



SKA (Sweden)

I think it's pretty clear that what looks on the surface as though it's a bookkeeping decision may be one of our most important management decisions. And that's why we are here today.

Frank Johansson, president of the SKA (Sweden), a supplier to the Swedish defense industry, was addressing his executive group as they met to consider what had grown into a major corporate issue—namely, the accounting treatment of a special research and development (R&D) expenditure. The accounting of the costs would make the difference in reporting either continued losses or small profits for the company over the next three years. Because Swedish accounting rules permitted companies to capitalize R&D expenditures (see **Exhibit 1**) SKA's management team had been examining the accounting issue to uncover as many of the relevant considerations as possible. The meeting in progress was to try to resolve the question.

SKA was founded in 1980. The company's operations covered the development, manufacture, and sale of electronic equipment for military and civilian use. Some 300 shareholders owned SKA's stock which traded on the Stockholm Stock Exchange.

In its early years, SKA had rapidly expanded its sales and showed increasing earnings per share. The success was due principally to the company's development of a number of improved electronic components for military computer applications and aircraft defense systems. As a result, SKA was labeled a "growth company" and its stock sold at a substantial premium.

About 1985 SKA's sales and profits began to decline. The underlying reason was that the company's line of electronic gear was progressively being made obsolete by a series of rapid changes in computer and military monitoring technology. Also, SKA's R&D group was unable to come up with any significant improvements in the company's existing products. Consequently, SKA's stock began to sell at an increasingly lower price earnings ratio.

Beginning in 1988 SKA reported losses to its stockholders. However, from the low point in 1989 these losses were reduced somewhat in 1990, and again in 1991, principally because the company had secured in those years several cost-plus-fixed-fee contracts related to the manufacture of experimental air-to-air missile guidance systems. But, despite the reduced losses, SKA's stock continued to be traded at a substantial discount from the stock prices of similar companies.

As a result of these repeated losses, the company management had been subjected to constant criticism by a dissident stockholder group since 1989. This group accused the management

Professor David F. Hawkins prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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of being "unimaginative" and "incompetent". And, as the losses persisted, other stockholders became more and more sympathetic to the dissident group's demand for a "change of management."

In February 1992, encouraged by the trend toward profitable operations, Johansson promised the company's stockholders that SKA would show a small profit during 1992 and thereafter increased profits. This encouraging news was welcomed by the stockholders. Johansson's promise was reported to all the leading financial journals. And the price of the company's stock showed a slight improvement.

Exhibit 2 shows SKA's financial data for the years 1980–1991.

R&D Program

One month following Johansson's promise to the stockholders of future profits, SKA's management committee met and decided to undertake a stepped-up-three-year R&D program, which hopefully would revitalize the company. This program grew out of a development by the company's R&D department of a simple pilot model of a computer component, which gave promise of revolutionizing computer memory capacity and allied systems for certain military applications. In this component, management decided lay the chance for SKA to regain its lost market position.

However, one of SKA's competitors was known to be exploring the same principle of electronics on which SKA's laboratory model was based. Therefore, in the spring of 1992, SKA decided to accelerate the development of a patentable commercial product by increasing the company's R&D expenses from some \$1,000,000 to \$1,500,000¹ a year, of which \$1,000,000 would be devoted to the new project. The remaining \$500,000 would be used to continue R&D related to other products, most of which the firm was already producing. Previously SKA had never spent more than \$500,000 in total on any single R&D project.

Peter Pettersson, SKA's vice president for research and development believed that even with the increased R&D expenditure, it would take nearly three years to develop the laboratory model into a sound commercial product. During the first year he proposed to conduct some further basic research on the electronic principles incorporated in the model. The actual development of commercial prototypes was scheduled to take place in the second and third years. Pettersson estimated the probability of success creating a commercial product at about seven chances out of ten.

Based on studies of the projected demand for military products during the period 1995 to 2000, Alan Fromm, SKA's vice president for sales, estimated that the new computer component and its allied systems' sales potential would be about \$150 million between 1995 and 2001. This projection did not take into account any possible major negative impact on the global military market caused by the recent political and economic changes in Eastern Europe and the Soviet Union.

