CHAPTER 10

Managerial Planning and Control

Prior chapters have largely had an external reporting orientation. This chapter focuses on internal reporting and control issues. We acknowledge that the distinction between the two is increasingly blurred.

Global competition together with continued advances in technology are significantly altering the landscape of business and its internal reporting requirements. Continued reductions in national trade barriers, floating currencies, sovereign risk, restrictions on fund remittances across national borders, differences in national tax systems, interest rate differentials, and the effects of changing commodity and equity prices on enterprise assets, earnings, and capital costs are variables that complicate management decisions. At the same time, developments such as the Internet, video conferencing, and electronic transfer are changing the economics of production, distribution, and financing. Production is increasingly awarded to the company in the world that does it, or parts of it, best. Globally coordinated value chains based on strategic alliances are replacing arms-length relationships among manufacturers, suppliers, and customers. Understandably, an increasing emphasis is being placed on information providers who understand the strategic information needs of management and who possess strong analytic skills and intellectual capital.[1]

Global competition and the speed of knowledge dissemination support the narrowing of national variations in management accounting practices.[2] Additional pressures include market and technology changes, the growth of privatization, cost and performance incentives, the coordination of global operations through joint venturing and other strategic linkages, and continual shareholder demands for value-added initiatives. These pressures are common to business organizations everywhere. They are driving management of multinational companies not only to adopt comparable internal accounting techniques, but also to use these techniques in similar fashion.[3] Managerial accounting issues discussed in this book fall into three

[1] Robert A. Howell, "The CFO: From Controller to Global Strategic Partner," *Financial Executive*, April 2006, pp. 20–25.
[2] Chris Guilding, Karen S. Cravens, and Mike Tayles, "An International Comparison of Strategic Management Accounting Practices," *Management Accounting Research* 9 (2000): 113–135.
[3] Ramona Dzinkowski, "Global Economic Impacts on Strategic Financial Management," *Strategic Finance*, Vol. 87, no. 6 (2005): 36–41.

broad areas: financial planning and control (this chapter), international risk management (Chapter 11), and international taxation and transfer pricing (Chapter 12). Planning topics in this chapter include business modeling, capital budgeting, and profitability management, together with the information systems needed to implement them. The balance of the chapter focuses on financial control.

BUSINESS MODELING

A recent survey finds that management accountants are spending more time on strategic planning issues than ever before. This reflects the fact that financial managers, major consumers of internal accounting data, are increasingly becoming strategic advisors to the chief executive. As Charles Noski, former CFO and Vice Chairman, AT&T states:[4]

> I think the CFO will continue to evolve, with more emphasis on the strategic issues facing the company and a requirement that the CFO be the business partner to the CEO . . . Compliance and internal controls will likely always be a part of the job, but the expectation for value-added contributions by the CFO to the growth, competitiveness and performance of the company will gain momentum.

Business modeling is big picture, and it consists of formulating, implementing, and evaluating a firm's long-range business plan. It involves four critical dimensions:[5]

1. Identifying key factors relevant to the future progress of the company
2. Formulating appropriate techniques to forecast future developments and assess the company's ability to adapt to or exploit these developments
3. Developing information systems to support strategic choices
4. Translating selected options into specific courses of action

PLANNING TOOLS

In identifying factors relevant to its future, it is helpful for a company to scan its external and internal environments to identify threats and opportunities. Systems can be set in place to gather information on competitors and market conditions. Both competitors and market conditions are analyzed for their impact on a company's competitive status and profitability. Insights gleaned from this analysis are used to plan measures to maintain or enlarge market share, or to identify and exploit new products and market opportunities.

One such tool is the WOTS-UP analysis. It is concerned with corporate strengths and weaknesses in relation to a firm's operating environment. This technique helps management generate a set of feasible strategies.[6] Exhibit 10-1 shows a WOTS-UP

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[4] Jeffrey Marshall and Ellen M. Heffes, "What Does the Future Hold for Finance and CFOs?" *Financial Executive*, December 2006, pp. 16–20.

[5] Kiyohiko Ito and Klaus R. Macharzina, "Strategic Planning Systems," in F. D. S. Choi, ed., *International Accounting and Finance Handbook*, 2nd ed., New York: John Wiley & Sons, 1997, Ch. 25.

[6] WOTS-UP analysis is a modified version of SWOT analysis, which is constantly being improved upon as a strategic planning tool. See George Panagiotou, "Bringing SWOT into Focus," *Business Strategy Review* 14, no. 2 (2003): 8–10.

EXHIBIT 10-1 WOTS-UP Analysis of Daimler Benz AG

	Strengths (S)	Weaknesses (W)
	1. Product quality improved 20% from previous year 2. R & D potential higher than other automobile producers 3. 50% share of comfort limousine market 4. Daimler Benz trucks lead industry 5. Breakeven point decreased from 1.0 to 0.7 million vehicles 6. Several acquisitions (e.g., AEG, Dornier, MBB) improved the synergistic potential of Daimler Benz 7. Excellent financial situation of Daimler Benz 8. High economies of scope	1. Acquisition of high-tech firms leads to coordination problems. 2. High wage level (most of the production is located in Germany) 3. Fewer joint ventures (international alliances) than Japanese automobile producers
Opportunities (O)	**SO-Strategies**	**WO-Strategies**
1. High-tech industries (micro electronics, aerospace) growing 20% per year 2. Consumers' disposable income increasing 6% per year 3. Liberalization of Eastern European countries 4. Image and service problems of Japanese automobile firms	1. Acquire automobile producers in Eastern Germany (03/S7) 2. Extend the distribution and service net in Eastern Europe (03/S7) 3. Develop several versions of the Baby Benz (02, 03/S5, S7) 4. Use production capacity for civil products (03/S6, S8)	1. Expand transfer of managers between headquarters and subsidiaries (03/W1) 2. Produce cars in the eastern part of Germany (03/W2) 3. Intensify HR development on each level (01/W2) 4. Form international aerospace joint venture company (01/W3)
Threats (T)	**Short-Term Strategies**	**Long-Term Strategies**
1. Low value of the dollar 2. Rising interest rate 3. Foreign imports, esp. luxury cars, gaining market share 4. Gulf crisis leads to increasing gas prices 5. BMW has an excellent new line of cars 6. Rising ecological problems throughout the world 7. Military (defense) markets may break off due to peace movement	1. Place selective advertising; boost advertising expenditures 30% (T3, T5/S1, S3) 2. Strengthen basic research in new fields of technology (solar energy, biotechnology, computing and robotics, electrical car engines) (T4, T6/S7, S8)	1. Build strategic alliances (strategic networks) to reduce cost of R & D investment and to solve ecological problems (T6/W3) 2. Improve productivity and quality (in production, administration, distribution, and services) (T1,T3/W2)

Source: K. Ito and K. R. Macharzina, "Strategic Planning Systems," in F. D. S. Choi, ed., International Accounting and Finance Handbook, 2nd ed., New York: John Wiley & Sons, 1997, p. 25.9.

analysis done by the German automaker Daimler. For example, extending Daimler's distribution and service network in Eastern Europe is a promising strategy, given the company's strengths in product quality, truck sales, lower breakeven point, and synergistic potential. The low value of the U.S. dollar, rising foreign competition in Germany, and the perceived advantages of strengthening basic research in new technologies by building strategic alliances may explain Daimler's earlier acquisition of the Chrysler Corporation in the United States.

Decision tools currently used in strategic planning systems all depend on the quality of information regarding a firm's internal and external environment. Accountants can help corporate planners obtain data useful in strategic planning decisions. Much of the required information comes from sources other than accounting records.

CAPITAL BUDGETING

As Exhibit 10-1 reveals, one of Daimler's strategies to capitalize on its strength/opportunity set was to initially acquire automobile producers in Eastern Germany. This strategy subsequently embraced the acquisition of the Chrysler Corporation in the United States. This decision to invest abroad is a critical element in the global strategy of a multinational company.[7] Direct foreign investment typically involves large sums of capital and uncertain prospects. Investment risk is compounded by an unfamiliar, complex, constantly changing international environment. Formal planning is imperative and is normally done within a capital budgeting framework that compares the benefits and costs of the proposed investment.[8] As an example of the second dimension of corporate modeling described earlier, capital budgeting analysis helps ensure that strategic plans are financially feasible and advantageous.

Sophisticated approaches to investment decisions are available. Procedures exist to determine a firm's optimum capital structure, measure a firm's cost of capital, and evaluate investment alternatives under conditions of uncertainty. Decision rules for investment choice typically call for discounting an investment's risk-adjusted cash flows at an appropriate interest rate: the firm's weighted average cost of capital. Normally, a firm increases the wealth of its owners by making investments that promise positive net present values. When considering mutually exclusive options, a rational company will select the option that promises the maximum net present value.[9]

In the international arena, investment planning is not straightforward. Different tax laws, accounting systems, rates of inflation, risks of expropriation, currency frameworks, market segmentation, restrictions on the transferability of foreign earnings, and language and intercultural differences introduce elements of complexity seldom encountered domestically. The difficulty of quantifying such data makes the problem that much worse.

Multinational adaptations of traditional investment planning models have been made in three areas of measurement: (1) determining the relevant return from a multinational investment, (2) measuring expected cash flows, and (3) calculating the

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[7] Cristiano Busco, Mark L. Frigo, Elena Giovannoni, Angelo Riccaboni, and Robert W. Scapens, "Integrating Global Organizations Through Performance Measurement Systems," *Strategic Finance,* January 2006, pp. 31–35.
[8] Maurice D. Levi, *International Finance,* New York: Routledge, 2005, 585 pp.
[9] The performance metric Economic Value Added (EVA) is derived from this construct.

multinational cost of capital. These adaptations provide data that support strategic choices, step 3 in the corporate modeling process.

FINANCIAL RETURN PERSPECTIVES

A manager must determine the relevant return to assess a foreign investment opportunity. But relevant return is a matter of perspective. Should the international financial manager evaluate expected investment returns from the perspective of the foreign project or that of the parent company?[10] Returns from the two perspectives could differ significantly due to (1) government restrictions on repatriation of earnings and capital, (2) license fees, royalties, and other payments that provide income to the parent but are expenses to the subsidiary, (3) differential rates of national inflation, (4) changing foreign currency values, and (5) differential taxes, to name a few.

One might argue that the return and risk of a foreign investment should be evaluated from the point of view of the parent company's domestic stockholders. However, it also can be argued that such an approach is no longer appropriate. First, investors in the parent company increasingly come from a worldwide community. Investment objectives should reflect the interests of all shareholders, not just the domestic ones. Observation also suggests that many multinational companies have long-run (as opposed to short-run) investment horizons. Funds generated abroad tend to be reinvested abroad rather than repatriated to the parent company. Under these circumstances, it may be appropriate to evaluate returns from a host country perspective. Emphasis on local project returns is consistent with the goal of maximizing consolidated group value.[11]

An appealing solution is to recognize that financial managers must meet many goals, responding to investor and noninvestor groups in the organization and its environment.[12] The host country government is one such group for a foreign investment. Compatibility between the goals of the multinational investor and the host government can be gauged through two financial return calculations: one from the host country perspective, the other from the parent country perspective. The host country perspective assumes that a profitable foreign investment (including the local opportunity cost of capital) does not misallocate the host country's scarce resources.[13] Evaluating an investment opportunity from a local perspective also gives the parent company useful information.

If a foreign investment does not promise a risk-adjusted return higher than the returns of local competitors, parent company shareholders would be better off investing directly in the local companies.

At first glance, the accounting implications of multiple rate-of-return calculations appear straightforward. Nothing could be less true. In an earlier discussion, we assumed that project rate-of-return calculations were a proxy for host country evaluation of a foreign investment. In practice, the analysis is much more complicated. Do

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[10] This issue parallels, in many respects, the problem of currency perspectives associated with foreign currency translation discussed in Chapter 6.

[11] John C. Edmunds and David M. Ellis, A Stock Market-Driven Reformulation of Multinational Capital Budgeting, *European Management Journal* 17, no. 3 (1999): 310–317.

[12] David K. Eiteman, Arthur I. Stonehill, and Michael Moffett, *Multinational Business Finance*, 11th ed., Reading, MA: Addison-Wesley, 2007.

[13] For example, a country would probably look favorably on a proposed investment promising a 21 percent return on assets employed when investments of comparable risk elsewhere in the country yield 18 percent.

project rate of return calculations really reflect a host country's opportunity costs? Are the expected returns from a foreign investment limited to projected cash flows, or must other externalities be considered? How are any additional benefits measured? Does a foreign investment require any special overhead spending by the host government? What is the risk from a host country viewpoint, and how can it be measured? Questions such as these call for a massive increase in the amount and complexity of the information needed to calculate rates of return.

MEASURING EXPECTED RETURNS

It is challenging to measure the expected cash flows of a foreign investment. Assume, for purposes of discussion, that Daimler's U.S. manufacturing operation is considering purchasing 100 percent ownership of a manufacturing facility in Russia. The U.S. parent will finance one-half of the investment in the form of cash and equipment; the balance will be financed by local bank borrowing at market rates. The Russian facility will import one-half of its raw materials and components from the U.S. parent and export one-half of its output to Hungary. To repatriate funds to the parent company, the Russian facility will pay the U.S. parent a licensing fee, royalties for use of parent company patents, and technical service fees for management services rendered. Earnings of the Russian facility will be remitted to the parent as dividends. Exhibit 10-2 provides a diagram of prospective cash flows that need to be measured.[14]

Methods for estimating projected cash flows associated with the Russian facility are similar to those used for a domestic company. Expected receipts are based on sales projections and anticipated collection experience. Operating expenses (converted to their cash equivalents) and local taxes are similarly forecast. Additional complexities must be considered, however. They include:

1. Project versus parent cash flows
2. Parent cash flows tied to financing
3. Subsidized financing
4. Political risk

This process must also consider the impact of changing prices and fluctuating currency values on expected foreign currency returns. If local currency cash flows were fixed (e.g., if the Russian venture was in the form of a bond investment), it would be straightforward to measure exchange rate effects. Here, depreciation of the Russian ruble relative to the U.S. dollar reduces the dollar equivalent of future interest income. When an ongoing manufacturing enterprise generates foreign currency income, the analysis is more complicated. Exchange rate changes influence net operating cash flows. Accordingly, accounting measurements of exchange rate effects for each type of activity (such as domestic vs. export sales, domestic vs. imported costs, and their cumulative effects on projected cash flows) become necessary.

