

Currency risks represent the degree of potential that any given investment or adjustment to the business operations of a company could be impacted by some change in exchange rates. The exact nature of the currency risk could be considered to be very low and thus well worth the risk in light of the chance for a high return. At the same time, a currency risk that is considered to be somewhat high could be sufficient reason to hold off on making the investment or implementing the change to the business operation.

Sometimes referred to as an exchange rate risk, the currency risk often involves the task of converting one type of currency into another type of currency in order to engage in a given investment. For example, a company may be considering the purchase of a competitor that is based in and operates primarily in a different country. When this is the case, it may be necessary to convert the currency used for the purchase into the type of currency used in the country where the purchased [corporation](#) is physically located. The exchange rate involved in making the conversion may indicate that the time for the purchase is not right, and the acquisition should be delayed.

A currency risk can also impact investors as well. This is especially true for investors who routinely choose to dabble in investment opportunities that involve international components. Once again, the rate of exchange between one currency to another could indicate that the current strength of the base currency is such that the exchange will ultimately put the investor at a disadvantage. When this is the case, the investment should be delayed. However, exchange rates and other pertinent factors can and do change over time, so the investor should consider revisiting the exchange at a later date and determine if the currency risk is now within acceptable perimeters.

Foreign Currency Exposure and Project Finance

A project has currency exposure when the currencies for its expenditures and revenues are not the same. For example, in infrastructure projects financed with foreign borrowing, currency exposure occurs because, in general, revenues are in local currency and debt service is in a foreign currency. Who takes the foreign currency risk and how it can be mitigated are central issues in project finance.

Who Takes the Risk? Lender or Shareholder
In a traditional corporate loan, exchange rate risk or any other project risk, is mainly borne by shareholders. Bankers and bondholders, on the other hand, only accept foreign exchange risk to the extent that shareholder equity and guarantees

are not enough to cover debt service. Today, however, newer forms of finance ranging from project financing to securitization, are raising the currency risk borne by lenders. Increasingly, infrastructure finance is "off " the balance sheet of the corporate sponsor (i.e. is not part of its assets and liabilities, as the project is a separate entity). As such, financing relies on the local assets of a specific project and local revenue sources, such as electricity sales of a power plant or revenues from electricity transmission services to cover debt service. These off-balance sheet financings have greater leverage, relying on a smaller equity participation, and do not have shareholder guarantees. The end result is that more risk is shifted to lenders.

The Components of Currency Exposure
 Currency exposure in an internationally financed infrastructure project leads to three types of risk:

- **Exchange rate risk** arises from potential exchange rate movements with respect to the currency in which the loan is denominated. For example, a devaluation of the local currency, in which project revenues are denominated. For example, a devaluation of the local currency, in which project revenues are denominated, raises the local currency cost of servicing project debt. Therefore, an increase in the cash inflows from the project is required for lenders and shareholders to receive timely payments.
- **Inconvertibility risk** is present where there are exchange controls or other currency restrictions that prevent or delay remittances and timely debt service. While exchange controls, for example, can interrupt payments to lenders, in other cases foreign currency can only be bought at a steep surcharge. This too can impair the project's cash flow.
- **Accounting risk** results from the application of internationally accepted accounting standards for converting foreign currency liabilities into domestic currency. In principle, this only has accounting implications, but in the case of long-term projects, the reported financial condition could lead parties to make decisions that create liquidity problems.

Dealing with Risk: Exchange Rate Cover

The cover required to deal with exchange rate and inconvertibility risk are very different in nature. Exchange rate risk can be covered, for instance, through forward purchases of foreign currency or other financial contracts, such as call options that give the holder the right to buy foreign currency at a given exchange rate and time. Neither forward contracts nor other suitable financial contracts, however, are available in the markets for long-term cover. As a result, because

infrastructure projects have a long useful life, the exchange rate risk cannot be adequately covered. Even though long- or medium-term forward contracts can be obtained, sellers of forward currency would require some guarantees regarding a project's capacity to generate the funds to support forward purchase agreements. These guarantees cannot be given by the project. There are two solutions for this problem: shareholders' external guarantees and/or denominating project revenues in a foreign currency. Shareholders and sponsors do not favor the first solution, while the second may only provide partial cover (see below for comments on indexation).

Some investors require that project prices be indexed in a hard currency and Foreign Currency and have guaranteed minimum revenue. The latter requirement implies that if customers do not cover those revenues, governments somehow will have to pay the difference between actual and minimum revenues.

Political	Risk	Insurance
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Inconvertibility of domestic currency is usually covered by so-called "political risk" insurance. Usually, political risk insurance covers the financing of capital goods exports and investments from developed to developing countries and is supplied by specialized public agencies. In general, the agencies provide broad cover-age, including: 1) confiscation, expropria-tion or nationalization, 2) war and civil strife, and 3) inconvertibility. However, political insurance for foreign financing of locally produced goods or exports from developing countries is not widely available. The Multilateral Investment Guarantee Agency (MIGA) of the World Bank Group provides political insurance in developing countries for those niches that are not covered by bilateral agencies, but MIGA has a limited financial capacity.

Accounting	Risk	and	Infrastructure	Loans
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Accounting losses in infrastructure projects can result from domestic currency devaluations, even though project cash flows are constant in terms of the borrowing currency owing to price indexation. Under internationally accepted accounting stan-dards, foreign currency loans are converted into domestic currency using the exchange rate of the date in which financial state-ments are prepared. Positive differences in loan value in terms of domestic currency should be passed through to the income statement. This means that a project fi-nanced with foreign currency will report large devaluation losses, regardless of present or future cash flows. Accounting losses are problematic where the infrastructure project has a useful life longer than the loan terms, since financial institutions may refuse to refinance a loan for a company showing losses in its income statement. Precisely

when a project may need time to recover these "unrealized" losses by raising its prices or cutting costs, lenders may cut the project off or demand repayment of loans.

Foreign Currency Exposure

International financing of infrastructure projects introduces currency risk. However, such financing is required in cases where domestic savings is not sufficient to invest in long-term projects, or there is private sector participation in infrastructure financing. Coverage of currency exposure derived from foreign financing, however, is far from complete. Different arrangements for sharing currency risk between shareholders, lenders and governments are available, but new ones are needed to address specific problems in infrastructure projects. In particular, a shortfall in funds for refinancing following a devaluation can create unsolvable liquidity problems for infrastructure projects.

Indexation as Insurance: Does it Work?

One method to protect against foreign currency exposure is to index local revenues to the foreign currency. The degree of protection provided, however, depends on price elasticity of demand for project services. For infrastructure projects with an inelastic demand (or price insensitive, i.e. where demand will fall little in response to price increases), the effect of passing through a currency devaluation to local prices will not reduce total revenues. In projects in which demand is elastic, in spite of higher prices, the fall in demand would lower total revenues (prices would go up, but demand would fall more). Depending on the project, denominating project prices in a hard currency could even increase exchange rate risk. A toll road which competes with public roads is more likely to suffer a loss in revenues because of higher prices than, say, a water project where there are very few competing suppliers at any price.