

An
Overview of
**Global
Real
Estate
Finance**

Presented By:
**International
Real Estate
Institute**



3rd. Edition

Written by Dr. M.A. Hines, SCV, RIM



International Real Estate Institute

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**INTERNATIONAL
REAL ESTATE INSTITUTE**

P.O. Box 879
Palm Springs, California 92263 USA

Tel: (760)327-5284 • Fax: (760)327-5631

E-mail: info@irei-assoc.org

Website: <http://www.irei-assoc.org>



International Real Estate Institute

*RIM- Registered International Member
SCV-Senior Certified Valuer
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Associate Membership
Corporate Membership*

*P.O. Box 879
Palm Springs, California 92263 USA
Tel: (760)327-5284
Fax: (760)327-5631
E-mail: info@irei-assoc.org
Website: <http://www.irei-assoc.org>*

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OVERVIEW OF
GLOBAL REAL ESTATE FINANCE

Dr. Mary Alice Hines

Clarence W. King Endowed Professor of Real Estate and Finance

School of Business
Washburn University
Topeka, KS 66621

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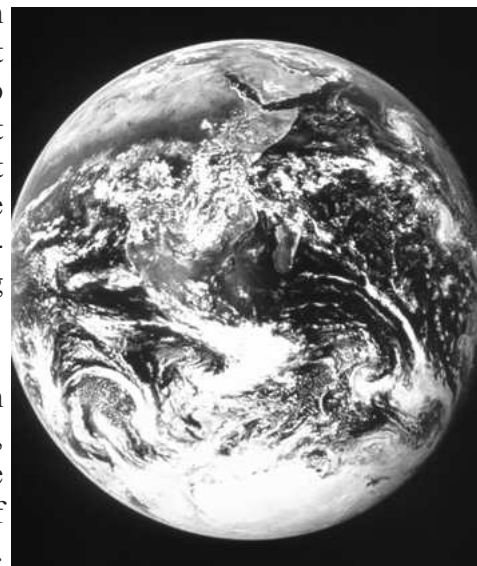
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AN OVERVIEW OF GLOBAL REAL ESTATE FINANCE

*Dr. M.A. Hines, SCV, RIM
Clarence W. King Endowed Chair of Real Estate and Finance
Washburn University of Topeka*

Since the ownership and use of real estate are important in every country across the globe, the financing of this important asset is paramount in global finance. Most households wish to finance their homes; for most households, the most valuable asset owned is the home. In like manner, companies and government entities across the world need appropriate and valuable real estate to house their administrative, service, and manufacturing personnel, machinery, equipment, vehicles, and their manufacturing systems.



Companies and government entities, like households, often wish to finance their real estate. Due to national tax regulations, companies may particularly benefit from financial leverage through the use of debt financing. Households may gain tax relief through the tax deductibility of interest payable on debt financing. Government entities finance infrastructure that includes land development such as roads, bridges, water treatment plants, and buildings for government use.

An Overview of Global Real Estate Finance covers the importance of local and global real estate finance, the varying objectives of the participants, the global and regional economic environments for real estate finance, the regulatory and institutional constraints, and worldwide use of important real estate financing methods. A survey of general variations in mortgage and lease terms and mortgage securitization is followed by risk recognition and general risk reduction methods. After a brief examination of the general methods of financial analysis used by worldwide real estate lenders and investors, some trends in global real estate finance are mentioned.

THE IMPORTANCE OF LOCAL AND GLOBAL REAL ESTATE FINANCE

Real estate values and investment activities are usually determined by local real estate conditions including the local balance between the supply and demand for real estate. Most real estate financing is done locally. Local sources of funds finance most local real estate investment needs. The regulations over many real estate lenders restrict lending activity to a local area, i.e., a specific lending radius from the headquarters office of the financial institution. If financial regulations do not restrict lending to a local or regional area, the lending conventions of the financial institution may preclude lending outside a specified area for financial safety purposes.

As businesses and governments operate increasingly in a global financial marketplace, the financing of real estate takes on more international and global dimensions. For example, the People's Republic of China (abbreviated the "PRC") is focused on the financing of its infrastructure. Sources at home and worldwide are sought for development of their infrastructure. At the same time, the PRC encourages foreign investors along with Chinese investors to finance and develop housing for both expatriate employees and PRC citizens within the boundaries of the PRC.