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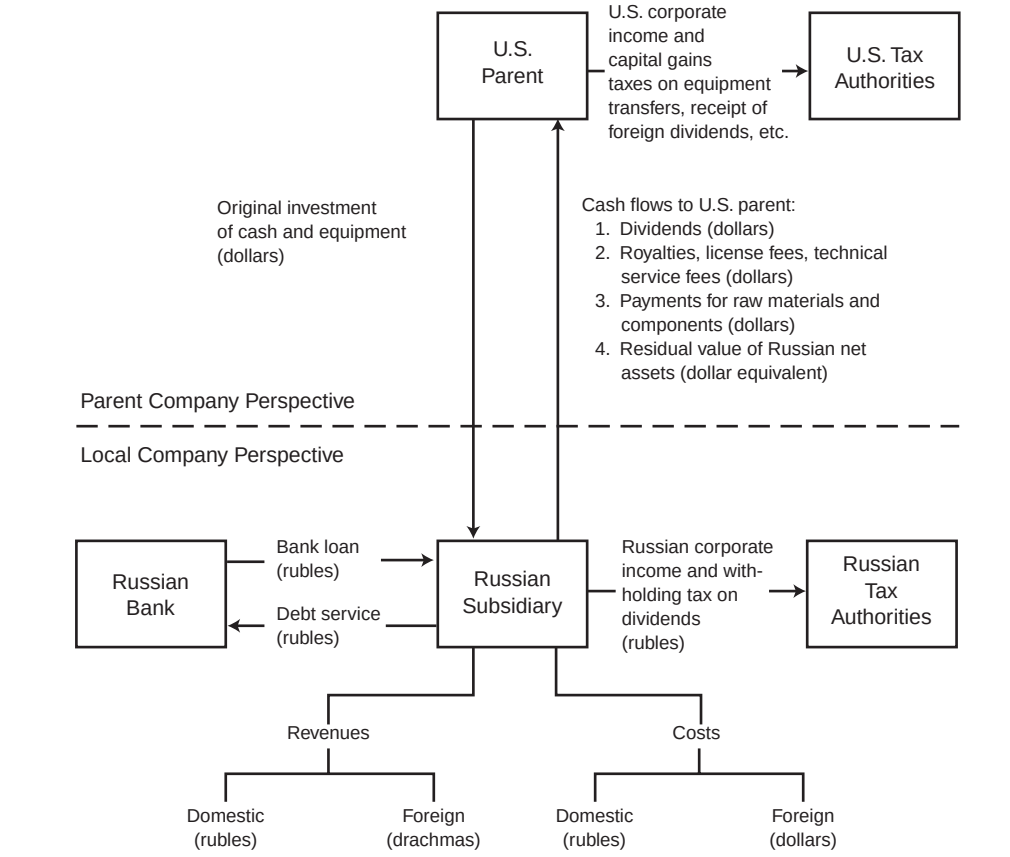
[14] For an extended discussion of this subject, see David K. Eiteman, "Foreign Investment Analysis," in F. D. S. Choi, ed., *International Finance and Accounting Handbook*, 3rd ed., New York: John Wiley & Sons, 2003, pp. 4.1– 4.19.

EXHIBIT 10-2 Cash Flow Components



The following example illustrates the effects of changing prices and currency values on expected returns for the first two years of a six-year investment project. The Russian facility's cash flows, as shown in Exhibit 10-3, are determined under the following assumptions.

1. The Russian facility is expected to sell 100,000 units of its manufactured product in the local market at an initial unit price of 2,020 Russian roubles (RUB). Another 100,000 units will be exported to Hungary and priced in forints (HUF) reflecting the rouble base price.
2. Changes in local selling prices are tied to annual rates of inflation in Russia and Hungary, which are expected to average 20 percent and 10 percent, respectively.
3. Domestic and foreign unit sales are expected to increase each year by 10 percent.
4. The rouble is forecast to depreciate relative to the forint by 10 percent per year.
5. Variable costs of production (raw materials and labor) also reflect local inflation rates.
6. Because 50 percent of the Russian manufacturer's raw materials are imported from the United States, imported raw material prices are expected to increase by 10 percent each year in line with anticipated U.S. and Russian inflation.

EXHIBIT 10-3 Cash Flows from Russian Subsidiary

	Year 1	Year 2
Sales (units)		
Domestic	100,000	110,000
Foreign	100,000	110,000
Price (per unit)		
Domestic	RUB2,020	RUB2,424
Foreign	RUB2,020	RUB2,444
Gross revenues		
Domestic	RUB202,000,000	RUB266,640,000
Foreign	RUB202,000,000	RUB268,640,000
	(HUF2,020,000,000)	(HUF2,444,000,000)
Total	RUB404,000,000	RUB535,480,000
Raw materials (cost per unit)		
Domestic	RUB400	RUB480
Foreign	RUB400	RUB462
	($20)	($22)
Labor (cost per unit)	RUB200	RUB240
Variable cost (per unit)	RUB1,000	RUB1,182
Total variable costs	RUB200,000,000	RUB260,040,000
Licensing fees, royalties, etc.	RUB40,400,000	RUB53,548,000
Depreciation expense	RUB60,000,000	RUB60,000,000
Selling and administrative expenses	RUB48,000,000	RUB55,200,000
Total	RUB348,400,000	RUB428,788,000
Net operating income	RUB33,360,000	RUB64,016,000
Corporate income tax (40%)	RUB22,240,000	RUB42,676,000
Net income	RUB33,360,000	RUB64,016,000
+Depreciation	RUB60,000,000	RUB60,000,000
Net cash flow (rubles)	RUB93,360,000	RUB124,016,000
Net cash flow (dollars)	$ 4,668,000	$ 5,905,000
Exchange rates:	RUB0.1 = HUF1	RUB0.11 = HUF1
	RUB20 = $1	RUB21 = $1

7. Anticipated depreciation of the rouble relative to the U.S. dollar is 5 percent.
8. Licensing and other fees are expected to average 10 percent of gross revenues.
9. Selling and administrative expenses are expected to increase by 15 percent each year from an initial level of RUB48,000,000.
10. Depreciation expense is RUB60,000,000 a year.
11. The Russian corporate tax rate is 40 percent.
12. Projected annual cash flows will increase from RUB93,360,000 to RUB124,016,000 in local currency. Measured in U.S. dollars, net cash flows will increase from $4,668,000 to $5,905,000.

In this example, a depreciating local currency had increased projected local cash flows due to the structure of the foreign operation's product and factor markets.

When a parent company perspective is used, cash flows to the parent company seldom mirror those of its overseas affiliate. The only relevant cash flows are those with direct consequences for the parent.

Major sources of parent cash flows include debt service on loans by the parent, dividends, licensing fees, overhead charges, royalties, transfer prices on purchases from or sales to the parent (see Chapter 12 for a further discussion of this managerial topic), and the estimated terminal value of the project. Measurement of these cash flows requires an understanding of national accounting differences, governmental repatriation policies, potential future inflation and exchange rates, and differential taxes.

Differences in accounting principles are relevant if financial managers rely on locally based pro forma financial statements in estimating future cash flows. When measurement rules used in preparing these accounts differ from those of the parent country, differences in cash flow estimates could arise. One example is depreciation based on replacement values rather than historical costs (as practiced by certain large multinationals in the Netherlands and Italy). This difference could affect corporate income taxes, and consequently, cash flow. As another example, differences in inventory costing methods could influence both the measurement and the timing of total cash flow. Balance of payment concerns may prompt host governments to limit the repatriation of dividends or other cash payments to the parent company. For example, dividend remittances may be limited to a certain proportion of a company's capital base that has been formally registered with the host government. Some countries disallow repatriation of cash flows made possible by tax-deductible expenses, as these are not part of accrual-based earnings from which dividends are declared. This consideration alone would reduce the cash flows that could be repatriated in our previous Russian example by 66 and 50 percent, respectively, for the two years examined. A parent company naturally cares about the value of foreign cash flows measured in parent currency.

Accordingly, it needs estimates of future inflation and its impact on future exchange rates used to convert foreign cash flows to parent currency. Finally, provisions relating to the taxation of foreign source income must be considered. For instance, in the United States the receipt of a royalty payment on which a foreign withholding tax has been assessed gives rise to a foreign tax credit designed to minimize the double taxation of foreign source income. (International tax considerations are detailed in Chapter 12.)

MULTINATIONAL COST OF CAPITAL

If foreign investments are evaluated with this discounted cash flow model, an appropriate discount rate must be developed. Capital budgeting theory typically uses a firm's cost of capital as its discount rate; that is, a project must yield a return at least equal to a firm's capital costs to be accepted. This hurdle rate is related to the proportions of debt and equity in a firm's financial structure as follows:

$$k_a = k_e(E/S) + k_i(1 - t)(DT/S)$$

where:

k_a = weighted average (after tax) cost of capital
k_e = cost of equity
k_i = cost of debt before tax
E = value of a firm's equity
D = value of a firm's debt
S = value of a firm's capital structure (E + D)
t = marginal tax rate

It is not easy to measure a multinational company's cost of capital. The cost of equity capital may be calculated in several ways. One popular method combines the expected dividend yield with the expected dividend growth rate. Letting DVi = expected dividends per share at period's end, P_0 = the current market price of the stock at the beginning of the period, and g = expected growth rate in dividends, the cost of equity, ke, is calculated as ke = $DV_i/P_0 + g$. Even though it is easy to measure current stock prices, in most countries where a multinational firm's shares are listed, it is often troublesome to measure DV and g. First, DV_i is an expectation. Expected dividends depend on the operating cash flows of the company as a whole. Measuring these cash flows is complicated by environmental considerations such as those mentioned in our Russian example. Moreover, measurement of the dividend growth rate, a function of expected future cash flows, is complicated by exchange controls and other government restrictions on cross-border funds transfers.

Similar problems relate to the measurement of the debt component of the average cost of capital.[15] In a single nation, the cost of debt is the effective interest rate multiplied by (1 − t) because interest is generally a tax-deductible expense. When a multinational company borrows foreign currencies, however, additional factors enter the picture. The effective after-tax interest cost now includes foreign exchange gains or losses that arise whenever foreign exchange rates fluctuate between the transaction and settlement dates (see Chapter 6). Suppose that a U.S. multinational borrows 100,000 Israeli shekels (ILS) for 1 year at 8 percent interest when the dollar/shekel exchange rate is $0.24 = ILS1. Should the shekel appreciate to $0.264 = ILS1 before repayment, the borrowing company will incur a transaction loss of ILS108,000 × ($ 0.264 − $0.240) = $2,592. This additional cost of debt financing would be tax deductible. Assuming a corporate tax rate of 40 percent, the after-tax cost of debt would be 0.18 (1 − 0.40), or 10.8 percent, as opposed to 4 percent in a purely domestic transaction.

Additional tax considerations apply when a multinational borrows funds in several foreign capital markets. Current and prospective tax rates in each foreign market over the life of the loan must be considered. The tax-deductibe status of interest payments must be checked, because not all national taxing authorities recognize interest deductions (particularly if the associated loan is between related entities).

[15] In countries with underdeveloped capital markets, internal borrowing is a common substitute. Mihir A. Desai, C. Fritz Foley, and James R. Hines, "A Multinational Perspective on Capital Structure Choice and Internal Capital Markets," *Journal of Finance*, Vol. 59, no. 6 (2004): 2451–2478.

Moreover, recognition of deferred taxes, which arise whenever income for tax purposes differs from income for external reporting purposes, is becoming a generally accepted practice in many industrialized countries where MNCs operate. Because deferred taxes are considered a liability on which no interest is paid, one can ask whether they are really an interest-free source of financing and should be included in determining the cost of capital. Although this idea merits consideration, we do not believe that the cost of capital calculation should include deferred taxes.[16]

It is not always straightforward to implement international capital budgeting theory in practice. All of the capital budgeting approaches we have examined assume that the required information is readily available. Unfortunately, in actual practice, the most difficult and critical aspect of the entire capital budgeting process is obtaining accurate and timely information, especially in the international sphere, where different climates, culture, languages, and information technologies complicate matters.

MANAGEMENT INFORMATION SYSTEMS

Organization of a firm's worldwide information systems is crucial in supporting corporate strategies, including the planning processes described earlier. This task is challenging, as a multinational framework is inherently more complex than a single-country framework. Exhibit 10-4 sets forth some environmental factors that complicate the flow of business information.

Systems Issues

Distance is an obvious complication. Due to geographic circumstances, formal information communications generally substitute for personal contacts between local operating managers and headquarters management. Developments in information technology should reduce, but will not entirely eliminate, this complication.

As another example, the information requirements of regional or corporate financial planners concern both operating and environmental data. Information demanded from managerial accountants in the field depends on how much decision-making power local managers have. The greater the authority of local managers, the less information is passed on to headquarters.

In their study, "Patterns in the Organization of Transnational Information Systems," Vikram Sethi and Joseph Katz identify three global IT strategies, each related to a specific type of multinational organization. Success hinges on matching systems design to corporate strategies.[17]

Low dispersal with high centralization. Employed by smaller organizations with limited international business operations, domestic IS needs dominate. A standard platform of data and applications dominate the worldwide IT system.

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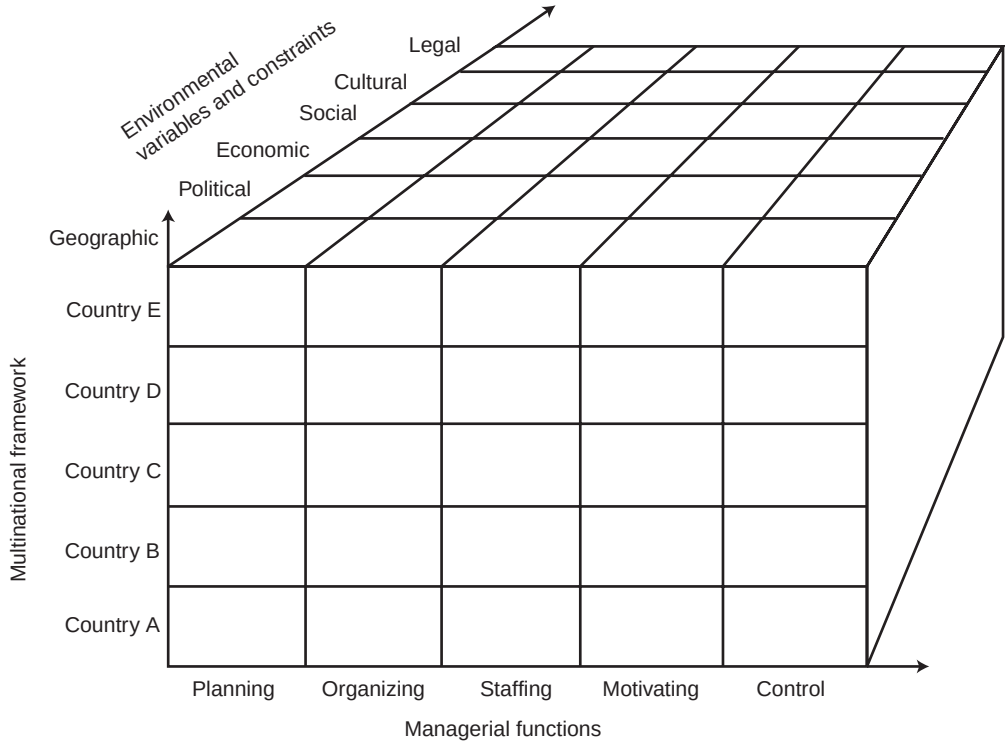
[16] As discussed in Chapter 6, deferred taxes under the current rate method are translated at the current rate with any translation gains and losses taken to owners' equity and held in suspense until realized. Under the temporal method, they are translated at the historical rate. Because current earnings are not burdened with exchange rate effects under either treatment, neither should the costs of capital be relieved by what is, in effect, an interest-free loan from a government.

