

International Bond Market

Chapter 12

Copyright © 2018 by the McGraw-Hill Companies, Inc. All rights reserved.

The World's Bond Markets: A Statistical Perspective

- The total market value of the world's bond markets are about 50% *larger* than the world's equity markets.
- The U.S. dollar, the euro, the pound sterling, and the yen are the four currencies in which the majority of domestic and international bonds are denominated.
- Proportionately more domestic bonds than international bonds are denominated in the U.S. dollar (44.0 percent versus 40.4 percent) and the yen (14.1 percent versus 2 percent) while more international bonds than domestic bonds are denominated in the euro (41.5 percent versus 14.7 percent), and the pound sterling (9.3 percent versus 5.6 percent).

EXHIBIT 12.1

Amounts of Domestic and International Bonds Outstanding (at year-end 2014 in billions of U.S.D.)

Currency	Domestic	Percent	International	Percent	Total	Percent
U.S. dollar	32,653.2	44.0	8,475.9	40.4	41,129.1	43.2
Euro	10,931.4	14.7	8,708.4	41.5	19,639.8	20.6
Pound sterling	4,174.9	5.6	1,947.3	9.3	6,122.2	6.4
Yen	10,457.3	14.1	417.7	2.0	10,875.0	11.4
Other	16,032.6	21.6	1,445.3	6.9	17,477.9	18.4
Total	74,249.4	100.0	20,994.6	100.0	95,244.0	100.0

12-3

Foreign Bonds and Eurobonds

- Bearer bonds and registered bonds
- National security registrations
- Withholding taxes
- Recent regulatory changes
- Global bonds

12-4

EXHIBIT 12.2

International Bonds Amounts Outstanding Classified by Major Instruments (in billions of U.S.D.)

	2011	2012	2013	2014	2015 (1Q)
<i>Instrument</i>					
Straight fixed-rate	13,541.5	14,824.0	15,545.9	15,140.1	14,569.6
Floating-rate notes	6,339.0	5,959.4	5,975.6	5,450.6	5,037.2
Convertible issues	325.5	318.1	377.0	403.9	395.4
With equity warrants	1.0	0.9	0.0	0.0	0.0
Total	20,207.0	21,102.3	21,898.5	20,994.6	20,002.2

12-5

Bearer Bonds and Registered Bonds

- Bearer bonds are bonds with no registered owner. As such they offer anonymity, but they also offer the same risk of loss as currency.
- Registered bonds are bonds where the owner's name is registered with the issuer.
- U.S. security laws require Yankee bonds sold to U.S. citizens to be registered.

12-6

National Security Registrations

- Yankee bonds must meet the requirements of the SEC, just like U.S. domestic bonds.
- Many borrowers find this level of regulation burdensome and prefer to raise U.S. dollars in the Eurobond market.
- Eurobonds sold in the primary market in the United States may not be sold to U.S. citizens.
- Of course, a U.S. citizen could buy a Eurobond on the secondary market.

12-7

Withholding Taxes

- Prior to 1984, the United States required a 30 percent withholding tax on interest paid to nonresidents who held U.S. government or U.S. corporate bonds.
- The repeal of this tax led to a substantial shift in the relative yields on U.S. government and Eurodollar bonds.
- This lends credence to the notion that market participants react to tax code changes.

12-8

Security Regulations That Ease Bond Issuance

- Shelf Registration (SEC Rule 415)
 - Allows the issuer to preregister a securities issue, and then offer the securities when the financing is actually needed.
- SEC Rule 144A
 - Allows qualified institutional investors to trade private placements.
 - These issues do not have to meet the strict information disclosure requirements of publicly traded issues.

12-9

Global Bonds

- A global bond is a very large international bond offering by a single borrower that is simultaneously sold in North America, Europe, and Asia.
 - Global bond issues were first offered in 1989.
- Global bonds denominated in U.S. dollars and issued by U.S. corporations trade as Eurobonds overseas and domestic bonds in the U.S.

12-10

Deutsche Telekom Global Bond

- The largest corporate global bond issue to date is the \$14.6 billion Deutsche Telekom multicurrency offering. The issue includes:
 - Three U.S. dollar tranches with 5-, 10-, and 30-year maturities totaling \$9.5 billion.
 - Two euro tranches with 5- and 10-year maturities totaling €3 billion.
 - Two British pound sterling tranches with 5- and 30-year maturities totaling £950 million.
 - One 5-year Japanese yen tranche of ¥90 billion.

