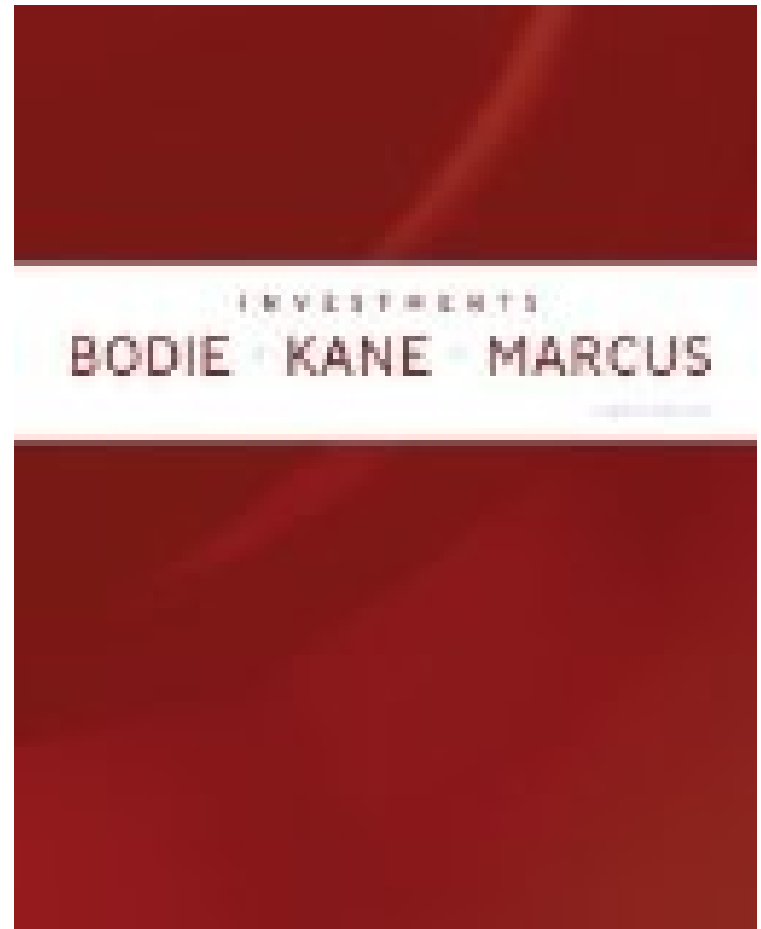


Financial Investment

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 - Seminars
 - Questions + small talk

Financial Investment

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Lecture 1

- The Investment Environment
- Asset Classes and Financial Investments

Real Assets Versus Financial Assets

- The material wealth of an economy is determined by production of the economy
 - How many goods and services are its members possible create
- This can be produced by using real asset
- In contrast to real assets are financial assets
 - Sheet of paper or computer entry
 - Means by which individuals hold claims on real assets
 - Auto plant vs. stock of Toyota

Real Assets Versus Financial Assets

- Essential nature of investment
 - Reduced current consumption
 - Planned later consumption
- Real Assets
 - Assets used to produce goods and services
 - Generate net income to the economy
- Financial Assets
 - Claims on real assets
 - Allocation of net income along investors

- Distinction between real and financial assets
 - Table 1.1 and 1.2

Table 1.1 Balance Sheet of U.S. Households, 2007

Assets	\$ Billion	% Total	Liabilities and Net Worth	\$ Billion	% Total
Real assets					
Real estate	\$22,874	32.9%	Mortgages	\$10,070	14.5%
Consumer durables	3,966	5.7	Consumer credit	2,413	3.5
Other	247	0.4	Bank and other loans	222	0.3
<i>Total real assets</i>	<i>\$27,086</i>	<i>38.9%</i>	Security credit	310	0.4
			Other	418	0.6
			<i>Total liabilities</i>	<i>\$13,432</i>	<i>19.3%</i>
Financial assets					
Deposits	\$ 6,629	9.5%			
Life insurance reserves	1,174	1.7			
Pension reserves	12,188	17.5			
Corporate equity	5,391	7.7			
Equity in noncorp. business	7,553	10.9			
Mutual fund shares	5,123	7.4			
Debt securities	3,160	4.5			
Other	1,305	1.9			
<i>Total financial assets</i>	<i>42,522</i>	<i>61.1</i>	<i>Net worth</i>	<i>56,176</i>	<i>80.7</i>
<i>Total</i>	<i>\$69,608</i>	<i>100.0%</i>		<i>\$69,608</i>	<i>100.0%</i>

TABLE 1.1

Balance sheet of U.S. households, 2007

Note: Column sums may differ from total because of rounding error.

Source: Flow of Funds Accounts of the United States, Board of Governors of the Federal Reserve System, June 2007.

Table 1.2 Domestic Net Worth

Assets	\$ Billion
Nonresidential real estate	\$ 9,549
Residential real estate	28,265
Equipment and software	4,498
Inventories	1,759
Consumer durables	3,966
<i>Total</i>	<u>\$ 48,038</u>

TABLE 1.2

Domestic net worth

Note: Column sums may differ from total because of rounding error.

Source: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, June 2007.

A Taxonomy of Financial Assets

- Fixed income or debt
 - Fixed stream of income vs. Determined stream of income (some formula)
 - Corporate bonds or floating-rate notes
 - Money market instruments
 - Bank certificates of deposit
 - Capital market instruments
 - Bonds

A Taxonomy of Financial Assets cont.

- Common stock or equity
 - Ownership in corporation
 - Without promise of regular payment
- Derivative securities
 - Options, futures contracts
 - Underlying
 - Hedging
 - speculation

Financial Markets and the Economy

- Information Role
 - Investor decides which company live or die
 - Bid up or bid down prices
 - The Google effect
- Consumption Timing
 - Earning more or less than wish to spend
 - Store wealth in financial assets
 - Shift purchasing power

Financial Markets and the Economy

cont.

