
Selecting Investments in a
Global Market
& Organization and Functioning
of Securities Markets

- Investor of the 21st century

- An array of investment opportunities not available several decades ago
 - Dynamism of financial markets
 - Technological advantages
 - New regulations
 - New financial instruments, expanded trading opportunities
 - Improvements in communication and relaxation of international regulation have made it easier for investor to trade in both domestic and global markets
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Reasons for the expansion of investment opportunities

1. Growth and development of foreign financial markets
 2. Advances in telecommunications technology
 3. Mergers of firms and security exchanges
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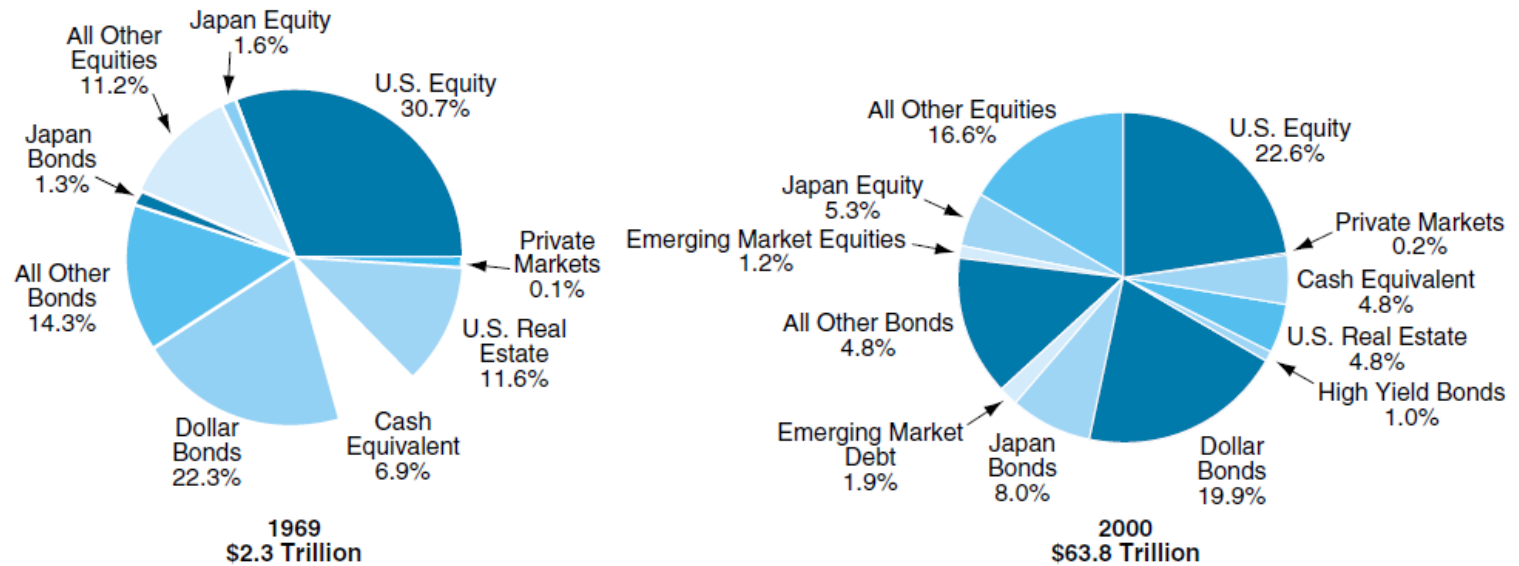
The Case for Constructing Global Investment Portfolios

- Growth and development of numerous foreign financial markets
 - Japan, UK, Germany and emerging markets as well
 - Accessible and viable for investor all around the world
 - Major advances in telecommunications technology
 - that made it possible to maintain contact with officer and financial markets around the world
 - The afford of investors and firms undertook counterbalancing initiatives
 - Significant merges of firms and exchanges to trade securities worldwide
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- Investor alternatives are available from security markets around the world

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- When investor compare absolute and relative size of U.S. and foreign markets
 - Reduce their choices to less than 50 percentage of available investment opportunities
 - The rate of return available on non U.S. securities often have exceeded those for U.S. only securities
 - Higher growth rates for countries where they were issued
 - Thesis of investment theory that investor should diversify their portfolios
 - Low correlation with asset returns
 - Foreign securities have low correlation with domestic securities
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Relative Size of U.S. Financial Markets

1. The share of the U.S. in world capital markets has dropped from about 65 percent of the total in 1969 to about 48 percent in 2000
 - Investor selection securities strictly from U.S. markets had a complete set of investments available
 2. The growing importance of foreign securities in world capital markets is likely to continue
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EXHIBIT 3.1**TOTAL INVESTABLE ASSETS IN THE GLOBAL CAPITAL MARKET**

Source: UBS Global Asset Management.

Rates of Return on U.S. and Foreign Securities

- Many non-U.S. securities provide superior rate of return but also show the impact of the exchange rate of risk
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Global Bond Market Return

INTERNATIONAL BOND MARKET COMPOUND ANNUAL RATES OF RETURN: 1990–2000

	COMPONENTS OF RETURN		
	TOTAL DOMESTIC RETURN	TOTAL RETURN IN U.S. \$	EXCHANGE RATE EFFECT
Canada	10.36	8.17	-2.19
France	9.51	8.30	-1.21
Germany	8.12	6.76	-1.36
Japan	5.82	8.67	2.85
United Kingdom	13.10	12.94	-0.17
United States	9.78	9.78	—

Source: Calculated using data presented in *Stocks, Bonds, Bills, and Inflation*® 2002 Yearbook, © Ibbotson Associates, Inc. Based on copyrighted works by Ibbotson and Sinquefeld. All rights reserved. Used with permission.