Multinational and global businesses are increasing in significance as time passes. These companies need to finance more and more property on a global scale. For example, the widespread companies of the Mitsubishi and Mitsui keiretsu based in Japan must increasingly finance worldwide properties for their varied business functions. Their trading, distribution, manufacturing, and investment functions require real estate worldwide; the appropriate real estate must be financed by the headquarters companies and local subsidiaries. Multinational corporations normally establish real estate finance policy at the headquarters office and acquire the necessary financing from sources close to each real property, international sources, or a combination of local and international sources.

Objectives of Participants in Global Real Estate Finance

Three groups participate in global real estate finance: real estate investors, real estate lenders, and employees of these investors and lenders. Their motivations differ as they actively participate in their global economic sector.

Some participants in real estate finance wish to invest in real property without a 100 percent commitment of cash equity from their own sources; they desire supplemental equity or debt funds from outside sources - local, international, and/or global sources.

They seek good investment yields from cash flows after taxes and debt payment from the operation, refinancing, and eventual sale of each investment property. They utilize other people's money to increase their investment yields and supplement their internal sources of funds.



Another group of participants wishes to lend money at reasonable yields while assuming reasonable financial risks with the reasonable expectation of total and timely return of principal. These investors focus on loan negotiation and underwriting, equity joint venture negotiation and underwriting, and joint venture negotiation and underwriting that involves both equity investment and debt financing. The yields to these lenders may come in the form of interest, dividends, and/or lender participation in the net operating cash flow, the refinancing net proceeds, and/or the net sale proceeds from the real property. They lend money on the basis of equity and/or debt contributions to the real estate investments.

A large portion of the participants in global real estate finance are managers and employees who work for real estate investors and

lenders for salaries, commission income, fees from loan applications, bonuses (perhaps at year-end), and participations in the cash flows from the acquired or financed investment properties. These employees are motivated by their compensation packages that are closely associated with the initial underwriting of the real estate investments and the subsequent performance of the real properties and/or the equity or debt financing.

The Global and Regional Economic Environments

Real estate finance continues within a vast array of economic environments across the globe. As we observe the advent of the new millennium, the economies of the United States and Europe flourish in contrast with the varying depths of recession experienced in Asian, Latin American, African, Eastern and Central European, and Middle Eastern countries.

On the continent of Africa, most national economies languish. Growth of the economy of South Africa is encouraged by the gradual formation of a racially integrated government, business system, and social conditions. On the northeastern rim of Africa, the economy of Egypt gradually improves through government reform policies including privatization of state-owned companies.



Even though most Asian economies are characterized by recession at the start of the new millennium, the economies subject to the most optimism about their near term growth are associated with China and its autonomous economic district, Hong Kong, and India. Economic and political difficulties are still linked with Indonesia, Thailand, Malaysia, Pakistan, Myanmar (Burma), and Bangladesh. At the insistence of the other members of the Group of 7 industrially developed countries, Japan is implementing political and economic policy changes that promise return of economic prosperity. South Korea's economic restructuring is gradually bringing about economic improvement. At the same time, North Korea's communist government policies prompt no revival of its economy; nuclear development and military preparedness continue to be North Korea's primary national objectives.

As the less developed countries move toward greater economic prosperity, they need to finance infrastructure in the form of roads, bridges, ports, telecommunication systems, water treatment plants, and power plants whose benefits will support greater productivity, less income disparity between the "have's" and the "have not's," and more real estate finance and investment. The continuing relatively low inflation and interest rates and the abundance of investable funds of the developed countries may give rise to foreign assistance for the less developed countries. Domestic real estate finance is encouraged in any country that exhibits relatively low inflation and interest rates such as the People's Republic of China. Significant currency devaluation such as that of Brazil tends to result in higher inflation and higher interest rates, imported goods and funds cost more in such an economic environment. The relatively high investment yields with reasonable risk exposures of less developed countries tend to attract the lenders and other investors from the advanced countries where the yields tend to be less.

Multilateral government-sponsored financial institutions continue to work closely with private and public financial institutions of highly developed and less developed countries to reallocate funds to economically stabilize regions and countries. For example, the World Bank and the International Monetary Fund continue to support national and regional programs and financial organizations that are designed to further economic development. Private real estate lenders are encouraged to make funds available when the multinational institutions are actively financing major projects that augment real estate use.

