction. They are;

- Natural causes
- Human errors
- Technical Failures