Investment Banks, Security, Brokers and Dealers, and Venture Capital Firms

Investment Banks

- Investment banks are best known as
  - **Intermediaries** that help corporations **raise funds**
- Investment banks provide many valuable and sophisticate services
  - Investment bank **is not a bank in the ordinary sense**, that is, it is not a financial intermediary that takes in deposits and then lend them out
- In addition to underwriting the initial sale of stocks and bonds
  - Investment banks also play a pivotal role as deal markets in **merges and acquisitions** area
    - As intermediaries in the buying and selling of companies
- Well-known investment banking firms are
  - Morgan Stanley, Merrill Lynch or Goldman Sachs

Investment Banks

- One feature of investment banks that distinguishes them from stockbrokers and dealers is
  - That they usually earn their income from **fees charged to clients** rather than from **commissions** on stock trades
  - These fees are often set as a fixed percentage of size of the deal being worked
  - The percentage fee will be smaller for large deals
    - 3%
  - And much larger for smaller deals
    - Sometimes exceeding 10%

Investment Banks: Background

- In the early 1800s most of the American securities had to be sold in Europe
- As a result, most of the securities firms developed from merchants that operated a security business as a sideline to their primary business
  - Morgans built their initial fortune with the railroads
  - To help raise the money to finance railroad expansion, J.P. Morgan's father resisted in London and sold their Morgan railroad securities to European investors
- Prior to the Great Depression, many large, money center banks in NY **sold securities** and **conducted conventional banking activities**
  - During the Depression, about 10.000 banks failed (about 40% of all commercial banks)
- This led to the passage of the **Glass-Steagall Act**, which **separated commercial banking from investment banking**

Investment Banks: Background

- The Glass-Steagall Act made it illegal for a commercial bank to buy or sell securities on behalf of its customers
- The original reasoning behind this legislation was to insulate commercial banks from greater risk inherent in the securities business
- There were also concerns that conflicts of interest might arise that would subject commercial banks to increased risk
  - An investment banker working at a commercial bank makes a mistake pricing a new stock offering

Mergers and Acquisitions

- Investment banks have been active in the mergers and acquisitions market since the 1960s
- A merge occurs when two firms combine to form one new company
  - Both firms support the merger, and corporate officers are usually selected so that both companies contribute to the new management team
  - Stockholders turn in their stock for stock in the new firm
- In an acquisition, one firm acquires ownership of another by buying its stock
  - Often this process is friendly
  - At other times, the firm being purchased may resist
    - Resisted takeovers are called hostile
      - In these cases, the acquirer attempts to purchase sufficient shares of the target firm to gain a majority of the seats on the board of directors

Mergers and Acquisitions

- Investment bankers serve both acquirers and target firms
- **Acquiring firms require** help in **locating attractive firm** to purchase, soliciting shareholders to sell their shares in a process called a **tender offer**, and raising the require capital to complete the transaction
- Target firms may hire investment bankers to help **ward off** undesired takeover attempts

Mergers and Acquisitions

- The best know investment bankers involved in mergers and acquisitions was
  - Michael R. Milken
- Who worked for Drexel Burnham Lembert, Inc.
- Milken was credited with investing in junk bond market, these securities were used primary to finance takeover attempts
- By allowing companies to raise large amounts of capital, even small firms could pursue and take over large ones
- During the 1980s, when Milken was most active in this market, merger and acquisition activity peaked
- As a result of the collapse of Drexel and the junk bond market, merger and acquisitions activity slowed during the early 1990s

Security Brokers and Dealers

- Securities brokers and dealers conduct trading in secondary market
- Brokers are pure middlemen who act as **agents for investors** in the purchase or sale of securities
  - Their function is **to match** buyers with sellers, a function for which they are paid **brokerage commissions**

Security Brokers and Dealers

- Dealers **link buyers and sellers** by standing ready to buy and sell securities at given prices
  - Dealer hold inventories of securities and make their living by selling these securities for a slightly higher price than they paid from them
    - Spread between
      - **bid price**
        - The price that the broker pays for securities they buy for their inventory and
      - **Ask price**
        - The price they receive when they sell the securities
  - This is **high-risk business** because **dealers hold securities** that can rise or fall in price
    - Brokers are not exposed to risk because they do not own the securities involved in their business dealing

Brokerage Services

- Security orders
  - If you call a security brokerage house to buy a stock, you will speak with a broker who will take your order
    - There are three primary types of transaction available
      - **Market order, limit order and short sell**
- Two most common types of securities orders are the market order and the limit order

Market order

- When you place market order you are instructing your agent to buy or sell the security at the current market price
- When placing the market order there is a risk that the price of security may have changed significantly from what it was when you made your investment decision
- The most notable occasion when prices changed between when orders were placed and when they were filled was during the October 19, 1987, stock crash
  - Panicked investors told their brokers to sell their stocks, but the transaction volume was so great that day that many orders were not filled until hours after they were placed
  - By the time they were filled, the price of the stocks had often fallen far bellow what they were at the time the original orders were placed