Regulatory and Institutional Constraints on Real Estate Finance

Real estate finance is constrained by local, national, regional, and international regulations and institutional conventions. On a local basis, building codes, zoning ordinances, and institutionally prescribed lending radii constrain real estate finance. Since a lender wishes a real estate investor and his or her real property to be profitable, local real estate investment conditions may constrain lending on an equity and/or debt basis. Local real estate investment conditions may be positive or negative with respect to the subject property. For example, as the European Bank for Reconstruction and Development analyzes loan applications from the Central European countries of Hungary, the Czech Republic, the Slovak Republic, and Poland, not all companies with associated real properties meet their current underwriting standards. Many Central European properties are economically obsolete for modern manufacturing, warehousing, and distribution processes in terms of local, national, and international market conditions; many new and renovated properties need to be financed.

Constraints Imposed by Government Budgets and Project Planning and Implementation



In Southeast Asia, government budgets and project planning and financing are constraining the profitability of property investment and finance due to the major traffic jams throughout the major cities of Thailand and Malaysia. In South America, traffic jams clog the streets of major cities. The lack of adequate rail transportation forces trucks, delivery vans, and passenger cars onto roads and bridges inadequate for the traffic volume. The expansion of property development and finance is held back by port construction and renovation as well. Property productivity would improve with needed government expenditure for water, electricity, sewers, and other public infrastructure; South American, African, Central and Eastern European, and most Asian government budgets lack tax funds for such projects due to the existence of only small middle-income segments of society,

continuing public and private corruption, and general tax avoidance practices.

Government Currency Constraints

National currency regulations of countries such as Russia, the Ukraine, India, and the People's Republic of China constrain foreign investment and property finance. These countries and others place restraints on the full convertibility of their currencies. Official and black market currency markets must be recognized as companies and properties are financed. Where there are currency restraints, the countries tend to constrain the remittance of interest, dividends, capital, management fees, royalties, and other such forms of investor/lender compensation on a continuous basis.

Due to the high levels of inflation in Brazil in recent years, Brazilian currencies have been replaced rather frequently by the Brazilian government. For example, four currencies have been imposed during the past seven years. Since the Brazilian real - the current and fourth of the recent Brazilian currencies - has recently been under massive pressure toward more than twenty percent devaluation, it has been permitted to float with economic supply and demand. The large devaluation of the Brazilian real may cause problems for the Argentine peso of the neighboring country and one of Brazil's major trading partners - the Argentine peso is pegged to the U.S. dollar which is a relatively strong currency and the leading global currency.

Foreign lenders and investors tend to prefer fully convertible national or regional currencies, the existence of only one national currency rather than the presence of official and black market currencies, only mild or minimal inflation, and the existence of long-term currencies rather than government replacement of national currencies on a rather frequent basis. Real estate lenders will tend to prefer the common use of the euro currency by the members of the European Union as partial implementation began in January, 1999 and complete implementation is promised in year 2002. The monetary policies of the European Union (often abbreviated EU") will be applied to all member countries; fiscal policies are tending to converge as countries comply with the EU requirements for membership. A lower level of national debt per EU member, EU general monetary control by the European Central Bank, a single currency, and a convergence of national fiscal and monetary policies may lead to lower interest rates, lower inflation, more stable economies, and lower real estate risk. The European Union may be attractive for global real estate lenders.



Recent Global Financial Institution Regulations

Global real estate finance is further affected by the global financial institution regulations as recently promulgated by the Bank for International Settlements (often abbreviated "BIS") of Basle, Switzerland. This global central bank to the national central banks has prescribed minimal bank reserve regulations to shore up the relatively weak banking sector of the world. As the banks of the world attempt to meet the BIS reserve standards, the bank monies normally available

for real estate finance become more restricted in volume. As a result of the Japanese recession of the 1990s, a number of leading Japanese banks are striving to meet the BIS reserve requirements through mergers, distressed loan sales, closure of some foreign banking locations, and other restructuring.

Rent Controls

Rent controls on agricultural, industrial, commercial, and residential properties are often used by local and national governments to implement their approved economic programs. Many countries of Europe, North Africa, North America, and Asia have rent controls - especially residential rent controls - in effect at the present time. Rent controls tend to inhibit local, national, and international real estate finance since the profitability of financed real property may be constrained over time. The usual squeeze on profits may lead to the default on mortgages placed on the rent controlled properties.