[17] Peter Gwynne, "Information Systems Go Global," *MIT Sloan Management Review*, Summer 2001, p. 14.

EXHIBIT 10-4 Framework for Systems Design



High dispersion with low centralization. This strategy is favored by multinational companies with diverse geographic operations. Local subsidiaries are afforded significant control over the development of their IT strategies and related systems.

High dispersal with high centralization. Here a "glocal" IT strategy is employed by truly global companies with strategic alliances worldwide. Information systems are designed that reflect both corporate requirements tailored to local circumstances.

Perhaps the biggest challenge facing systems specialists is designing corporate information systems that allow financial managers to respond appropriately to the phenomenon of global competition. Conditions are changing. Owing to deregulation of markets and reduction of tariff barriers, firms are increasingly able to access foreign markets either directly or indirectly through joint ventures, strategic alliances, and other cooperative arrangements. This more open access has led to competitive intensities where firms adopt strategies to (1) protect market share at home, (2) penetrate competitors' home markets to deny them market share and revenues, and (3) generate significant market share in key third-country markets.

CEOs need information systems that enable them to plan, coordinate, and control effective worldwide production, marketing, and financial strategies. To facilitate this objective, software information developers in the United States have created a new computer language, XBRL. XBRL stands for extensible business reporting language and

is a standard computer programming enhancement that is being included in all accounting and financial reporting software in the United States. Once added to the software, XBRL automatically translates all numbers and words so that each data segment is identified in a standard way when viewed by a Web browser or sent to a particular spreadsheet application. Specifically, XBRL tags each segment of computerized business information with an identification marker that remains with the data when moved or changed. No matter how an application software formats or rearranges the information, the markers remain with the data. Links are created that identify the location on a financial statement where the data elements reside, instruct users as to how the data elements should be calculated in relation to other elements in the financial statements, detail descriptive lables that should be applied to the data elements including the national language in which they should be reported and specify other information such as currency of denomination, time period covered, and the like. Useful for all enterprises regardless of industry or size, XBRL reduces information processing, calculating, and formatting costs because financial data only need to be created and formatted once regardless of intended use. It will also improve a firm's investor relations as it facilitates interfirm comparisons along many dimensions, including financial accounts, accounting policies, and related footnotes in automated fashion.[18] This systems effort is being led in the United States by a consortium of accounting firms, financial service providers, and technology companies, including software giants Microsoft and IBM. Not only is this system making the distribution of financial information fast and easy, it is also eliminating the need for rewriting financial reports to accommodate incompatible accounting systems. Parallel efforts are reportedly under way in other countries along with involvement of the International Accounting Standards Board.

Information Issues

Management accountants prepare many kinds of information for corporate management, ranging from collections data to liquidity reports to operational forecasts of various types to expense disbursements. For each set of data transmitted, corporate management must determine the relevant time period of the reports, the level of accuracy required, the frequency of reporting, and the costs and benefits of timely preparation and transmission.

Here too, environmental factors affect the usage of information generated internally. Consider the influence of culture: Culture shapes the values of a given society. Citizens of these societies bring these values with them when employed by business organizations. These values, in turn, frame employees' organizational behavior and how they use information technology within the organization. Although organizations around the world are becoming more similar in their conduct of business, the people that comprise these organizations tend to maintain their cultural behavior patterns. As one example, Johns, Smith, and Strand examine the impact of uncertainty avoidance on database usage.[19] They find that cultures that are less uncomfortable with uncertainty

[18] Mike Willis and William M. Sinnett, "XBRL Not Just for External Reporting," *Financial Executive*, May 2008, pp. 44–47.

[19] The term uncertainty avoidance was coined by Gerte Hofstede in his oft-cited study on values as determinants of behavior. Uncertainty avoidance is a value construct that describes the degree to which one is more or less comfortable with task uncertainty and ambiguity. See discussion of Hofstede's work in Chapter 2.

and ambiguity tend to embrace information technology more readily than those who are very uncomfortable. A major implication of their study for managerial accountants is that culture is a major impediment to the international flow of data and must be explicitly dealt with in information systems design.[20]

Managers in different environments have different ways of analyzing and resolving problems, different decision time frames, and compete under different operating conditions. Different information needs are a direct consequence. Hence, we have a fundamental problem for the multinational enterprise. Local managers are likely to require different decision information than headquarters management. For example, a special feature of the U.S. consolidation process is that financial statements prepared according to foreign accounting principles are first restated to U.S. GAAP prior to being consolidated. Does this restatement somehow alter the information content of the accounts that go into a group consolidation? We provide an illustration of this reporting conundrum in the following section.

Another major information problem is the question of translation. In evaluating operations, U.S. managers generally prefer reports stated in U.S. dollars. Accordingly, reports from foreign operations of U.S. multinationals are typically translated to their U.S. dollar equivalents in order for U.S. headquarters managers to evaluate their dollar investments. However, does translating foreign currency amounts for managerial review purposes preserve the data without distortions? We address this issue empirically in Case 10-1 at the end of this chapter.

MANAGEMENT INFORMATION AND HYPERINFLATION

FAS No. 52 mandates use of the temporal translation method, described in Chapter 6, in consolidating the accounts of foreign affiliates domiciled in high-inflation environments. Even though FAS No. 52 and similar national pronouncements provide useful guidelines in preparing hard currency statements, they do not meet the information needs of firms operating in high-inflation countries. In high-inflation environments, financial reports prepared in conformity with FAS No. 52 tend to distort reality by

- Overstating or understating revenues and expenses
- Reporting large translation gains or losses that are difficult to interpret
- Distorting performance comparisons over time

Our reporting framework overcomes these limitations and is based on the following assumptions[21]:

1. Management's objective of maximizing the value of the firm is framed in terms of a currency that holds its value (i.e., a hard currency). Accordingly, the best way to

[20] Sharon K. Johns, L. Murphy Smith, and Carolyn A. Strand, "How Culture Affects the Use of Information Technology," *Accounting Forum* 27, no. 1 (March 2002): 84–109.
[21] Frederick D. S. Choi, "Financial Reporting in Hyperinflationary Environments: A Transactions Analysis Framework for Management," in *International Finance and Accounting Handbook*, 3rd ed., Frederick D.S. Choi, ed., New York: John Wiley & Sons, 2003, pp. 27.1–27.13.

measure the performance of an affiliate located in a high-inflation environment is in terms of hard currency.[22]

2. Our model also implicitly assumes that inflation rates, exchange rates, and interest rates are interrelated. (This assumption is not critical to the proposal.)

A common reporting convention in accounting for foreign currency transactions is to record revenues and expenses at exchange rates prevailing at the financial statement date. (Use of average rates is also common.) A better option is to report local currency transactions at the exchange rate prevailing on the payment date. Recording a transaction at any other date muddles the measurement process by introducing gains or losses in the purchasing power of money or, alternatively, implicit interest into the exchange transaction.

In a perfectly competitive market, all local currency transactions would be in cash. With inflation, it is advantageous for buyers to delay payment for as long as possible and for sellers to accelerate collections. The payment date is determined by the competitive strengths of the contracting parties. Our recommended reporting treatment produces reported numbers that are reliable, economically interpretable, and symmetric in the sense that economically similar transactions produce similar financial statement numbers when translated into a common currency. One could say that the model uses accrual accounting with a cash accounting mentality.

An example will highlight the translation gains and losses generated by FAS No. 52 reporting. While many would attribute gains or losses in our example to foreign exchange risk, they are really due to improper accounting for events that occurred above the line.

Following are our working assumptions:

- Inflation and Zimbwabean dollar (ZWD) devaluation is 30 percent per month or 1.2 percent per workday.
- The exchange rate at selected intervals for months 1 and 2 are:

1/1	100.0
1/10	109.6
1/20	119.6
1/30	130.0
2/10	141.6
2/20	154.5
2/30	169.0

The real rate of interest is 1.5 percent per month or 20 percent per year.

- Cash balances are kept in hard currency (U.S. dollars).
- Month-end rates are used to record expense transactions.

Sales Revenue

Suppose that the firm sells ZWD 2,000,000 worth of merchandise in month 1, with varying invoice dates and payment terms. Assuming that financial statements are prepared

[22] Interviews with financial executives of U.S.-based multinationals as well as subsidiary managers suggest that this assumption is consistent with corporate practices at the micro level. It also appears consistent with practices at the macro level, as more and more Latin American countries have pegged their currencies to the U.S. dollar.

monthly, the conventional practice is to record the sales transaction at the month-end exchange rate regardless of when the sale is invoiced or when payment is received. Sales reported using the month-end exchange rate are ZWD 2,000,000/ZWD130 = $15,385.

First assume that the sale is invoiced on day 1 of month 1, with payment received immediately in cash = ZWD 2,000,000/ZWD 100 = $20,000. Conventional treatment measures the transaction at month's end rather than when cash is received, but the economic basis of the transaction is the cash that is actually received on the invoice date. Here revenues are understated by 30 percent or $4,615 determined as follows:

Cash received	$20,000
Reported sales	15,385
Variance	$ 4,615

In keeping with the temporal translation method, this $4,615 understatement of sales is offset by an equivalent nonoperating translation gain appearing below the line.[23] Next, assume instead that the sale is invoiced on day 5, and that the client receives 25 days payment terms. In our model, the transaction is booked on the same day that payment is received. From an economic point of view, there is no variance and no nonoperating translation gain or loss.

Cash received	$15,385
Reported sales	15,385
Variance	$ -0-

From a control perspective, management should be able to learn from the salesperson what the expected profit margin is on the day of sale. The salesperson does not have to wait until the books are closed to have this information, which is already at hand as invoices in hyperinflationary environments clearly state the payment due date.

In the following example, assume that the client is invoiced on day 30 with payment required a month later. From an economic point of view, the firm collects $11,834 (= ZWD 2,000,000/ZWD 169). The accounting system reports $15,385, resulting in a variance of $3,551.

Cash received	$11,834
Reported sales	15,385
Variance	$ 3,551

Here, the conventional reporting system overstates sales by 23.1 percent with the positive variance offset by an equivalent nonoperating translation loss below the line.

Exhibit 10-5 shows the magnitude of the distortions associated with differing invoicing and payment terms. Depending on sales terms, sales can be overstated or understated by significant amounts.

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[23] Assume that the firm in question begins the period with a $10,000 equity investment and immediately converts this cash balance to saleable inventories. The goods are marked up 100 percent over cost and sold for cash the next day. In this case, the aggregate exchange adjustment would be $4,615, determined either as a plug when preparing the end-of-period translated balance sheet, or as a positive aggregate translation adjustment comprising the gain on the hard currency cash balance.

EXHIBIT 10-5 Distortions in Invoice and Payment Due Dates (ZWD2,000,000 Sales in Month 1)

Invoice Day	Payment Terms	Today's Number	Proposed Number	Diff.	%
1	Cash	15,385	20,000	4,615	30.0%
5	5 days	15,385	18,248	2,863	18.6%
5	15 days	15,385	16,722	1,337	8.7%
5	25 days	15,385	15,385	0.000	0.0%
10	30 days	15,385	14,124	1,261	8.2%
20	30 days	15,385	12,945	2,440	–15.9%
30	30 days	15,385	11,834	3,551	–23.1%

Why do we care about these distortions? The traditional reporting system has a bad effect on the behavior of the sales force. For example, it gives the company's sales force no motivation to improve payment terms. If sales are recorded at the end-of-month rate, sales personnel do not care whether they are paid in cash or in 30 or 60 days. It is important to have a system that encourages the sales force to act in the company's best interests.

In addition, traditional reporting systems do not motivate the sales force to invoice and ship earlier in the month. When sales are recorded at end-of-month rates, the sales force does not care about the time of delivery. Yet, even one day's delay in shipment could be costly: 1.5 percent in lost interest in our example. Another glance at Exhibit 10-5 shows that bonuses and commission payments are based on inflated sales values whenever payment terms carry over to the following period.

Perhaps the most serious shortcoming of traditional reporting systems is that they encourage manipulation of results. Assume now that exchange rates at the end of each of the next 3 months are as follows:

End-of-month 1	130 = $1
End-of-month 2	169 = $1
End-of-month 3	220 = $1

Suppose that a salesperson arranges the following with a favorite customer: deliver and invoice ZWD2,000,000 of a product on day 30 of month 1 at ZWD2,500,000 with 60-day payment terms instead of invoicing at ZWD2,000,000 on the same date with 30-day payment terms. The attractiveness of this arrangement is easy to figure out. Under conventional reporting methods, the revised sales value is ZWD2,500,000/ZWD 130 = $19,231 versus ZWD2,000,000/YTL130 = $15,385 under traditional measurements. This represents an additional sales gain of almost $4,000, or 25 percent. From the customer's point of view, the actual cost of the purchase is only ZWD2,500,000/ZWD 220 = $11,364 versus ZWD2,000,000/ZWD 169 = $11,834, a savings that is hard to resist. Under these circumstances, the customer is likely to initiate such a proposal.