- Allocation of Risk
 - Real assets involve risk as well
 - Transformation risk according to investor profile
 - Bond vs stock
- Separation of Ownership and Management
 - Companies owned and managed by same individuals
 - Agency Issues
 - Does management attempt to maximalise firm value?
 - Conflict of interest
 - Tie managers income to profit of a firm
 - » Stock options
 - » Analysis of pension funds or analysts
 - » Treat of takeover – proxy contest or other firm

GOOGLING FOR GOLD

With the news that shares of online search giant Google Inc. (GOOG) had crossed the lofty \$400-per-share mark in November 2005, the world may have witnessed something akin to the birth of a new financial planetary system. Given its market cap of \$120 billion, double that of its nearest competitor, Yahoo!, Google now has the gravitational pull to draw in a host of institutions and company matchmakers unable to resist the potential profit opportunities. Google stock, with a price-earnings ratio of 70, represents one of the richest dealmaking currencies anywhere. That heft has attracted a growing galaxy of entrepreneurs, venture capitalists, and investment bankers, all of whom are orbiting Google in the hopes of selling it something—a new service, a start-up company, even a new strategy—anything to get their hands on a little of the Google gold.

The Google effect is already changing the delicate balance in Silicon Valley between venture capitalists

(VCs) and start-up companies. Instead of nurturing the most promising start-ups with an eye toward taking the fledgling businesses public, a growing number of VCs now scour the landscape for anyone with a technology or service that might fill a gap in Google's portfolio. Google itself and not the larger market has become the exit strategy as VCs plan for the day they can take their money out of their start-ups. Business founders have felt the tug as well. "You're hearing about a lot of entrepreneurs pitching VCs with their end goal to be acquired by Google," says Daniel Primack, editor of *PE Week Wire*, a dealmaking digest popular in VC circles. "It's a complete 180 [degree turn] from the IPO craze of five years ago; now Google is looked at like NASDAQ was then." Other entrepreneurs, meanwhile, are skipping the VC stage altogether, hoping to sell directly to Google.

Source: *BusinessWeek Online*, www.businessweek.com/magazine. Reprinted from the December 5, 2005, issue of *BusinessWeek* by special permission. © 2005 McGraw-Hill Companies, Inc.

Financial Markets and the Economy Continued

- Corporate Governance and Corporate Ethics
 - Financial market play important role in effective allocation of resources
 - Transparency of information
 - Accounting Scandals
 - WorldCom
 - Examples – Enron, Rite Aid, HealthSouth
 - Auditors—watchdogs of the firms
 - Analyst Scandals
 - Arthur Andersen
 - Sarbanes-Oxley Act
 - Tighten the rules of corporate governance
 - 2002
 - Independent directors that are not managers
 - Prohibit auditors providing another services

The Investment Process

- Saving
 - Not spending all on consumption
- Investing
 - Choosing what assets to hold
 - Safe, risky, combination
- Investors are making two decisions in creation of their portfolio
- Asset allocation
 - Choice among broad asset classes
- Security selection
 - Choice of which securities to hold within asset class
- Security analysis
 - Evaluation of assets
- Top down portfolio
 - Asset allocation
 - Security selection
- Bottom-up strategy
 - Securities that are attractively priced

Markets are Competitive

- Prediction of future return
 - Risk associate with investment
- Risk-Return Trade-Off
 - If all else is equal, investors will prefer investments with the highest expected return
 - Else can not be equal
 - Fair return to risk
- Efficient Markets
 - Role of information
 - Active Management
 - Finding mispriced securities
 - Timing the market
 - Passive Management
 - No attempt to find undervalued securities
 - No attempt to time the market
 - Holding a highly diversified portfolio

The Players

- Business Firms– net borrowers
 - Raise capital to pay for investments in plant and from income provides return to investors
- Households – net savers
 - Purchase securities from firms that need capital
- Governments – can be both borrowers and savers
 - After WWII mostly borrowers
- Role of financial institutions and intermediaries

The Players cont.

- Financial Intermediaries
 - Investment Companies
 - Banks
 - Insurance companies
 - Credit unions

Financial Intermediaries

- For the households is direct investment difficult
- For small investor is lending money related with transactional costs
- Entrance of financial intermediaries
 - Bring them together
 - Different from another business
 - All their liabilities and claims are at most financial
 - Table 1.3 compare with table 1.4
- Primary function
 - Channelling funds from private to business sector
 - Pooling the resources from many small investors to be able to lend considerable sum of money
 - Lending to many borrowers
 - Diversification and thus can adopt risky project
 - Built expertise through volume of business they do
 - Economy of scale

The Players Continued

- Investment companies
 - Pool and manage the money of many investors
 - Most household portfolios is not large enough to be spread among a wide variety of securities
 - Brokerage fees
 - Researcher costs
 - Mutual funds
 - Portfolios for individual investors
- Investment Bankers
 - Perform specialized services for businesses
 - Markets in the primary market
 - Expertise to security issuers
 - Assisting in issuing securities

Table 1.3 Balance Sheet of Commercial Banks, 2007

Assets	\$ Billion	% Total	Liabilities and Net Worth	\$ Billion	% Total
Real assets			Liabilities		
Equipment and premises	\$ 100.7	1.0%	Deposits	\$ 6,865.3	65.9%
Other real estate	6.8	0.1	Borrowed funds	1,242.5	11.9
<i>Total real assets</i>	\$ 107.5	1.0%	Subordinated debt	161.3	1.5
			Federal funds and repurchase agreements	771.4	7.4
			Other	320.8	3.1
			<i>Total liabilities</i>	\$ 9,361.3	89.9%
Financial assets					
Cash	\$ 457.5	4.4%			
Investment securities	2,180.0	20.9			
Loans and leases	6,089.3	58.5			
Other financial assets	822.3	7.9			
<i>Total financial assets</i>	\$ 9,549.1	91.7%			
Other assets					
Intangible assets	\$ 379.2	3.6%			
Other	375.1	3.6			
<i>Total other assets</i>	\$ 754.3	7.2%	<i>Net worth</i>	\$ 1,049.6	10.1%
<i>Total</i>	\$ 10,410.9	100.0%		\$10,410.9	100.0%

TABLE 1.3

Balance sheet of commercial banks, 2007

Note: Column sums may differ from total because of rounding error.

Source: Federal Deposit Insurance Corporation, www.fdic.gov, September 2007.