National Government Regulations on Lending Institutions



Government regulations on the state- and privately-owned financial institutions of a country establish the lending parameters of each financial institution. The government establishes the general operating guidelines for each of the institutional types. Then the financial institution may decide the volume and terms of the types of lending it will pursue for the company planning horizon. For example, in the People's Republic of China, both the People's Bank of China and the People's Construction Bank are permitted to finance real estate investment. The People's Construction Bank in 1993 started an experimental home mortgage program within the city of Shanghai. It is part of the governments change in policy toward private home ownership. As another example, most of the home mortgage lending of Mexico is reserved for the Mexican commercial banks. In contrast, regulations of Germany permit savings banks, mortgage banks, universal banks, and other thrift

institutions to finance home and commercial mortgages. In Singapore many of the home mortgages are financed through the government-sponsored postal savings network and the Community Provident Fund. The Community Provident Fund is the nationally sponsored pension fund whose funds are contributed by both employers and employees across Singapore. Even though pension funds are only developing in Japan, Japan, like Singapore, represents a country where the postal savings system finances a large portion of the home mortgages.

Global Financial Policies

As the Group of Seven, that is comprised of financial representatives of the major industrialized countries, repeatedly meets in worldwide locations to coordinate money conditions on a global basis, they approve general financial policies for the major industrial nations that influence the rest of the finan-

cial world. The Group of Seven, comprised of France, the United Kingdom, Japan, the United States, Germany, Canada, and Italy, may shortly become the Group of Five. The European Union encompasses France, Germany, and Italy. The coordinated financial policies of the Group of Five will influence the flows of funds into real estate finance and the terms offered by real estate lenders to borrowers.

Worldwide Use of Important Real Estate Financing Methods

Six major real estate financing methods are used across the world: Mortgage financing, unsecured institutional lending, joint venture equity and debt financing, sale leaseback financing, advance payment of key money, and sale of securities. Most countries -with communist or capitalist governments - utilize unsecured institutional financing, advance payment of key money, and joint ventures, particularly foreign and domestic joint ventures. More advanced economies widely use freehold and leasehold mortgage financing and the sale of securities for land and building finance along with the other five major methods of real estate financing.

The sale of securities by individual property companies and property trusts is a familiar financing device in many countries. The securities may be listed on a major exchange such as the Hong Kong Stock Exchange, the International Stock Exchange of London, or the New York Stock Exchange. As the euro is forecasted to become a leading world currency, the various European stock exchanges are tending to merge to more effectively compete with the other major exchanges of the world.



Five major property companies including Hutchinson, Jardine Matheson, Swire Pacific, Wharf, and Citic Pacific are traded on the Hong Kong Exchange. Three of these companies are based in Hong Kong while Citic Pacific is based in Beijing and Jardine Matheson is chartered in Bermuda. Recently some major regional real estate developers from the United States have listed their company shares in corporate or real estate investment trust form on the New York Stock Exchange. Otherwise, these securities might be listed on regional securities exchanges such as the Philadelphia, Shanghai, and Shenzhen Stock Exchanges. Two types of property shares may be listed on the Chinese regional exchanges - A and B shares. The A shares are reserved for Chinese residents exclusively, while the B shares are reserved for foreign residents exclusively. When mainland Chinese property companies wish to sell shares on the Hong Kong Exchange, these company shares are labeled H shares and can be bought and traded by any company wherever domiciled, or trade in the over-the-counter market. Many Japanese, European, and United Kingdom property company and property trust shares are listed on exchanges and are traded over the counter in various markets. For example, Mitsui Fudosan and Mitsubishi Estate companies have long financed their large worldwide property companies on the Tokyo Stock Exchange.

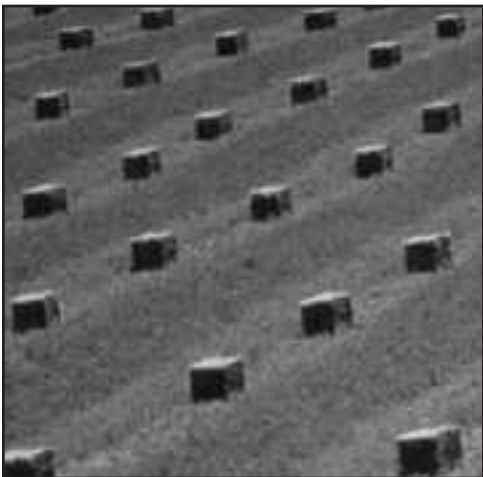
When demand is strong for the prospective units of a proposed building, the developer may receive payments from prospective tenants or unit owners that will assure them of space in the proposed build-

ing. These advance payments are called key money. The developer may use the key money to construct an office or apartment building in such countries as India, Japan, Peru, and Mexico. If the key money covers only part of the total development costs, the developer may use these deposits to obtain a mortgage or unsecured loan from a local financial institution or other creditor.

