

Chapter 7

Financial Risk Management: An Introduction

Mirela-Madalina Stoian

Technical University of Civil Engineering Bucharest, Romania

Rares-Gabriel Stoian

Technical University of Civil Engineering Bucharest, Romania

ABSTRACT

The present paper intends to serve as an introduction into the financial risk management universe. It starts with the basic assumption that performance of an organization is inseparable from the risks it is facing. Any organization should have in place the necessary tools to identify, assess and constantly measure the risks it is exposed to. The paper focuses in defining the basic principles in creating a viable risk management framework that keeps track of three major categories of identified financial risks: market risk, credit risk and liquidity risk. Emphasis is put on the models to measure these types of risks but also on the tools an organization can use in order to reduce them. The second part of the paper is dedicated to recent events that shaped and shocked financial markets and illustrate the consequences faced by organizations when risks are not properly assessed and the risk management models in place are based on dangerously unrealistic notions.

INTRODUCTION

It was the year 1973, oil-producing countries and members of the Organization of Petroleum Exporting Countries (OPEC), exercising their powers, embargoed oil shipments and sent the price of oil up more than five times. Inflation followed in big consumer countries like the U.S. and Great Britain. Other products and services soon captured the price increase. Oil producers' started to amass large quantities of cash kept in bank deposits. As a consequence banks suddenly were able to make loans that otherwise they have not made. Operating on the principle that countries do not actually go bankrupt, they started lending money to not so creditworthy countries from Eastern Europe or Latin America (Shirreff, 2004).

DOI: 10.4018/978-1-5225-5481-3.ch007

During the early 1980s, the U.S. and Great Britain tried to stop the inflationary spiral. They raised interest rates to previously unimaginable levels. This created a problem for the developing-country debtors. High interest rates made the dollar expensive, which in turn implied a lower dollar value for the commodity exports critical for the Eastern European countries (and some others). These countries faced a currency mismatch on their debt. They had borrowed dollars, and they had to repay dollars, but they couldn't earn enough dollars to do so. One by one, they defaulted.

This crisis has its roots all the way back to 1971, when the U.S. decided to close the gold window as a result of the Breton Woods summit and refused to allow those who held dollars to exchange the currency for gold. Deregulation of currency values and interest rates followed. The world had embarked on a new era of financial volatility. Soon, vendors were offering to sell safety and security. They based their products and services on complex mathematical analyses that would have been impossible without astonishing advances in computer technology. Back-to-back loans evolved into swaps, and swaps evolved into sophisticated derivatives. Meanwhile, futures exchanges throughout the world began to trade financial futures and options (Shirreff, 2004).

A new profession, the one of the financial risk manager has emerged. The world was soon to find that its practices entirely can depend on dangerously unrealistic notions. Monte Carlo simulations, for example, are powerful, impressive analytical techniques, but they assume the continued existence of the market and the continued availability of a price. Because mathematical models are so limited, experts started to experiment with other approaches in order to minimize risk exposures. Still, numbers cannot capture the full human reality of the market, which includes not only pure reason, but also emotions like fear, greed and more. However, the recurring theme of recent financial history has been the inadequacy of quantitative models in the face of unprecedented experienced risk. These will be thoroughly presented in this chapter by studying case histories that show the consequences of the improper usage of derivatives instruments (Hammersmith & Fulham, LTCM etc.) (Shirreff, 2004).

THE RISK MANAGEMENT FRAMEWORK

In the world of investments, risk is considered to be closely correlated with performance. The risk-return framework is one of the foremost lessons in financial education and it actually explains the fact that you cannot have return without taking any risk. In this context, risk becomes a critical variable to identify, measure and most importantly to manage. As a general rule, organizations should take only the risk they have information about and feel comfortable with. Other risks should be reduced, avoided, or completely hedged (Shimpi, 1999).

In this context, any modern organization should have in place an effective risk management process that is created around five important steps:

1. Top management of the organization puts forward the relevant policies and procedures for managing the risk the organization is facing.
2. Identify the risks that the organization is facing. These risks may be grouped as financial and non-financial risks. This process usually requires creating and managing databases for the identified types of risks.
3. Define risk tolerance intervals in terms of what the organization is willing and able to bear. Depending on the identified risks, tolerance levels can differ.

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