

2. (i) Interest cost can be capitalized on borrowings directly associated with the project or when the company has debt equal to or exceeding the cost of construction.

(ii) Start-up costs must be expensed under U.S. GAAP.

(iii) Shipping costs are considered part of the cost of acquisition.

(iv) Increases in the market value of land and buildings may not be recognized under U.S. GAAP.

b. (i) While the benchmark treatment under IAS 23 is to expense all interest, capitalization of borrowing costs directly attributable to a project is an allowed alternative.

(ii) Same as U.S. GAAP except that the benchmark The capitalization of interest is an allowed alternative under IAS 23 (paragraph 11)

(iii) Same as U.S. GAAP.

(iv) While revaluation is an allowed alternative under IAS 16, it must be applied to all assets in a particular class and could be selectively applied to a particular project.

3. (i) Under SFAS 86 (text page 242), computer software development costs can be capitalized only when economic feasibility has been established.

b. Under IAS 38 (paragraph 45), intangible assets such as computer software can be recognized when the enterprise can demonstrate technical and economic feasibility.

#### 4. Ericsson

Amounts in SEK millions

##### Development costs for software to be sold:

	1997	1998	1999
Opening balance		7,398	10,744
Capitalization	5,232	7,170	7,898
Amortization	(3,934)	(3,824)	(4,460)
Writedown			(989)
Year-end balance	7,398	10,744	13,193

##### Development costs for software for internal use:

Opening balance			
Capitalization			1,463
Amortization			(152)
Year-end balance			1,311

##### a. Under Swedish GAAP:

Net sales	167,740	184,438	215,403
Pretax income	17,218	18,210	16,386
Total assets	147,440	167,456	202,628
Stockholders' equity	52,624	63,112	69,176

Average total assets		157,448	185,042
Average equity		57,868	66,144

Asset turnover		1.17	1.16
Pretax ROE		0.31	0.25

##### b. Adjustments:

Development costs for software to be sold:

Capitalization	5,232	7,170	7,898
Amortization	(3,934)	(3,824)	(4,460)
Write down			(989)
Net effect	1,298	3,346	2,449

Development costs for software for internal use:

Capitalization			1,463
Amortization			(152)
Net effect	-	-	1,311

Total pretax effect	1,298	3,346	3,760
Adjusted pretax income	18,516	21,556	20,146
(i) % change	8%	18%	23%

##### Year-end balances:

Software to be sold	7,398	10,744	13,193
Internal use software			1,311
Total	7,398	10,744	14,504
Less: deferred tax @ 35%	(2,589)	(3,760)	(5,076)
Increase in equity	4,809	6,984	9,428

Adjusted total assets	154,838	178,200	217,132
(ii) % change	5.0%	6.4%	7.2%
Adjusted equity	57,433	70,096	78,604
(iii) % change	9.1%	11.1%	13.6%

##### c:

Adjusted average assets		166,519	197,666
Adjusted average equity		63,764	74,350
(i) Adjusted asset turnover		1.11	1.09
(ii) Adjusted pretax ROE		0.34	0.27

**d.** The adjustments for Ericsson show that capitalization of software development costs can have a significant effect on reported income and equity, and on financial ratios. Therefore comparability requires that all firms be restated to the same basis.

**e.** The amounts capitalized highlight expenditures and enable the analyst to inquire about the new products under development. The amortization period used may be useful as a forecast of the useful life of the product. In both cases (capitalization and amortization) significant changes from prior periods may provide useful signals of impending change.

**5.a.** The capitalization of the investment in displays delays their impact on income as compared with expensing. In addition, cash from operations is permanently increased as the expenditures are classified as cash flows for investment. Finally, if these expenditures are volatile, capitalization and amortization smoothes the impact on reported income.

b. (i) In 2000, the capitalized amount increased by \$1,648,000. Had promotional displays been expensed, net income would be \$1,071,200 (after 35% tax) lower. Expensing would have reduced net income by 7.4% ( $\$1,071.2/\$14,467$ ).

(ii) Shareholders' equity would be reduced by 65% of \$10,099,000 equal to \$6,564,350 or 7.1%.

(iii) Reported return on (average) assets equals  $\$14,467/[(\$166,656 + \$140,609)/2] = 9.42\%$

Adjusted return on (average) assets equals  $(\$14,467 - \$1,071)/[(\$166,656 - \$10,099) + (\$140,609 - \$8,451)/2] = 9.28\%$  as assets must be reduced by the investment in promotional displays.

**6.a.** Brand names are clearly an asset. However, it is not clear that these assets should be shown on corporate balance sheets.

One advantage of recognizing brand names is completeness; a balance sheet that ignores major firm assets is of limited use for analysis. Another advantage is that the cost of acquiring or developing a brand name should be recorded as an investment (asset) in order to properly match revenues and expenses.

The major disadvantage of brand name recognition is the difficulty of proper measurement. As each brand name is unique, market transactions are not

available to value the brand. Thus, the value recognized is subjective; differences across firms may reflect either real differences in the value of the brands or different measurement decisions.

One approach involves capitalization of the acquisition cost (for purchased brands) or the advertising and other development costs (for internally developed brands). In the latter case, it is unlikely that the value of the brand will be equal to the cost of development. A successful brand will be worth much more than the cost of its development; an unsuccessful brand may have no value at all. (These characteristics may also describe acquired brands.)

