

OUTLINE FOR CHAPTER 22

- Understand
 - Basic needs of export/import financing
 - Main instruments (letter of credit, bill of exchange, and bill of lading)
 - Export Credit Insurance
 - Eximbank
 - Countertrade

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Chapter 22 - Import and Export Financing

- Usually there are more formal rules in export/import trade than purely domestic trade
 - Hard to get information on each party
 - Communication is harder
 - Customs are different
 - Don't want to end up in a court in a foreign country

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Basic Needs of Import/Export Financing

- Risk of Noncompletion - both the buyer and seller do not want to be in the position of having neither money nor goods
 - Seller wants to have legal title to goods until getting paid or at least assurance of payment
 - Buyer doesn't want to pay until receiving the goods or receiving title to the goods.
- Transaction Exposure
- Financing

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Main Instruments in Export-Import Financing

- Letter of Credit
- Draft or Bill of Exchange
- Bill of Lading
- There are some open account transactions especially between related companies and companies that trade frequently with each other

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Letter of Credit

- Issued by a bank at the request of an importer
- The bank promises to pay a beneficiary (usually the exporter or the exporter's bank) after receiving certain documents specified in the Letter of Credit

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Letter of Credit

Instead of Importer $\xrightarrow{\text{Promises to Pay}}$ Exporter

With a Letter of Credit Importer Bank $\xrightarrow{\text{Promises to Pay}}$ Exporter

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Letter of Credit

- The bank puts itself in the middle between the buyer and the seller
- Exporter likes it because it reduces the risk of noncompletion. Even if there are foreign exchange blockages the exporter is more likely to get paid since banks have more access to foreign exchange than most companies.

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Letter of Credit - Continued

- Exporter may also get pre-export financing easier
- Importer will often not have to pay until the bank receives the proper documents and all conditions stated in the LC have been satisfied.
- Disadvantage – Cost to the importer

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Typical Transaction

- 1) After exporter and importer agree on a transaction, importer applies to his bank for a L/C
- 2) Assuming bank agrees, bank sends L/C to exporter's bank specifying what documents must be included
- 3) After exporter ships goods, exporter draws a draft against the issuing bank, attaches documents and gives all this to the (exporter's) bank

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Typical Transaction - Continued

- 4) Exporter's bank sends everything to issuing bank
- 5) Issuing bank (if documents are in order) honors draft
- 6) Exporter's bank receives funds and passes them on to the exporter
- 7) At some time during this process the importer will pay the issuing bank

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Types of L/C

- 1) Irrevocable vs. Revocable - irrevocable l/c can not be canceled or modified unless all parties agree
- 2) Confirmed vs. Unconfirmed - if confirmed the exporter's bank is obligated to honor drafts if for some reason issuing bank can not or will not pay

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Types of L/C - Continued

- 3) Revolving vs. nonrevolving - nonrevolving l/c are valid for only one transaction

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Draft or Bill of Exchange

- An order written by exporter telling an importer or its bank to pay a certain amount of money now or a particular time in the future
- Drawer issues bill - exporter
- Drawee the party to whom the draft is addressed (if buyer - trade draft and if bank - bank draft)

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Drafts - Continued

- Sight drafts are payable right away while time drafts are payable in the future
- If drawee agrees to pay time draft - write accepted on draft
- If drawee is a bank and draft is a time draft then once it is accepted it becomes a banker's acceptance

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Banker's Acceptance

- If an exporter needs money right away can discount acceptance
- Banker's acceptances are instruments (like CD's) that investors hold to earn extra short-term income

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Bill of Lading

- Issued by common carrier to exporter
- Three main purposes:
 - 1) receipt (carrier has received merchandise)
 - 2) contract (lists responsibilities of carrier)
 - 3) document of title (used to obtain payment or promise of payment before goods are released to importer)
- Can also function as collateral so exporter can get money by its local bank prior to receiving it from importer

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Government Programs to Help Finance Exports

- Most governments want to encourage exports (jobs) so in many countries there are institutions that offer export credit insurance at favorable rates and also government supported banks for export financing

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Export Credit Insurance

- Exporters often get business because they offer more favorable credit terms than their competitors
- Export credit insurance allows companies to offer favorable credit terms because in cases of default the insurance companies will pay a substantial part of the loss
- If the exporter has export credit insurance, the importer may not need a letter of credit which will save the importer money

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Export Credit Insurance in the U.S.