Table 1.4 Balance Sheet of Nonfinancial U.S. Business 2007

Assets	\$ Billion	% Total	Liabilities and Net Worth	\$ Billion	% Total
Real assets			Liabilities		
Equipment and software	\$ 3,764	15.0%	Bonds and mortgages	\$ 4,397	17.5%
Real estate	7,861	31.2	Bank loans	707	2.8
Inventories	1,671	6.6	Other loans	745	3.0
<i>Total real assets</i>	<u>\$13,295</u>	<u>52.8%</u>	Trade debt	1,651	6.6
			Other	3,319	13.2
Financial assets			<i>Total liabilities</i>	<u>\$10,818</u>	<u>43.0%</u>
Deposits and cash	\$ 608	2.4%			
Marketable securities	953	3.8			
Trade and consumer credit	2,200	8.7			
Other	8,108	32.2			
<i>Total financial assets</i>	<u>\$11,868</u>	<u>47.2%</u>			
<i>Total</i>	<u>\$25,164</u>	<u>100.0%</u>	<i>Net worth</i>	<u>\$14,346</u>	<u>57.0%</u>
				<u>\$25,164</u>	<u>100.0%</u>

TABLE 1.4

Balance sheet of nonfinancial U.S. business, 2007

Note: Column sums may differ from total because of rounding error.


Source: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, June 2007.

- Globalization
- Securitization
- Financial engineering
- Information and computer networks

- Investor is not limited only to domestic assets
- Efficient communication technology and decreasing of regulatory borders
- Possible way how to participate in foreign investments opportunities
 - Domestically traded securities that represent claim to share of foreign stocks
 - Purchase of foreign securities that are denominated in domestic currency
 - Buy mutual funds that invest internationally
 - Buy derivative securities with payoffs that depend on prices in foreign security market
- A giant step toward globalization 1999
 - 11 European countries adopted euro

Figure 1.1 Globalization: A Debt Issue Denominated in Euros

This announcement appears as a matter of record only. March, 1999



North West Water Finance PLC

EURO 500,000,000

4.875% Notes due 2009

guaranteed by
North West Water Limited
issued pursuant to the
United Utilities PLC, NORWEB PLC and North West Water Finance PLC
U.S. \$2,000,000,000
Euro Medium Term Note Programme

Joint Lead Managers

ABN AMRO J.P. Morgan Securities Ltd.

Co-Lead Managers

Banque Nationale de Paris S.A. Barclays Capital
Credit Suisse First Boston Deutsche Bank
ING Barings/BBL Warburg Dillon Read

Co-Managers

Dresdner Kleinwort Benson Greenwich NatWest
HypoVereinsbank Salomon Smith Barney
Tokyo-Mitsubishi International plc





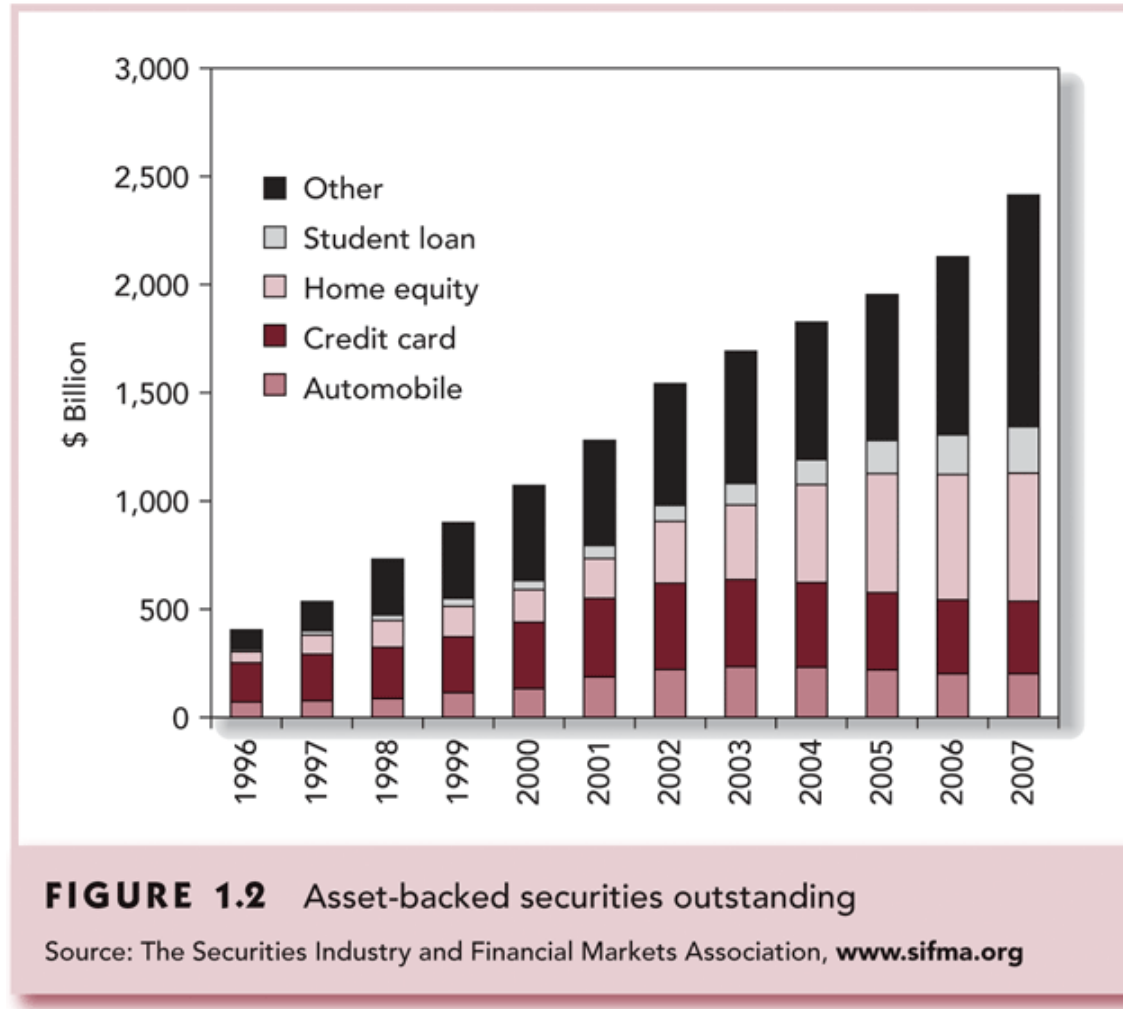
FIGURE 1.1 Globalization: A debt issue denominated in euros

Source: North West Water Finance PLC, April 1999.

