Chapter 64
Currency and Interest Rate Effect on Financial Ratios:
Technology Case on ISE

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ABSTRACT

The purpose of this study is to analyze the effects of currency and interest rates on selected financial ratios of technology firms. In a developing country, as an economic indicator, currency and interest rates have crucial impact on technology firms' financial statements. The authors selected financial ratios from seven technology companies that were included in the technology index on Istanbul Stock Exchange (ISE) between the years 2001 and 2010. Findings suggest that Dollar and Euro-Turkish Lira currency affect the current ratio, Euro-Turkish Lira currency only affects the acid-test ratios and net working capital turnover, and Dollar currency and interest rates both have an effect on total asset turnover. Net profit margin ratio is only affected by interest rates changes. This analysis helps technology sector managers and shareholders to forecast the changing currency and interest rates in order to optimize their financial statements.

INTRODUCTION

Technology sector continually expands its area with information technology. Technology firms are listed on Istanbul Stock Exchange (ISE) produce software and hardware. Furthermore, they have begun to collaborate mobile network, energy, defence and telecommunication with increased interest on information technology. Technology and information technology firms are telescoped each other and this situation is a result of which technology and information technology firms are the same firms in ISE. Although information technology market in Turkey does not have a larger size than the one in Europe and other countries in the world, it has growth potential when compared to the large-scale markets. The number

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of technology improvement regions in 2005 increased from twenty to thirty in number in 2010 and this stands as atestimony of Turkey's growth potential (Bulgurcu, 2012).

Turkey has long been and continues to be an advocate of raising science and technology to new heights, and has recently been engaged in a significant science, technology and innovation impetus with the vision to contribute to new knowledge and develop innovative technologies to improve the quality of life by transforming the former into products, processes and services for the benefit of the country and humanity. Such an advocacy is rooted in the advancement of a dynamic ideal based on continuous renewal and modernization under the guidance of science, technology and knowledge. Today, the actors as a whole have succeeded to put forth a determination to continue to invest in R&D (Research and Development) and innovation, which is a key driver of future sustainable growth, and increase demand for science, technology and innovation (Tubitak, 2010).

Currency and Interest rate crisis becomes central issue for technology firms, which are located in emerging countries. Currency depreciation helps solve financial distress problems even when firms have borrowed in a foreign currency, if firms' cash flows are denominated in a foreign currency and its costs at least partially in a domestic currency. Bris et al. (2004), indicates that the currency depreciation is not costless, however, since it leads to excessive leverage and risky investments prior to depreciation. Currency depreciation may harm corporations financed with foreign debt. Bris and Koskinen (2002), argues that financial distress leads currency crises, followed by improving financial health, and only those firms that benefit from the currency depreciation should display excessive leverage prior to a crisis. Unexpected currency fluctuations vital risk element for technology firms financial statements and it's budgeting at currency crisis. They argue that the firms that benefit from a currency depreciation increase their leverage prior to the corresponding currency crisis. Leverage and profitability could develop asymmetrically before and after a crisis has occurred. Schneider and Tornell (2004), concludes that the firms in the tradable sector show higher leverage and lower profitability and growth preceding a crisis compared to firms in the non-tradable sector and a reversal of roles after a crisis has occurred. According to the result of Aghion et al. (2001), and Krugman (1999), firms are less profitable and are more fragile even after currency depreciation is stable.

In the recent years, a growing body of research has been sought to identify the effect of financial and economic factors on financial performance. Parallel to this, the study aims to analyze the relation between financial ratios and macroeconomic conditions with time series. According to the research, we will identify those financial ratios, which would be the main effect on the competition between companies in the technology market. The relation between macroeconomic indicators of Turkey and financial ratios of these companies (on Istanbul Stock Exchange-ISE) are analyzed through the study. In our research, we aimed to estimate the impact of economic conditions and development on the financial performance of technology firms in terms of not only their profitability and sales revenue but also the overall financial performance as well.

BACKGROUND

In the emerging financial markets, currency risk is the major concern for companies, which is one of the most controversial issues in literature and it is related with hedging. Jorion (1989), and Gastineau (1995) accept the presence of hedging benefits in the short run, but not in the long run. Hauser et al. (1994), verify the benefits of hedging in developed countries, but not in emerging markets. In the short

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