- Offered by Foreign Credit Insurance Association (FCIA), which is an unincorporated association of private insurance companies operating with Eximbank (Export-Import Bank)

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FCIA

- Insurance against
 - commercial risk (insolvency or lack of payment of buyer)
 - political risk (actions of governments beyond control of buyer or seller)
 - examples- buyer can't get dollars or approved currencies and transfer them to the insured, civil war, or importer can't import goods

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FCIA - Continued

- Coverage for U.S. goods produced and shipped from U.S.
- Coverage
 - commercial 90-95%
 - political 95-100%

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Eximbank

- Independent agency of U.S. government
- Started in 1934
- Purpose - Push exports
- Eximbank guarantees repayment of export loans given by U.S. banks to foreign borrowers (6 months to 10 years)
- Also lends funds to foreign borrowers directly (requires private participation) for buying U.S. goods

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Eximbank - Continued

- Can provide working capital to help small exporters
- If foreign governments provide unfair subsidies, then Eximbank can provide help to those U.S. exporters affected by those subsidies

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State Programs

- Many states have programs that give exporters special financing

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Countertrade

- Goods and services are paid for or partially paid for by other goods and services
- Often one country involved may be less developed, a centrally planned economy, has more political risk, and/or has poor quality goods
- Countertrade is often a second best solution (free trade is best)

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Examples of Countertrade

- Examples include
 - simple barter (goods for goods - Pepsi for vodka)
 - buyback or compensation agreement (export plant and equipment and get paid in output of new firm - build a car plant and get paid in cars)

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Outline for Chapter 19 - Multinational Capital Budgeting

- Capital budgeting – Project viewpoint
- Capital budgeting – Parent viewpoint

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Project versus Parent Valuation - Continued

- It makes sense to view a project from standpoint of the parent and not just looking at the results of the project
- In the end, the parent will pay out dividends and service debt. Cash flows from the project are not very useful if they can not be used elsewhere in the MNE.

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Project versus Parent Valuation - Continued

- Funds permanently blocked cannot be used elsewhere in the firm. Funds temporarily blocked and are able to earn only low return while blocked are not worth as much to the parent.
- Funds taxed by the host country are worth less to the parent.

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Parent Valuation

- One major problem with parent valuation is that cash flows from the subsidiary are usually financial flows (not operating cash flows).
- Usually capital budgeting only worries about operating cash flows and not financial flows.

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Project Valuation

- MNEs should earn a return on a project greater than local competitors. If not, stockholders would be better and investing in the stock of the local competitors.

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Project Valuation - Continued

- EBIT
- Less taxes
- EAT
- Add back depreciation
- Net operating cash flows

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Project Valuation

- Take NPV taking into consideration changes in net working capital
- Forecasting exchange rates often done using PPP
- Terminal value = $\text{NOCF} \frac{(1+g)}{(k_{\text{wacc}} - g)}$
where NOCF = net operating cash flows
and g is the growth rate of NOCF

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Parent Viewpoint

- Remittances net of withholding taxes
 - Dividends
 - License fees
 - Debt service
 - Principal payments (no withholding)

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Parent Valuation - Continued

- Only capital invested into project by the parent (debt and/or equity) is included in the initial investment
- For foreign projects typically increase discount rate due to increased risk

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Sensitivity Analysis

- Often used to examine the effects of various factors on both project and parent viewpoint

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Sensitivity Analysis – Project
Viewpoint

- Political Risk – what happens if the parent is expropriated or funds are blocked
- Foreign exchange risk – what happens if changes in exchange rates are different from what is forecasted

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Project Finance

- Please read pages 503-505.