Limit order

- An alternative to the market order is the limit order
- Here buy orders specify a maximum acceptable price, and sell orders specify a minimum acceptable price
- E.g. you could place a limit order to sell 100 shares of IBM at $100.
- If the current market price of IBM is less than $100, the order will not be filled
- Unfilled limit orders are reported to the stock specialist who works that particular stock on the exchange
- When the stock price moves in such a way that limit orders are activated, the stock specialist initiates the trade

Stop loss order

- The stop loss order is similar to the limit order, but is for stocks that you already own
- This order tells your broker to sell your stock when it reaches a certain price
- E.g.
  - Suppose you buy a stock for $20 per share
  - You do not want to suffer a major loss on this stock, so you enter a stop loss order at $18
  - In the event the stock price falls to $18 the broker will sell the stock

- When investors believe that the price of a stock **will rise** in the future, they **buy** that stock and **hold** it until the increase occurs
  - They can then sell at a profit and capture a gain for their effort
- What can be done if an investor is convinced that a stock **will fall** in the future?
  - The solution is to **sell short**
  - A short sell requires that the investor **borrow stocks** from a brokerage house and **sell them today**, with **the promise of replacing the borrowed stocks** by buying them in the future
  - If you are wrong and the price rises, you will suffer a loss

- **Market and limit orders** allow you to take advantage of stock **price increases**,
- **Short sell** allow you to take advantage of stock **price decrease**
  - Analysts track that the number of short position taken on a stock as an indicator of the number of investors who feel that a stock's price is likely to fall in the future

Other Services

- In addition to trading in securities, stockbrokers provide a variety of other services
  - Investors typically **leave their securities in storage** with the broker for safekeeping
    - If the securities are left with the broker, they are **insured against loss**
    - This guarantee is not against loss in value, only against loss of the securities themselves

Other Services

- Brokers also provide **margin credit**
  - Margin credit refers to **loans advanced by the brokerage house** to help investors buy securities
  - The Fed sets the percentage of the stock purchase price that brokerage houses can lend
  - Interest rates on marginal loans are usually 1 or 2 percentage points above the prime interest rates

Securities Dealers

- Securities dealers hold inventories of securities, which they sell to customers who want to buy
- In addition to requiring the a fair return, the investor wants to know that the investment **is liquid**
  - That it can be sold quickly if it no longer fits into the investor's portfolio
- Consider small, relatively unknown firm that is trying to sell securities to the public
  - An investor can be tempted to buy a security but if these securities cannot be resold easily, it is unlikely that the investor will take a chance on them
    - This is where the **dealers are crucial**
    - The stand ready to make a market in the security at any time
      - They make sure that an investor can always sell or buy a security
      - Dealers are also called **market makers**

Securities Dealers

- When an investor wishes to sell a thinly traded stock
  - One without an active secondary market
- It is unlikely that another investor is simultaneously seeking to buy that security
  - This no synchronous problem is solved when the dealer buys the security from the investor and holds it in inventory until another investor is ready to buy it
  - Dealers will provide this service **encourages** investors to buy securities that would be otherwise **unacceptable**
  - In countries with less well developed financial markets, where dealers will not make a market for less popular securities, it is extremely difficult for small, new, or regional firms to raise funds

Private Equity Investment

- When is talking about investing there are usually discussing stocks and bonds
- However, there is an **alternative** to **public** equity investing, which is **private** equity investing
- With private equity investing, instead to raising capital by selling securities to the public, a **limited partnership** is formed that **raises money from a small number of high-wealth investors**
- Within the broad universe of private equity sectors, the two most common are
  - Venture funds
  - Capital buyouts

Venture Capital Firms

- Venture capital firms provide the **funds** a **start-up company** needs to get established
- This money is most frequently raised by limited partnerships and invested by the general partner in firms showing promise of high returns in the future
- Venture capitalists backed many of the most successful high-technology companies during the 1980s and 1990s
  - Apple Computer, Cisco Systems, Microsoft, Sun Microsystems, etc
- And number of service firms
  - Starbucks

Venture Capitalists Reduce Asymmetric Information

- Uncertainty and information asymmetries frequently accompany start-up firms
  - Especially in high-technology communities
- Managers of these firms may engage in **wasteful expenditures**, such as leasing expensive office space, since the manager may benefit from disproportionately from them but does not bear their entire cost
- Or biotechnology company founder may invest in research that brings personal acclaim but little chance for significant returns to investors
- As a result of these **information asymmetries**, **external financing may be costly**, **difficult, or even impossible to obtain**

Venture Capitalists Reduce Asymmetric Information

- First, as opposed to bank loans of bond financing, **venture capital firms hold an equity interest in the firm**
- The firms are usually **privately held**, so the stock does not trade publicly
- Equity interests in privately held firms are very illiquid
- As a result, venture capital **investment horizons are long-term**
- The partners do not expect to earn any return for a number of years, often as long as a decade