Under our proposed reporting system, the incentives for such arrangements are reduced. When the sales transaction is reported at the exchange rate prevailing on

the payment date, the transaction is recorded at $11,364 rather than $11,834. From the selling firm's perspective, it would be better to invoice the sale at ZWD2,000,000 with 30-day payment terms. Our proposed reporting system gives the salesperson an incentive to do so. Our model thus uses the actual or forecasted exchange rate prevailing on the day of payment to record local currency transactions. Because those dates are generally in the accounts receivable system (i.e., on sales invoices), this system is readily implemented. The idea is to use *accrual* accounting while maintaining a *cash* accounting mentality. Some have correctly argued that sales and expenses in hyperinflationary environments have a built-in implicit interest rate. (Hence the need to discount local currency transactions to their present values before translation.) Our model emphasizes the difference in the exchange rate between the invoice date and the collection date, and thereby automatically incorporates the implicit interest differential (i.e., the International Fisher Effect).[24] Under our reporting framework, there is no need for management to think about what the interest rate is or worry about how to calculate an appropriate discount. After all, operating management cares about the exchange rate difference.

What happens if the customer delays payment beyond the promised date? In our reporting framework, normal payment conditions are shown in reported sales and gross margins. Thus, if a customer agrees to pay on a certain date, the transaction is booked at the exchange rate prevailing on the agreed payment date. If payment takes place after the promised date, the loss in dollars is reported below the line as a translation loss attributed to the applicable line of business or sales segment. That loss is offset by interest income as original sales terms include an explicit interest cost for delayed payments, which would appear as additional interest income below the line.

To summarize, our transactions-based reporting model

- Allocates translation gains and losses to specific revenues and expenses to which they are related
- Provides both headquarters and subsidiary management with numbers that will support better decisions
- Eliminates the need for parallel controls
- Facilitates performance comparisons over time
- Can be implemented on a cost-effective basis

ISSUES IN FINANCIAL CONTROL

Once questions of strategy and information support systems have been decided, attention shifts to the equally important area of financial control and performance

[24] Under a freely floating system of exchange rates, spot rates of exchange are theoretically determined by the interrelationships between national rates of inflation, interest rates, and forward rates of exchange, usually expressed as premiums or discounts from the spot rate. If the forecasted rate of inflation in Brazil one month ahead is 30 percent higher than in the United States, the real can be forecast to decline in value by 30 percent relative to the dollar. By the same token, interest rates for maturities of comparable risk can be expected to be 30 percent higher on Brazilian securities than on comparable U.S. securities. For an extended discussion of these relationships, see David K. Eiteman, Arthur I. Stonehill, and Michael H. Moffett, *Multinational Business Finance*, 11th ed., Reading, MA: Addison-Wesley, 2007.

evaluation.[25] These considerations are especially important as they enable financial managers to

1. Implement the global financial strategy of the MNE
2. Evaluate the degree to which the chosen strategies contribute to achieving enterprise goals
3. Motivate management and employees to achieve the enterprise's financial goals as effectively and efficiently as possible

Management control systems aim at accomplishing enterprise objectives in the most effective and efficient manner. Financial control systems, in turn, are quantitative measurement and communication systems that facilitate control through (1) communicating financial goals as appropriate within the organization, (2) specifying criteria and standards for evaluating performance, (3) monitoring performance, and (4) communicating deviations between actual and planned performance to those responsible.

A sound financial control system enables top management to focus the activities of its subsidiaries toward common objectives. A control system consists of operational and financial policies, internal reporting structures, operating budgets, and procedure manuals consistent with top management's goals. Thus, suboptimal behavior, which occurs when a subunit strives to achieve its own ends at the expense of the whole organization, is minimized. A timely reporting system that constantly monitors each unit is a good motivator. An efficient control system also enables headquarters management to evaluate the strategic plans of the company and to revise them when needed. Management's strategic planning tasks are aided by an information system that informs management of environmental changes that might significantly impact the company. Finally, a good control system enables top management to properly evaluate the performance of subordinates by ensuring that subordinates are held accountable only for events they can control.

If a well-designed control system is useful to a uninational company, it is invaluable to its multinational counterpart. As we have repeatedly observed, conditions that impact on management decisions abroad are not only different, but are constantly changing.

Domestic Versus Multinational Control System

How should a well-functioning control system be designed in a multinational company? Should a parent company use its domestic control system, unaltered, in its foreign operations? Early studies show that the systems used by many multinational enterprises to control their foreign operations are identical, in many respects, to those used domestically. System items commonly exported include financial and budgetary control and the tendency to apply the same standards developed to

[25] Corporate governance is also concerned with corporate control. However, governance issues rely on externally reported information, which is the subject of earlier chapters. For an excellent state-of-the-art piece on corporate governance, see Robert M. Bushman and Abbie J. Smith, "Financial Accounting Information and Corporate Governance," *Journal of Accounting and Economics* 32 (2001): 237–333.

evaluate domestic operations. In a now classic paper, David Hawkins offers four basic reasons for this:

1. Financial control considerations are seldom critical in the early stages of establishing a foreign operation.
2. It is normally cheaper to transplant the domestic system than to create from scratch an entire system designed for the foreign operation.
3. To simplify preparing and analyzing consolidated financial statements, the corporate controller's office insists that all operating subsidiaries use similar forms and schedules to record and transmit financial and operating data.
4. Former domestic executives working in the foreign operation and their corporate superiors are more comfortable if they can continue to use as much of the domestic control system as possible, largely because they reached the highest levels of management by mastering the domestic system.[26]

We feel that exporting domestic control systems abroad is fraught with pitfalls. It is difficult to believe that a central controller's staff could design a single and effective worldwide control system given that the multinational operating environment is so diverse. A look back at the many elements in Exhibit 10-4 illustrates this point.

Environmental diversity has an unlimited potential impact on the financial control process. Earlier, we observed that geographical distances often impede traditional methods of communicating between affiliates and company headquarters. Although better technology might overcome geographical distance, cultural distance is harder to overcome. Culture and the business environment interact to create unique sets of managerial values in a country. Language difficulties, cross-cultural differences in attitude toward risk and authority, differences in need-achievement levels, and other cultural attributes often result in unforseen consequences, including (1) misunderstood directives, (2) lower tolerance of criticism, (3) unwillingness to discuss business problems openly or to seek assistance, (4) loss of confidence among foreign managers, (5) unwillingness to delegate authority, and (6) reluctance to assume responsibility. Managers of multinational companies face many tough issues. This is especially the case for managers and employees of acquired companies in cross-border mergers and acquisitions.[27] Frequently, managers and employees steeped in one culture must often operate under management control systems designed in the context of another. Based on cultural behaviors documented by Hofstede, cited earlier, Lere and Portz offer several caveats when designing management control systems in an international context.[28] Systems designed for highly decentralized operations are less likely to be effective in countries characterized by high certainty avoidance, described earlier, and high power distance structures characteristic of socially stratified societies. Delegation of authority may be less acceptable in collectivistic societies, which tend to emphasize the authority of the group as opposed to the individual. In societies that tend to have a longer term orientation, performance measures that reflect sales growth and market share may be more meaningful than ROI and budget variances that tend to focus on the

[26] David F. Hawkins, "Controlling Foreign Operations," *Financial Executive*, February 1965, pp. 25–32.
[27] Yaakov Weber and Ehud Menipaz, "Measuring Cultural Fit in Mergers and Acquisitions," *International Journal of Business Performance Management* 5, no. 1 (2003): 54.
[28] John C. Lere and Kris Portz, "Management Control Systems in a Global Economy," *The CPA Journal*, September 2005, pp. 62–70.

shorter term. Hopper and Rathnasiri document the consequences of ignoring cultural mores in financial control. In their case analysis, Indian employees, accustomed to a formal bureaucratic rule-bound control system, resisted a new merit-based reward system imposed by the new Japanese owners of their company. Employees reportedly formed alliances with local politicians who were frustrated with their exclusion from organizational affairs. In the end, the Japanese managers were removed and the control system reverted back to its original bureaucratic state characterized by political interventions into operational issues.[29]

Distribution channels, credit terms, industrial policies, financial institutions, and business practices all vary from country to country. International financial managers need to adapt to these diverse business practices. In examining reward preferences in Finland and China, Chiang and Birtch find that a fuller appreciation of reward preferences entails consideration of employee characteristics and other contextual factors that transcend culture.[30]

Companies with foreign operations must also adapt to unfamiliar governmental regulations and restrictions. Exchange controls, restrictions on capital flows à la Thailand in 2007, joint ownership requirements, and many other specific business regulations are examples. The environmental considerations related to the strength of a nation's currency may be the most important for the design of overseas control systems of all those shown in Exhibit 10-4. Internal rates of inflation and fluctuating currency values are critical, and corporate control systems must allow for them. Applying financial controls designed for a stable environment to one that is less stable is a recipe for failure.

Operational Budgeting

Once strategic goals and capital budgets are in place, management next focuses on short-range planning. Short-range planning involves creating operational budgets or profit plans where needed in the organization. These profit plans are the basis for cash management forecasts, operating decisions, and management compensation schemes. Budgeted income statements of foreign affiliates are first converted to parent country accounting principles and translated from the local currency (LC) to the parent currency (PC). Periodic comparisons of actual and budgeted profit performance in parent currency require appropriate variance analyses to ensure that deviations from budget are correctly diagnosed for managerial action. While variance analysis is, in principle, the same internationally as domestically, currency fluctuations make it more complex.

The financial performance of a foreign operation can be measured in local currency, home country currency, or both. The currency used can have a significant impact in judging the performance of a foreign unit and its manager. Fluctuating currency values can turn profits (measured in local currency) into losses (expressed in home country currency).

Some favor a local currency perspective because foreign transactions take place in a foreign environment and are done in foreign currency. Foreign currency translation

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[29] Trevor Hopper and Chandra Rathnasiri, "Japanese Cost Management Meets Sri Lankan Politics: Disappearance and Reappearance of Bureaucratic Management Controls in a Privatized Utility," *Accounting, Auditing and Accountability*, Vol. 17, no. 1 (2004): 120.

[30] Flora F.T. Chiang and Thomas A. Birtch, "An Empirical Examination of Reward Preferences within and Across National Settings," *Management International Review*, Vol. 46, no. 5 (2006): 573–596.

gains and losses are not considered when operations are evaluated in local currency. Those who favor a parent currency perspective argue that ultimately, home country shareholders care about domestic currency returns. Because they judge headquarters management by domestic currency returns, foreign managers should be judged by the same standard.

Problems remain even if parent currency is considered a better measure of performance than local currency. In theory, the exchange rate between two countries should move in proportion to changes in their differential inflation rates. Thus, if the rate of inflation is 10 percent in Italy and 30 percent in Turkey, the Turkish lira should lose approximately 20 percent of its value relative to the euro. In practice, changes in currency exchange values that lag behind foreign rates of inflation can distort performance measures. Local currency earnings and their dollar equivalents increase during excessive inflation. In the following period, when the foreign currency loses value, the dollar value of local earnings falls even if local currency earnings increase. Under these circumstances, measuring with parent currency introduces random elements in measuring the performance of foreign operations if changes in foreign exchange rates do not track differences in inflation rates.

In the long run, one must judge a foreign unit's value as an investment in terms of home country currency. A parent currency perspective is appropriate for strategic planning and long-term investment decisions. However, the currency framework used in evaluating managerial performance must depend on who is held accountable for exchange risk. (This issue is separate from who is responsible for exchange risks.) If corporate treasury manages exchange risks, then it is logical to measure foreign performance in local currency. Parent currency measures are just as valid if exchange gains and losses are removed in evaluating foreign managers. If local managers have the necessary tools to manage exchange gains and losses, measuring their performance in parent currency is justifiable.

Consider some aspects of the budgetary process. Control over a network of domestic and foreign operations requires that foreign currency budgets be expressed in parent currency for comparison. When parent currency figures are used, a change in exchange rates used to establish the budget and to monitor performance causes a variance beyond that due to other changes. Three possible rates can be used in drafting the beginning-of-period operating budget:

1. The spot rate in effect when the budget is established
2. A rate that is expected to prevail at the end of the budget period (projected rate)
3. The rate at the end of the period if the budget is updated whenever exchange rates change (ending rate).[31]

Comparable rates can be used to track performance relative to budget. If different exchange-rate combinations are used to set the budget and track performance, this creates different allocations of responsibilities for exchange rate changes and leads to different possible managerial responses. Let us consider some possibilities.

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[31] Donald R. Lessard and Peter Lorange, "Currency Changes and Management Control: Resolving the Centralization/Decentralization Dilemma," *Accounting Review,* July 1977, pp. 628–637.

1. Budget and track performance at initial spot rate. Exchange rate changes have no effect on the evaluation of the foreign manager's performance. Local managers have little incentive to incorporate anticipated exchange rate changes into their operating decisions.
2. Budget at ending (updated) rate and track at ending rate. This combination produces similar results. Local management need not consider exchange rates because the same rate is used for budgeting and evaluation.
3. Budgeting at initial rate and track at ending rate. Local managers have full responsibility for exchange rate changes. Potential negative consequences include padding of budgets by local managers or hedging that may not be optimal for the corporation.
4. Budget and track performance using projected exchange rates. This system reflects a local currency perspective. Local managers are encouraged to incorporate expected exchange rate changes into their operating plans but are not held responsible for unexpected rate changes, which the parent company absorbs.
5. Budget at projected rate and track at ending rate. This exchange rate combination does not hold the local manager accountable for expected rate changes. Managers are responsible for (and thereby encouraged to hedge) unanticipated exchange rate changes.

Which option is best for evaluating managerial performance? All five are found in practice. We focus on the last two, the most common. As an illustration, assume the following (LC = local currency):

Projected rate of exchange:	$0.50 = LC 1	Actual end-of-period rate:	$0.25 = LC 1
Budgeted earnings in LC:	800,000	Actual earnings in LC:	1,000,000
Budget earnings in :	$400,000	Actual earnings in $:	250,000

If the projected rate is used in monitoring performance, the dollar result is $500,000 (LC 1,000,000 X $0.50), or $100,000 above budget. The manager appears to have done well. But, if the actual end-of-period rate is used, the result is $250,000 (LC 1,000,000 X $0.25), or $150,000 below budget. The manager appears to have performed poorly. Which rate should be used?

Most discussions of this problem favor option 4. Using the projected exchange rate in budgeting encourages managers to include expected exchange rate movements in their operating decisions. Use of the projected rate to monitor performance, in turn, shields local managers from unanticipated exchange rate changes they cannot control. Also, protection against exchange risk can be coordinated on a company-wide basis.

We think that use of a projected exchange rate for budgeting and the actual ending rate for tracking performance (option 5) also has merit. Like option 4, this approach encourages managers to include anticipated exchange rate changes in their plans for the budget period. Unlike option 4, holding local and corporate managers accountable for unexpected rate changes encourages them to respond to exchange rate movements. Imagine what would happen if a foreign manager, projecting a 30 percent local currency devaluation, actually experiences a 70 percent devaluation and does nothing to offset

the larger than expected devaluation because his performance is measured using the projected rate.