Global Equity Market Return

COUNTRY	YEAR 2000 RETURNS				YEAR 1999 RETURNS				YEAR 1998 RETURNS			
	U.S. DOLLAR RETURNS	RANK	LOCAL CURRENCY RETURNS	RANK	U.S. DOLLAR RETURNS	RANK	LOCAL CURRENCY RETURNS	RANK	U.S. DOLLAR RETURNS	RANK	LOCAL CURRENCY RETURNS	RANK
United States	-10.15%	11	-10.15%	17	18.90%	21	18.90%	24	26.78%	13	26.78%	9
Australia	-10.03	10	5.72	5	20.53	20	12.45	26	5.40	19	12.03	16
Austria	-15.40	17	-9.72	16	-6.97	30	8.40	28	-3.00	22	-9.84	25
Belgium	-13.95	13	-8.17	14	-17.29	34	-3.66	34	62.73	4	51.16	4
Brazil	-10.25	12	-3.04	12	50.99	10	134.82	2	-46.19	33	-44.04	33
Britain	-14.60	14	-7.44	13	14.26	22	17.45	25	13.40	16	12.68	14
Canada	0.85	6	4.59	6	42.98	11	34.65	19	-5.10	24	1.91	20
Chile	-17.61	20	-10.69	19	32.91	17	48.88	13	-28.50	28	-23.15	30
Denmark	22.23	1	17.80	2	5.38	26	22.13	22	3.26	20	-3.79	21
Finland	-15.23	16	-9.53	15	153.14	1	193.79	1	94.63	2	82.14	2
France	-7.89	8	-1.70	10	32.18	18	53.50	11	40.26	7	30.94	8
Germany	-15.96	18	-10.31	18	20.87	19	40.74	17	28.38	12	19.14	12
Greece	-42.09	29	-42.89	32	39.30	15	62.99	8	86.24	3	83.89	1
Hong Kong	-14.98	15	-14.67	21	73.20	5	73.81	6	-10.34	25	-10.38	26
Indonesia	-56.44	33	-39.88	30	77.31	4	58.05	9	-41.94	32	7.52	18
Ireland	7.38	4	14.59	3	-13.24	33	1.19	32	38.05	8	37.18	7

Individual Country Risk and Return

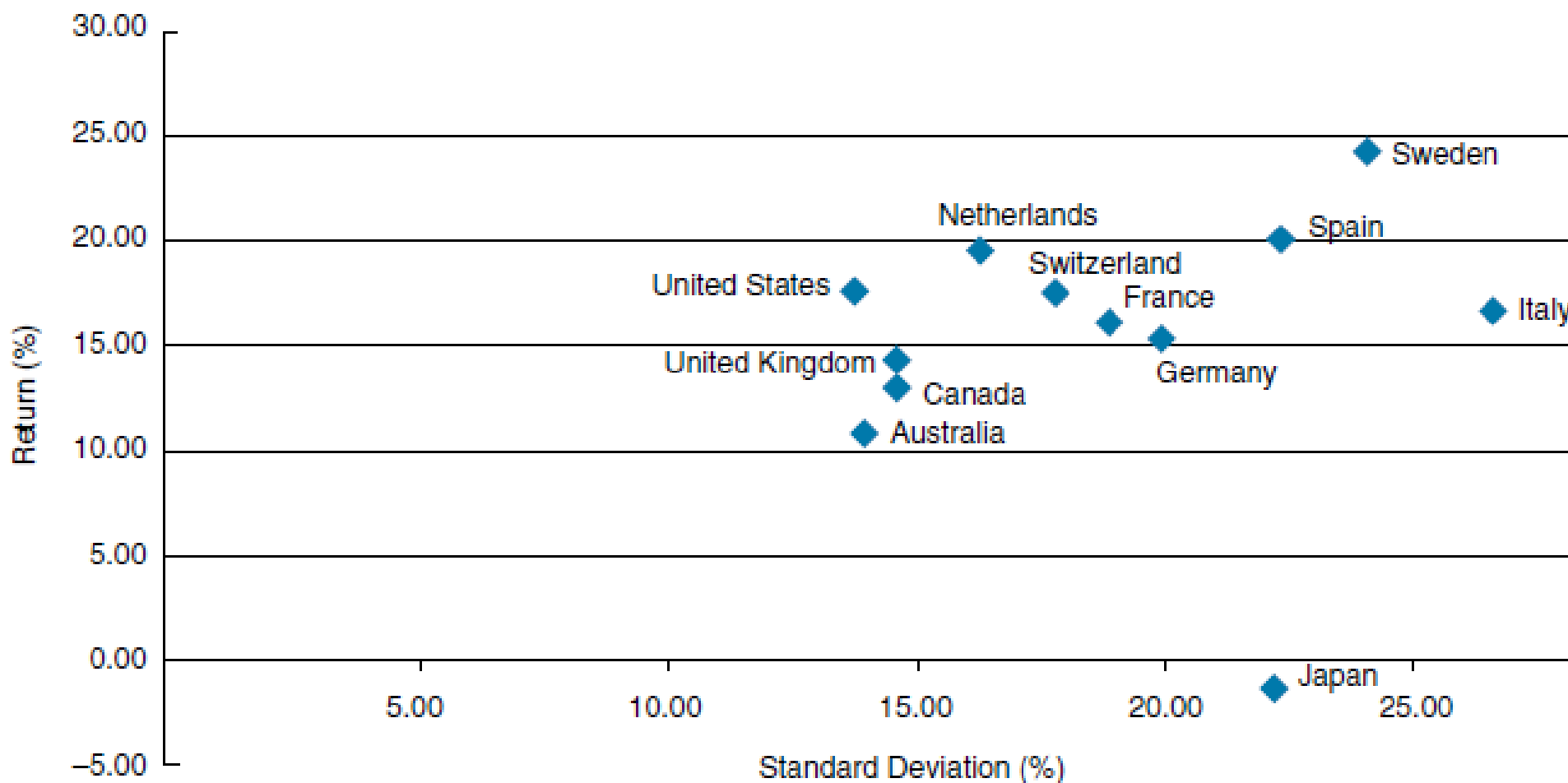
- A question
 - Are these superior rates of return attributable to higher levels of risk for securities in these countries?