From its past experience with similar technological innovations, management expected that the competitive advantage of the component might be as short as two years, but more likely as long as four years. Thereafter as similar or better competitive components were developed by either SKA or other companies, it was anticipated that the component would experience declining sales for a period of two or three years.

¹To partially eliminate the effect of Swedish inflation on SKA's financial data, all Krona values have been restated to their U.S. dollar equivalent using year end exchange rates.

Expense or Capitalize?

Shortly after the management committee had decided to go ahead with the new R&D program, Thomas Larsson, SKA's controller, circulated among top management a memorandum (See Exhibit 3) suggesting that the increase in R&D expenditures required offsetting cost cuts in other areas of the business.

Larsson's memorandum caused considerable consternation among management. As a result, Johansson called a meeting of his management group to discuss the memorandum and the expensing issue. The group consisted of Johansson, Pettersson, Fromm, and Larsson—as well as David Thor, vice president for finance, Philip Holter, vice president for purchasing, and Sebastian Jansson, vice president for employee and public relations.

After the prefatory remarks which Johansson made (as quoted at the beginning of the case), SKA's president asked the controller to expand on his memorandum.

Johansson: Tom, why don't you discuss your memorandum a bit more extensively? Why do we have to write off *as they are incurred* these R&D costs related to the memory-storage project?

Larsson: Well, first let me explain that *either* deferment or current expensing of R&D costs is an acceptable Swedish accounting practice. In fact, both practices at one time or another have been followed within our industry. However, the accounting profession has generally favored current expensing of such costs.

Personally, I believe we should write off our R&D costs as incurred for several reasons: (1) the accounting treatment I propose is conservative; (2) it is highly speculative that we will ever generate future revenues from these R&D costs; (3) if we defer them, we will be overstating our income during the next three years; and (4) we have always currently expensed our R&D costs, and consistency demands we treat these anticipated costs in the same way.

Johansson: Well, Tom, I think it is more than just an accounting question. I'm sure there are some additional considerations that we as management will have to evaluate. What thoughts do the rest of you have about Tom's proposed accounting policy to cover the handling of these R&D costs?

Pettersson: Speaking for the R&D group, I would reject out of hand Tom's statement that the project is highly speculative. As I've said before, I think our chances for success are seven out of ten. Those are pretty good odds to me.

One thing that worries me. The morale of the R&D group has been very low in recent years. They feel the losses of the last few years thanks to the wage freeze have resulted from *their* failure to come up with a new product. Now we have a red-hot prospect and everyone is happy. If you write off the costs and we continue to report losses to the stockholders, then the R&D group's morale might fall again during those periods when we have setbacks on the project. And make no mistake about it; this project, like all R&D projects, will have its discouraging moments.

On the other hand, if you capitalize the costs and carry them on the balance sheet as an asset, you will be telling the R&D groups that they have created something of value. And that is true. After all, we wouldn't spend all this money if we didn't think it was of some value to us, would we?

I'm for deferment of these particular costs. In fact, I'm for deferring all our R&D costs which will benefit future accounting periods.

Thor: I agree with Peter. From our point of view in finance, there is only one policy to follow – deferment.

If this R&D project is to be completed within three years and turned into a successful commercial venture, we will have to go to the public money markets for capital in 1994, the year before we get into commercial production. And, for the life of me, I don't see how we will get sufficient funds at a reasonable cost if we show losses for the entire period 1988 through 1993.

Now, I can't go along with Tom when he states that deferment would be overstating our income during the next three years. If we defer these costs, what we are really doing is matching our costs with our revenues. These R&D costs are clearly identifiable with the memory-storage project. And, just as clearly, sensible accounting would demand that the costs be matched with the memory-storage revenues. Therefore, since these revenues will not be realized until after 1994, the appropriate R&D costs should be deferred until 1994, and then expensed against the revenues from the project.

To write these R&D costs off as incurred would be misleading. We would understate our income over the next three years. And, because the post-1994 revenues would be relieved of these R&D costs, the post 1994 income would be overstated.

Of course, there would be full disclosure to our stockholders of our accounting policy covering R&D costs. The extraordinary costs related to the memory-storage project would be the only ones deferred. They would be clearly labeled as such on the balance sheet with an explanatory footnote. All other R&D costs would be expensed as incurred.