Option 5 is especially useful when local operating plans can be changed to accommodate unanticipated currency developments. Where any remaining variances between actual and projected rates are ignored when evaluating local managers (i.e., the remaining variance is regarded as a forecasting error, which is the responsibility of corporate headquarters), this system offers additional benefits over option 4.

When responsibility for exchange variances is divided between various levels in management, budget variances need to be analyzed by responsibility level. In our previous example, the foreign subsidiary's operating variance and exchange rate variance would be analyzed as shown in Exhibit 10-6.

The total budget variance of −$150,000 (LC 800,000 X $0.50 − LC 1,000,000 X $0.25) would consist of a positive variance of $100,000 attributed to the foreign manager (LC 800,000 X $0.50 − LC 1,000,000 X $0.50) and a negative variance of −$250,000 attributed to corporate headquarters (LC 1,000,000 X $0.50 − LC 1,000,000 X $0.25). Exhibit 10-7 illustrates a framework for analyzing budget variances when the responsibility for exchange variances is divided between local management, an international division's operating management (parent currency variation), and corporate treasury (variance from budget rates). Here, the international division is responsible for

EXHIBIT 10-6 Analysis of Exchange Rate Variances

		Computation				
Responsibility		**Operating Item**		**Exchange Rate**		**Variance**
Local currency operations (Foreign management)	–	LC Budget LC Actual	× ×	Budget Budget	=	Local-currency operating variance
Parent currency operations (Headquarters' management)	–	LC Actual LC Actual	× ×	Budget Actual	=	Parent-currency exchange variance

EXHIBIT 10-7 Three-Way Analysis of Exchange Rate Variance

		Computation				
Responsibility		**Operating Item**		**Exchange Rate**		**Variance**
Local currency operations (Local management)	–	LC Budget LC Actual	× ×	Budget Budget	=	Local-currency operating variance
Parent currency operations (International division)	–	LC Actual LC Actual	× ×	Budget Actual	=	Parent-currency operating variance
Foreign exchange variance from budget (Treasury)	–	LC Budget LC Budget	× ×	Budget Actual	=	Exchange rate variance from budget

hedging unexpected exchange rate changes while corporate treasury is responsible for accurate rate forecasts.

Analysis of Exchange Rate Changes

We now provide a more comprehensive example of an exchange rate variance analysis.[32] Exhibit 10-8 shows the budgeted and actual condensed income statements for FC Company at the start and end of the 20X8 budget year. The profit plan for the year (expressed in parent company GAAP) is translated to parent currency at the beginning-of-period exchange rate of FC 1 = PC1. The foreign currency devalues by 20 percent by year-end.

A performance report breaking out price-, volume- and exchange-rate-induced variances appears in Exhibit 10-9.

From the perspective of the foreign affiliate, performance variances are measured in local currency and reflect the difference between budget and actual figures for each item in the income statement. These performance variances are detailed in column (7) of Exhibit 10-9. Variances for sales revenues and cost of sales can be broken down into price (cost) and volume variances. The sale volume variance of FC 1,000 is determined by multiplying the change in unit sales volume, 200 units, by the budgeted selling price of FC 5. Applying a similar methodology to cost of sales produces a volume variance of 200 units X FC 3 = FC 600. Thus, the net volume variance affecting gross margin and operating income column (9) is FC 1,000 − FC 600 = FC 400. Variances in sales revenues and cost of sales attributed to price (cost) changes during the budget period are found by multiplying the actual number of units sold by the change in selling price (production cost). This calculation yields a negative price variance of 1,200 units X −FC 0.25 = −FC 300 for sales revenue, and a positive cost variance of 1,200 units X −FC 0.60 = FC 720 for cost of sales, in column (10). Differences between budgeted and actual expenses are shown as nominal variances in column (11).

EXHIBIT 10-8 Income Statement for Exchange Rate Variance Analysis

		Budget		Actual
Revenues		FC 5,000		FC 5,700[a]
Cost of goods sold		3,000[b]		2,880
Gross margin		FC 2,000		FC 2,820
Operating expenses	750		825	
Depreciation	500		500	
Interest	250	1,500	300	1,625
Operating income		FC 500		FC 1,195

[a]The company employs the FIFO costing method and production equaled sales during the year. Unit production costs dropped from a planned FC 3.00 to FC 2.40 per unit.

[b]Actual sales increased by 200 units during the year at a price of FC 4.75, FC 0.25 lower than that expected.

[32] Frederick D.S. Choi and Gerald F. Lewis, "Multinational Budgeting and Control Systems," in *International Finance and Accounting Handbook*, 3rd ed., F.D.S. Choi, ed., New York: John Wiley & Sons, 2003, pp. 25.1–25.22.

EXHIBIT 10-9 Performance Report FC Company (for the budget period ending 12/31/X8)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
							Variance Analysis					
	Budget			Actual			Total					
	FC	FX	PC	FC	FX	PC	FC	PC	Vol.	Price/ (Cost)	Reported	Exch. Rate
Revenue	5,000	1.0	5,000	5,700	.8	4,560	700	(440)	1,000	(300)		(1,140)
Beg. inventory	(3,000)	1.0	(3,000)	(2,800)	1.0	(2,800)	200	200				
Production	(3,000)	1.0	(3,000)	(2,880)	.8	(2,304)	120	696				
Goods available	(6,000)		(6,000)	(5,680)		(5,104)	320	896				
End. inventory	3,000	1.0	3,000	2,800	.8	2,240	(200)	(760)				
Cost of sales	(3,000)		(3,000)	(2,880)		(2,864)	120	136	(600)	720		16
Gross margin	2,000		2,000	2,820		1,696	820	(304)	400	420		(1,124)
Operating exp.	(750)	1.0	(750)	(825)	.8	(660)	(75)	90			(75)	165
Depreciation	(500)	1.0	(500)	(500)	1.0	(500)	—	—			—	—
Interest	(250)	1.0	(250)	(300)	.8	(240)	(50)	10			(50)	60
Operating income	500		500	1,195		296	695	(204)	400	420	(125)	(899)

Based on this analysis, we can see that the improvement in FC Company's operating income of FC 695 (column 7) is attributable to the following factors:

Higher volume (column 9)	FC 400
Lower selling price (column 10)	(300)
Lower production cost (column 10)	720
Higher expenses (column 11)	(125)
Increase in operating income (column 7)	FC 695

When FC Company's performance is evaluated from the parent company perspective, first its local currency results are translated to parent currency. Let us assume that Parent Company designates the parent currency as its functional currency. Accordingly, FC Company's budgeted income statement is translated to parent currency using the temporal translation method. Had the local currency been designated as functional, the current rate translation method would have been used. (See Chapter 6 for a detailed description of these methods.)

To simplify our analysis, Parent Company will analyze FC Company's budget variances using the exchange rate prevailing at the budget date (FC 1.00 = PC 1.00).[33]

With this approach, price and volume variances for sales and cost of sales will mirror those calculated under a local company perspective. The effect of exchange rate changes is calculated by multiplying actual results reported in parent currency by the change in the exchange rate during the budget period. The total variance for sales revenues in parent currency, PC 5,000 − PC 4,560 = PC 440, would be broken down into the following volume, price, and exchange rate variances:

$$\text{Volume variance in col. (9)} = 200 \text{ units} \times \text{FC } 5 = \text{FC } 1{,}000 \times 1.0 = \text{PC } 1{,}000$$

$$\text{Price variance in col. (10)} = 1{,}200 \text{ units} \times -\text{FC } 0.25 = \text{FC } (300) \times 1.0 = \text{PC } (300)$$

$$\text{Exchange rate variance in col. (12)} = \text{FC } 5{,}700 \times -\text{PC } 0.2 = \text{PC } (1{,}140).$$

Similarly, the total variance for cost of sales can be broken down as follows:

$$\text{Volume variance} = 200 \text{ units} \times \text{FC } 3 = \text{FC } 600 \times 1.0 = \text{PC } (600)$$

$$\text{Cost variance} = 1{,}200 \text{ units} \times -\text{FC } 0.60 = \text{FC } (720) \times 1.0 = \text{PC } 720$$

Exchange rate variance is computed by multiplying each component of cost of goods sold by the exchange rate change in column (12):

Beginning inventory	FC 2,800	×	-0-	=	0
Production	FC 2,880	×	PC 0.2	=	576
Ending inventory	FC 2,800	×	−PC 0.2	=	(560)
					16

[33] Alternative exchange rate benchmarks and their implications for performance evaluation of foreign operations are considered in a later section of this chapter.

Exchange rate variances for operating expenses and depreciation are computed by multiplying the actual figures in local currency by the exchange rate change during the period. This yields an exchange variance for operating expenses FC 825 × −PC 0.2 = PC165 and an exchange variance of FC (300) × −PC 0.2 = PC 60 for interest.

In evaluating FC Company's performance in parent currency, the shortfall of −PC 204 in operating earnings can be attributed to the following factors:

Higher sales volume	PC +400
Lower selling price	(300)
Lower production cost	+720
Higher operating expenses	(75)
Higher interest expenses	(50)
Exchange rate changes (column 12)	(899)
Decrease in parent currency operating earnings (column 8)	PC (204)

A currency translation phenomenon caused by a weakening of the local currency relative to the reporting currency is a major cause of the poor operating result. We discuss the proper evaluation of this currency effect in the subsequent section of this chapter on performance evaluation of foreign operations.

STRATEGIC COSTING

While product and standard costing systems have traditionally played a major role in cost control, certain Japanese companies have introduced cost concepts that reinforce their global manufacturing strategies.[34] In doing so they have enhanced the cost control process, and more importantly, have established a direct link between management accounting practices and corporate goals.[35]

In controlling costs at the manufacturing stage, many companies around the world employ standard costing systems that basically estimate what costs of producing a product should be as a basis for arriving at a reasonable selling price. Actual costs of production are then compared with estimated costs. Resulting variances between standard and actual costs are examined as a basis for corrective actions in the production or procurement process. This process can be thought of as a cost-based pricing model.

In contrast, many Japanese companies employ a price-based costing model. Also known as target costing, this strategic costing methodology is premised on designing and building products at prices intended to ensure market success.[36] Consider the Daihatsu Motor Company. Its product development cycle (which normally lasts three years) begins with the production manager instructing Daihatsu's departments to submit design and performance specifications that they

[34] These manufacturing strategies embrace continuous improvement in productivity and quality. Specific practices include just-in-time (JIT) manufacturing, total quality control, and other lean production techniques.
[35] Antonio Davila and Marc Wouters, "Designing Cost-Competitive Technology Products Through Cost Management," *Accounting Horizons*, Vol. 18, no. 1 (2004): 13–26.
[36] Ibid.

believe the car should meet. This is followed by a cost estimate based not on what it will cost to build the car, but on an allowable cost per car. This allowable cost is based on subtracting a target profit margin that reflects the company's strategic plans and financial projections from a target sales price the company believes the market will accept.

While used as a target, the allowable cost is not static. During production, allowable cost is reduced every month by a cost reduction rate based on short-term profit objectives. In later years, actual costs of the previous year are the starting point for further reductions, thus assuring ongoing cost cutting for as long as the car is in production. This market-driven system, known as Kaizen costing, significantly reduces the reliance on traditional standard costing systems. Standard costing systems seek to minimize variances between budgeted and actual costs. Kaizen costing emphasizes doing what is necessary to achieve a desired performance level under competitive market conditions. Exhibit 10-10 summarizes the major differences between standard and kaizen costing concepts.

Another strategic costing concept introduced by the Japanese is behavioral costing.[37] In a process costing system, overhead is applied to goods or routine services using an overhead application rate. From a traditional cost accounting perspective, manufacturing overhead is allocated to products on a cause-and-effect basis. Despite the capital intensity of many Japanese manufacturers, the use of direct labor as an allocation base for assigning overhead costs has continued. This practice encourages production managers to reduce rather than just accumulate costs (i.e., encourage automation). A production manager wishing to reduce his overhead burden is motivated to substitute capital for labor.

EXHIBIT 10-10 Standard versus Kaizen Costing Concepts

Standard Cost Concepts	Kaizen Cost Concepts
Cost Control	Cost Reduction
Predicated on existing manufacturing conditions	Predicated on continuous manufacturing improvement
Objective: Compliance with performance standards	Objective: Achieve cost reduction targets
Standards set annually	Cost reduction targets set monthly
	Continuous improvement in manufacturing methods to attain target costs
Variance analysis based on actual vs. standard	Variance analysis based on constant cost reduction
Investigate when standards not met	Investigate when target costs not achieved

Source: Reprinted with permission from Yasuhiro Monden and John Y. Lee, "How a Japanese Auto Maker Reduces Costs," Management Accounting (Now Strategic Finance) August 1993. pp. 22–26, published by the IMA, Montvale, New Jersey, www.ima.org. For a more detailed account of Kaizen costing, see B. Modarress, A. Ansari, and D.L. Lockwood, "Kaizen Costing for Lean Manufacturing: A Case Study," *Journal of Production Research*, May 2005, pp. 1751–1760.

[37] T. Hiromoto, "Japanese Management Accounting," *Harvard Business review*, July–August 1988, pp. 22–26.

PERFORMANCE EVALUATION OF FOREIGN OPERATIONS

Evaluating performance is central to an effective control system. A properly designed performance evaluation system allows top management to (1) ensure managerial behavior is consistent with strategic priorities, (2) judge the profitability of existing operations, (3) spot areas that are not performing as planned, (4) allocate limited corporate resources productively, and (5) evaluate managerial performance. Developing an effective performance evaluation system is as much an art as a science. Its complexity increases with overseas operations. Performance evaluation of foreign operations must deal with such complications as exchange rate volatility, foreign inflation, transfer pricing, distinctive national cultures, and a host of other environmental effects. If these factors are ignored, headquarters risks receiving distorted measures of operating results. Inappropriate standards of performance may motivate overseas managers to take actions not in line with corporate goals. Direct consequences are reduced corporate efficiency and (possibly) reduced competitiveness.

To date, management accountants have had mixed success in creating comparable financial controls for multinational companies and their foreign operations. In addition to the many contextual variables that complicate the design of global performance evaluation systems is the more recent challenge of developing dynamic performance measurement and financial controls. The behavioral model that continues to describe extant practices is that organizations establish goals, or aspiration levels, and compare their actual performance to these goals.[38] Performance relative to aspiration tends to elicit an array of corporate responses associated with success, performance that exceeds aspirations, and failure, performance that falls short of aspirations.[39]

The remaining sections of this chapter examine some major issues associated with the performance evaluation of foreign operations, describe how leading MNCs evaluate performance, and offer some general policy guidelines.