Recent Trends—Securitization

- Mortgage pass-through securities
 - 1970
 - Aggregation of individual home mortgages into homogeneous pool
 - This pool works as backed for pass through security
 - Investors get share in principal and payments related with backed securities
 - Securitization of mortgages means that mortgages can be traded as securities
- Other pass-through arrangements
 - Car, student, home equity, credit card loans
- Offers opportunities for investors and originators

Figure 1.2 Asset-backed Securities Outstanding



Recent Trends—Financial Engineering

- Use of mathematical models and computer-based trading technology to synthesize new financial products
 - Principal-protected equity-linked note
 - Security that guarantee a minimum fixed return plus an additional amount that depends on the performance of some index
- Bundling and unbundling of cash flows
- Combination more than one security into a composite security or breaking up and allocation the cash flows from one security to create several new securities
- Securities tailored according to investor risk

Figure 1.3 Building Creates a Complex Security

\$172,500,000

Boise Cascade Corporation

**7.50% Adjustable Conversion-rate
Equity Security Unit**

—
Price \$50 Per Unit
—

Upon request, a copy of the Prospectus Supplement and the related Prospectus describing these securities and the business of the Company may be obtained within any State from the Underwriter who may legally distribute it within such State. The securities are offered only by means of the Prospectus Supplement and the related Prospectus and this announcement is neither an offer to sell nor a solicitation of any offer to buy.

Goldman, Sachs & Co.
ABN AMRO Rothschild LLC
Banc of America Securities LLC
JPMorgan
Wachovia Securities

December 19, 2001

FIGURE 1.3 Bundling creates a complex security

Source: *The Wall Street Journal*, December 19, 2001.

Recent Trends—Computer Networks

- Online trading
 - Direct contact between customers and brokerage firm
 - Cheaper trading
 - Lower commissions
- Online information dissemination
- Information is made cheaply and widely available to the public
- Automated trade crossing
 - Direct trading among investors
 - Trading without benefit for intermediaries such security dealers

Major Classes of Financial Assets or Securities

- Money market
- Bond market
- Equity Securities
- Indexes
- Derivative markets

The Money Market

- A subsector of the fixed income market
 - Short-term debt securities
 - Highly marketable
 - Traded in large denominations
 - Out of reach of individual investors

The Money Market cont.

- Treasury bills
 - Most market able
 - Simple for of borrowing
 - Government want to borrow from public
 - Investors buy with discount from face value
 - Maturities 28, 91 or 182 days
 - Individual can buy directly in auction or from government securities dealer
 - Highly liquid
 - Bid and asked price
 - Bank discount method

The Money Market cont.

- **Certificates of Deposits**
 - CD time deposit with bank
 - Can not be withdraw on demand
 - Issued in denominations greater than 100.000 USD
 - Are negotiable
- **Commercial Paper**
 - Issued by well-know comapnies rather than using bank loans
 - Very often backed by a bank line of credit
 - Access to cash that can be used to pay off the paper at maturiy
 - Issued in multiple of 100.000
 - For small investor open only indirecly

The Money Market cont.

- Bankers Acceptances
 - Order to a bank by bank's client to pay a sum of money at a future day, typically within 6 months
 - Can be traded in secondary market
 - It is selling with discount from face value

The Money Market Continued

- Eurodollars
 - Dollar-denominated deposits at foreign bank

The Money Market Continued

- Brokers' Calls
 - Individual who buys securities on margin borrow part of the funds to pay for the stocks from their broker
 - Broker may borrow the funds from a bank, agreeing to repay immediately on call if the bank requests it
 - Price about 1 % higher than the rate on short-term T-bills

The Money Market Continued

- Repurchase Agreements (RPs) and Reverse RPs
 - It is used by dealers with government securities
 - Form of short term borrowing
 - Most deposits are in large sum, time deposit less than 6 months
 - Overnight
 - Dealer sells government securities on an overnight basis with the promise to buy back these securities next day
 - Dealer get 1-day loan from the investor
 - Securities work as collateral
 - Safe in term of credit risk

LIBOR Market

- London Interbank Offered Rate
 - Large banks in London are willing to lend money among themselves
 - Short-term interest rate quoted in European money market
 - Reference rate for a wide range of transactions

Figure 2.1 Rates on Money Market

Money Rates					January 4, 2007				
International rates					Other short-term rates				
	Latest	Week ago	— 52-WEEK — High	Low		Latest	Week ago	— 52-WEEK — High	Low
Prime rates					Commercial paper				
U.S.	8.25	8.25	8.25	7.25	30 to 60 days	5.23	...	...	...
Canada	6.00	6.00	6.00	5.00	61 to 90 days	5.22	...	...	...
Euro zone	3.50	3.50	3.50	2.25	91 to 120 days	5.20	...	...	...
Japan	1.625	1.625	1.625	1.375	Dealer commercial paper				
Britain	5.00	5.00	5.00	4.50	30 days	5.26	5.27	5.36	4.32
Overnight repurchase					60 days	5.26	5.28	5.41	4.42
U.S.	5.22	5.19	5.28	4.13	90 days	5.25	5.30	5.46	4.46
U.K. (BBA)	5.080	5.047	5.150	4.100	Euro commercial paper				
Euro zone	3.60	3.77	3.77	2.26	30 day	3.58	3.58	3.62	2.00
U.S. government rates					Two month	3.62	3.62	3.63	2.39
Federal funds					Three month	3.69	3.68	3.69	2.45
Effective rate	5.24	5.25	5.37	4.21	London interbank offered rate, or Libor				
Treasury bill auction					One month	5.32000	5.3256	5.4200	4.4188
4 weeks	4.760	4.660	5.170	3.950	Three month	5.36000	5.3600	5.5200	4.5500
13 weeks	4.930	4.875	4.990	4.070	Euro Libor				
26 weeks	4.900	4.900	5.110	4.250	One month	3.628	3.634	3.713	2.386
Secondary market					Three month	3.733	3.724	3.733	2.488
Freddie Mac					Euro interbank offered rate (Euribor)				
30-year mortgage yields					One month	3.625	3.634	3.672	2.384
30 days	5.92	6.06	6.71	5.81	Three month	3.734	3.723	3.734	2.490
60 days	5.93	6.07	6.75	5.82	Asian dollars				
One-year ARM	3.375	3.375	3.375	3.375	One month	5.335	5.337	5.425	4.418
Fannie Mae					Three month	5.363	5.370	5.525	3.570
30-year mortgage yields					Bankers acceptances				
30 days	6.066	6.107	6.792	5.913	30 days	5.29	5.31	5.38	4.35
60 days	6.089	6.125	6.821	5.924	60 days	5.30	5.31	5.43	4.44
Bankers acceptances					90 days	5.31	5.31	5.49	4.49
					Eurodollars (mid rates)				
					One month	5.28	5.30	5.32	5.39
					Two month	5.29	5.31	5.32	5.44
					Three month	5.30	5.32	5.34	5.51

FIGURE 2.1 Rates on money market securities

Source: *The Wall Street Journal*, January 5, 2007. Reprinted by permission of Dow Jones & Company, Inc. via Copyright Clearance Center, Inc. © 2007 Dow Jones & Company, Inc. All Rights Reserved Worldwide.

