Multinational Capital Budgeting

Multinational capital budgeting, like traditional capital budgeting, focuses on cash inflows and outflows associated with long-term investments.

Multinational capital budgeting techniques are used in foreign direct investment analysis.
Multinational Capital Budgeting

Basic steps of multinational capital budgeting are:

1. Identify the capital put at risk.

2. Estimate the future cash flows generated by the project.

3. Identify the appropriate discount rate.

4. Apply traditional capital budgeting decision criteria such as NPV and IRR to determine the acceptability or ranking of potential projects.
Complexities of Budgeting for a Foreign Project

- Parent cash flows must be distinguished from project cash flows.
- Parent cash flows often depend on the form of financing which means that financing cash flows cannot be clearly separated.
- Additional cash flows from a new subsidiary may reduce the cash flows from another subsidiary.
- Nonfinancial payments such as license fee and import payments can generate cash flows from subsidiaries.
Complexities of Budgeting for a Foreign Project

- Differing rates of national inflation have to be anticipated.
- The possibility of unanticipated changes in foreign exchange rates must be kept in mind.
- Political risk must be evaluated.
- Terminal value may be hard to estimate because potential buyers may have different views about the value of the company’s cash flows.
Project versus Parent Valuation

Strong arguments exist in favour of analyzing any foreign project from the viewpoint of the parent.

Since most of the project’s cash flows to the parent are financing cash flows, this violates the capital budgeting concept that financing cash flows should not be mixed with operating cash flows.
Project versus Parent Valuation

The evaluation of a foreign project from the project viewpoint is useful in determining its competitiveness compared to local firms. Multinationals should invest only if they can earn a risk-adjusted return greater than that of local competitors, otherwise investors are better off investing in the local firms. Most firms appear to evaluate projects both from the parent and the project viewpoint.
Illustrative Case: Cemex Enters Indonesia

In early 1998, Cementos Mexicanos, Cemex, is considering the construction of a cement manufacturing facility on the Indonesian island of Sumatra.

The project, Semen Indonesia, would be a wholly owned greenfield investment with a total installed capacity of 20 million metric tonnes per year (mmt/y).
Illustrative Case: Cemex Enters Indonesia

Three driving reasons for this project:

1. Initiate a productive presence in Southeast Asia.

2. Favorable long-term prospects for Asian infrastructure development and growth.

3. Positive prospects for producing and exporting from Indonesia due to the depreciation of the Indonesian rupiah (Rp) in 1997.
Illustrative Case: Cemex Enters Indonesia

Cemex considers the U.S. dollar to be its functional currency.

To evaluate the project, one needs to

1. construct a set of pro forma financial statements for Semen Indonesia (in Indonesian rupiah),

2. create two capital budgets, one from the project viewpoint and one from the parent viewpoint.
Illustrative Case: Cemex Enters Indonesia

Forecasted exchange rates are determined assuming PPP. That is, if the exchange rate is Rp10,000/$ at the start of the project, inflation in the U.S. and Indonesia over the coming year are expected to be 3% and 30%, respectively, then the expected spot rate one year after the start of the project is expected to be

\[
\frac{1.30}{1.03} \times 10,000 = \text{Rp}12,621/\$. 
\]
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

Capital Investment: 20 million metric tonnes per year at $110/tonne means that $2,200,000,000 will have to be invested to build the production facility. At an average exchange rate in year 0 of Rp10,000/$, this means Rp22 trillion.

Of this Rp22 trillion, Rp17.6 trillion would be plant and equipment and 10-year straight-line depreciation is assumed (Rp1.76 trillion/year).
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

Financing: 50% equity, all from Cemex, and 50% debt, 3/4 from Cemex and 1/4 from a group of Indonesian banks. Cemex’s U.S. dollar WACC is 11.98%. Cemex’s WACC in local Indonesian terms was estimated at 33.26%.
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

Financing: Cemex’s loan is denominated in U.S. dollars, has 5 years to maturity and the interest rate is 10%. Indonesian loan has also 5 years to maturity and the interest rate on it is 35%.
Financial Assumptions

Financing: Cemex lends

\[
\frac{3}{4} \times .5 \times 2,200,000,000 = 825,000,000
\]

to Semen Indonesia and the loan is amortized over 5 years. What is the rate of interest semen is expected to pay on this loan in rupiah?
Financial Assumptions

**Financing:** Annual dollar payment on loan from Cemex:

\[ P = \frac{825,000,000}{\frac{1}{1.1} \left(1 - \left(\frac{1}{1.1}\right)^5\right)} = \$217,632,922. \]

To find the rupiah-denominated interest rate paid on this loan, we must translate the annual $217.6m in rupiah each year at the expected exchange rate and then find the internal rate of return of this stream of cash flows. This gives 38.84%.
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

**Revenues:** The 20mmt/y facility will initially produce 8mmt/y (40% capacity).

Sales price is $58/tonne and will remain constant over the life of the project.

Capacity is expected to be 50% in year 2 and 60% from year 3 on.
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

**Costs:** Cash costs are estimated at Rp115,000 per tonne for 1999 and are expected to rise at the rate of inflation of 30% each year.

Additional production costs of Rp20,000 per tonne for the first year which also rise at the rate of inflation.

Loading and shipping costs are $2 and $10 per tonne, respectively, in year 1, and will increase by 3% each year.
Financial Assumptions

**Costs:** Semen pays a license fee of 2% of sales each year to Cemex.

General and administrative expenses are 8% of sales and increase by 1% each year.
Illustrative Case: Cemex Enters Indonesia

Financial Assumptions

**Working Capital Requirements:** Receivables are around 50 to 55 days sales outstanding (DSO), inventories 65 to 70 DSO and payables 114 DSO. 15 net DSO will be added with sales growth.