IBIT 3.4
INTERNATIONAL BOND MARKET RETURN-RISK RESULTS: LOCAL CURRENCY AND U.S. DOLLARS, 1990–2000

	LOCAL CURRENCY			U.S. DOLLARS		
	RETURN	RISK	RETURN-RISK	RETURN	RISK	RETURN-RISK
Germany	10.36	7.00	1.48	8.17	9.16	1.01
France	9.51	5.20	1.83	8.30	10.97	2.67
Japan	8.12	5.31	1.53	6.76	11.23	4.47
Italy	5.82	5.88	0.99	8.67	13.92	5.25
United Kingdom	13.10	8.26	1.59	12.94	13.34	0.40
United States	9.78	8.03	1.22	9.78	8.03	1.22

Calculated using data presented in *Stocks, Bonds, Bills, and Inflation® 2002 Yearbook*, © Ibbotson Associates, Inc. Based on copyright by Ibbotson Associates, Inc. and Sinquefeld. All rights reserved. Used with permission.

EXHIBIT 3.5**ANNUAL RATES OF RETURN AND RISK FOR MAJOR STOCK MARKETS IN LOCAL CURRENCY, 1990–2000**

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- U.S. stocks look very strong relative to other countries



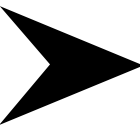
Risk of Combined Country Investments

- The way to measure whether two investments will contribute to diversifying a portfolio is to compute
 - The correlation coefficient between their rates of return over time
 - Range from -1 to + 1
 - A correlation +1 means
 - The rate of return for two instruments move exactly together
 - A correlation - 1 means
 - The rate of return for two instruments move exactly opposite to each other
 - If one investment is experiencing above average return, the other is suffering by similar below average rates of return
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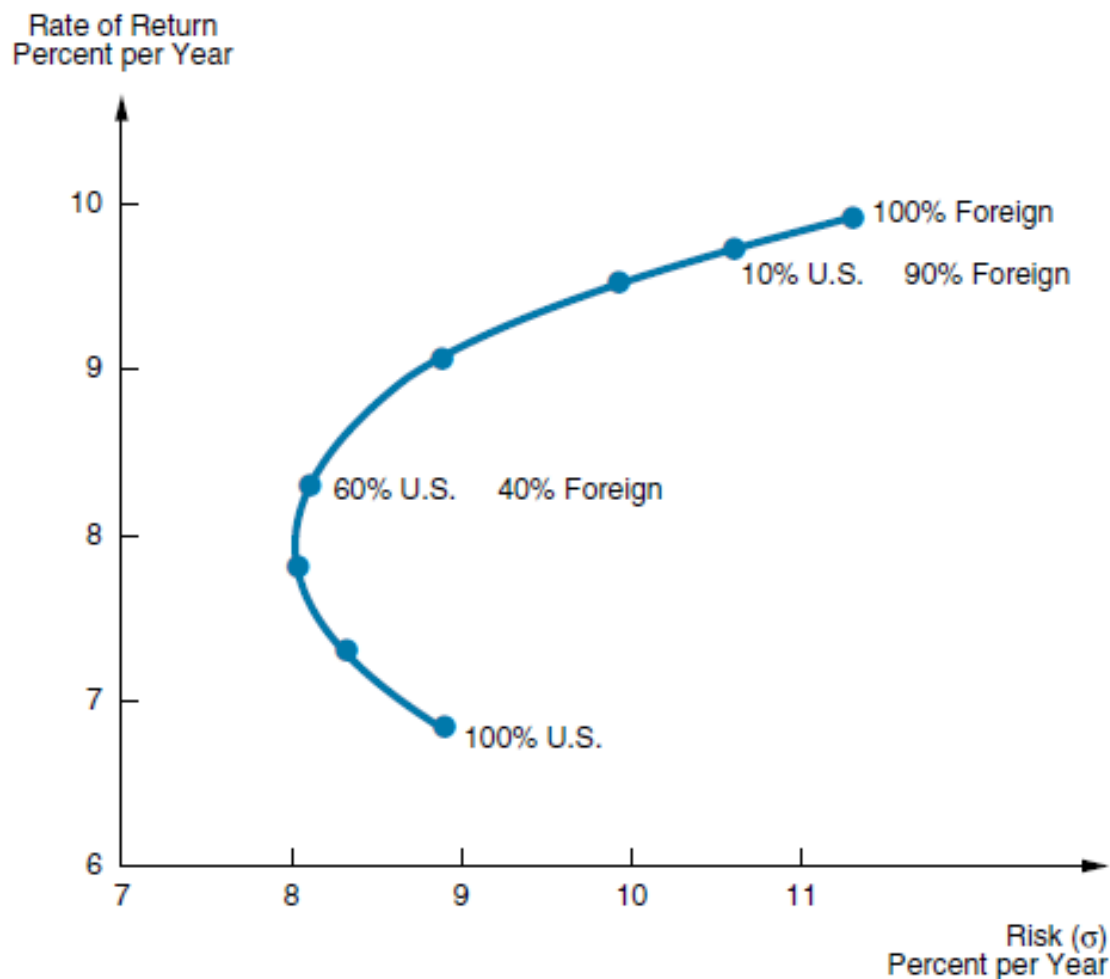
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- Combining two investments with large negative correlation in a portfolio would contribute much to diversification
 - It would stabilize the rates of return over time
 - Reduces standard deviation of the portfolio returns
 - Reduces risk of portfolio
 - If you want to diversify portfolio
 - Low positive correlation
 - Zero correlation
 - Negative correlation - ideally
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Global Bond Portfolio Risk