Use of Debt, Equity, or Combined Methods of Financing

Real estate can be financed with all equity or a combination of equity investment and debt financing. In areas of the world with less developed financial markets, joint venture financing involving government and private business entities may generate all equity financing for a real property. For example, in Central and Eastern Europe, capitalistic financial markets are developing slowly since the demise of communism. Mortgage financing systems have not yet developed in this large portion of the developing world. Equity financing through foreign joint ventures and limited bank unsecured financing are possible for investors seeking financing. Most of the Central and Eastern European countries are in the throes of privatization of state-owned properties and companies. The financial institutions are being privatized under the same comprehensive government programs. The development of modern real estate financing systems will occur later. For example, during the last few years, the development of real estate valuation systems along capitalistic lines has been slowly taking place. Before real property can appropriately be valued and financial risks analyzed by real estate lenders, a good real estate valuation system needs to be in operation.

The Impact of State-Owned Land in Communist Countries



Communist governments usually reserve the ownership of land to the state. Since land titles do not transfer from the state to private owners or from one set of private owners to another set of private owners, land ownership is not financed by private entities. Real estate financing involves mainly leased land in communist countries such as the People's Republic of China, Myanmar (Burma), and Nepal.

In countries where communism has recently been replaced by socialism and elements of capitalism, the land remains a state-owned asset until national statutes are passed to permit private ownership of land. Privatization programs, for example, usually permit private companies and individuals to own land that was previously owned exclusively by the state. Countries that fall into this category that are converting to private and public land ownership from total state land ownership include Russia, the other members of the previous Commonwealth of Independent States, and the Central European countries of Poland, the Czech Republic, the Slovak Republic, and Hungary. When the state owns all the land, leasehold mortgage and unsecured loans may be used to finance the buildings.

Financing Methods Involved in International or Global Real Estate Finance

Four of the five major financing methods often involve international or global market participants. Mortgage financing usually does not cross national boundaries.

Real estate joint ventures often involve foreign partners who supply equity and/or debt financing. For example, in the Middle East, most of the countries who are members of the Organization of Gulf States do not permit ownership of the real estate of the country. Joint ventures bringing together local partners and foreign investors are encouraged. Often the Middle Eastern government requires that the local partner be given the majority ownership position. The joint venture, dominated by the local partner, will take ownership of the property needed for the investment. Through this financing device, oil refineries, commercial buildings, and expatriate housing will be acquired and financed by the foreign joint venture, not the foreign investor alone.

Any major investor from any country, including a major institutional investor, may finance sale leasebacks of industrial, commercial, and residential space in any country as long as the receiving government permits inward foreign real estate investment and the government of funds origin permits outward foreign real estate investment. Recently the government of Sweden has eliminated restrictions on outward real estate investment; the Swedish government had long permitted inward foreign real estate investment. As tax and other investment regulations are taken into account, sale leasebacks are often negotiated so



that an investor with a lower overall cost of capital will own the important property and lease it to the occupant that needs the financing or has an overall higher cost of capital. Quite often the local or foreign financial institution who will hold the property title will be totally or primarily exempt from income taxation while the local or foreign property occupant is subject to full exposure to income taxation.

In most countries, banks offer unsecured financing for real estate. Most of the banks of a country are owned by the state or by private investors of that country. But foreign-owned banks now operate in many countries alongside locally-owned banks. For example, Citibank of the U-S. and Bank Santander of Spain operate in Argentina alongside the Argentine banks that are owned by the state and private investors. Many of these foreign-owned banks represent global networks such as Citibank. These foreign owned banks are subject to the laws and regulations of the particular national locale of each of its offices, but real estate lending may be accomplished by the globally located bank on a global basis. The management of the globally located bank considers the global risk exposure and yields from global real estate lending. A case in point is Citicorp with its worldwide branch system. Other banks with international real estate lending ability through internationally located branches are Deutsche Bank and Dresdner Bank from Germany, Mitsubishi Bank and Daichi-Kangyo Bank from Japan, Credit Lyonnais Bank from France, and Midland and Hong Kong and Shanghai Bank from the United Kingdom.