Consistency

Survey results show that a principal goal of performance evaluation is to ensure profitability.[40] There is a potential conflict, however, when the performance evaluation system does not suit the specific nature of a foreign operation that may have purposes other than short-run profit. MNCs establish foreign operations for many reasons. Companies that depend on a steady supply of raw materials generally expand overseas to secure their supplies. Others invest abroad to lower production costs by utilizing cheaper labor and power, often establishing a local operation there. Other reasons for expanding abroad include the need to (1) avoid losing a foreign market to major competitors, (2) create markets for components and related products, (3) diversify business risks, (4) search for new markets, (5) satisfy government regulations, and (6) spread

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[38] Ahmed Riahi-Belkaoui, *Behavioral Management Accounting*, Connecticut: Greenwood Publishing Group, 2002, p. 259.

[39] Stephen J. Mezias, Patrice Murphy, Ya_ru Chen, and Mikelle A. Calhoun, "Dynamic Performance Measurement Systems for a Global World: The Complexities to Come," in *International Finance and Accounting Handbook* F.D.S. Choi, ed., New York: John Wiley & Sons, 2003, Chapter 26.

[40] Survey results suggest that the one measure believed to provide reliable information for comparing operations in multiple countries is profitability. Frederick D.S. Choi, *International Finance and Accounting Handbook*, New York: John Wiley $ Sons, 2003.

overhead costs among more producing units. Many of these objectives are strategic rather than tactical in nature. Emphasis on short-term profitability and efficiency can divert attention from critical manufacturing and corporate strategy and alienate corporate personnel.

Given the uniqueness of each foreign subsidiary's mission, performance evaluation systems must allow for how the subsidiary's objectives fit in with overall corporate goals. For example, if a foreign subsidiary's purpose is to produce components for other units in the system, it should be evaluated in terms of how its prices, production, quality, and delivery timetables compare to other sources of supply. This use of nonfinancial performance measures to complement traditional financial meaures of performance is consistent with the contemporary notion of employing a *balanced scorecard.* Subsidiary managers should participate fully in establishing their objectives. Their participation helps to ensure that they will be evaluated within a framework that is sensitive to local operating conditions and consistent with overall corporate goals. Companies should be sure not to sacrifice long-term objectives because subsidiary managers are preoccupied with short-term results. This adherence to long-term goals can be accomplished by making sure that short-term performance goals and management incentives are met within the company's strategic plans.

Unit Versus Managerial Performance

CONTROLLER A: I think generally we would look upon the manager's and unit's performance as about one and the same. The operation of the foreign unit is the responsibility of the manager and how the unit does is pretty much tied in with his evaluation.[41]

CONTROLLER B: In terms of evaluating the manager, it is very much related to how he is doing against his budget because he did present his budget, which was approved by the executive office, and this was his plan of action for the coming year. Now in terms of evaluating whether his unit is one that we want to continue or invest in or whether we should be looking at other alternatives, the return on investment becomes the significant factor.[42]

Should we distinguish between the performance of the unit and the performance of its manager in evaluating a foreign operation? Although some may believe there is no distinction, this position can be held only under limited conditions.

The actions of several parties, each with a different stake in the outcome, may affect the performance of a foreign operation. These parties include (but are not limited to) local management, headquarters management, the host government, and the parent company's government.

Local managers obviously influence reported earnings through their operating decisions. Decisions made at corporate headquarters also affect foreign earnings. For example, to protect the value of assets located in devaluation-prone countries,

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[41] Paul A. Samuelson, "Economic and Cultural Aspects of Tomorrow's Multinational Firms," *Japan and the World Economy,* December 2000, pp. 393–394.
[42] Ibid., p. 26.

corporate treasury will often instruct foreign units to transfer funds to subsidiaries located in strong-currency countries.

Host government actions and policies also directly affect the reported results of a foreign subsidiary. Required minimum capitalization ratios in various countries often enlarge the investment base against which earnings are compared. Foreign exchange controls that limit the availability of foreign currency to pay for needed imports will often depress a subsidiary's performance. Wage and price controls can also damage the reported performance of local managers.

These considerations make it clear that a distinction must be made between managerial and unit performance.[43] Evidence suggests that this is seldom the case in practice.[44] Local managers should be evaluated only on those balance sheet and income statement items they can influence. This specific evaluation can be done in practice by dividing each balance sheet and income statement item into controllable and noncontrollable components, as illustrated in Exhibit 10-11.

Under this framework, for example, a manager of a U.S. affiliate in Bogota would not be held accountable for effective interest charges incurred in connection with a Canadian dollar borrowing mandated by corporate treasury. Because the borrowing decision was made at headquarters, headquarters management is responsible for the interest cost (i.e., the nominal interest rate in Canada plus the exchange risk). Because the affiliate derives some benefit from the loan proceeds, it should pay an equitable interest charge. This related charge is called a capital charge and is based on the cost that would have been incurred had the Colombian manager borrowed locally or from the parent.

EXHIBIT 10-11 **Financial Statement Format for Control (Local Currency)**

	Locally Controllable	Locally Noncontrollable
Balance Sheet		
Assets (detailed)	xx	xx
Liabilities (detailed)	xx	xx
Owners' equity (detailed)	xx	xx
Income Statement		
Revenues	xx	xx
Operating expenses	xx	xx
Interest	xx	xx
"Other"	xx	xx
Taxes	xx	xx
Net Income	xx	xx

[43] Business International Corporation, *Assessing Foreign Subsidiary Performance: Systems and Practices of Leading Multinational Companies,* New York: BIC, 1982, p. 10.

[44] Wagdy M. Abdallah, Nadeem M. Firoz, and Ikechi Ekeledo, "Performance Evaluation of Foreign Subsidiary Managers Using Intra Company Pricing," *The International tax Journal*, Vol. 31, no. 4 (2005): 5–12.

Performance Criteria

A single criterion is unlikely to capture all factors of performance of interest to headquarters management.[45] Two of the more widely used financial performance criteria used by MNCs for evaluating their foreign operations are return on investment (ROI) and budgeted performance. ROI relates enterprise income to a specified investment base; budgeted performance compares operating performance to a budget. Budgetary control means that any difference between budget and actual performance can be traced to the manager or unit responsible. One classic study demonstrated that budgetary control is better than ROI comparisons for evaluating managerial performance. ROI measures may be more appropriate for measuring unit performance, while budget comparisons may be more useful in evaluating managers.

In an earlier performance evaluation study by Business International, both U.S. and non-U.S. MNCs surveyed stated that the most important financial criterion used to evaluate the performance of overseas units is budgeted versus actual profit, followed by ROI. Also considered somewhat important were budget versus actual sales, return on sales, return on assets, budget versus actual return on investment, and operating cash flows. As for cash flows, however, U.S.-based multinationals tended to stress cash flows to the parent, whereas non-U.S. multinationals preferred cash flows to the foreign subsidiary. Interestingly, both groups gave little importance to the notion of residual income recommended in the literature. Fast growth private companies tend to favor operating income and revenue growth.[46]

Many companies do not confine their performance criteria to financial considerations. Nonfinancial criteria reinforce financial measures by focusing on actions that may significantly affect long-term performance. These criteria are especially important in distinguishing between managerial and unit performance.

Important nonfinancial measures include market share, product and process innovation, on-time performance, product reliability, customer response time, personnel development (gauged in terms of number of people promoted in relation to the number of promotable employees), employee morale (ascertained by in-house opinion surveys), and productivity measurements. No less significant is performance in social responsibility and host government relations. Such nonfinancial factors are vital to ensure continued success abroad.[47]

Despite difficulties in measurement, nonfinancial criteria are considered important in practice. Earlier surveys suggest that market share is important, followed by productivity improvement, relationships with host governments, quality control, and employee development and safety. Fullerton and Walters report that firms implementing a higher degree of just-in-time (JIT) practices such as lean manufacturing strategies and continuous quality enhancements are more likely to use nonfinancial criteria.[48]

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[45] For example, see Rajiv D. Banker, Hsihui Chang, and Mina J. Pizzini, "Balanced Scorecard: Performance Measures Linked to Strategy," *Accounting Review*, Vol. 79, no. 1 (2004): 1–23.
[46] Trendsetter Barometer, www.barometersurveys.com
[47] Katharina Kretschmer, *Performance Evaluation of Foreign Subsidiaries,* Wiesbaden, Germany: Gabler Verlag, 2008, 363 pp.
[48] Rosemary R. Fullerton and Cheryl S. McWatters, "The Role of Performance Measures and Incentive Systems in Relation to the Degree of JIT Implementation," *Accounting, Organizations and Society* 27 (2002): 711–735.

These often include measures such as quality results, competitive benchmarking, waste and vendor quality, setup times, scrap, and downtime.[49]

Additional issues concern identifying relevant components of ROI and budget indicators and measuring them. Variations in ROI and budget comparisons relate to appropriate elements of income and the investment base. Thus, should income be the difference between revenues and expenses as they appear in a subsidiary's conventional income statement, or should it incorporate other dimensions? While conventional income measures may reflect a firm's results better than a strictly cash flow measure, they can be misleading in an international setting. To begin, net income may include allocated corporate expenses that the unit manager cannot control. It may not reflect the strategic nature of the foreign unit's mission. A subsidiary's reported results rarely reflect its total contribution.

To remedy these shortcomings, corporate accountants need to specify, as accurately as they can, the returns specifically attributable to the foreign subsidiary's existence. To report profits, therefore, they should add back things such as (1) royalty payments, service fees, and corporate allocations charged to the foreign subsidiary and (2) profits on intracorporate sales to the subsidiary. If sales to the subsidiary are not made at arms-length prices, the foreign subsidiary's profits should be adjusted for transfer pricing subsidies (transfer prices are discussed in detail in Chapter 12). Income amounts used for managerial evaluations should preferably include only those elements of revenues and expenses that unit managers can control.

What about the ROI denominator? Should it consist of shareholders' equity? Should it incorporate shareholders' equity plus total interest-bearing debt (alternatively, fixed assets plus net working capital)? Should it be total assets? If so, should assets include nonproductive resources that are carried because of local environmental constraints? Should it include assets that are allocated by corporate headquarters, such as those corporate treasury controls?

As with income, we believe that a distinction should be made. For managers, the investment base should consist of the resources they can control. Thus, excess inventories (stockpiled because of host government exchange control policies) should be eliminated, as should intracorporate receivables and cash balances over whose levels the local managers have little influence. For the subsidiary, the investment base should include all capital employed in accomplishing its stated objectives.

Assume, as an example, that a foreign unit ends the year with the following foreign currency (FC) financial position. (Current liabilities exclude any interest-paying debt including the current portion of long-term debt.)

Cash	FC 500	Current liabilities	FC 300
Accounts receivable	200	Long-term debt	800
Inventory	300		
Fixed assets	1,000	Owners' equity	900
	FC 2,000		FC 2,000

Assume further that earnings before interest and taxes (EBIT) are FC 200. Local interest rates average 12 percent.

[49] S. J. Daniel and W. D. Reitsperger, "Linking JIT Strategies and Control Systems: A Comparison of the United States and Japan," *The International Executive* 38 (1996): 95–121.

Many companies in the United Kingdom and the United States compute ROI by relating EBIT to fixed assets plus net working capital. In our example, this investment base yields an ROI statistic of 11.7 percent (FC 200/FC 1,700). The comparable figure for many Netherlands-based MNCs, however, is closer to 16.7 percent, because Dutch companies typically remove the ending cash balance from the definition of capital employed. (Cash on hand is considered a nonearning asset in the Netherlands).[50]

Measurement Issues and Changing Prices in Evaluation

The designer of an evaluation system for foreign operations must also face the issue of accounting measurements. Should local currency asset values be adjusted for changing prices where inflation is a significant force?[51] Such restatements directly affect measures of various ROI components and performance statistics for budgeting and performance evaluation. For example, failure to account for inflation generally overstates return-on-investment measures. As a result, corporate resources may not be directed to their most promising use within the corporation.

In Chapter 7 we said that an internal information system, sensitive to the effects of changing prices, provides a foundation for an inflation management strategy. For a closer look at such issues, we describe a case study examining the performance evaluation practices of ICI, the U.K. chemical giant and now part of the Akzo Nobel Group.

PERFORMANCE EVALUATION PRACTICES: ICI

During the oil embargo of the early 1970s, the price of oil, one of ICI's major raw materials, shot up by a factor of 5 in one year. As a result, top management was informed that even a 50 percent rate of return was inadequate! An examination of the impact of inflation on historical accounts disclosed six adverse consequences: (1) cost of goods sold was understated compared with current sales, (2) capital employed was understated in relation to its current value, (3) as a result of (1) and (2), returns on capital were doubly overstated, (4) comparisons of divisional performance based on similar assets of different ages were spurious, (5) intercountry comparisons of subsidiary performance were meaningess, and (6) performance comparisons over time were invalid.[52]

To eliminate these distortions, ICI incorporated current cost adjustments (CCA) in its internal reporting system. ICI divided its performance measures into two categories: long term (at least one year) and short term. Cash flow generation by product and ROI are the principal long-term measures. With its cash flow measure, ICI sought to determine whether a product would earn enough money to pay for replacing its plant, its share of corporate costs, and return enough profit to finance realistic growth. In modeling its operations, ICI discovered that the required rate of CCA return differed by country. For

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[50] On the other hand, Dutch companies use cash on hand as a standard of comparison. Return on assets employed should at least exceed the return that would have been earned had cash been invested in the local capital market, 12 percent in our example.

[51] Even in countries where rates of inflation are low, the cumulative effect of changing prices on long-lived assets can be significant. This is especially true of a capital-intensive multibusiness with older fixed assets. See also Lars Oxelheim and Clas Wihlborg, *Corporate Decision-Making with Macroeconomic Uncertainty: Performance and Risk Management*, London: Oxford University Press, 2008, 244 pp.

[52] Business International, *Assessing Foreign Subsidiary Performance*, p. 124.

example, its operations in Germany needed twice the U.K. rate of return to finance the same rate of growth, primarily due to tax factors.

ICI employed as its measure of ROI the ratio of current cost operating profit (before interest, taxes, and dividends) to current cost fixed assets plus net working capital. Assets were valued at replacement cost net of depreciation for large businesses, and at gross for smaller product lines to eliminate distortions due to the age of the assets (i.e., the denominator would decrease over time simply due to depreciation, thus raising the rate of return).