1. Macroeconomic differences cause the correlation of bond returns between the United States and foreign countries to differ
2. The correlation of returns between a single pair of countries changes over time because the factors influencing the correlation change over time
 - International trade, economic growth, fiscal and monetary policy,
 - changes in how economies are related and in the relations between returns of bond



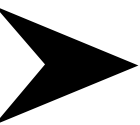
RISK-RETURN TRADE-OFF FOR INTERNATIONAL BOND PORTFOLIOS



Source: Kenneth Cholerton, Pierre Piergerits, and Bruno Solnik, "Why Invest in Foreign Currency Bonds?" *Journal of Portfolio Management* 12, no. 4 (Summer 1986): 4-8. This copyrighted material is reprinted with permission from *Journal of Portfolio Management*, a publication of Institutional Investor, Inc.

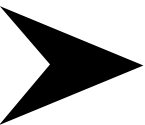
Global Bond Portfolio Risk

- Low positive correlation
- Opportunities for U.S. investors to reduce risk
- Correlation changes over time
- Adding non-correlated foreign bonds to a portfolio of U.S. bonds increases the rate of return and reduces the risk of the portfolio



Global Equity Portfolio Risk

- Low positive correlation
- Opportunities to reduce risk of stock portfolio by including foreign stocks

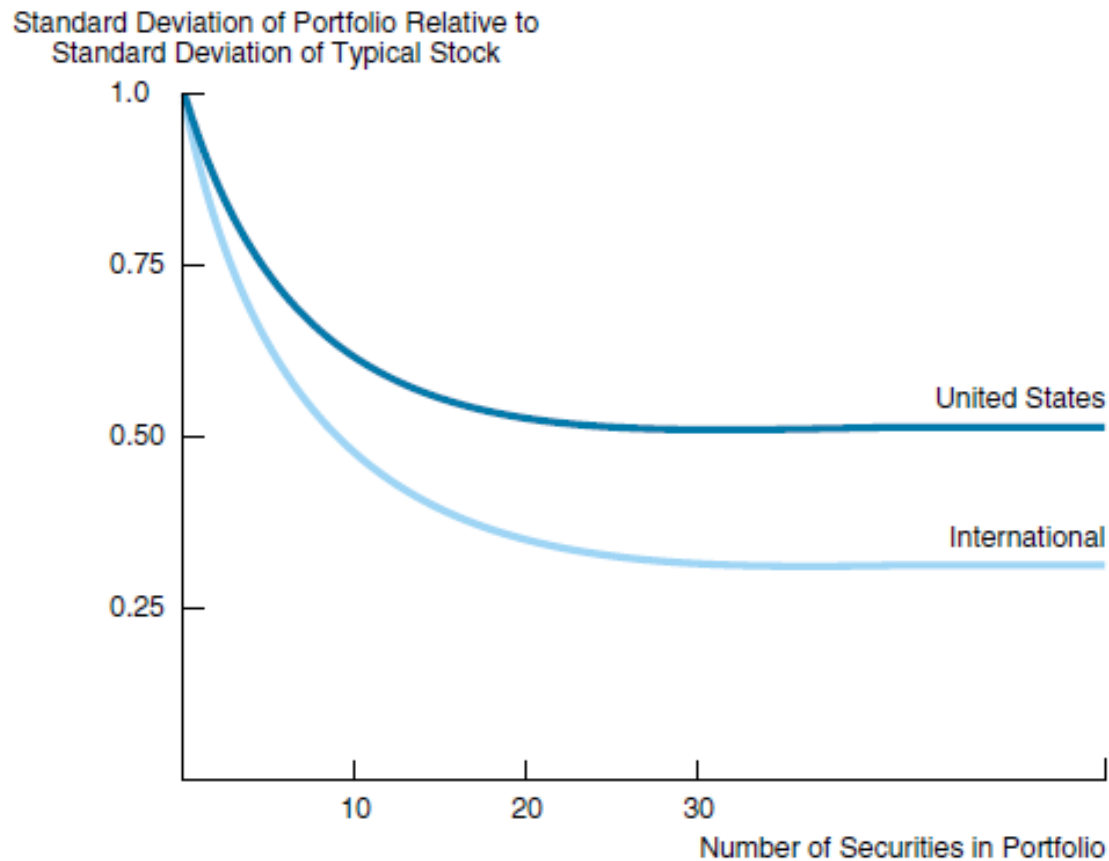


CORRELATION COEFFICIENTS BETWEEN RATES OF RETURN ON BONDS IN THE UNITED STATES AND MAJOR FOREIGN MARKETS: 1990–2000 (MONTHLY DATA)

	DOMESTIC RETURNS	RETURNS IN U.S. DOLLARS
Canada	0.58	0.47
France	0.44	0.28
Germany	0.42	0.29
Japan	0.32	0.15
United Kingdom	0.50	0.41
Average	0.45	0.32

Source: Frank K. Reilly and David J. Wright, "Global Bond Markets: Alternative Benchmarks and Risk-Return Performance" (May 1997). Updated using International Monetary Fund data.