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Chapter 17
International Portfolio Theory and
Diversification

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Outline for Chapter 17

- Expected return for a portfolio
- Expected risk of a portfolio
- Optimal portfolio construction - domestic and international
- Gains from international diversification

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Portfolio Return

- $E(R_p) = w_1E(R_1) + w_2E(R_2) + w_3E(R_3) + \dots$
- Where $w_{(i)}$ = weight of asset i and the weights sum to 1
- $E(R_p)$ = expected return for portfolio p
- $E(R_i)$ = expected return for asset i

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Portfolio Risk

- $\sigma_p = (\text{sum of the variances weighted} + \text{the sum of all the covariances weighted})^{.5}$
- Example of 3 assets:
- Variances = $w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + w_3^2 \sigma_3^2$
- Covariances = $2w_1w_2\rho_{12}\sigma_1\sigma_2 + 2w_1w_3\rho_{13}\sigma_1\sigma_3 +$
 $+ 2w_2w_3\rho_{23}\sigma_2\sigma_3$
- Covariances come in pairs
- Where ρ_{ij} is the correlation coefficient between asset i and asset j

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Example of 2 assets

- Expected return for asset 1 (2) = .1 (.12)
- Weight for asset 1 (2) = .6 (.4)
- Standard deviation of asset 1(2) = .2 (.3)
- Correlation coefficient between asset 1 and 2 = .5
- Expected return of the portfolio = .6 (.1) + .4 (.12) = .108

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Example of 2 assets - Continued

- Portfolio standard deviation = $\{ (.6)^2 (.2)^2 + (.4)^2 (.3)^2 + 2(.6) (.4) (.5)(.2)(.3) \}^{.5} = .2078$

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Example of 2 assets - Continued

- Suppose the correlation coefficient had been 1 instead of .5
- Portfolio standard deviation = $\{ (.6)^2 (.2)^2 + (.4)^2 (.3)^2 + 2(.6) (.4) (1)(.2)(.3) \}^{.5} = .24$
- In this case .24 is 60% of the way between .2 and .3
- Suppose the correlation coefficient had been 0 instead of .5
- Portfolio standard deviation = $\{ (.6)^2 (.2)^2 + (.4)^2 (.3)^2 + 2(.6) (.4) (0)(.2)(.3) \}^{.5} = .17$

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Example of 2 assets - Continued

- Suppose the correlation coefficient had been -1 instead of .5 (very unlikely)
- Portfolio standard deviation = $\{ (.6)^2 (.2)^2 + (.4)^2 (.3)^2 + 2(.6)(.4)(-1)(.2)(.3) \}^{.5} = .0$ (in this case doesn't have to be 0)
- Note the standard deviation is highest when correlation coefficient is 1 and less at .5, still smaller at 0 and still smaller at -1.

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Example of 2 assets - Continued

- Given a correlation coefficient of .5, we can solve for the weight of asset 1 which gives the minimum portfolio risk using calculus.

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Portfolio Risk

- There are N variance terms and $(N^2 - N)$ covariance terms
- Portfolio risk = $\{ N (1/N) (1/N) \text{ average variance} + (N^2 - N) (1/N) (1/N) \text{ average covariance} \}^{.5}$ for equally weighted portfolio
- For large portfolios (number of assets) the average covariance term dominates and not the average variance

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Optimal Portfolio Construction

- First create the efficient frontier – Minimum expected risk for each level of expected portfolio return
- In absence of a risk free rate investor selects portfolio on the efficient frontier that has highest level of satisfaction

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Optimal Portfolio Construction

- With risk free asset – Can choose any place along capital market line assuming one can borrow or lend at the risk free rate.
- Capital market line connects risk free rate with domestic portfolio

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Optimal Portfolio Construction



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Optimal Portfolio Construction - Continued

- With international assets, now have more assets to choose (all domestic plus international).
- Some international assets may have lower risk, higher returns, and when combined with domestic assets help to lower the overall portfolio risk.

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Optimal Portfolio Construction

- Now can reach a higher level of satisfaction (along the international capital market line)

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Optimal Portfolio Construction



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Gains from International Diversification

- In this case the expected return is higher and the risk for the portfolio with international assets is lower than the portfolio of just domestic assets

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Gains from International Diversification

- A lot of the gains arise because the correlation of assets between domestic and international assets are lower than between two domestic assets.
- See page 443 for correlations between world equity markets
- Gains from international diversification are becoming less and less as markets become more integrated

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