

FIN2010 Financial Management

Lecture 1: What is Finance?



Agenda

- About this course
- What is finance?
 - Investors and borrowers
 - Financial institutions
- Plan for the semester



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Course Objectives

- Understand what the **financial industry** does
- Learn the framework of **quantifying** financial problems
- Learn how to make rational financial **decisions**
 - Evaluate: should I buy this apartment/stock/product?
 - Plan: to have X amount of money, I need to ...
 - **Call out scams**



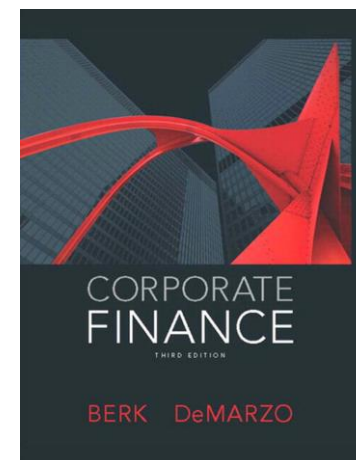
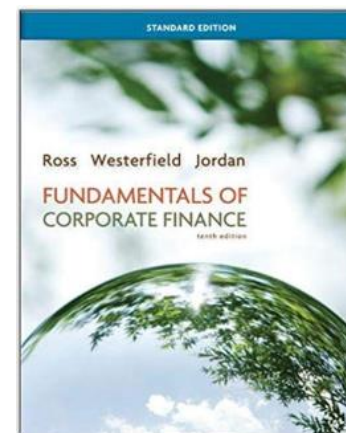
Materials

- Textbooks

- [Fundamentals of Corporate Finance](#), by Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan
- [Corporate Financial](#), by Jonathan Berk, Peter DeMarzo
- Not required
- Strongly recommended for students without any prior knowledge of finance

- Financial calculator

- Recommend Texas Instruments BA II Plus (including BA II Plus Professional)



Course Logistics

- Sections

- #1: M/W 10:30-11:50 AM (Ye)
- #2: M/W 1:30-2:50 PM (Ye)
- #3: M/W 8:30-9:50 AM (Liu)
- #4: M/W 10:30-11:50 AM (Liu)

You can attend either
section taught by me

- Grading

- 20% Homework (12% weekly MC quizzes, 8% problem sets)
- 12% Group project
- 3% Investment report
- 30% Midterm
- 35% Final

Grading is outcome based, and students are evaluated across all 4 sections.



Group Project

- 12% of your grade
- Goal: apply theories to evaluate an investment opportunity
- Format: 5-15 pages (including tables and graphs) report
- Logistics:
 - Group of up to 3. Please form groups before 2020-11-1.
 - Due date: 2020-12-8
 - Best 4 groups of each section will be invited to present in class. You will earn **2% extra credit** if you present. You can also decline the invitation and forgo the 2 points.



Investment Report

- 3% of your grade
- Goal: record and analyze your own investment performance
 - Buy at least 5 financial assets with real money
 - Describe why you bought and sold these assets
 - Track the performance of your investments
- Format: Fill in the form provided by the instructor
 - Due date: 2020-12-19



Office Hour

- By the instructor
 - Time: Wednesday 15:00pm-17:00pm
 - Location: ZR 312
- By the TA (Shirley Wu)
 - Time: Tuesday 15:00pm-17:00pm
 - Location: ZR 320
- By the two student TAs
 - Time: TBA
 - Location: TBA

