Racquetball

# Overview

It is early in 2000, and a friend of yours has invented a new manufacturing process for producing racquetballs. The resulting high-quality ball has more bounce, but slightly less durability, than the currently popular high-quality ball, which is manufactured by Woodrow, Ltd. The better the players, the more they tend to prefer a lively ball. The primary advantage of the new ball is that it can be manufactured much more inexpensively than the existing ball. Current estimates are that full variable costs for the new ball are $0.52 per ball as compared to $0.95 for the existing ball. (Variable costs include all costs of production, marketing, and distribution that vary with output. It excludes the cost of plant and equipment, overhead, etc.) Because the new process is unlike well-known production processes, the only reasonable alternative is to build a manufacturing plant specifically for producing these balls. Your friend has calculated that this would require $4 – 6 million of initial capital. He figures that if he can make a good case to the bank, he can borrow the capital at about a 10 percent interest rate and start producing racquetballs in a year. Your friend has offered to make you a partner in the business and has asked you in return to perform a market analysis for him. He has already hired a well-known market research firm, Market Analysis, Ltd., to do some data gathering and preliminary market analysis. The key elements of their final report are given below. Your problem is to determine how the new balls should be priced, what the resultant market shares will be, and whether the manufacturing plant is a good investment. Your friend is especially concerned about the risks involved and would like some measures of how solid the investment appears to be. He would like you to make a formal presentation of your analysis.

# Market Analysis

* The market for this type of high-quality ball is currently dominated by a single major competitor, Woodrow, Ltd. Woodrow specializes in manufacturing balls for all types of sports. It has been the only seller of high-quality racquetballs since the late 1970s. Its current price to retail outlets is $1.25 per ball (the retail markup is typically 100 percent, so these balls retail around $2.50 each, or $5.00 for the typical pack of two).
* Historical data on the number of people playing the sport, the average retail price of balls, and the (estimated) total sales of balls is given in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Players (thousands)** | **Retail** | **Balls (millions)** |
| 1985 | 600 | $1.75 | 5.932 |
| 1986 | 635 | $1.75 | 6.229 |
| 1987 | 655 | $1.80 | 6.506 |
| 1988 | 700 | $1.90 | 6.82 |
| 1989 | 730 | $1.90 | 7.161 |
| 1990 | 762 | $1.90 | 7.895 |
| 1991 | 812 | $2.00 | 7.895 |
| 1992 | 831 | $2.20 | 8.224 |
| 1993 | 877 | $2.45 | 8.584 |
| 1994 | 931 | $2.45 | 9.026 |
| 1995 | 967 | $2.60 | 9.491 |
| 1996 | 1,020 | $2.55 | 9.996 |
| 1997 | 1,077 | $2.50 | 10.465 |
| 1998 | 1,139 | $2.50 | 10.981 |

* According to industry trade association projections, the total number of players will grow about 10 percent a year for the next 10 years and then stabilize at a relatively constant level.
* In order to assess relative preferences in the marketplace, a concept test was performed. In this test, 200 customers were asked to use both balls over a three month period, and then specify which ball they would buy at various prices. Many customers indicated they would pay a premium for the Woodrow ball, based on their satisfaction with it and its better durability. Nevertheless, about 11 percent of the customers interviewed indicated a preference for the new, bouncier ball at equal prices. The actual observed distribution of price premiums is as follows (price ratio = price of Woodrow ball / price of new ball):

|  |  |
| --- | --- |
| **Price Ratio** | **% Who Would Buy New Ball** |
| 0.5 | 0 |
| 1 | 11 |
| 1.5 | 41 |
| 2 | 76 |
| 2.5 | 95 |
| 3 | 100 |