Table 2.1 Major Components of the Money Market

	\$ Billion
Repurchase agreements	\$1,150.2
Small-denomination time deposits*	1,164.4
Large-denomination time deposits*	2,155.7
Eurodollars	530.3
Treasury bills	911.5
Commercial paper	2,252.5
Savings deposits	3,874.8
Money market mutual funds	2,390.0

TABLE 2.1

Major components of the money market

*Small denominations are less than \$100,000.

Sources: *Economic Report of the President*, U.S. Government Printing Office, 2007; *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, June 2007.

Figure 2.2 Treasury Bill Yields

Treasury Bills					
MATURITY	DAYS TO MAT	BID	ASKED	CHG	ASK YLD
Jan 11 07	6	4.50	4.49	-0.11	4.56
Jan 18 07	13	4.57	4.56	-0.09	4.63
Jan 25 07	20	4.61	4.60	-0.01	4.68
Feb 01 07	27	4.70	4.69	-0.06	4.77
Feb 08 07	34	4.70	4.69	+0.01	4.78
Feb 15 07	41	4.73	4.72	-0.08	4.81
Feb 22 07	48	4.79	4.78	-0.04	4.88
Mar 01 07	55	4.83	4.82	-0.02	4.92
Mar 08 07	62	4.86	4.85	+0.01	4.96
Mar 15 07	69	4.85	4.84	-0.01	4.95
Mar 22 07	76	4.88	4.87	-0.02	4.99
Mar 29 07	83	4.88	4.87	-0.02	4.99
Apr 05 07	90	4.91	4.90	-0.01	5.03
Apr 12 07	97	4.90	4.89	-0.01	5.02
Apr 19 07	104	4.90	4.89	-0.01	5.03
Apr 26 07	111	4.90	4.89	-0.01	5.03

FIGURE 2.2 Treasury bill yields

Source: Compiled from data obtained from *The Wall Street Journal Online*, January 4, 2007.

Figure 2.3 The Spread between 3-month CD and Treasury Bill Rates

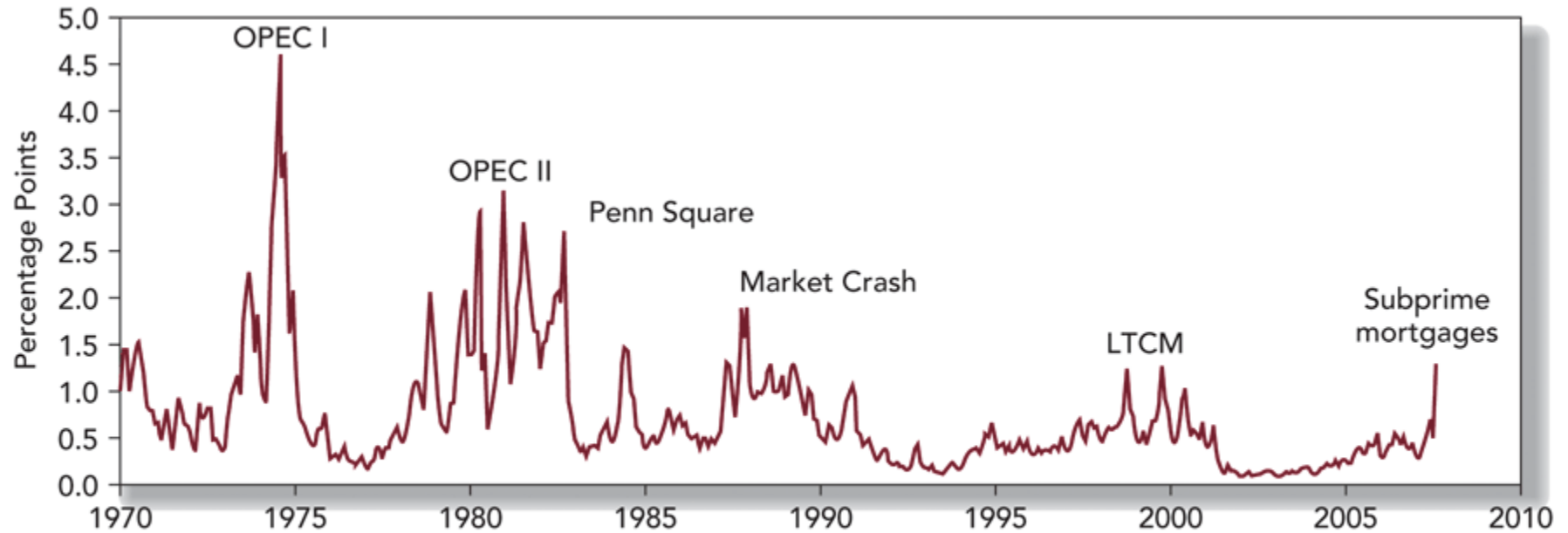


FIGURE 2.3 The spread between 3-month CD and Treasury bill rates

The Bond Market

- Longer term borrowing
- Debt instrument that are not traded in money market
- Mostly traded with fixed income capital market instruments
 - Either fixed stream of income
 - Stream of income that is determined from specific formula

The Bond Market

- Treasury Notes and Bonds
- Inflation-Protected Treasury Bonds
- International Bonds
- Municipal Bonds
- Corporate Bonds
- Mortgages and Mortgage-Backed Securities

Treasury Notes and Bonds

- Maturities
 - Used by government for debt financing
 - Notes – maturities up to 10 years
 - Bonds – maturities in excess of 10 years
 - 30-year bond
 - Semiannual interest payments called coupon payment
- Par Value - \$1,000
- Quotes – percentage of par