RISK REDUCTION THROUGH NATIONAL AND INTERNATIONAL DIVERSIFICATION



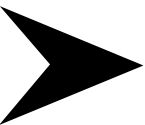
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Summary of Global Investing

- The relative size of the markets for non-U.S. bonds and stocks has growth in size and importance
 - Too big to ignore
 - Rates of return for foreign bond and stocks per unit were superior to those in the U.S. market
 - Return of dollar were typically lower during the 1990s because the strength of the dollar and the risk was always higher
 - To successful diversification, an investor should combine investments with low positive or negative correlation between rates of return
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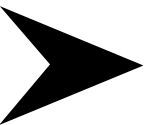
Global Investment Choices

- Fixed-income investments
 - bonds and preferred stocks
- Equity investments
- Special equity instruments
 - warrants and options
- Futures contracts
- Investment companies
- Real assets



Fixed-Income Investments

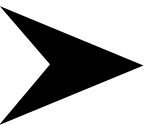
- Contractual payment schedule
 - Specific payment at predetermined times
- Recourse varies by instrument
 - Creditors can declare the issuing firm bankrupt
 - Issuing firm must make payments only if it earns profits - income bonds
- Bonds
 - investors are lenders
 - expect interest payment and return of principal



Savings Accounts

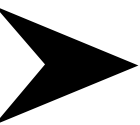
- Fixed earnings
- Convenient
- Liquid
- Low risk – almost all are insured
- Low rates
 - Passbook saving account
 - Certificates of Deposit (CDs)
 - instruments that require minimum deposits for specified terms, and pay higher rates of interest than savings accounts. Penalty imposed for early withdrawal

Limited liquidity



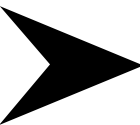
Money Market Certificates

- Compete against Treasury bills (T-bills)
- Minimum \$10,000
- Minimum maturity of six months
- Redeemable only at bank of issue
- Penalty if withdrawn before maturity



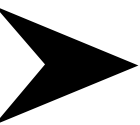
Capital Market Instruments

- Fixed income obligations that trade in secondary market
- U.S. Treasury securities
- U.S. Government agency securities
- Municipal bonds
- Corporate bonds



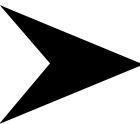
U.S. Treasury Securities

- Bills, notes, or bonds - depending on maturity
 - Bills mature in less than 1 year
 - Notes mature in 1 - 10 years
 - Bonds mature in over 10 years
- Highly liquid
- Backed by the full faith and credit of the U.S. Government



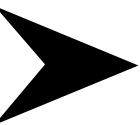
Municipal Bonds

- Issued by state and local governments usually to finance infrastructural projects.
- Exempt from taxation by the federal government and by the state that issued the bond, provided the investor is a resident of that state
- Two types:
 - General obligation bonds (GOs)
 - Revenue bonds



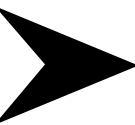
Corporate Bonds

- Issued by a corporation
- Fixed income
- Credit quality measured by ratings
- Maturity
- Features
 - Indenture
 - Call provision
 - Sinking fund



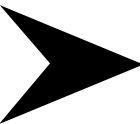
Corporate Bonds

- Senior secured bonds
 - most senior bonds in capital structure and have the lowest risk of default
- Mortgage bonds
 - secured by liens on specific assets
- Collateral trust bonds
 - secured by financial assets
- Equipment trust certificates
 - secured by transportation equipment



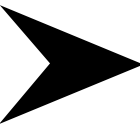
Corporate Bonds

- Debentures
 - Unsecured promises to pay interest and principal
 - In case of default, debenture owner can force bankruptcy and claim any unpledged assets to pay off the bonds
- Subordinated bonds
 - Unsecured like debentures, but holders of these bonds may claim assets after senior secured and debenture holders claims have been satisfied



Corporate Bonds

- Income bonds
 - Interest payment contingent upon earning sufficient income
- Convertible bonds
 - Offer the upside potential of common stock and the downside protection of a bond
 - Usually have lower interest rates



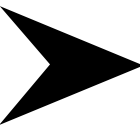
Corporate Bonds

■ Warrants

- Allows bondholder to purchase the firm's common stock at a fixed price for a given time period
- Interest rates usually lower on bonds with warrants attached

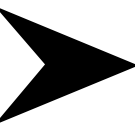
■ Zero coupon bond

- Offered at a deep discount from the face value
- No interest during the life of the bond, only the principal payment at maturity



Preferred Stock

- Hybrid security
- Fixed dividends
- Dividend obligations are not legally binding, but must be voted on by the board of directors to be paid
- Most preferred stock is cumulative
- Credit implications of missing dividends
- Corporations may exclude 80% of dividend income from taxable income



International Bond Investing

- More than half of all fixed-income securities available to U.S. investors are issued by firms in countries outside the U.S.
 - Identification it by different ways
 - Country or city of issuer
 - Location of primary trading market
 - Home county of major buyers
 - Currncy in which are securities denominated
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International Bond Investing

