

## **Capital Budgeting: Multiple Projects with Unequal Lives**

Acclaim Entertainment

Acclaim Entertainment, Inc. is a mass marketer of interactive entertainment software whose games can be played on such well known video game systems as Nintendo and Sega. Some of their more successful games include Mortal Kombat I and II, NBA Jam I and II, Maximum Carnage, Virtual Bart (Simpson), and NFL Quarterback. Acclaim has also obtained licenses from True Lies, Batman Forever, and Spiderman.

The interactive entertainment industry is characterized by rapid technological change and as such, no single hardware system has achieved long-term dominance. Accordingly, Acclaim focuses its production efforts on the development of software for the hardware systems that dominate the interactive entertainment market at a given point in time or in the very near future. Presently, Acclaim has licensing agreements with three industry leaders: Sony Computer Entertainment of America (SCE), Nintendo, and Sega. Acclaim is currently in the design/production stage of a new version of Mortal Kombat. Since the previous versions of the game were extremely successful, Acclaim is not greatly concerned with the acceptance of the game by the general public. It is concerned, however, with the hardware platform that should be chosen to distribute the game.

Since licensing agreements are extremely short term, Acclaim wonders which of the three hardware companies should carry Mortal Kombat. For example, the licensing agreement with SCE expires in December two years from now. The Nintendo agreement expires in December of this year and the Sega contract expires in December of next year. While these contracts expire and have traditionally been renewed every few years, there is no guarantee they will be successfully renewed or extended in the future.

A further consideration involves the costs charged by each company. SCE, Nintendo, and Sega charge their licensees a fixed amount per unit based on chip configuration, memory capacity, and market price. This charge covers manufacturing, printing and packaging of the unit, as well as a royalty for the use of their respective names, proprietary information and technology. Furthermore, these charges are subject to adjustment at the discretion of SCE, Nintendo, and Sega.

To offset the expenses of licensing fees, Acclaim must speculate on the ability of the three hardware platforms to access enough end-users to make their games profitable. Nintendo and Sega hold a greater share of the market, but SCE charges lower licensing fees. In general, the product life cycle in the interactive software business is from one month up to eighteen months with the majority of sales occurring within the first three months after introduction. Although titles older than eighteen months may still be available for sale, Acclaim generally actively markets only its ten to fifteen most recently released titles. Mortal Kombat represents somewhat of an exception to the rule. Being one of the most successful products, Mortal Kombat's most feared competitor will be the

prospect of the next version of Mortal Kombat. There has currently been no discussion of the number of games that will be produced in the series.

Acclaim's management has assembled the following projected net cash flows associated with the distribution of Mortal Kombat. These net cash flows reflect all licensing fees, productions costs, advertising expenditures, revenues, etc.

**Table 1:**

| Time<br>(end of year) | Net Cash Flow (in millions) |          |       |
|-----------------------|-----------------------------|----------|-------|
|                       | SCE                         | Nintendo | Saga  |
| 0                     | -\$40                       | -\$40    | -\$40 |
| 1                     | \$34                        | \$44     | \$41  |
| 2                     | \$10                        | \$16     | \$18  |
| 3                     | \$5                         |          | \$4   |
| 4                     | \$1                         |          |       |

### Questions

1. What is the Payback Period for Mortal Kombat when marketed under the three different hardware companies? Assuming a required payback period of 1 year, which company would you allow to carry the new product?
2. Assuming a discount rate of 10%, what is the Net Present Value (NPV) under each system? Under which system, if any, would you be willing produce Mortal Kombat?
3. What are the Internal Rates of Return (IRR) under each marketer? Which marketer(s) has/have acceptable IRRs?
4. Thus far we have assumed that Mortal Kombat will be marketed through only one hardware system. Under this assumption, the projects are mutually exclusive. If we explore the possibility of allowing more than one company to market Mortal Kombat, which company(ies) would you allow to market the product? Base your answer on the three criteria from the above questions.
5. Mortal Kombat will have a different life span depending on the hardware system Acclaim chooses. Since the lives of the three projects are not equal, can a comparison truly be made based on conventional NPV measures? Calculate the Annualized Net Present Value (ANPV) for each of the three alternatives. Based on ANPV, which marketer would you choose to sell the product through if the projects were mutually exclusive? What if they were independent?