Figure 2.4 Listing of Treasury Issues

U.S. Government Bonds and Notes											
Maturity						Maturity					
Rate	MO/YR	BID	ASKED	CHG	ASK YLD	Rate	MO/YR	BID	ASKED	CHG	ASK YLD
3.375	Jan 07i	99:28	99:29	....	6.72	4.250	Nov 13n	97:29	97:30	+10	4.60
3.125	Jan 07n	99:27	99:28	....	4.62	2.000	Jan 14i	97:16	97:17	+1	2.38
2.250	Feb 07n	99:21	99:22	....	4.89	4.000	Feb 14n	96:09	96:10	+10	4.61
6.250	Feb 07n	100:04	100:05	....	4.73	4.750	May 14n	100:26	100:27	+9	4.61
3.375	Feb 07n	99:23	99:24	....	4.90	13.250	May 14	119:02	119:03	+4	4.61
3.750	Mar 07n	99:21	99:22	....	4.99	2.000	Jul 14i	97:14	97:15	....	2.37
3.875	Feb 13n	96:06	96:07	+8	4.59	4.250	Aug 14n	97:21	97:22	+10	4.61
3.625	May 13n	94:23	94:24	+8	4.58	12.500	Aug 14	119:04	119:05	+4	4.62
1.875	Jul 13i	97:00	97:01	+1	2.37	11.750	Nov 14	118:30	118:31	+6	4.59
4.250	Aug 13n	98:00	98:01	+9	4.60	4.250	Nov 14n	97:19	97:20	+9	4.61
12.000	Aug 13	111:04	111:05	+2	4.71	1.625	Jan 15i	94:18	94:19	+1	2.37

FIGURE 2.4 Listing of Treasury issues

Source: Compiled from data obtained from the online edition of *The Wall Street Journal*, January 5, 2007.

Inflation-Protected Treasury Bonds

Called TIPS

- The principal amount is adjusted in proportion to increase of CPI

International Bonds

- Many firms borrow abroad and many investors buy bonds from foreign issuers
- In addition to national capital markets, there is a rising international capital market, largely concentrated in London
- A Eurobond
 - Bond denominated in a currency that is different from country where it is issued
 - Eurodollar bond
 - E.g. A dollar-denominated bond sold in UK
- Many firms also issue bonds in different currency that is same as a currency of a investor
 - Yankee bond dollar denominated, sold in US by non-dollar issuer
 - Samurai bond yen denominated bond, sold in Japan by non-Japanese issuer

Municipal Bonds

- Issued by state and local governments
- Types
 - General obligation bonds
 - Backed by faith and credit of issuer
 - Revenue bonds
 - Issue to finance commercial project
 - Backed by revenues from this project
 - Airports, hospitals, etc.
 - Riskier than GOB
 - Industrial revenue bonds
 - Revenue bond to finance commercial enterprises
- Maturities – range up to 30 years

Municipal Bond Yields

- Interest income on municipal bonds is not subject to federal and sometimes not to state and local tax
- To compare yields on taxable securities a Taxable Equivalent Yield is constructed

Corporate Bonds

- Issued by private firms
 - Borrow money directly from public
 - In structure almost same as Treasury issues
 - Semianual coupon
 - Return the face value
 - But different degree of risk – default risk
- Secured bonds – collateral backing them in the event of firm bankruptcy
- Unsecured bonds - debentures – no collateral
- Subordinate debentures – lower priority claim to firm's assets
- Options in corporate bonds
 - Callable – right of issuer to repurchase bond from the holder at a set price
 - Convertible - right of issuer to convert bond into a number of shares of stock

Mortgages and Mortgage-Backed Securities

- Developed in the 1970s to help liquidity of financial institutions
 - Mortgages written for long term 15 – 30 year maturity with fixed interest rate and fixed monthly payments – conventional mortgages
 - Difficulties from lenders if interest rate increase
 - Adjustable-rate mortgage
- Mortgage-Backed Security
 - Proportional ownership of a pool or a specified obligation secured by a pool
 - Securitization in mortgage market
 - Called as a pass-throughs
- Market has experienced very high rates of growth