- Eurobond

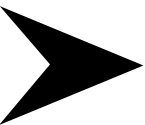
- An international bond denominated in a currency not native to the country where it is issued

- Yankee bonds

- Sold in the United States and denominated in U.S. dollars, but issued by foreign corporations or governments
- Eliminates exchange risk to U.S. investors

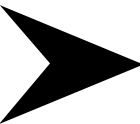
- International domestic bonds

- Sold by issuer within its own country in that country's currency



Equity Investments

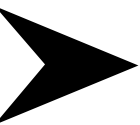
- Returns are not contractual and may be better or worse than on a bond



Equity Investments

Common Stock

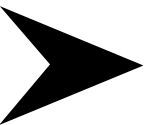
- ❑ Represents ownership of a firm
- ❑ Investor's return tied to performance of the company and may result in loss or gain



Classification of Common Stock

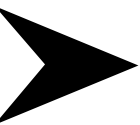
Categorized By General Business Line

- Industrial: manufacturers of automobiles, machinery, chemicals, beverages
- Utilities: electrical power companies, gas suppliers, water industry
- Transportation: airlines, truck lines, railroads
- Financial: banks, savings and loans, credit unions



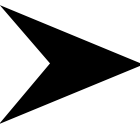
Acquiring Foreign Equities in U.S. market

1. Purchase of American Depository Receipts (ADRs)
2. Purchase of American shares
3. Direct purchase of foreign shares listed on a U.S. or foreign stock exchange
4. Purchase of international mutual funds



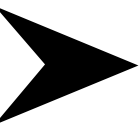
American Depository Receipts (ADRs)

- Easiest way to directly acquire foreign shares
- Certificates of ownership issued by a U.S. bank that represents indirect ownership of a certain number of shares of a specific foreign firm on deposit in a U.S. bank in the firm's home country
- Buy and sell in U.S. dollars
- Dividends in U.S. dollars
- May represent multiple shares
- Listed on U.S. exchanges
- Very popular



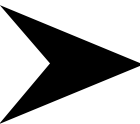
Purchase or Sale of American shares

- Issued in the United States by transfer agent on behalf of a foreign firm
- Higher expenses
- Limited availability



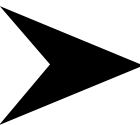
Direct Purchase of Foreign Shares

- Direct investment in foreign equity markets- difficult and complicated due to administrative, information, taxation, and market efficiency problems
 - Purchasing security in the domestic country
- Purchase foreign stocks listed on a U.S. exchange – limited choice
 - In 2000 only 96 firms
 - Mostly Canadian



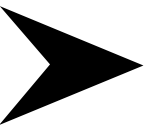
Purchase International Mutual Funds

- Global funds - invest in both U.S. and foreign stocks
- International funds - invest mostly outside the U.S.
- Funds can specialize
 - Diversification across many countries
 - Concentrate in a segment of the world
 - Europe, South Africa, the Pacific basin, etc.
 - Concentrate in a specific country
 - Japan fund, Germany fund, etc.
 - Concentrate in types of markets
 - Emerging markets, BRIC, etc.



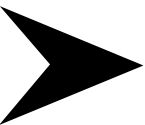
Special Equity Instruments

- Equity-derivative securities have a claim on common stock of a firm
- Options are rights to buy or sell at a stated price for a period of time
- Warrants are options to buy from the company
- Puts are options to sell to an investor
- Calls are options to buy from a stockholder



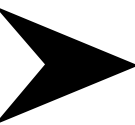
Futures Contracts

- Exchange of a particular asset at a specified delivery date for a stated price paid at the time of delivery
- Deposit (10% margin) is made by buyer at contract to protect the seller
- Commodities trading is largely in futures contracts
- Current price depends on expectations



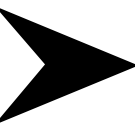
Financial Futures

- Recent development of contracts on financial instruments such as T-bills, Treasury bonds, and Eurobonds
- Traded mostly on Chicago Mercantile Exchange (CME) and Chicago Board of Trade (CBOT)
- Allow investors and portfolio managers to protect against volatile interest rates
- Currency futures allow protection against changes in exchange rates



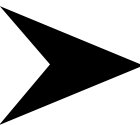
Investment Companies

- Rather than buy individual securities directly from the issuer they can be acquired indirectly through shares in an investment company
 - Mutual fund
- Investment companies sell shares in itself and uses proceeds to buy securities
- Investors own part of the portfolio of investments



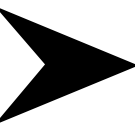
Investment Companies

- Money market funds
 - Acquire high-quality, short-term investments
 - T-Bills, commercial papers, etc.
 - Yields are higher than normal bank CDs
 - Typical minimum investment is \$1,000
 - Minimum additions \$250 to \$500
 - No sales commission charges
 - Withdrawal is by check with no penalty
 - Investments usually are not insured



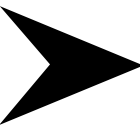
Investment Companies

- Bond funds
 - Invest in long-term government, corporate, or municipal bonds
 - Bond funds vary in bond quality selected for investment
 - Expected returns vary with risk of bonds



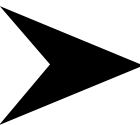
Investment Companies

- Common stock funds
 - Many different funds with varying stated investment objectives
 - Aggressive growth, income, precious metals, international stocks
 - Offer diversification to smaller investors
 - Sector funds concentrate in an industry
 - International funds invest outside the United States
 - Global funds invest in the U.S. and other countries