Johansson: How does this question look from the sales end, Alan?

Fromm: I go along with both Peter and David. If we are to finance this project, we will have to keep our sales volume up over the next few years. And the best way to do this is to continue to get cost-plus-fixed-fee contracts. However, the major defense contractors and the military don't like to let out contracts to unprofitable companies. Therefore, I can't see jeopardizing the whole project just to be "conservative" accounting-wise.

Holter: I know one thing – if we are to finance the bulk of this project for at least two years by ourselves, we will have to resort to such measures as drawing down our cash and stretching our accounts payable. And that means our current 2.2-to-1 ratio will decrease somewhat, irrespective of whether we expense or defer the R&D costs.

Currently, despite our losses we have been able to get reasonable trade credit because of our good current ratio. If, however, we have to reduce our current ratio to 1-to-1 or even less, and continue to report losses, I am sure our trade creditors will not be quite so generous. After all, they have seen far too many companies in the electronics business go under in recent years.

Admittedly, I don't understand all the fine accounting points, but just from the purchasing angle, I'm for deferment. Our current ratio will decline, but at least we will have profits to offset this disadvantage.

Johansson: Well, Seb, you are the last one. How do you see this issue from the employee and public relations point of view?

Jansson: Like Phil, I don't pretend to understand all the fine points of accounting. However, in contrast to the rest of you, I'm not as positive in my position with respect to the issue.

As you all know, over the last few years we have successfully put off the demands of some of our employees for higher hourly wages. Our principal argument has been that if wages were not frozen by the government we couldn't afford these increases in view of our losses. Now, if we defer the R&D costs, we are going to be showing profits. And under these conditions, I have no doubt that it will be harder to justify denying the employees a pay increase when the wage freeze ends.

In addition, I must point out that such wage increases would be an additional *out-of-pocket* expense. They would be an added drain on our resources at the very time we are scratching and scraping to get together enough money to finance the stepped-up R&D program.

As for the stockholders, I am sure they would like to see some profits. And, if we defer these R&D costs, there will be profits.

But if we expense the R&D costs, as Tom suggests, our stockholders are going to be unhappy over the losses. It's going to put you, Frank, in a difficult position since you promised them profits for 1992.

On balance, I guess I favor deferment. Perhaps we can put the employees off a year or two. Frankly, I don't know how we can expense R&D costs for three years and tell the stockholders we are confident of success. The dissident group will say, "Clearly, management by its own admission is throwing more money down the drain."

Johansson: Tom, one last point of information. What cost elements did you include in your R&D calculation?

Larsson: Only direct costs, which are mostly salaries and materials.

Johansson: As I understand it, Statistics Sweden's definition of R&D cost includes shares of administration and capital costs, among other items. Shouldn't we use their definition? I know the Association of the Swedish Pharmaceutical Industry has adopted this full cost approach.

Larsson: Maybe we should for footnote disclosure, but I would be hesitant to do so for asset measurement purposes. If we took the full cost approach, we would add 20 percent to the R&D cost. My concern is that the more you capitalize now, the more you may have to write off in the future if the project fails.

Johansson: It seems like the majority is for capitalization. Tom?

Larsson: If you are all so keen to defer these R&D costs, let me ask you some questions:

- Why shouldn't we have separate R&D accounts for *all* our projects?
- What do we do with that \$3 million lump deferment if the component project fails?
- Aren't we just getting ourselves *into* more problems what we're getting *out* of?
- And, finally, over what period do you propose specifically to expense the capitalized costs after we go into production in 1994?

Fromm: On your last question, I believe we should plan to expense these deferred costs equally over the maximum period possible: that is, over the anticipated four years in which we expect to have a competitive advantage with the product, plus the subsequent three years of declining sales – that is, seven years in all.

In addition, we should also restate the comparative 1991 financial figures in our 1992 annual report. We should take out of the expenses charged against 1991 revenues the \$300,000 we have already spent on the memory-storage project. These costs should be deferred also. Then we would show a small profit for 1991, which would be more realistic since the R&D costs rightly belong on the balance sheet. Both the 1991 and 1992 statements would then be truly comparable.

Larsson: Dave, you're trying to bookkeep us to profit!

Fromm: And you, Tom, are trying to bookkeep us to ruin. . . .