Key money financing may involve foreign developers, foreign space acquirers, foreign financial

institutions, and other real estate participants involved in domestic and cross border transactions. In Bombay, Indian developers of international-standard office buildings may receive advance financing from prospective office building occupants through key money payment. The prospective occupants may be Indian companies or persons or foreign companies or persons. Key money payments are commonly associated with prime office buildings of Tokyo. The prospective retail or office tenants may expect to pay key money to obtain high-quality office space in highly desirable Tokyo office buildings.

General Variations in Lease Terms

The general nature of commercial property lease terms and the strength of tenant tenure influence the mortgage terms generally offered the prospective borrower. While tenant tenure tends to be well protected by governments of Western Europe and Japan, the length of commercial leases in Western Europe and Japan varies widely. Twenty-five year commercial leases that open to renegotiation of terms every three to five years are still relatively common in the United Kingdom. The rollover of 3-year leases in France guarantees tenant tenure once the third 3-year lease term goes into effect. Many office leases in Europe run three to five years with expected renewal over a long period of time. The 2-year office leases on prime Japanese space carry with them tenant tenure and expected continual renewal.



General Variations in Mortgage Terms

Since the package of mortgage terms differ by lender, by type of property, by type of financial institution, by the relative current place in the changing economic cycle of the region and country, and by time period, it is somewhat difficult to generalize about mortgage terms across the world. As we consider the normal length of a mortgage, the type of interest rate adjustment, and the normal loan-to-value ratio, let us consider some comparative global mortgage lending patterns.

Residential Mortgage Comparison

In countries that have highly developed primary and perhaps secondary mortgage markets, we find relatively long home mortgages (perhaps 30 years in length), a high proportion of fixed-rate mortgage contracts, and relatively high loan-to-value ratios in use. Germany, the United States, Canada, the United Kingdom, Denmark, France, and Japan have such highly developed mortgage markets. These countries have publicly financed low-income housing, government-sponsored mortgage finance programs for moderate and middle-income home buyers, and privately financed conventional mortgage programs for

middle- and upper-income home financing. In the secondary mortgage market of each of these countries, blocks of residential mortgages are actively traded and, in many instances, securitized for the benefit of various types of institutional investors. Commercial mortgage-backed security markets have developed in such countries as the United States and Japan.



Medium- and long-term home mortgages with variable rates of interest with moderate loan-to-value ratios are often utilized for home financing in Western Europe. In recent years, medium-term, relatively low loan-to-value home mortgage programs have been offered in India. The banks of the People's Republic of China have offered such home mortgages in Shanghai where rising income and wealth positions permit such financing.

Mortgage lenders of the Western European market have long recognized the risk of rapidly fluctuating interest rates over the relatively long-term periods of home mortgages. Many mortgages have been underwritten with variable interest rates. For example, in the United Kingdom, the large volume of home mortgages underwritten by the building societies have reflected variable interest rates that have been based on the variable net incomes of the building societies. The mortgage rates are generally changed as the cost of various types of money to the building societies change. In contrast, the stability of the German financial system and the strong financial management of the German government are reflected in the large volume of fixed-rate mortgages of that country. The overall European financial management of the new European Central Bank will determine, to a large degree, future European mortgage lending patterns.

Commercial Mortgage Comparisons

To protect against inflationary conditions and rather rapid recent changes in financial conditions, most commercial mortgage loans are medium-term in length, i.e., 7 to 12 years in length, have variable rates based on government maintained indices, and employ relatively conservative loan-to-value ratios, i.e., 60 to 70 percent of appraised value, for permanent commercial mortgage loans. Even though the national financial systems may differ rather measurably, commercial mortgage loans worldwide tend to reflect this general pattern.

Most commercial mortgage loans of the world are recourse loans in contrast to the prevalence of non-recourse loans in the United States. Most real estate lenders across the world prefer to have recourse to the other assets, the wealth position, and the earning power of the borrower as well as the real estate given as collateral for the secured loan.

Some Rationale for the Variations in Mortgage Terms

The comparative mortgage terms for both residential and commercial mortgage loans reflect the relative development of the country, the level of development of general mortgage and company and personal bankruptcy laws, the availability of domestic and international sources of funds, and the investment requirements of the lenders. For example, mortgage terms in Hong Kong - a special administrative area of the People's Republic of China - reflects the nature of Hong Kong's well developed mortgage legal and financial system while the rest of the PRC is only experimenting with mortgage finance. The PRC communist government is gradually developing its mortgage and bankruptcy infrastructure. Italian mortgage lending operations range from slow, time-consuming bureaucratic systems of large Italian banks to quicker, more efficient mortgage lending systems of the Italy-located United Kingdom-based real estate lenders such as the Woolwich Building Society and Abbey National and the U.S.-based Citibank.