Figure 2.7 Mortgage-backed Securities Outstanding, 1979-2007

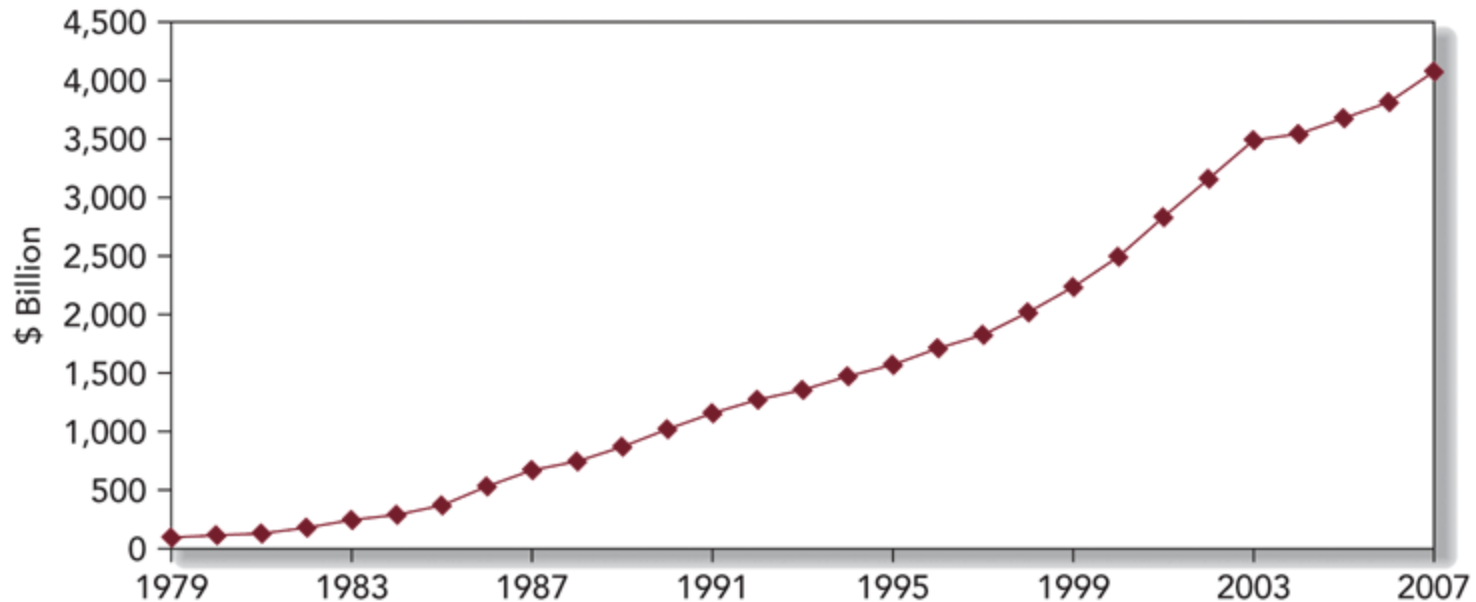


FIGURE 2.7 Mortgage-backed securities outstanding, 1979–2007

Source: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, June 2007.

Equity Securities

- Represent ownership in a corporation
- The corporation is controlled by a board of directors that are elected by shareholders
- The board that meet only a few time each year selects managers who actually run the corporation on a day-to day basis.

Equity Securities

- Common stock
 - Residual claim
 - The last in line of all those who have a claim on the assets and income of the corporation
 - After tax authorities, employees, suppliers, bondholders and other creditors
 - If a firm is not in liquidation
 - After interest and taxes
 - Limited liability
 - Shareholders can lose only original investment

Figure 2.8 Listing of Stocks Traded on the NYSE

NAME	SYMBOL	CLOSE	NET CHG	VOLUME	52 WK HIGH	52 WK LOW	DIV	YIELD	P/E	YTD% CHG
Gencorp	GY	13.59	-0.29	491,300	20.75	12.02	....	....	dd	-3.1
Genentech	DNA	83.68	-0.35	3,986,300	94.46	75.58	....	....	49	3.1
General Cable	BGC	42.67	-1.11	679,700	45.41	20.3	....	....	23	-2.4
General Dynamics	GD	74.59	0.17	1,497,300	77.98	56.68	0.92	1.2	16	0.3
General Electric	GE	37.56	-0.19	26,907,700	38.49	32.06	1.12	3	23	0.9
General Gwth Prop	GGP	51.51	-0.8	1,308,200	56.14	41.92	1.8	3.5	215	-1.4
General Maritime	GMR	34.56	-0.83	597,400	40.64	30.34	4.8	13.9	5	-1.8
General Mills	GIS	56.97	-0.42	1,355,600	59.23	47.05	1.48	2.6	18	-1.1
General Motors	GM	30.24	0.6	10,477,600	36.56	19	1	3.3	dd	-1.6
Genesco Inc	GCO	36.75	-0.9	127,900	43.72	25.5	....	....	15	-1.5
Genesee & Wyoming	GWR	25.86	-0.5	364,500	36.75	21	....	....	9	-1.4
Genesis Lease	GLS	23.6	0.1	298,500	24.4	23	....	....	....	0.4
Genuine Parts co.	GPC	46.86	-0.51	384,400	48.34	40	1.35	2.9	17	-1.2
Genworth Financial	GNW	33.79	-0.32	1,414,900	36.47	31	0.36	1.1	13	-1.2
Geo Group Inc	GEO	37.57	-1.53	157,500	40.3	14.69	....	....	35	0.1
Georgia Gulf	GGC	18.69	-0.38	479,000	34.65	18.36	0.32	1.7	6	-3.2
Gerber Scientific	GRB	12.32	-0.07	243,200	16.8	9	....	....	27	-1.9
Gerdau Ameristeel	GNA	8.59	-0.04	446,200	11.02	5.85	0.08	0.9	7	-3.7
Gerdau S.A. Ads	GGB	15.57	-0.56	1,729,100	18.16	11.27	0.58	3.7	....	-2.7

FIGURE 2.8 Listing of stocks traded on the New York Stock Exchange

Source: Compiled from data from *The Wall Street Journal Online*, January 9, 2007.

Equity Securities

- Preferred stock
 - Fixed dividends - limited
 - Same as infinite-maturity bonds
 - No voting rights
 - Cumulative preferred stock
 - Unpaid dividends are cumulated and must be paid in fullz before any other dividends
 - Tax treatment
 - Are not tax-deductible expenses for the firm
- Depository receipts - ADRs
 - Certificated that represent ownership in shares of a foreign company
 - Traded un U.S. markets

Stock Market Indexes

- There are several broadly based indexes computed and published daily
- There are several indexes of bond market performance
- Others include:
 - Nikkei Average
 - Financial Times Index

Dow Jones Industrial Average

- Includes 30 large blue-chip corporations
- Computed since 1896
- Originally simple average of the stocks included in the index
 - Add up prices of the 30 stocks and it is divided by 30
 - Percentage change in DJIA is percentage change in average price of the 30 shares
 - Holding of portfolio of 30 shares (one share of each stock in the index)
 - Value of portfolio is value of 30 shares
- Price-weighted average

Example 2.2 Price-Weighted Average

Portfolio: Initial value $\$25 + \$100 = \$125$

Final value $\$30 + \$90 = \$120$

Percentage change in portfolio value
 $= 5/125 = -.04 = -4\%$

Index: Initial index value $(25+100)/2 = 62.5$

Final index value $(30 + 90)/2 = 60$

Percentage change in index $-2.5/62.5$
 $= -.04 = -4\%$

Standard & Poor's Indexes

Improvements of DJIA in two ways

- Broadly based index of 500 firms
 - Market-value-weighted index
 - Calculating the total market value of 500 firms and total market value of those firms in previous day
 - The change in the value represent the change in index
 - The rate of return of index represent the rate of return of portfolio of investor that hold 500stocks in proportion to their market value

- How to invest in index
 - Index funds
 - Exchange Traded Funds (ETFs)

Other U.S. Market-Value Indexes

- NASDAQ Composite
 - Index of all Nasdaq listed stocks
 - Subindexes – industrial, utility, transportation and financial stocks
 - More broadly based than S&P 500
- NYSE Composite
- Wilshire 5000
 - Nyse and Amex stocks plus actively traded Nasdaq stocks
 - About 6000 stocks