Further, the value of brands changes over time. Despite the quotation from Laing, brands can also become "dilapidated" if they are neglected, if the advertising is poor, or if the products are defective. The value of brands will also be affected by changes in market conditions, e.g., pricing decisions and the inroads made by generic products.

From the point of view of financial analysis, therefore, it is not clear that reporting management's estimate of brand value would be helpful. The "proof of the pudding is in the eating" and a valuable brand should be highly profitable. The evaluation of that profitability might be better left to the marketplace.

b. The advantage of amortization is that the income statement should reflect all expenses that help produce income. If profitability is due to the brand name, the amortization of its acquisition cost should be an element of expense.

On the other hand, given the subjectivity of brand name valuation, the amortization amount (also affected by the choice of method and life) may be a poor measure of the expired value. In addition, brand names may not decline in value over time; any decline is likely to be irregular.

For purposes of analysis, therefore, the amortization of brand name intangible assets should be excluded from income. The evaluation of profitability, however, should consider the role of brand names.

**8.a.**(i) Given rapidly rising expenditures, Nokia will report higher net income as current year capitalization will exceed amortization of prior year capitalized amounts.

(ii) Regardless of trend, Nokia will report higher cash from operations as expenditures are reported as cash for investment and never affects cash from operations (see Figure 7-4 on page 232).

(iii) Capitalization of development costs results in higher equity for Nokia, regardless of the trend of expenditures.

b. (i) Capitalization of development cost increases operating income (EBIT) and, therefore, the interest coverage ratio.

(ii) Higher equity under capitalization reduces the debt-to-equity ratio.

$$\text{Debt to equity} = \$15,431/\$28,131 = 54.8\%$$

c. These steps are described in Box 7-2 of the chapter. One can adjust Nokia's reported amounts to those for an "expensing" firm by:

- Eliminating the capitalized costs from assets
- Eliminating the capitalized costs (net of taxes) from equity
- Deducting the (tax-adjusted) difference between expenditures and amortized cost from income
- Transferring expenditures from CFI to CFO

Alternatively, one can adjust Ericsson's reported results by assuming that it capitalizes development costs and:

- Choosing an appropriate amortization period
- Increasing assets by the unamortized portion of previous years' expenditures
- Increasing equity by the (tax adjusted) assets calculated above
- Adding the (tax-adjusted) difference between expenditures and amortized cost to income
- Transferring expenditures from CFO to CFI.

**10.a.** Because SB expenses the cost of developing new drugs, their carrying amount on SB's balance sheet is extremely low. As a result, the proceeds of sale are virtually all profit.

b. The drugs were developed over a number of years and the income from their sale was really earned during that time period rather than completely in the year of sale.

c. For valuation purposes, it would be more logical to spread the sale income over the time period during which the drug was developed. Valuation based on 2000 income that includes the entire gain will overvalue the company.

## 11.

- a. Debt to total assets =  $\$15,431/\$65,585 = 23.5\%$   
Debt to equity =  $\$15,431/\$32,660 = 47.2\%$
- b. Debt to total assets =  $\$15,431/\$61,056 = 25.3\%$

c. (i) Because the revaluation increment increases equity, and has no effect on income, ROE is reduced.

(ii) Because the revaluation increment increases assets, and has no effect on sales, asset turnover is reduced.

(iii) There is no effect on EPS as income is unchanged.

(iv) Revaluation has no effect on cash flow or any of its components.

d. (i) The initial effect of amortization would be to reduce income and, therefore, ROE. Longer term the lower equity base would tend to increase ROE so that the net effect is difficult to predict.

(ii) Initially and over time, asset turnover would increase as amortization reduced the carrying amount of assets.

(iii) Amortization would reduce the level of earnings per share initially and over time.

(iv) Cash from operations would be unchanged as amortization is a noncash expense.

e. Increased competition would be likely to reduce the current stock price almost immediately as stock prices discount future events as soon as information is known. The financial statement effects would be slower to occur. Initially there would be reduced profitability. At some point the intangible asset would be revalued downward.

f. Revaluation facilitates disclosure of management's view of the value of the firm's assets. This disclosure allows the financial analyst to measure operating results against the real investment in these assets rather than an obsolete cost. This permits the analyst to evaluate the "opportunity cost" of using the assets in operations rather than selling them.

However, revaluations are subjective by their nature. Management can manipulate revaluations and provide a misleading indication of the value of the firm. The lack of amortization means that changes in economic value are reflected only when management chooses to write down the assets, which may be well after the market price of the company's shares has recognized the change.

**13.**(i) 1999 income is reduced as prior year startup expenses are amortized but there were no startup costs incurred.

(ii) Cash from operations for 1999 is unaffected as amortization is a noncash expense.

(iii) Return on equity is reduced because of lower income and because equity was increased by the capitalization of startup expenses in prior years.

(iv) Asset turnover is reduced as assets were increased by capitalization of startup costs in prior years.

b.(i) Initial year income was increased as startup costs were capitalized rather than expensed.

(ii) Cash from operations was also increased as startup expenses were reported as investments rather than operating expenses.

(iii) Return on equity was increased because of higher income from the initial application of the method.

(iv) Asset turnover was reduced as ending assets were increased by capitalization of startup costs.

c. When a company capitalizes startup costs, the initial financial statement effects are mostly favorable. However if startup expenses are not incurred each year, then later year effects are negative. The exception is cash from operations, where the initial favorable effect is never reversed.