Chapter 7
Understanding the Financial Derivatives Instruments

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ABSTRACT
Today, core of the individual and institutional decisions are mainly finance and economics related thereby in today's world the most important success and performance indicators are financial results. Concepts which are called as change or innovation found themselves throughs derivative products in financial markets. Basically, the instruments that are known as forwards, futures, options and swaps have left their mark in last 20 years. However, after the 2008 financial crisis, these products have been labeled as toxic, complex or speculative and held solely responsible for the crisis. Whereas, first appearance of the derivative products was directed toward hedging and risk management. Therefore, objective of this study is to academically explain basic operating principles of financial derivative markets from conceptual and functioning point of view, to understand their places in world financial markets and to analyze their pricing examples. In this way, we aim to help students, academicians, and researchers make better assessment of derivative products.

INTRODUCTION
The Mortgage crisis during the last years has caused the reconsideration of financial history and risks from past to present. Besides, the historical development process of risk forms a close relationship between the finance and philosophy. Financial discipline or modern finance, comparing to other disciplines, has a short history and it has started to develop as a separate discipline especially after 1950s (Lyuu, 2004: 1). The “behavioral finance”, evaluates why and how the investors take investment decisions and it is actually one of the subjects of the financial philosophy. For instance, Thales demonstrated how a philosopher can get rich only with his knowledge and intuition, roughly 2500 years ago by estimating the olive harvest. Beside that being accepted as the first philosopher of the history, Thales also introduced the first example of abstract proof in the world history that is not based on mathematics or experiment, but nonempirical and ratiocinative with the strategy he followed towards the future (Ülger, 2003: 49).

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Thales’s investment estimation that is based upon converting knowledge into income is the first example of derivative products and still survives today. In addition to this, “selem1” contracts within the Islamic discipline can also be regarded as one of the examples of derivative products with their “forward sale agreements” in terms of historical perspective.

The History of derivative products is important and need to be known in order to make future judgments. Together with financial globalisation, derivative products are used as an investment tool rather than hedging. Therefore making profit become possible with derivative products and markets. As a result of this, these products which are shown as the main responsible of last crisis, are also considered as a reason of financial crises. However those products initially offered to lose less rather than earn more. Apart from the importance of derivative products; for todays world, it also contributed to the improvement of core financial fields like financial risk management international finance, portfolio management and made them widely used. In future it is expected that different derivative products will be traded in markets. Thereby the theoretical information infrastructure of those products must be empowered and improved.

In this study, risk and its types, derivative products and their intended uses, markets and types will be examined and the factors creating derivatives and their usage philosophies will also be explained.

THE CONCEPT OF RISK AND ITS PHILOSOPHY

Conceptually there is a close relationship between the concepts like risk, finance, philosophy, certainty and uncertainty. Risk concept is explained as; “uncertainty and the result of uncertainty” by Tevfik (1997) and “the diversion of actual result from the expected” by Bolak (2004). Finance, in reality, is explained as the money. Financial management is the discipline that enables the management of this money (Gitman, 1991: 5). When the concept of “financing”, the supply of money, is added to this definition; financial management is defined as the supply, protection, and effective management of the funds that are needed by the individuals and organisations to develop their enterprises (Büker at al., 2009: 4). In fact, the concepts of uncertainty and risk should also be added to this definition since “finance” and “financing” are seen as the essential components in the definition of financial management. However, finance (money) and the supply of this money (financing) is depend on dispensing with some future investments, taking into consideration new investment decisions, and choosing of assets to be invested in according to their risks. At this point, considered factors will be the concepts of return and risk along with philosophical questionings. To be able to get more return requires taking more risk and therefore facing with more probability of loss, and necessitate to consider different alternatives. This relationship is also explained as risk-return trade-off. Given the fact that negative expectations towards the uncertainty poses the risk, the uncertainty, and in terms of financial terminology, it is called as “dispersion of expected results obtained” (Bolgün and Akçay, 2009: 189). The extent of this dispersion shows the uncertainty band. Uralcan (2006) refers one’s awareness of his own risks as uncertainty while explaining risk as the probability of material and moral loss of individuals and organisations. If you can not scale the uncertainty, you can not speak about the risk. Because while each risk includes some uncertainty, each uncertainty can not be perceived as a risk. In the situation of uncertainty, the decisions towards the future are abstracted completely. Certainty is knowing the future foresights from today. Therefore, derivative products can be defined as financial instruments that help managing uncertainty and risks with some cost or foresight.