In Western Europe, profit was measured before interest and taxes because these expenses were the responsibility of headquarters, and it was difficult to relate a loan to a particular project or determine the actual tax paid when a product was made in one country and sold in several others. Where performance was evaluated on a subsidiary basis (e.g., Brazil and Australia), profit was measured after interest and tax. The reason ICI chose to do this was because these subsidiaries did their own borrowing, and investment decisions there were influenced by local taxes and tax incentives. By using a current cost ROI as opposed to a historical cost return, ICI largely insulated its measure of return from local taxes, tax incentives, and inflation. As a result, ICI could compare businesses in different countries and at different times.

While ICI mainly used cash flow generation and ROI to assess long-term performance, its principal short-term performance measure was to compare actual results against budget, with particular interest in financial ratios such as gross profit margin (i.e., profit before corporate costs). The company employed a three-year plan: The first year became that period's operating budget. Performance was tracked monthly and quarterly. Quarterly results were considered more significant.

Like many MNCs, ICI incorporated inflationary expectations when budgeting local selling prices and operating costs such as expected labor expense. ICI preferred to incorporate current values in its budgeting system and forecasted a replacement value for cost of goods sold and depreciation. The stated reason for this approach was to force management's attention to the fact that if a company is in a volatile cost setup, as when the price of oil and derivatives rises or falls very fast, it has to use the cost it will incur to replace raw materials and factor that into its selling price. If it uses historic cost, profits may not be adequate to continue purchasing oil at current prices.

Thus, performance was tracked using the actual cost of goods incurred each month. The unit's manager was held accountable for the variance (if any), because unexpected (i.e., greater than forecasted) increases in cost could be countered by raising prices.[53]

The budget also included a forecasted depreciation expense based on local indexes reflecting the asset's replacement cost. The local manager was not responsible for any variance (calculated quarterly) between forecasted and actual depreciation. It was not considered feasible for a local manager to discern and react to a change in forecasted depreciation. However, the product manager was expected to achieve his budgeted profit after actual depreciation.

ICI also included a forecasted monetary working capital adjustment (MWCA) in its budget. (See Chapter 7 for a discussion of this concept.) ICI did not consider the difference between forecasted and actual MWCA to be very meaningful because this

[53] This assumed that competitors suffered the same cost increases, which might not always be true due to exchange rate factors.

variance was considered to be caused by changes in costs and selling prices and would show up elsewhere in the profit and loss account.[54]

ICI's solution to inflation reporting largely focused on aggregate balance sheets and income statements. We next offer an internal reporting system that allows management to examine reported numbers in more disaggregated fashion.

Foreign Currency Effects

The foreign exchange variance analysis earlier in the chapter assumes that local managers are responsible for domestic operating results. Ideally, the local manager's responsibility for exchange variances should be in line with the ability to react to exchange rate changes.

The economic impact of changes in exchange rates on performance can be more profound than can be seen through accounting measures alone. To more fully assess the impact of inflation and currency volatility, and gauge their own ability to react, companies need to analyze their competitive market position and the impact of currency changes on their costs and revenues and those of their competition. To shed more light on this issue, we return to ICI's handling of exchange rates and budgetary control. Like many MNCs, ICI uses a forecasted rate of exchange to set budgets and the actual end-of-period rate to measure performance. Unlike many MNCs, ICI believes that the variance that results when the actual exchange rate differs from the budget rate is not meaningful by itself. For example, the company may have budgeted a rate for the euro for its subsidiary in France and the end-of-the-month exchange rate turns out to be identical to the forecasted rate. There is no arithmetic variance, but ICI may have lost some sales volume in France. The reason may be that its competitors are exporters from Canada and the Canadian dollar has weakened against the euro. As a result, the Canadians may have a margin advantage against ICI and can lower their prices in euros to maintain the same level of profits when converting to Canadian dollars.

Thus, ICI believes that exchange rate changes have more impact than accounting measures convey. It finds that further analysis is necessary to determine the real impact of currency fluctuations on performance, to arrive at effective reactions, and to determine how far the local manager is to be held accountable for protecting his budgeted profit in pounds sterling.

To achieve these objectives, ICI looks at the currencies in which its costs and revenues arise in relation to those of its competitors. Here is a view from within the company:

We buy oil and oil-related products, which are basically dollar denominated, and we are not a price-maker but are in competition with other producers in Europe. Our oil costs are dollar denominated and our revenues are denominated in other European currencies. If the pound appreciates against all other currencies, then revenues arising from foreign sales, and even those from U.K. sales subject to competitive pressures, will be reduced. As partial compensation, raw material costs (dollar-denominated oil) will be lower, but on balance ICI is worse off because the decrease in raw material costs is less than the decrease in sales revenue in absolute terms. The figure can be significant because ICI is the U.K.'s largest single exporter. Currency movements in the opposite

[54] The gearing adjustment on net, nontraded monetary liabilities (a form of purchasing power gain) was not incorporated into budgeting because raising funds was the responsibility of the headquarters.

direction are, of course, possible and in fact have recently occurred. An appreciation of the U.S. dollar against all other currencies puts the same raw material cost pressures on our European competitors as on U.K. manufacturing operations so we will not suffer a comparative disadvantage. The comparative disadvantage would arise if there was a depreciation of the pound versus the dollar coupled with a depreciation of other European currencies against the pound. This would both reduce our income and increase our costs.[55]

This approach to analyzing the economic impact of currency movements affects ICI's evaluation of its managers, whose freedom to react to such external circumstances is limited. In measuring the manager's performance, the company takes into account the extent to which he has been affected by factors beyond his control and also his reaction to them.

PERFORMANCE STANDARDS

Once questions of measurement are resolved, companies must develop meaningful standards with which to evaluate performance. But what standards are appropriate for a company with operations all over the world? Let's look at some possibilities.

A company may have certain corporate-wide standards, such as a minimum required ROI, that it applies to individual subsidiaries or product lines; or it may set different ROI levels or other benchmarks (such as gross margin) for different subsidiaries or product lines. These standards may be incorporated into budgets and can later be compared with results. Performance can also be measured over time. Companies may require stated improvement in specific ratios or income. Past performance is usually significant in developing the next period's budget. Finally, firms can compare their own overseas performance with that of competitors or compare its own units with one another.

Comparing the performance of foreign units against that of their competitors can be useful. At the same time, these comparisons have many pitfalls. (See Chapter 9 for a more extensive discussion of problems involved in analyzing foreign financial statements.) For example, when competitors are local firms, the problem of data availability and adequacy may be considerable, especially if competitors are privately held. When data is available, comparisons might be difficult. Competitors' transfer pricing policies and accounting principles may be impossible to determine. Cross-border comparisons compound these problems even further.

Comparing subsidiaries with other units of the parent company, either at home or abroad, must also be done cautiously as questions of comparability again arise. Differences in subsidiary objectives will automatically bias performance comparisons unless directly accounted for. Even if subsidiary objectives are the same, differences in country risk profiles must be considered. If higher levels of risk are to be offset by higher levels of return, it is reasonable to expect higher profitability from operations in riskier countries. To date, however, no single agreed-upon formula guides how to incorporate these country risks in assessing subsidiary performance.

Many firms require a shorter payback period, adjust cash flow projections for risk, or raise the required rate of return when considering investments in riskier

[55] Ibid., p. 127.

countries.[56] ROI is readily adjusted for political risk because one can set a desired ROI to include a premium in line with risk in a given country (offset to some extent by lower risk that results from geographical diversification of a firm's portfolio of foreign operations).

Applying risk premiums to an ROI goal is unavoidably subjective, but the process can be made systematic. One approach is to adjust the corporate-wide ROI by a numerical risk index developed for each country. For example, assume that a country-by-country risk assessment service, such as Business International, assigns a total score of 65 out of 100 possible points to Country Y. (A higher number indicates a lower country risk.) If a company's worldwide target ROI is 15 percent, Country Y's risk-adjusted target ROI is about 23 percent (15 divided by 65 percent). If Country Z's risk index is 75, its target ROI will be 20 percent (15 divided by 75 percent). Under this system, differences between a subsidiary's actual ROI and its budgeted ROI are calculated and used to compare the performance of subsidiaries in different countries. In this example, if one subsidiary's actual ROI in Country Y was 23.5 percent and the ROI of another subsidiary in Country Z was 21 percent, the subsidiary in Country Z will have performed better, as its variance from budgeted ROI was a positive 1 percent versus 0.5 percent for the subsidiary in Country Y. An overall risk index may not reflect the risk to which a particular foreign subsidiary is exposed. For example, the risk exposure of an oil company's subsidiary may differ from that of a consumer goods manufacturer in the same country. Thus, the risk index should be modified to reflect the specific risk to each unit. A more critical issue, however, is whether a company-wide ROI standard should be applied at all.

Performance evaluations based on a single company-wide standard are generally unsatisfactory. A performance budget is a more useful standard of comparison for multinational operations. Realistic budgets enable performance targets to incorporate considerations that are unique to a particular unit. Comparisons of actual performance to a budget also enables headquarters management to distinguish those results for which subsidiary managers can be held responsible from those that are beyond their control.

Following are seven caveats that may be useful guidelines for those who evaluate the results of foreign operations:

1. Foreign subsidiaries should not be evaluated as independent profit centers when they are really strategic components of a multinational system.
2. Company-wide return on investment criteria should be supplemented by performance measures tailored to the specific objectives and environments of each foreign unit.
3. Specific goals that consider each subsidiary's internal and external environment should be incorporated in performance budgets.
4. A subsidiary's performance should be evaluated in terms of departures from these objectives, the reasons for those departures, and managerial responses to unforeseen developments.

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[56] For an analysis of the impact of political risk on the cost of capital, see Kirt C. Butler and Domingo Castelo Joaquin, "A Note on Political Risk and the Required Return on Foreign Direct Investment," *Journal of International Business Studies* 29, no. 3 (1998): 599–608.

5. Subsidiary managers should not be held responsible for results that are beyond their control (at home and abroad).
6. Subsidiary managers whose performance is being measured should participate fully in setting the goals by which they will be judged.
7. Multiple measures of performance, financial and nonfinancial, should be used in evaluating foreign operations.

Value Reporting

We end this chapter with a recent management accounting development that attempts to bridge the gap between internal and external users of accounting information. It acknowledges that financial managers have a responsibility not only to assure compliance with stated objectives but to engage in value creation. It entails reporting both financial and nonfinancial measures and processes that provide both company managers and their shareholders with historical and predictive indicators of shareholder value. It also recognizes that information useful to management are also of interest to investors in enabling them to assess future enterprise value.[57]

A company that embraces value reporting is Infosys Technologies, alluded to in earlier chapters. What follows is a case description of the company's value reporting platform. To increase its transparency with the investing community, Infosys provides investors with data that are used internally to manage its affairs. The conceptual framework that guides its discloures is mapped below:

Value creation → Value Preservation → Value Realization

Value is created by developing and executing operating strategies that generate positive net present values of expected future cash flows. Value is preserved by implementing sound financial controls and engaging in the effective management of enterprise risks. By consistently delivering on its promises, management helps to assure investors that they will reap the benefits that the business has created.

As the firm's traditional financial statements have a historical orientation, Infosys provides a range of nonfinancial information that is related to creating long-term shareholder value. These reports are organized among four themes diagrammed in Exhibit 10-12.

Specific information provided to investors that is consistent with the disclosure framework in Exhibit 10-12 includes information on brand valuation, economic value-added, intangible assets, financial position statement including intangible assets, current cost financial statements(see Chapter 7), human resource accounting and a value-added statement. The company adopts similar measures for its internal measurement of business performance. This assures congruence between financial and nonfinancial measures used internally and those used by the market. This information model has been used by Infosys before it went public in 1993. Infosys is a good example of a company that has excelled by constantly adapting to the ever-changing environment of international business.

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[57] Robert Eccles, Robert Herz, Mary Keegan, and David Phillips, *The Value Reporting Revolution: Moving Beyond the Earnings Game,* New York: John Wiley & Sons, 2001.

EXHIBIT 10-12 ValueReporting™ Disclosure Model

External Market Overview
- Competitive environment
- Regulatory environment
- Macroeconomic environment

Internal Value Strategy
- Goals
- Objectives
- Governance
- Organization

Value Platform
- Innovation
- Brands
- Customers
- Supply chain
- People

Managing for Value
- Financial information
- Financial position
- Risk management
- Segment performance

Discussion Questions

1. This chapter identifies four dimensions of the strategic planning process. How does Daihatsu's management accounting system, described in this chapter, conform with that process?
2. Explain the difference between a standard costing system and the Kaizen costing system popularized in Japan.
3. Companies must decide whose rate of return (i.e., local vs. parent currency returns) to use when evaluating foreign direct investment opportunities. Discuss the internal reporting dimensions of this decision in a paragraph or two.
4. As an employee on the financial staff of Multinational Enterprises, you are assigned to a three-person team that is assigned to examine the financial feasibility of establishing a wholly owned manufacturing subsidiary in the Czech Republic. You are to compute an appropriate hurdle (discount) rate with which to conduct a discounted cash flow analysis. List all the parameters you would consider in measuring your company's cost of capital (discount rate).
5. Refer to Exhibit 10-7 which presents the methodology for analyzing exchange rate variances. Describe in your own words what this methodology accomplishes.
6. State the unique difficulties involved in designing and implementing performance evaluation systems in multinational companies.
7. Foreign exchange rates are used to establish budgets and track actual performance. Of the various exchange rate combinations mentioned in this chapter, which do you favor? Why? Is your view the same when you add local inflation to the budgeting process?
8. WOTS-UP analysis fails to identify a best strategy. Refer to Exhibit 10-1 and examine the strategies Daimler Benz identified in its two-by-two matrix. What other strategies would you have considered?
9. List six arguments that support a parent company's use of its domestic control systems for its foreign operations, and six arguments against this practice.
10. How does value reporting differ from the financial reporting model you learned in your basic accounting course? Do you think this is a good reporting innovation?

Exercises

1. Slovenia Corporation manufactures a product that is marketed in North America, Europe, and Asia. Its total manufacturing cost to produce 100 units of product X is € 2,250, detailed as follows:

Raw materials	€ 500
Direct labor	1,000
Overhead	750
Total	€ 2,250

The company bases its selling price on a cost-plus formula.

Required:

a. What would be Slovenia Corporation's selling price per unit if it wants a gross profit of 10 percent above cost?
b. Slovenia Corporation wants to be price competitive on an international basis. To accomplish this it must be able to price its product no higher than $21.50. Using the target costing methodology described in this chapter, what would be Slovenia Corporation's allowable costs? Assume that the company still wants a profit margin of 10 percent of its allowable costs. What does your calculation imply about its manufacturing costs?