12-11

Types of Instruments

- Straight fixed-rate debt
- Floating-rate notes
- Equity-related bonds
- Zero coupon bonds
- Dual-currency bonds
- Composite currency bonds

12-12

EXHIBIT 12.3

Typical Characteristics of International Bond Market Instruments

Instrument	Frequency of Interest Payment	Size of Coupon Payment	Payoff at Maturity
Straight fixed-rate	Annual	Fixed	Currency of issue
Floating-rate note	Quarterly or semiannual	Variable	Currency of issue
Convertible bond	Annual	Fixed	Currency of issue or conversion to equity shares
Straight fixed-rate with equity warrants	Annual	Fixed	Currency of issue plus equity shares from exercised warrants
Dual-currency bond	Annual	Fixed	Dual currency

12-13

Straight Fixed-Rate Debt

- These are “plain vanilla” bonds with a specified coupon rate and maturity and no options attached.
- Since most Eurobonds are *bearer bonds*, coupon dates tend to be annual rather than semi-annual.
- The vast majority of new international bond offerings are straight fixed-rate issues.

12-14

Floating-Rate Notes

- Just like an adjustable rate mortgage.
- Common reference rates are 3-month and 6-month U.S. dollar LIBOR.
- Since floating-rate notes reset every 6 or 12 months, the premium or discount is usually quite small.
...as long as there is no change in the default risk.

12-15

Equity-Related Bonds

- There are two types of equity-related bonds: convertible bonds and bonds with equity warrants.

12-16

Convertible Bonds

- A **convertible bond** issue allows the investor to exchange the bond for a predetermined number of equity shares of the issuer.
 - The *floor-value* of a convertible bond is its straight fixed-rate bond value.
 - Convertibles usually sell at a premium above the larger of their straight debt value and their conversion value.
- Investors are usually willing to accept a lower coupon rate of interest than the comparable straight fixed coupon bond rate because they find the conversion feature attractive.

12-17

Bonds with Equity Warrants

- These bonds allow the holder to keep the bond but still buy a specified number of shares in the firm of the issuer at a specified price.
 - They can be viewed as straight fixed-rate bonds with the addition of a call option (or warrant) feature.
 - The warrant entitles the bondholder to purchase a certain number of equity shares in the issuer at a pre-stated cash price over a predetermined period of time.
- With a convertible bond, you surrender the bond to get the shares. With equity warrant bonds you pay cash and keep the bond.

12-18

Zero Coupon Bonds

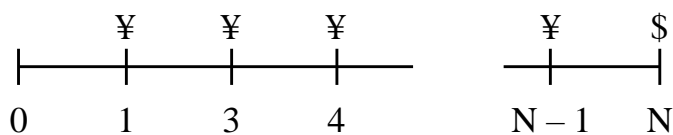
- Zero coupon bonds are sold at a large discount from face value because there is no cash flow until maturity.
- In the U.S., investors in zeros owe taxes on the “imputed income” represented by the increase in present value each year, while in Japan, the gain is a tax-free capital gain.
- Pricing is very straightforward:

$$PV = \frac{PAR}{(1 + r)^T}$$

12-19

Dual-Currency Bonds

- A straight fixed-rate bond with interest paid in one currency and principal in another currency.
- Japanese firms have been big issuers, with coupons in yen and principal in dollars.
- Good option for an MNC financing a foreign subsidiary.



12-20

Composite Currency Bonds

- Denominated in a currency basket, like the SDRs or ECUs, instead of a single currency.
- Often called *currency cocktail bonds*.
- Typically straight fixed-rate debt.

12-21

Characteristics of International Bond Market Instruments

Instrument	Frequency of Payment	Size of Coupon	Payoff at Maturity
Straight-fixed rate	Annual	Fixed	Currency of issue
Floating rate note	Every 3 to 6 months	Variable	Currency of issue
Convertible bond	Annual	Fixed	Currency of issue or conversion to equity shares
Straight fixed-rate with equity warrants	Annual	Fixed	Currency of issue plus conversion to equity shares
Zero coupon bond	None	Zero	Currency of issue
Dual currency bond	Annual	Fixed	Dual currency

12-22

EXHIBIT 12.4

Currency Distribution of International Bonds Amounts Outstanding (in billions of U.S.D.)