Mortgage terms offered by various types of lenders differ. Financial systems vary due to varying compositions of national financial institutions and varying volumes of funds available from domestic and foreign sources. For example, larger pension funds may offer longer term mortgage financing than commercial banks. In Hong Kong, few large pension funds exist; Hong Kong's capitalistic society has not relied on accumulated pension funds under independent institutional management for the retirement of the typical Hong Kong citizen. Funds are accumulating in the more recently created pension funds of South America. Pension funds of Chile, Argentina, and Brazil, for example, are leading the way forward.

Banks tend to offer shorter term mortgages because their sources of funds are generally not as long term in nature as pension funds. In contrast, the large pension funds of the United Kingdom, the United States, and the Netherlands can afford to offer long term mortgages when these investments fit their portfolio needs.



Mortgage Securitization

Mortgage securitization in various countries of the world has opened up sources of funding that are needed for real estate finance. Without active mortgage markets, investors in mortgages find these assets lack liquidity and marketability. Mortgage securitization and market making in mortgage-backed securities give liquidity to the investor's mortgage portfolio.

Mortgage securitization is spreading to more countries, and the types of mortgage backed securities are expanding to fit more investors' needs in countries that already have adopted mortgage securitization systems. The enabling legislation and tax regulations long have permitted mortgage securitization in the United States. U.S. investment bankers are given credit in some corners of the financial world for introducing mort-

gage securitization to the United Kingdom and Europe. For example, Bankers Trust International, based in the United States, has arranged a FFr9bn securitization of commercial property loans that restructured the balance sheet of the French bank, Comptoir des Entrepreneurs. The securitization was split into three tranches, consisting of two mortgage-backed commercial paper programs and one bond offering. The offerings have unconditional and irrevocable guarantees from MBIA, a triple-A rated French specialist insurance company.



Now large volumes of mortgage-backed securities are created for initial public offerings and are traded in the United Kingdom and other countries of Western Europe. Foreign-developed mortgage-backed securities are bought and traded by domestic investors in many national markets. For example, as a result of the many worldwide "dog and pony shows: (marketing programs designed for and presented to foreign and domestic prospective and current clients) of the Federal National Mortgage Association (often abbreviated as "Fannie Mae") of the United States, many Fannie Mae discount notes, mortgages, and mortgage-backed securities have been purchased and traded by worldwide investors.

European mortgage companies have long sold mortgage-backed securities to finance their businesses. The Danish mortgage companies - including the three largest Danish mortgage finance groups in terms of loans outstanding, according to an issue of the Financial Times - have particularly been successful in financing their companies via this method. Numerous specialty financial institutions in the form of mortgage companies in Germany and France, for example finance their operations in this fashion. Many of the mortgage companies of Germany are subsidiaries of banks as are many of the mortgage companies of the United States.

Many issues of mortgage-backed securities have developed in the aftermath of the financial institution crises of Japan and the United States. The Resolution Trust Corporation of the U.S. has packaged real property interest and mortgage interests in its sale of foreclosed real estate and mortgages. At the same time, Japanese financial institutions have been selling defaulted mortgage loans to a specifically designed and mutually financed financial institution so that they could get such bad real estate loans off their books and move ahead in lending. The specially designed institution is marketing these bad real estate loans and foreclosed properties to investors just as the U.S. Resolution Trust Corporation has. The creation of the new mortgage-backed securities from packages of mortgage loans may make these assets more saleable in this liquid-security form to more investors worldwide.

Risk Analysis in Global Real Estate Finance

The prospective yields from global real estate finance may be analyzed with respect to several risks including:

- . . . country risk
- ... exchange rate risk interest rate risk prepayment risk
- ... default risk
- ... liquidity or marketability risk

The first three risks that particularly apply to global real estate lending will be elaborated upon.

Real estate lending risk dimensions vary by country and even by neighborhood and urban area within a country, to some degree. The risks may be assessed before the lender/investor makes a final decision about approving a proposed real estate financing.

