Chapter XI

E-Capital Budgeting:
Managing Strategic Investments in a World of Uncertainty

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Over the last five years, firms with strong presence on the Internet have seen increases in the value of their firms to what some consider obscene levels. The “new era” economy has led to “irrational exuberance” in the stock market. This era of uncertainty has also unleashed numerous valuable opportunities for firms. The world in general and e-commerce ventures in particular are dominated by strategic investments with lots of uncertainty that require huge capital outlays. Moreover, these projects must have the ability to adapt to changing conditions that evolve as new information becomes available. The failure of traditional discounted cash flows (DCF), such as NPV, in valuing e-commerce projects is partially due to meager cash flows relative to required investments and high discount rate due to unknown risk in the projects. This chapter will show how techniques used in valuing financial options can be used to value project or firms under conditions of extreme uncertainty.

E-COMMERCE: NEW ECONOMY OR IRRATIONAL EXUBERANCE

E-retailing has continued a steep upward climb with online sales that were a mere $13 billion in 1998 tripling to over $40 billion in 1999. With close to 100

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million Americans expected to cruise the Web by the year 2000, the expectation of growth is truly staggering. However, Rosen and Howard (2000) warn that the “Internet will not change everything.” Only a few products are suitable for e-retailing, as online shopping is suitable for certain product types that do not require ‘touch and feel’ and require detailed information about it (that can be better obtained online). Some examples of products that are suitable for online retailing are sporting goods, computers, and books. While the success of e-retailing may be somewhat limited, its greatest impact is perhaps being felt in the manufacturing sector where the benefits are much more tangible. Ken Vollmer, Research Director of Giga Information Group, identifies four main areas where the Internet is helping manufacturers. Some of the key areas are: product design (companies can share information more quickly), procurement (business-to-business e-marketplace initiatives), customer service (by improving post-sales support) and supply chain management.

In the last five years, firms with strong presence on the Internet have seen increases in the value of their firms to what some consider obscene levels. Wilshire Associates, which tracks the performance of more than 400 Internet stocks, reports that as of June 30, 2000, these firms had a market capitalization of $1.5 billion. This market capitalization is less than 1% of the total market cap of the entire stock market. However, while the overall stock market has averaged about 23% for the years 1998-99, the Internet stocks have produced dizzying average returns of 150%. The extraordinary valuations of the Internet stocks are viewed by many a result of irrational individual day trading of any stock that “begins with e- or ends with .com” (Schwartz and Moon, 2000). Others view that the high valuations of Internet firms are due to investor optimism on the growth potential of these firms.

The “new era” economy has led to what many believe to be “irrational exuberance” in the stock market. Shiller (2000) notes that the market has been heading up fairly uniformly ever since it bottomed out in July of 1982. It is clearly the most spectacular bull market in U.S. history. The upward trend in price-to-earnings (P/E) ratio has been even more dramatic. While real earnings have remained flat, the real stock prices have increased by more than 300%. This era of uncertainty has also unleashed numerous valuable opportunities for firms. According to John Seely Brown, Director of Palo Alto Research Center, “Fundamental changes are underway in the world of business...With this shift, we are finding many of our background assumptions and time-honored business models inadequate to help us understand what is going on, let alone compete.” The first six months of the year 2000 witnessed some impressive reversals. While the broad stock market as measured by the Wilshire 5000 had a return of -0.80%, the Internet stocks were down -14%.

THE WORLD OF UNCERTAINTY

In this world of uncertainty, how does a firm go about valuing its investment projects and how can investors in turn find out the fair value of the stocks?
Digital Watermarking and Its Impact on Intellectual Property Limitation for the Digital Age
www.igi-global.com/article/digital-watermarking-its-impact-intellectual/3451?camid=4v1a