Venture Capitalists Reduce Asymmetric Information

- Investors in stocks or bonds are often unwilling to wait years to see in a new idea, process, innovation, or invention will yield profits
- Venture capital financing thus fills an important gap left vacant by alternative sources of capital
- As a second method of addressing the asymmetric information problem, venture capital usually comes with **strings attached**, the most noteworthy being that the **partners in a venture capital firm take seats on the board of directors of the financed firm**
  - Venture capital firms **are not passive investors**
    - They active attempt to add value to the firm through advice, assistance and business contracts

Venture Capitalists Reduce Asymmetric Information

- One of the most effective ways venture capitalists have of controlling managers is to distribute funds to the company in stages only as the firm demonstrates progress toward its ultimate goal
  - If development stalls or markets changed funds can be withheld to cut losses
- Implicit to venture capital financing is an expectation of high risk and large compensating returns
- Venture capital firms will search very carefully among hundreds of companies to find a few that show real growth potential

Origin of Venture Capital

- The first true venture capital firm was **American Research & Development**, established in 1946 by MIT president Karl Compton
- The bulk of their success can be traced to on $70.000 investment in a new firm, the Digital Equipment Company
  - This invested money grew in value to $355 million over the next three decades

Origin of Venture Capital

- During the 1950s and 1960s, most venture capital funding was for the development of real estate and oil fields
- By the late 1960s, the U.S. Department of labour clarified the **prudent man rule**, which restricted pension funds from making risky investments
  - Explicitly allowed investment in some high risky assets
  - This resulted in a surge of pension fund dollars going into venture projects

Origin of Venture Capital

- Corporate funding of venture capital projects increased when many companies **reduced** their **investment** in their own in-house **R&D** in favor of outside start-up companies
- This change was fueled by evidence that many of the best ideas from in-house centralized R&D were unused or were commercialized in new firms started by defecting employees
  - Salaried employees tend not to be as motivated as businessman who stand to capture a large portion of the profits a new idea may generate

Structure of Venture capital Firms

- Most early venture capital firms were organized as **closed-end mutual funds**
  - Close-end mutual fund sells a fixed number of shares to investors
  - Once all of the shares have been sold, no additional money can be raised
  - Instead, a new venture fund is established
- The advantage of this organization structure is that it provides the **long-term money** required for venture investing
  - Investors **can not pull money** out of the investment as they could from an open-end mutual fund

Structure of Venture capital Firms

- In the 1970s and 1980s, venture capital firms began organizing as **limited partnerships**
- While both organizational forms continue to be used, currently most venture capital firms are limited partnerships

The Life of a Deal

- Most venture capital deals follow a similar life cycle
  - That begins when a limited **partnership is formed** and funds are raised
  - In the second phase, the funds are **invested in start-up companies**
  - Finally, the venture firm **exits** the investment

Fundraising

- A venture firms begins by soliciting **commitments of capital** from investors
  - Pension funds, corporations, wealthy investors
- Ventura capital firms usually have a **portfolio target** amount that they attempt to raise
  - Because the minimum commitment is usually to high, venture capital funding is generally out of reach of most average individual investors
- The limited partners understand that investment in venture funds are long term
  - It may be several years before the first investment starts to pay
  - In many cases, the capital may be tied up for seven to ten years
  - The illiquidity of the investment must be carefully considered by the potential investor

Investing

- Once the commitments have been received, the venture fund can begin the investment phase
- Frequently, venture capitalists invest in a firm before it has a real product or is even clearly organized as a company
  - **Seed investing** 60 %
- Investing in a firm that is a little further along in its life cycle is known as
  - **Early-stage investing** 25 %
- Finally, some funds focus on later-stage investing
  - Providing funds to help the company grow to a critical mass to attract public financing 15%

Exiting

- The goal of the venture capital investment is to help a firm *until* it can be **funded with alternative capital**
- Venture firms hope that an exit can be made in no more than seven to ten years
- Once an exit is made, the partners receive their **shares of the profits** and fund is dissolved

Exiting

- There are number of ways for a venture fund to successfully **exit** an investment
  - Through an IPO
    - At a public stock offering, the venture firm is considered as insider and receives stock in the company, but the firm is regulated and restricted in how that stock can be sold or liquidated for several years
- Once the stock is freely tradable, usually after two years, the venture fund distributes the stock to its limited partners, who may then hold the stock or sell it
- Over the last 25 years, over 3.000 companies financed by venture funds have had IPOs
- An equally common type of successful exit for venture investment is through merges and acquisitions
  - Venture firms receives cash or stocks from the acquiring company
    - These proceeds are then distributed to the limited partners

Venture Fund Profitability

- Venture investing is **extremely high-risk** and most start-up firms do not succeed
- If venture investing is high-risk, then there must also be the possibility of a high return to induce investors supplying funds
- Historically, venture capital firms have been very profitable
    - The 20-year average return is 16,5%
        - Seed investing is most profitable with a 20-year average return 20,4%, compare to about 13,5% for later-stage investing

Thank you for your attention