	2011	2012	2013	2014	2015 (1Q)
<i>Currency</i>					
Euro	9,331.8	9,620.0	9,907.3	8,708.4	7,763.5
U.S. dollar	6,640.5	7,223.8	7,860.7	8,475.9	8,628.1
Pound sterling	1,905.5	1,921.3	2,045.6	1,947.3	1,850.3
Yen	741.9	646.2	485.2	417.7	413.3
Swiss franc	380.8	380.9	352.8	300.9	291.4
Canadian dollar	311.5	287.6	261.6	207.5	179.8
Other	895.0	1,022.5	985.3	936.9	875.8
Total	20,207.0	21,102.3	21,898.5	20,994.6	20,002.2

12-23

EXHIBIT 12.5 International Bond Amounts Outstanding Classified by Nationality and Type of Issuer (in billions of U.S.D.)

	2011	2012	2013	2014	2015 (1Q)
<i>Nationality</i>					
Australia	530.9	570.4	601.2	595.7	581.3
Canada	643.8	684.5	732.8	737.3	739.6
France	1,637.1	1,715.1	1,758.4	1,603.3	1,469.0
Germany	1,869.1	1,921.6	1,902.7	1,743.0	1,598.6
Italy	1,142.2	1,094.9	1,154.9	988.2	889.1
Japan	335.8	329.5	344.1	358.7	364.5
Netherlands	1,265.6	1,307.5	1,337.3	1,244.1	1,143.1
United Kingdom	2,771.9	2,744.2	2,785.3	2,595.8	2,448.9
United States	2,991.5	2,938.5	2,943.6	2,986.9	2,988.9
Other developed countries	4,373.6	4,111.6	4,213.1	3,725.9	3,425.7
Off-shore centers	261.8	316.7	325.8	333.3	338.1
Developing countries	1,691.5	2,042.9	2,379.4	2,628.4	2,639.1
International organizations	1,028.0	1,324.9	1,453.5	1,465.2	1,384.2
Total	20,207.0	21,102.3	21,898.5	20,994.6	20,002.2
<i>Type</i>					
Financial corporations	15,506.3	15,723.4	15,921.4	14,964.2	14,210.8
General Government	1,542.8	1,578.0	1,655.3	1,612.4	1,539.1
International organizations	1,028.1	1,324.9	1,455.3	1,465.7	1,384.6
Non-financial corporations	2,129.8	2,476.0	2,866.7	2,952.4	2,867.6
Total	20,207.0	21,102.3	21,898.5	20,994.6	20,002.2

12-24

International Bond Market Credit Ratings

- Fitch IBCA, Moody's, and Standard & Poor's sell credit rating analysis.
- Focus on default risk, not exchange rate risk.
- Assessing sovereign debt focuses on political risk and economic risk.

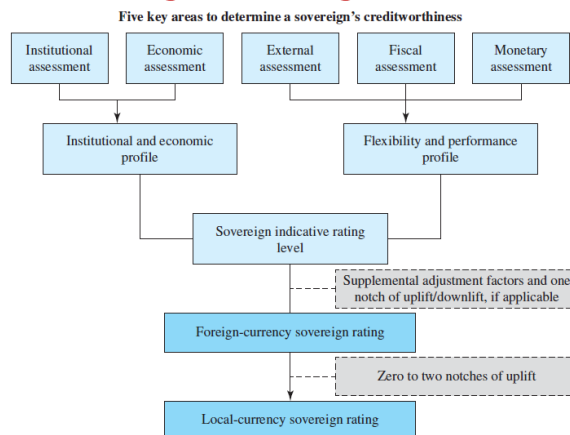
12-25

Eurobond Market Structure

- Primary market
 - Very similar to U.S. underwriting.
- Secondary market
 - OTC market centered in London.
 - Comprised of market makers as well as brokers.
 - Market makers and brokers are members of the International Capital.
 - Market Association (ICMA), a self-regulatory body based in Zurich.
- Clearing procedures
 - Euroclear and Cedel handle most Eurobond trades.