Figure 2.9 Comparative Performance of Several Stock Stock Indexes, 2001-2006

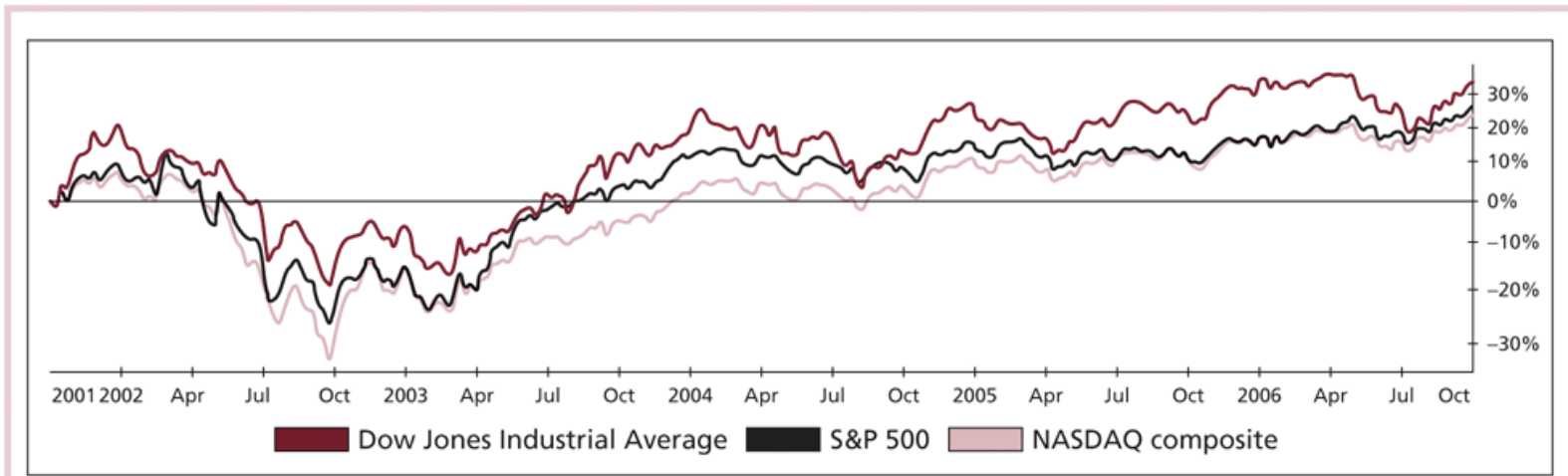


FIGURE 2.9 Comparative performance of several stock market indexes, 2001–2006

Foreign and International Stock Market Indexes

- Nikkei (Japan)
- FTSE (Financial Times of London)
 - "footsie"
- Dax (Germany)
- MSCI (Morgan Stanley Capital International)
 - International index
 - About 50 country indexes and some regional indexes
- Hang Seng (Hong Kong)
- TSX (Canada)

Derivatives Markets

- One of the most significant developments in financial markets in recent years
- Provide payoffs that depends on development of another assets such commodity prices, bonds, stocks, market indexes, etc.
- Derivative assets or contingent claims
 - Value derive from or is contingent on the values of another assets

Derivatives Markets

Options

- Basic Positions
 - Call (Buy)
 - Put (Sell)
- Terms
 - Exercise Price or strike price
 - Expiration Date
 - Assets

Futures

- Basic Positions
 - Long (Buy)
 - Short (Sell)
- Terms
 - Delivery Date
 - Assets

Figure 2.10 Trading Data on GE

Gen EI (GE)		Underlying stock price: 41.10					
Expiration	Strike	Call			Put		
		Last	Volume	Open Interest	Last	Volume	Open Interest
Oct 2007	37.50	3.90	110	10411	0.12	394	20014
Nov 2007	37.50	4.23	112	2	0.27	236	140
Dec 2007	37.50	4.45	257	27876	0.49	507	33731
Mar 2008	37.50	...	...	5721	1.07	272	11931
Oct 2007	40.00	1.68	4823	46175	0.45	1659	17500
Nov 2007	40.00	2.14	897	135	0.70	170	163
Dec 2007	40.00	2.49	700	136176	1.06	356	36470
Mar 2008	40.00	3.35	113	13141	1.78	49	18901
Oct 2007	42.50	0.38	4525	66631	1.64	2838	5784
Nov 2007	42.50	0.72	1439	1996	1.83	67	269
Dec 2007	42.50	1.07	540	31560	2.13	805	10872
Mar 2008	42.50	1.90	74	9767	2.98	50	4054

FIGURE 2.10 Trading data on General Electric options

Source: Compiled from data downloaded from *The Wall Street Journal Online*, September 25, 2007.

Figure 2.11 Listing of Selected Futures Contracts

Agriculture Futures							Currency Futures						
	OPEN	HIGH	LOW	SETTLE	CHG	OPEN INT							
Corn (CBT) -5,000 bu.; cents per bu.							Japanese Yen (CME) -¥12,500,000; \$ per 100¥						
March	371.00	372.50	360.50	362.25	-8.25	591,430	March	.8456	.8485	.8447	.8479	.0016	275,282
Dec	361.75	366.00	357.00	359.00	-3.00	311,690	June	.8561	.8579	.8545	.8577	.0016	5,119
Oats (CBT) -5,000 bu.; cents per bu.							British Pound (CME) -£62,500; \$ per £						
March	261.75	265.75	258.25	261.25	-.75	8,823	March	1.9516	1.9537	1.9403	1.9448	-.0063	136,995
Dec	233.00	234.25	232.50	233.75	.75	3,907	June	1.9446	1.9531	1.9402	1.9443	-.0063	191
Soybeans (CBT) -5,000 bu.; cents per bu.							Index Futures						
Jan	667.00	675.00	659.75	662.75	-6.50	9,947	DJ Industrial Average (CBT) -\$10 x index						
March	681.00	687.75	672.50	675.50	-6.50	220,362	March	12543	12575	12470	12549	19	64,555
							June						
							12629 12647 12601 12647 18 44						
							S&P 500 Index (CME) -\$250 x index						
							March						
							1425.20 1431.50 1417.00 1427.50 2.70 601,655						
							June						
							1432.00 1444.50 1430.50 1440.10 2.60 13,287						

FIGURE 2.11 Listing of selected futures contracts

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Thank you for your attention