Chapter Objectives

- Identify sources of short-term financing for MNCs.
- Explain how MNCs determine whether to use foreign financing.
- Illustrate the possible benefits of financing with a portfolio of currencies.

Sources of Foreign Financing (1 of 2)

Internal short-term financing

- Before an MNC's parent or subsidiary in need of funds searches for outside funding, it should check other subsidiaries' cash flow positions to determine whether any internal funds are available.
- **Internal Control over Funds** — An MNC should have an internal system that consistently monitors the amount of short-term financing by all subsidiaries.

Sources of Foreign Financing (2 of 2)

External short-term financing

- **Short-term notes or unsecured debt securities:** Short-term notes typically have maturities of 1, 3, or 6 months with interest based on LIBOR.
- **Commercial paper (euro-commercial paper):** The selling price is not guaranteed to the issuers. Maturities can be tailored to the issuer's preferences.
- **Bank loans:** Direct loans from banks maintain a relationship with banks.

Access to funding during the credit crisis — MNCs had limited access to short-term funding during the credit crisis.

Financing With a Foreign Currency (1 of 5)

When MNCs obtain short-term financing, they usually borrow the currency that matches their future cash inflows. If an MNC has a net receivables position in a foreign currency, it may obtain a short-term loan in that currency so that it can both access short-term funds and hedge its receivables against exchange rate risk. This strategy is especially appealing if the interest rate of the foreign currency is low..

Motive for Financing with a Foreign Currency

- Exhibit 20.1 compares short-term interest rates among countries. The interest rates in many developing countries are usually higher than the interest rates in developed countries.

Exhibit 20.1 Comparison of Short-Term Interest Rates among Countries (as of October 2018)

COUNTRY	ANNUALIZED INTEREST RATE
Australia	5.1%
Brazil	11.3
Canada	4.8
Chile	5.5
China	8.0
Eurozone countries	4.7
India	9.3
Japan	2.5
Mexico	10.1
New Zealand	5.3
Russia	9.6
Turkey	30.0
United Kingdom	4.7
United States	4.9

Financing With a Foreign Currency (2 of 5)

Potential Cost Savings from Financing with a Foreign Currency:

When an MNC borrows a currency that differs from its local currency, the actual or "effective" financing rate will depend on

- The interest rate charged by the bank.
- The movement in the borrowed currency's value over the time of the loan.

$$r_f = (1+i_f)\left(1+e_t\right)-1$$

where

r_f = effective financing rate

e_t = percentage change in the value of the foreign currency over the same period

i_f = interest rate of the foreign currency

Financing With a Foreign Currency (3 of 5)

Risk of Financing with a Foreign Currency:

Although an MNC can benefit from financing in a currency with a low interest rate that differs from the currency that it needs, the strategy could backfire if the currency that is borrowed substantially appreciates over the loan period.

Hedging the Foreign Currency Borrowed:

To avoid exposure to exchange rate risk when borrowing a foreign currency, an MNC could hedge its position by purchasing the borrowed currency forward (for the time at which the loan is to be repaid).

Financing With a Foreign Currency (4 of 5)

Reliance on the Forward Rate for Forecasting:

If the forward rate is an unbiased predictor of the future spot rate, then the effective financing rate of a foreign currency will on average be equal to the domestic financing rate. (Exhibit 20.2)

Exhibit 20.2 Implications of Interest Rate Parity for Financing

SCENARIO	IMPLICATIONS
1. Interest rate parity holds.	Foreign financing and a simultaneous hedge of that position in the forward market will result in financing costs similar to those incurred in domestic financing.
2. Interest rate parity holds, and the forward rate is an accurate forecast of the future spot rate.	Uncovered foreign financing will result in financing costs similar to those incurred in domestic financing.
3. Interest rate parity holds, and the forward rate is expected to overestimate the future spot rate.	Uncovered foreign financing is expected to result in lower financing costs than those incurred in domestic financing.
4. Interest rate parity holds, and the forward rate is expected to underestimate the future spot rate.	Uncovered foreign financing is expected to result in higher financing costs than those incurred in domestic financing.