Investment Companies

- **Balanced funds**
 - Invest in a combination of stocks and bonds depending on their stated objectives
- **Index Funds**
 - Create to equal performance of a market index
 - Passive investors
- **ETFs**
 - Mutual Funds priced daily after trading day
 - Do not reflect event till the end of day
 - ETFs fund traded in stock exchange



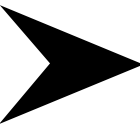
Real Estate

- Profitable investment alternative
 - Available only for limited number of expert with a lot of capital



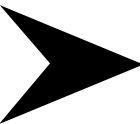
Real Estate Investment Trusts (REITs)

- Low capital alternatives
- Investment fund that invests in a variety of real estate properties
- Construction and development trusts provide builders with construction financing
- Mortgage trusts provide long-term financing for properties
- Equity trusts own various income-producing properties
 - Office buildings, shopping centers



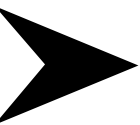
Direct Real Estate Investment

- Purchase of a home
 - Average cost of a single-family house exceeds \$100,000
 - Financing by mortgage requires down payment
 - Homeowner hopes to sell the house for cost plus a gain



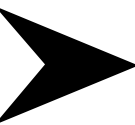
Direct Real Estate Investment

- Purchase of raw land
 - Intention of selling in future for a profit
 - Ownership provides a negative cash flow due to mortgage payments, taxes, and property maintenance
 - Risk from selling for an uncertain price and low liquidity



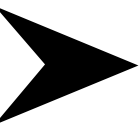
Direct Real Estate Investment

- Land Development
 - Buy raw land
 - Divide into individual lots
 - Build houses or a shopping mall on it
 - Requires capital, time, and expertise
 - Returns from successful development can be significant



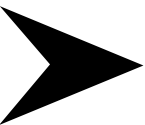
Low-Liquidity Investments

- Some investments don't trade on securities markets
- Lack of liquidity keeps many investors away
- Auction sales create wide fluctuations in prices
- Without markets, dealers incur high transaction costs
- Trading in auctions



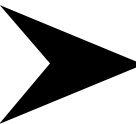
Antiques

- Dealers buy at estate sales, refurbish, and sell at a profit
- Serious collectors may enjoy good returns
- Individuals buying a few pieces to decorate a home may have difficulty overcoming transaction costs to ever enjoy a profit



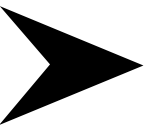
Art

- Investment requires substantial knowledge of art and the art world
- Acquisition of work from a well-known artist requires large capital commitments and patience
- High transaction costs
- Uncertainty and illiquidity



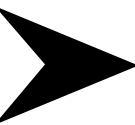
Coins and Stamps

- Enjoyed by many as hobby and as an investment
- Market is more fragmented than stock market, but more liquid than art and antiques markets
- Price lists are published weekly and monthly
- Grading specifications aid sales
- Wide spread between bid and ask prices



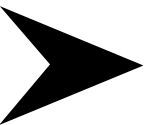
Diamonds

- Can be illiquid
- Grading determines value, but is subjective
- Investment-grade gems require substantial investments
- No positive cash flow until sold
- Costs of insurance, storage, and appraisal before selling



Returns of Stocks, Bonds, and T-Bills

- Ibbotson and Sinquefeld (I&S) examined nominal and real rates of return for seven major classes of assets in the United States
 - 1. Large-company common stocks
 - 2. Small-capitalization common stocks
 - 3. Long-term U.S. government bonds
 - 4. Long-term corporate bonds
 - 5. Intermediate-term U.S. Treasury bills
 - 6. U.S. Treasury bills
 - 7. Consumer goods (inflation)



Derived Series: Historical Highlights (1926 - 2001)

- I & S computed geometric and arithmetic mean rates of return
- They derived four return premiums
 - 1. Risk premium
 - 2. Small-stock premium
 - Return on small capitalized stock minus the return on large company stocks
 - 3. Horizon premium
 - Long term government bond vs. T-Bills
 - 4. Default premium
 - Long-term risky corporate bonds vs. long term risky-free government bonds

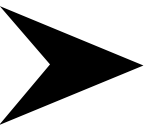


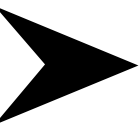
EXHIBIT 3.11**BASIC AND DERIVED SERIES: HISTORICAL HIGHLIGHTS (1926–2001)**

SERIES	ANNUAL GEOMETRIC MEAN RATE OF RETURN	ARITHMETIC MEAN OF ANNUAL RETURNS	STANDARD DEVIATION OF ANNUAL RETURNS
Large-company stocks	10.7%	12.7%	20.2%
Small-capitalization stocks	12.5	17.3	33.2
Long-term corporate bonds	5.8	6.1	8.6
Long-term government bonds	5.3	5.7	9.4
Intermediate-term government bonds	5.3	5.5	5.7
U.S. Treasury bills	3.8	3.9	3.2
Consumer price index	3.1	3.1	4.4
Equity risk premium	6.6	8.6	19.9
Small-stock premium	1.6	3.3	18.4
Default premium	0.4	0.5	3.1
Horizon premium	1.4	1.8	8.5
Large-company stock—inflation adjusted	7.4	9.4	20.2
Small-capitalization stock—inflation adjusted	8.7	13.3	32.1
Long-term corporate bonds—inflation adjusted	2.6	3.1	9.8
Long-term government bonds—inflation adjusted	2.2	2.7	10.5
Intermediate-term government bonds—inflation adjusted	2.2	2.4	6.9
U.S. Treasury bills—inflation adjusted	0.7	0.8	4.1

Source: *Stocks, Bonds, Bills, and Inflation*® 2002 Yearbook, © Ibbotson Associates, Inc. Based on copyrighted works by Ibbotson and Sinquefeld. All rights reserved. Used with permission.