Country Risk

Country risk involves risk associated with possible government expropriation of property, nationalization of privately-owned property, and the threat of war within the country's boundaries that leads to property damage and destruction. Country risk also involves the government's position on the currency's convertibility, domestic regulation of financial institutions, foreign investment regulations and legislation, mortgage law including mortgage foreclosure law, and legal protection of the private ownership of both land and improvements including buildings. This type of risk analysis may be the first level of analysis as an investor approaches real estate financing in a foreign country.



Exchange Rate Risk

The yield on a prospective mortgage financing of a foreign property may be attractive before exchange rate risk is considered. The yield may reflect the amount of property and country risk that would be assumed. Now the prospective investor should forecast the path of the exchange rates between the host country and the home country over the proposed time of the investment. The investor may perceive a relatively long investment holding period. Will the exchange rate for the host country appreciate or depreciate during the investment holding period? Since mortgage financing involves a longer term investment with perhaps fixed interest rates, the convertibility of the interest rate payments into the home currency makes a difference in the overall yield from the lender's investment. Usually the tender on a fixed rate basis will benefit in yield from the appreciation of the foreign currency, but will suffer from the deprecation of the foreign currency. And the path of the exchange rate may vary over the period of the financing. So the question is: What is the overall yield effect of the forecasted exchange rate changes over the investment holding period?

The analysis should cover the avenues for hedging the exchange rate risk in the foreign domicile of the financing proposal. Is there in place a forward currency market? A futures currency market? An

options currency market? Are Currency swaps available to move from the original currency of the real estate financing to a less risky currency? If the foreign country does not have active forward, futures, options, or currency swaps markets, is cross hedging possible in these types of contracts in another country's currency that is closely correlated with the host country currency?

Interest Rate Risk

Mortgage lending involves either fixed- or floating-interest rates. Lenders and investors in fixed-rate mortgages in any country - domestic or foreign - assume interest rate risk. The value of the existing mortgage declines when market interest rates rise; in like manner, the value increases as market rates decline. Floating interest rates protect the investor generally from the type of interest rate risk associated with fixed mortgage rates; the interest rate and interest income to the lender change rather than the principal of the mortgage indebtedness. There is interest rate risk with respect to variable-rate mortgages underwritten in foreign countries. The interest rate changes of the foreign country affect the host country value of the mortgage as do the market interest rate changes of the home country. If the investor figures yields



in terms of home country receipts from the overseas investments, the market interest rates of the home country are probably more important in foreign mortgage yield analysis than the host country interest rate projections. On the other hand, if the mortgage may be sold to a host country investor, the host country interest rates will affect the mortgage sale price.

The investor may wish to hedge the interest rate risk. Does the host country have forward, futures, options, or interest rate swaps markets that can be used for hedging? Perhaps cross hedging with closely correlated foreign interest rate instruments can be used in the absence of host country hedging instruments.

Inflation risk is a part of the interest rate risk. Inflation is usually one component of the market rate of interest. The investor may wish to hedge against the inflationary risk component of interest rate risk.

General Methods of Real Estate Lender Financial Analysis

Real estate financing generally has two facets:

(1) credit and financial analysis of the borrower and

(2) inspection, valuation, and financial analysis of the real property interest serving as collateral.

When the mortgage loan is non-recourse in nature, the real property interest may be analyzed more strenuously and completely in a due diligence process than when the mortgage loan is recourse in nature. In the latter instance, the analysis of the credit and wealth position and loan-paying motivation of the borrower is very significant.

Ratio and yield analysis are used by real estate financiers worldwide. Ratios including the debt coverage ratio, the debt to total investment ratio, and the operating expense ratio are used by debt underwriters worldwide. Internal rate of return analysis is used by most lenders and investors as they view competing investments, but net present value, average return on average investment, and payback period methods of analysis may also be utilized.

Computers make the analysis and communications easier. Computer software models are used for decision making, in such areas as investment yield analysis, lease versus buy analysis, and hold versus sell analysis. Electronic mail makes global communication easier and less expensive. The world wide web permits advertisement of properties and services and search for up-to-date real property information



Some Trends in Global Real Estate Finance

Increasingly investable funds are flowing across national boundaries. Some of these debt and equity funds are financing real properties. The European euro will increasingly compete with the U.S. dollar and the Japanese yen in the financing of real estate worldwide. Methods are being found to reduce the risks of interest rate and exchange rate variability. To combat interest rate and

the associated inflationary risk, loan and lease rates may be indexed to national consumer price indices, construction cost indices, and interest rate indices. The financing of a real property interest is still associated primarily with the local real estate market; mortgage lending remains primarily constrained by national boundaries.



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