Financing With a Foreign Currency (5 of 5)

Use of Probability Distributions to Enhance the Financing Decision (Exhibits 20.3, 20.4, 20.5)

- Since forecasts are not always accurate, it is sometimes useful to develop a probability distribution instead of relying on a single point estimate.
- Allows comparison of distribution to the known financing rate of the home currency in order to make its financing decision.

Exhibit 20.3 Analysis of Financing with a Foreign Currency

POSSIBLE RATE OF CHANGE IN THE CANADIAN DOLLAR OVER THE LIFE OF THE LOAN (e_f)	PROBABILITY OF OCCURRENCE	EFFECTIVE FINANCING RATE IF THIS RATE OF CHANGE IN THE CANADIAN DOLLAR DOES OCCUR (r_f)
−1%	60%	(1.03)[1 + (−0.01)] − 1 = 1.97%
+10%	40%	(1.03)[1 + (0.10)] − 1 = 13.3%

Financing with a Portfolio of Currencies

Multinational corporations may be able to achieve lower financing costs without excessive risk by financing with a portfolio of foreign currencies instead of a single foreign currency (Exhibit 20.4 and 20.5).

Exhibit 20.4 Possible Effective Financing Rates for Each Currency

CURRENCY	POSSIBLE PERCENTAGE CHANGE IN THE SPOT RATE OVER THE LOAN LIFE	PROBABILITY OF THAT PERCENTAGE CHANGE IN THE SPOT RATE OCCURRING	COMPUTATION OF EFFECTIVE FINANCING RATE BASED ON THAT PERCENTAGE CHANGE IN THE SPOT RATE
Outcome 1 for Canadian dollar	−1%	60%	(1.03) [1 + (−.01)] − 1 = .0917, or 1.97%
Outcome 2 for Canadian dollar	10%	40%	(1.03) [1 + (.10)] − 1 = .133, or 13.3%
		100%	
Outcome 1 for Japanese yen	−2%	70%	(1.04) [1 + (−.02)] − 1 = .0192 or 1.92%
Outcome 2 for Japanese yen	8%	30%	(1.04) [1 + (.08)] − 1 = .1232 or 12.32%
		100%	

Exhibit 20.5 Analysis of Financing with Two Foreign Currencies

(1) POSSIBLE JOINT EFFECTIVE FINANCING RATES	(2) POSSIBLE JOINT EFFECTIVE FINANCING RATES	(3) COMPUTATION OF JOINT PROBABILITY	(4) COMPUTATION OF EFFECTIVE FINANCING RATE OF PORTFOLIO (50% OF TOTAL FUNDS BORROWED IN EACH CURRENCY)
CANADIAN DOLLAR	**JAPANESE YEN**		
1.97%	1.92%	(60%)(70%) = 42%	0.5(1.97%) + 0.5(1.92%) = 1.945%
1.97	12.32	(60%)(30%) = 18%	0.5(1.97%) + 0.5(12.32%) = 7.145%
13.3	1.92	(40%)(70%) = 28%	0.5(13.3%) + 0.5(1.92%) = 7.61%
13.3	12.32	(40%)(30%) = 12%	0.5(13.3%) + 0.5(12.32%) = 12.81%
		100%	

Actual Results from Foreign Financing

The fact that some firms utilize foreign financing suggests that they believe reduced financing costs can be achieved.

Savings can be achieved if the foreign currency depreciates against the home currency.

Foreign financing can backfire if the foreign currency appreciates against the home currency.

Summary (1 of 2)

- When MNCs need short-term financing, they may first consider internal sources of funds, including foreign subsidiaries that might have excess funds. They also commonly rely on external sources such as short term notes, commercial paper, or bank loans.
- MNCs may use foreign financing in an attempt to reduce their financing costs. They can determine whether to use foreign financing by estimating the effective financing rate for any foreign currency over the period in which financing will be needed. The expected effective financing rate depends on the quoted interest rate of the foreign currency and the forecasted percentage change in the currency's value over the financing period. over the period in which financing will be needed. The expected effective financing rate depends on the quoted interest rate of the foreign currency and the forecasted percentage change in the currency's value over the financing period.

Summary (2 of 2)

- When MNCs borrow a portfolio of currencies that have low interest rates, they can increase the probability of achieving relatively low financing costs if the currencies' values are not highly correlated.