12-26

EXHIBIT 12.7 Standard and Poor's Sovereign Rating Framework



12-27

Assessing the Five Main Sovereign Rating Factors

- The analysis of each of the five key factors consists of quantitative and qualitative elements.
- Some factors, such as the robustness of political institutions, are primarily qualitative, while others such as those relating to the real economy, debt, and external liquidity use mostly quantitative indicators.

Eurobond Tombstone



12-29

Eurobond Practices: Primary Market

- A borrower desiring to raise funds by issuing Eurobonds to the investing public will contact an investment banker and ask it to serve as the **lead manager** of an underwriting syndicate that will bring the bonds to market.
- The **underwriting syndicate** is a group of investment banks, merchant banks, and the merchant banking arms of commercial banks that specialize in some phase of a public issuance.
- The lead manager will sometimes invite co-managers to form a **managing group** to help negotiate terms with the borrower, ascertain market conditions, and manage the issuance.

12-30

Eurobond Practices: Primary Market

- The managing group, along with other banks, will serve as **underwriters** for the issue. They will commit their own capital to buy the issue from the borrower at a discount from the issue price.
 - The discount, or **underwriting spread**, is typically in the 2 to 2.5 percent range. By comparison, the spread averages about 1 percent for domestic issues.
 - Most of the underwriters, along with other banks, will be part of a **selling group** that sells the bonds to the investing public.

12-31

Eurobond Practices: Secondary Market

- Eurobonds initially purchased in the **primary market** from a member of the selling group may be resold prior to their maturities to other investors in the secondary market.
- The **secondary market** for Eurobonds is an over-the-counter market with principal trading in London. However, important trading is also done in other major European money centers, such as Zurich, Luxembourg, Frankfurt, and Amsterdam.

12-32

Eurobond Practices: Secondary Market

- The secondary market consists of market makers and brokers connected by an array of telecommunications equipment.
- **Market makers** stand ready to buy or sell for their own account by quoting two-way **bid** and **ask prices**.
- Market makers trade directly with one another, through a broker, or with retail customers.
 - The bid-ask spread represents a market maker's only profit; no other commission is charged.

12-33

Clearing Procedures

- Eurobond transactions in the secondary market require a system for transferring ownership and payment from one party to another.
- Two major clearing systems, Euroclear and Clearstream International, handle most Eurobond trades.
 - Euroclear is based in Brussels and is operated by Euroclear Bank.
 - Clearstream is located in Luxembourg.

12-34

Clearing Procedures

- Both clearing systems operate in a similar manner.
 - Each clearing system has a group of depository banks that physically store bond certificates.
 - Members of either system hold cash and bond accounts. When a transaction is conducted, electronic book entries are made that transfer book ownership of the bond certificates from the seller to the buyer and transfer funds from the purchaser's cash account to the seller's.
- Physical transfer of the bonds seldom takes place.

12-35

Other Functions of the Clearing System

- Euroclear and Clearstream perform other functions associated with the efficient operation of the Eurobond market.
 - (1) The clearing systems will finance up to 90 percent of the inventory that a Eurobond market maker has deposited within the system.
 - (2) The clearing systems will assist in the distribution of a new bond issue. The clearing systems will take physical possession of the newly printed bond certificates in the depository, collect subscription payments from the purchasers, and record ownership of the bonds.
 - (3) The clearing systems will also distribute coupon payments. The borrower pays to the clearing system the coupon interest due on the portion of the issue held in the depository, which in turn credits the appropriate amounts to the bond owner's cash accounts.

12-36

International Bond Market Indices

- There are several international bond market indices.
- JPMorgan and Company
 - Domestic bond indices.
 - International government bond index for 18 countries.
 - Widely referenced and often used as a benchmark.
 - Appears daily in *The Wall Street Journal*.

12-37

Summary

- This chapter introduces and discusses the international bond market.
- The chapter presents a statistical perspective of the market, noting its size, an analysis of the market segments, the types of instruments issued, the major currencies used to denominate international bonds, and the major borrowers by nationality and type.
- Trading practices of the Eurobond market are examined, as are credit ratings for international bonds and international bond market indexes.

12-38