Thor: Hold on, fellows, maybe there is another alternative. As some of you may recall, back in 1987 ASTRA² published an "article" in its 1987 annual report showing the company's book value and earnings assuming the company capitalized its R&D expenditures rather than expensing them as incurred. Maybe we could do something along the same lines. That is, use supplemental disclosure to let people know that we are really profitable.

Johansson: I think ASTRA's circumstances were a little different to our's, but David has raised an interesting possibility. What do you think, Tom?

Larsson: Who reads annual reports? People just look at the "Bottom Line." Nobody will see our "Article." No, I prefer to stick with expensing.

²AB ASTRA is a Swedish global pharmaceutical company.

Exhibit 1 Swedish Accounting Principles: Research and Development Accounting

Under the Swedish Accounting Act, expenditures for technical assistance and for research and development (R&D) may be recognized as fixed assets if they will benefit the company in future years. The recorded asset should be amortized annually by an appropriate amount not less than 20% of its original value unless there are special circumstances in which amortization at a lower rate may be used in accordance with generally accepted accounting principles.

There is no uniformity in reporting practice in this area. The Swedish Accounting Standards Board recently issued a Recommendation on Accounting for Research and Development with the aim of conforming Swedish practice with international accounting practice (IAS 9). The general rule requires that research and development expenditures be expensed as incurred, unless the criteria set out below are satisfied:

- The R&D project and the expenditures attributed to it are clearly defined.
- The technical feasibility of the R&D project has been demonstrated.
- The products or process resulting from the R&D project is intended for sale or internal use.
- The expected revenue or cost savings resulting from the R&D project are known with reasonable probability.
- There are adequate resources to complete the project.

If capitalized, research and development costs must be amortized annually according to the rules stated in the Accounting Act, that is, at least 20% annually.

The financial statements, on their face or in notes, should disclose:

- The accounting policy for R&D.
- The R&D expenditures expensed in the current year and the amortization of R&D expenditures capitalized in previous years.
- The total R&D expenditures capitalized and the related accumulated amortization.

Source: Coopers & Lybrand, *International Accounting Summaries*, John Wiley & Sons, New York, 1992.

Exhibit 2 Selected Financial Data, 1980–1991 (all values in thousands)

Year	Gross Sales	R&D Expense	Earnings After Theoretical Tax^a
1980	\$ 8,000	\$ 400	\$ 100
1981	21,000	900	600
1982	33,000	800	2,000
1983	40,100	1,000	2,500
1984	42,000	950	2,600
1985	42,000	900	2,500
1986	40,000	1,000	1,800
1987	36,000	1,000	1,200
1988	35,500	800	(100)
1989	33,000	600	(600)
1990	36,100	1,000	(400)
1991	36,300	1,000	(10)

^aThe calculation of earnings after theoretical tax is based on recommendations issued by the Swedish Business Community's Stock Exchange Commission. Theoretical tax comprises those taxes (excluding profit-sharing tax) that would have been paid on earnings if no tax credits had been taken through special appropriations, such as untaxed reserves. Effective in 1992, the Swedish corporate tax rate was lowered to 30%. Also, the possibility to offset income by untaxed reserves was abolished. However, a tax equalization reserve was introduced in its place. Prior to 1992, the Swedish statutory corporate tax rate had been 52%.

Exhibit 3 Larsson's Memorandum

TO: Frank Johansson
FROM: Thomas Larsson
RE Need to Identify Promptly Cost Reduction Actions

Our decision to increase annual R&D expenses from the original planned level for \$1 million to \$1.5 million will have a significant impact on our anticipated reported profits for 1992–1994. It will turn the original profit projections (see below) into a loss.

Original Projection (as of January 1, 1992, 000s omitted)

Year	Gross Sales	R&D Expense	Earnings After Theoretical Tax^a
1992	\$37,500	\$1,000	\$ 50
1993	38,500	1,000	150
1994	38,500	1,000	150

^a30 percent tax rate.

Better accounting practice and consistency with our earlier treatment of R&D costs calls for us to expense these additional R&D costs currently. If this is also your decision, we must cut costs in other areas of the business if we are to be profitable.

I recommend we meet as soon as possible to identify cost-cutting opportunities.