Returns of Stocks, Bonds, and T-Bills

- Returns and risk increase together
- Rates of return are generally consistent with the uncertainty of returns



Art and Antiques

- Market data is limited
 - Results of financial securities published daily
 - Sotheby's a major art auction firm
 - Indices from 13 areas of arts
- Results vary widely, and change over time, making generalization impossible, but showing a reasonably consistent relationship between risk and return
- Correlation coefficients vary widely, allowing for great diversification potential
- Liquidity is still a concern

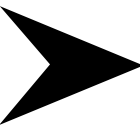
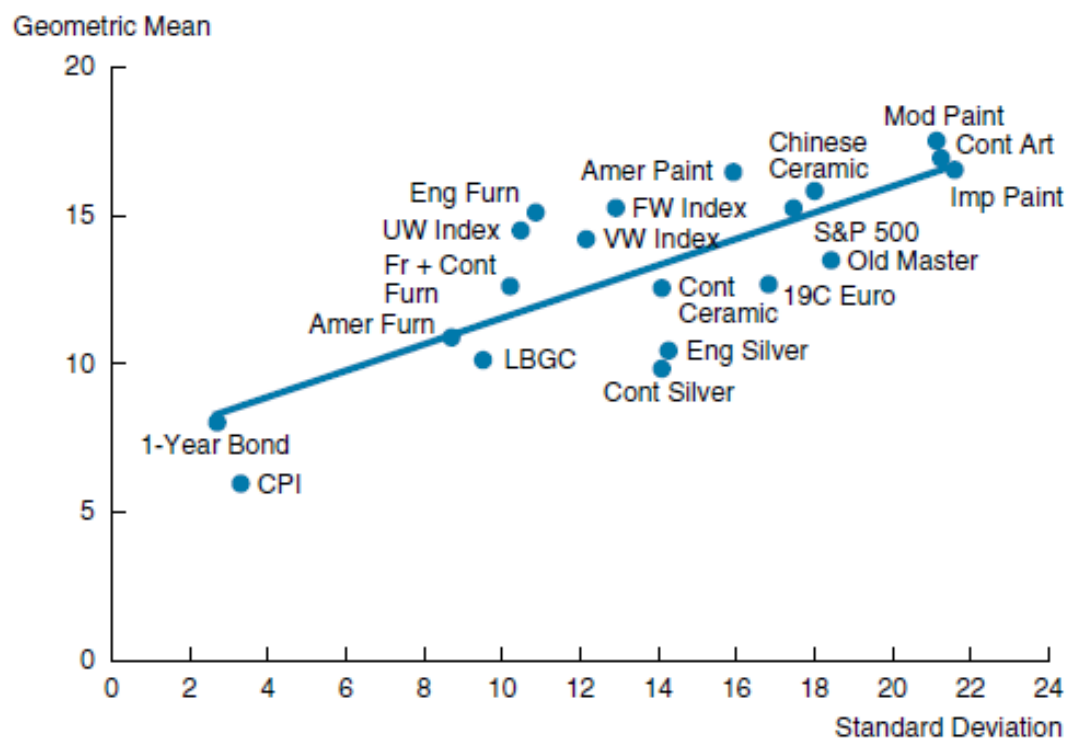
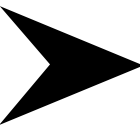


EXHIBIT 3.14**GEOMETRIC MEAN RATES OF RETURN AND STANDARD DEVIATION FOR SOTHEBY'S INDEXES, S&P 500, BOND MARKET SERIES, ONE-YEAR BONDS, AND INFLATION: 1976-1991**

Source: Adapted from Frank K. Reilly, "Risk and Return on Art and Antiques: The Sotheby's Indexes," Eastern Finance Association Meeting, May 1987. (Updated through September 1991.)

Real Estate

- Returns are difficult to derive due to lack of consistent data
- Residential shows lower risk and return than commercial real estate
- During some short time periods REITs have shown higher returns than stock with lower risk measures
- Long term returns for real estate are lower than stocks, and have lower risk



Real Estate

- Negative correlation between residential and farm real estate and stocks
- Low positive correlation between commercial real estate and stocks
- Potential for diversification

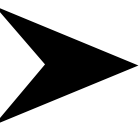


EXHIBIT 3.16**CORRELATIONS OF ANNUAL REAL ESTATE RETURNS WITH THE RETURNS ON OTHER ASSET CLASSES**

I&S	1								
CREF	0.79	1							
CPI Home	0.52	0.12	1						
C&S	0.26	0.16	0.82	1					
Farm	0.06	-0.06	0.51	0.49	1				
S&P	0.16	0.25	-0.13	-0.20	-0.10	1			
20-Yr. Gvt.	-0.04	0.01	-0.22	-0.54	-0.44	0.11	1		
1-Yr. Gvt.	0.53	0.42	0.13	-0.56	-0.32	-0.07	0.48	1	
Infl.	0.70	0.35	0.77	0.56	0.49	-0.02	-0.17	0.26	1
	I&S	CREF	CPI Home	C&S	Farm	S&P	20-Yr. Gvt.	1-Yr. Gvt.	Infl.