2. Review the operating data incorporated in Exhibit 10-3 for the Russian subsidiary of the U.S. parent company.

Required: Using Exhibit 10-3 as a guide, prepare a cash flow report from a parent currency perspective identifying the components of the expected returns from the Russian investment for the first two years of its operations. The U.S. parent company is only allowed to receive 70 percent of its affiliate's reported net income, after Russian corporate income taxes, as dividends. However, U.S. tax law provides a credit against U.S. taxes for any foreign income taxes paid.

3. Assume that management is considering whether to make the foreign direct investment described in Exercise 3. Investment will require $6,000,000 in equity capital. Cash flows to the parent are expected to increase by 5 percent over the previous year for each year after year 2 (through year 6). Exchange rate forecasts are as follows:

Year	Rate
1	RUB 26 = $1
2	RUB 27 = $1
3	RUB 29 = $1
4–6	RUB 31 = $1

Management insists on a risk premium of 10 percent when evaluating foreign projects.

Required: Assuming a weighted average cost of capital of 10 percent and no expected changes in differential tax rates, evaluate the desirability of the Russian investment using a traditional discounted cash flow analysis.

4. Do a WOTS-UP analysis for your school or firm relative to its major competitor. Based on your analysis, suggest several countermeasures your dean or CEO might consider to maintain or improve your organization's competitive standing.

5. Assume the following:

- Inflation and Zambian kwacha (ZMK) devaluation is 30 percent per month, or 1.2 percent per workday.
- Foreign exchange rates at selected intervals for the current month are:

1/1	100.0
1/10	109.6
1/20	119.6
1/30	130.0

- The real rate of interest is 1.5 percent per month, or 20 percent per year.
- Cash balances are kept in hard currency (dollars).
- Month-end rates are used to record expense transactions.

Required: Based on these assumptions, prepare a table showing the distortions that can occur when expense transactions totaling ZMK 1,000,000 are recorded using conventional measurement rules (i.e., month-end rates in this example) instead of the internal reporting structure recommended in this chapter.

Transactions:	
Invoice Date	**Payment Terms**
1	Cash
5	15 days
5	25 days

6. Global Enterprises, Inc. uses a number of performance criteria to evaluate its overseas operations, including return on investment. Compagnie de Calais, its Belgian subsidiary,

EXHIBIT 10-13 Compagnie de Calais Performance Report

Sales		$4,200,000
Other income		120,000
		$4,320,000
Costs and expenses:		
Cost of sales	$3,200,000	
Selling and administrative	330,000	
Depreciation	160,000	
Interest	162,000	
Exchange losses	368,000	4,220,000
Income before taxes		$ 100,000
Income taxes		42,000
Net income		$ 58,000

submits the performance report shown in Exhibit 10-13 for the current fiscal year (translated to U.S. dollar equivalents). Included in sales are $500,000 worth of components sold by Compagnie de Calais to its sister subsidiary in Brussels at a transfer price set by corporate headquarters at 40 percent above an arms-length price. Cost of goods sold includes excess labor costs of $150,000 owing to local labor laws. Administrative expenses include $50,000 of headquarters expenses, which are allocated by Global Enterprises to its Belgian affiliate.

The parent company holds all of its subsidiaries responsible for their fair share of corporate expenses. Local financing decisions are centralized at corporate treasury, as are all matters related to tax planning. At the same time, Global Enterprises thinks that all subsidiaries should be able to cover reasonable financing costs. Moreover, it thinks that foreign managers should be motivated to use local resources as efficiently as possible. Hence, Compagnie de Calais is assessed a capital charge based on its net assets and the parent company's average cost of capital. This figure, which amounts to $120,000, is included in the $162,000 interest expense figure. One-half of the exchange gains and losses figure is attributed to transactions losses resulting from the Belgian subsidiary's export activities. The balance is due to translating the Belgian accounts to U.S. dollars for consolidation purposes. Exchange risk management is also centralized at corporate treasury.

Required: Based on the foregoing information, prepare a performance report that isolates those elements that should be included in performance appraisals of the foreign unit.

7. In evaluating the performance of a foreign manager, a parent company should never penalize a manager for things the manager cannot control. Given the information provided in Exercise 6, prepare a performance report identifying the relevant elements for evaluating the manager of Compagnie de Calais.
8. To encourage its foreign managers to incorporate expected exchange rate changes into their operating decisions, Vancouver Enterprises requires that all foreign currency budgets be set in Canadian dollars using exchange rates projected for the end of the budget period. To further motivate its local managers to react to unexpected rate changes, operating results at period's end are translated to dollars at the actual spot rate prevailing at that time. Deviations between actual and budgeted exchange rates are discarded in judging the manager's performance.

   At the start of the 2010 fiscal year, budgeted results for a Mexican affiliate, the Cuernavaca Corporation, were as follows (amounts in thousands):

Sales	MXP 8,000,000	CAD 2,560
Expenses	6,400,000	2,048
Income	MXP 1,600,000	CAD 512

Actual results for the year in dollars were: sales, CAD2,160,000; expenses, CAD1,680,000; and net income, CAD480,000. Relevant exchange rates for the peso during the year were as follows:

Jan. 1, 2010 spot rate:	CAD.00040
Global Enterprise's one-year forecast	CAD.00032
Dec. 31, 2010 spot rate	CAD.00024

Required: Based on the foregoing information, did the Mexican manager perform well? Support your answer using the variance analysis suggested in the chapter. (Refer to Exhibit 10-6.)

9. Exhibit 10-9 contains a performance report that breaks out various operating variances of a foreign affiliate, assuming the parent currency is the functional currency under FAS No. 52. Using the information in Exhibit 10-9, repeat the variance analysis, assuming instead that the parent company defines the local currency as its functional currency.

10. Parent Company establishes three wholly owned affiliates in countries X, Y, and Z. Its total investment in each of the respective affiliates at the beginning of the year, together with year-end returns in parent currency (PC), appear here:

Subsidiary	Total Assets	Returns
X	PC 1,000,000	PC 250,000
Y	PC 3,000,000	PC 900,000
Z	PC 1,500,000	PC 600,000

Parent Company requires a return on its domestic investments of 10 percent and is evaluating the annual performance of its three foreign affiliates. To establish an appropriate performance benchmark, Parent Company subscribes to a country risk evaluation service that compiles an unweighted risk index for various countries around the world. The risk scores for each of the n countries are:

Country Risk Score (out of 60)	
X	30
Y	21
Z	15

Other things being equal, the higher the score, the lower the country's risk.

Required: Prepare an analysis for Parent Company's management indicating which affiliate performed best.

CASES

Case 10-1

Foreign Investment Analysis: A Tangled Affair

You are the CFO of Marisa Corporation, a major electronics manufacturer headquartered in Shelton, Connecticut. To date, your company's operations have been confined to the United States and you are interested in diversifying your operations abroad. One option would be to begin establishing wholly owned subsidiaries in Europe, Latin America, and Asia. Another option is to acquire a multinational company that already has a major international presence. You are leaning toward the latter course of action as you are interested in diversifying your company's operating risk and enhancing its bottom line as soon as possible. You also have a significant stock option package and will benefit greatly if the price of Marissa Corporation's common stock were to rise over the next year.

You are particularly interested in MBI International, a U.S.-based multinational with operations in a significant number of countries. You estimate that approximately 60% of the company's earnings are from abroad. Foreign operations performance statistics, provided in MBI Corporation's consolidated financial statements, are included in Exhibit 10-14 for the years 2008, 2007, and 2006. Relevant notes are also appended.

Unfortunately, MBI does not disclose data explaining the movement of the major currencies in which it conducts its businesses. You do a Google search and uncover a trade-weighted index supplied by the U.S. government. Given MBI's large-scale operations, you decide to use the trade-weighted index as a proxy for MBI's currency experience (see Exhibit 10-15). (In using such a proxy, you are assuming that the currency mix of MBI's activities parallel the currency mix in the trade-weighted index.)

Required

1. On the basis of the information provided, together with what you have learned in Chapter 6, does MBI represent an attractive acquisition candidate?

EXHIBIT 10-14 MBI Data on Non-U.S. Operations

Non-U.S. Operations (Dollars in millions)	2008	2007	2006
At year-end:			
Net assets employed:			
Current assets	$24,337	$20,361	$20,005
Current liabilities	15,917	12,124	11,481
Working capital	$8,420	$8,237	$8,524
Plant and equipment, net	11,628	9,879	9,354

(continued)

EXHIBIT 10-14 MBI Data on Non-U.S. Operations (Continued)

Non-U.S. Operations (Dollars in millions)	2008	2007	2006
Investments and other assets	9,077	6,822	5,251
	$29,125	$24,938	$23,129
Long-term debt	$5,060	$3,358	$2,340
Other liabilities	2,699	2,607	2,505
Deferred taxes	2,381	1,184	1,580
	$10,140	$7,779	$6,425
Net assets employed	$18,985	$17,159	$16,704
Number of employees	168,283	167,291	163,904
For the year:			
Revenue	$41,886	$36,965	$34,361
Earnings before income taxes	$7,844	$7,496	$7,088
Provision for income taxes	3,270	3,388	3,009
Net earnings	$4,574	$4,108	$4,079

Notes: Non-U.S. subsidiaries that operate in a local currency environment account for approximately 90 percent of the company's non-U.S. revenue. The remaining 10 percent of the company's non-U.S. revenue is from subsidiaries and branches that operate in U.S. dollars or whose economic environments are highly inflationary.

As the value of the dollar weakens, net assets recorded in local currencies translate into more U.S. dollars than they would have at the previous year's rates. Conversely, as the dollar becomes stronger, net assets recorded in local currencies translate into fewer U.S. dollars than they would have at the previous year's rates. The translation adjustments, resulting from the translation of net assets, amounted to $3,266 million at December 31, 2008, $1,698 million at December 31, 2007, and $1,917 million at December 31, 2006. The changes in translation adjustments since the end of 2006 are a reflection of the strengthening of the dollar in 2007 and the weakening of the dollar in 2008.

EXHIBIT 10-15 Dollar's Trade–Weighted Exchange Index, 2006–2008 (1990 = 100)

December 31	Index
2006	92.8
2007	93.7
2008	83.7
Average Rates for Years, 2002–2008	
2002	138.2
2003	143.0
2004	112.2
2005	96.9
2006	92.7
2007	98.6
2008	89.1

Case 10-2

Assessing Foreign Subsidiary Performance in a World of Floating Exchange Rates

General Electric Company's worldwide performance evaluation system is based on a policy of decentralization. The policy reflects its conviction that managers will become more responsible and their business will be better managed if they are given the authority and necessary tools to budget and achieve a targeted net income in dollar terms. Moreover, decentralization permits the company to overcome the difficulty of centrally exercising detailed control over its large and diverse operations. Foreign affiliate managers, like their domestic counterparts, are accountable for dollar income, a practice not followed by many MNCs.

In the words of one financial executive, "Although many U.S. corporations are decentralized in their U.S. operations, they seem to be less so with regard to their foreign operations. One reason may be the concern as to whether foreign managers are sufficiently trained in some aspects of international finance, such as foreign exchange exposure management. We feel this is essential training, and our people get that training."

General Electric does not have any rigid standards for comparing the performance of its affiliates. Strategic and operating plans are agreed upon for each business, including financial targets. Like most other companies, GE generally requires a higher rate of return from investment proposals in riskier countries and has a system of ranking countries according to relative risk. A proposed investment in a high-risk area will have more difficulty being approved and will generally require a higher ROI, but approval depends on both the forecasted ROI and the company's total strategic objectives in each country.

The system of budgeting and forecasting extends five years into the future. The first year of the long-range forecast becomes a preliminary budget for the year ahead. A year later the budget is revised, a comparison is made between it and the original forecast, and changes are accounted for.

Measurement of an affiliated company's performance is related to the objectives of its strategic plan and the annual budgets that are derived from the plan. The primary financial measure is success in achieving the affiliates' committed dollar net income. Other measurements include ROI (calculated as the sum of reported net income plus after-tax interest expense, divided by the sum of net worth plus borrowings), net income to sales ratios, market share, inventory and receivable turnover rates, and currency exposure.

While the performance of both an affiliate and its manager are measured primarily on bottom-line results, the review of the manager includes other measurements. Assessments include how well the manager has dealt with government relations, the progress made toward achieving certain targets such as increasing market share, and success in maintaining good employee relationships. These measurements are based on the strategic plan and targets that were established between the manager and parent company supervisor at the start of a period.

GE conducts periodic operating reviews where each manager is reviewed by the level above. The focus

is on planning, results, and most recent estimates. This evaluation process provides corporate management with an opportunity to determine whether short-term actions are being taken at the expense of long-range goals.

To minimize currency exposure, GE finances fixed assets with equity and holds the affiliate responsible for maintaining a balanced position on working capital. The policy is modified as necessary for varying circumstances.

Unlike MNCs that have centralized the financing and exposure management functions at the head office, GE makes exposure management a responsibility of its local managers, overseen by sector and corporate personnel. To avoid the transaction costs of having, for example, a French affiliate hedge its position by buying French francs forward, GE has provisions for internal hedging arrangements. Corporate treasury obtains currency exposure data from all affiliates and provides needed information on offsets. Therefore, units can execute a hedging agreement between themselves without going to outside sources.

In setting the budget, the affiliate's manager uses the exchange rate he expects to prevail. General Electric believes that, although predicting rates of exchange is not an exact science, the managers of its foreign businesses have the necessary authority and tools to take those actions that will enable them to achieve their budgeted income. These tools include hedging and pricing decisions. The manager can not only raise prices, cut costs, lead payments, lag receivables, borrow locally, and remit dividends quickly but he can also take out forward contracts if they are available.

The affiliate manager has the responsibility and authority to protect the unit against currency fluctuations and, therefore, is accountable for dollar profits regardless of exchange rate changes. According to a company spokesperson:

If an unexpected devaluation occurs, the affiliate's performance is still measured in terms of dollar income vis à vis budget. GE considers changes in the rate of exchange in the same way as other risks that occur in a country. For example, if an affiliate's sales are less than those budgeted for because of a recession in that economy, countermeasures are available to the affiliate. If one contends that these things are not controllable, how does one manage a company? We're not saying it's controllable in the sense that it can be prevented from happening, but it is susceptible to countermeasures before and after the event occurs.

Required

1. Compare GE's approach to performance evaluation with that of ICI (mentioned in the chapter).
2. Critically evaluate the strengths and weaknesses of each company's approach to the performance evaluation of its foreign managers as it relates to the problem of fluctuating currency values.
3. Which approach to performance evaluation do you support and why?