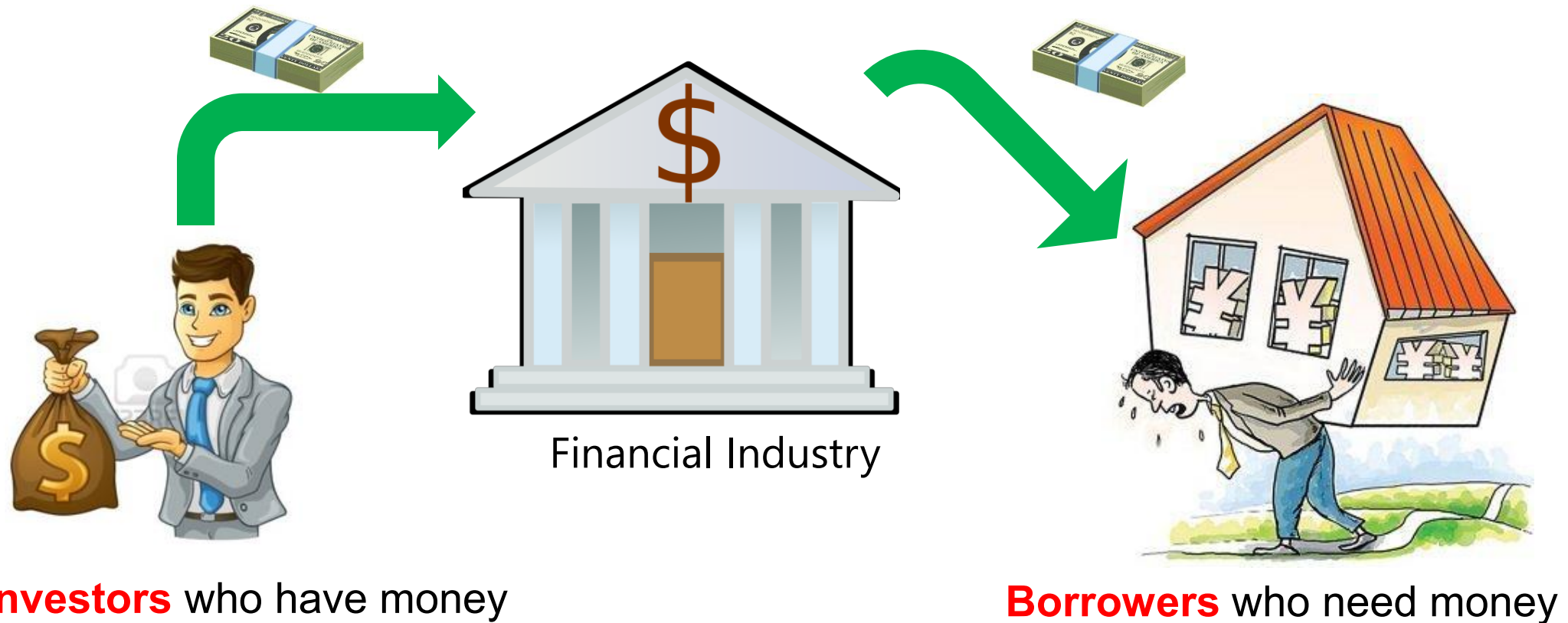


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What is Finance?

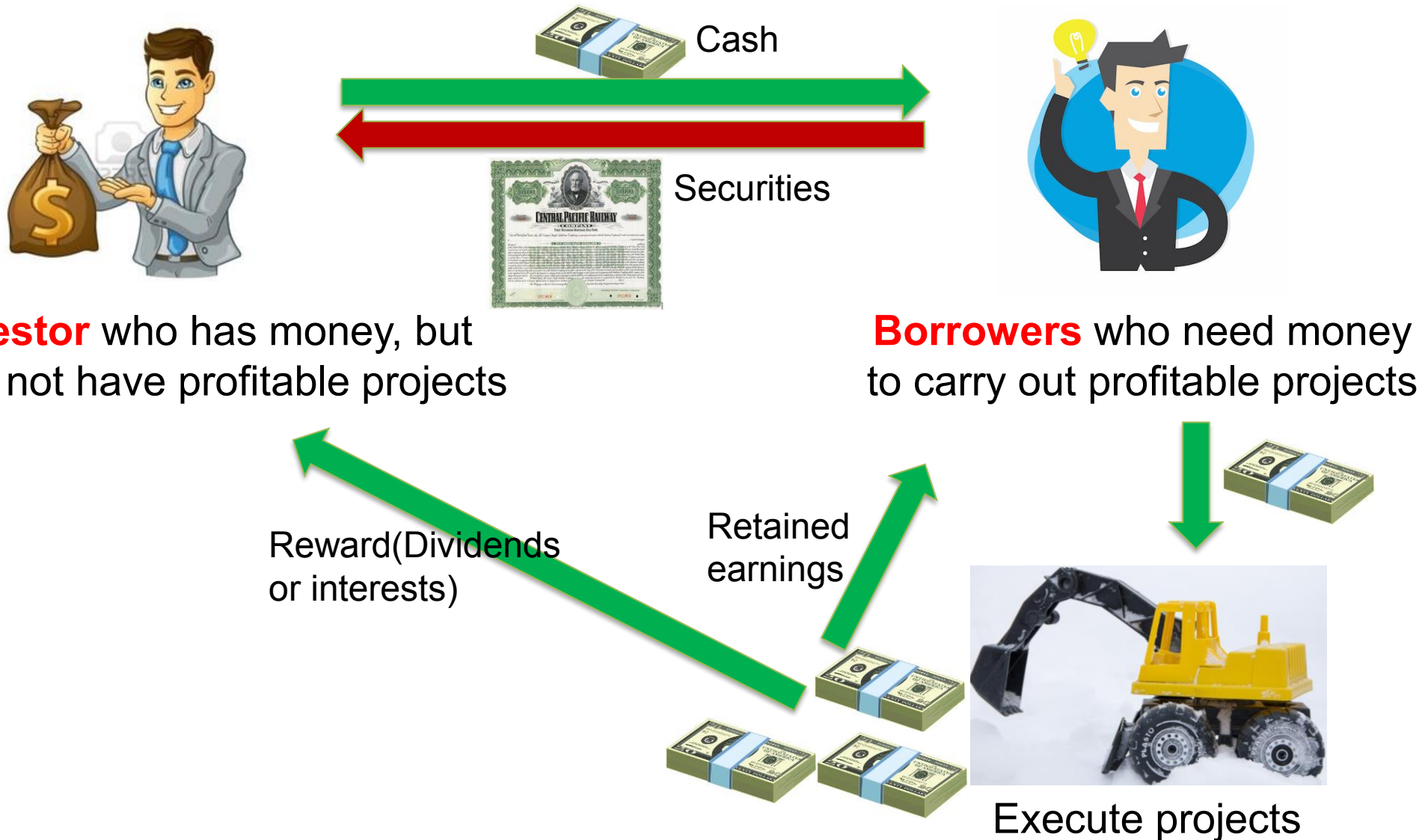


Does Financial Industry Create Value?

- It seems the financial industry only transfers wealth but does not create wealth. Is this true?
 - **No! Efficient allocation of resource is in itself value-creating**
 - Suppose there are two firms:
 - Firm A can turn \$1 to \$2 in a year
 - Firm B can turn \$1 to \$1.1 in a year
 - If we have \$100 to allocate to the two firms.
 1. An economy with efficient financial industry will allocate all \$100 to firm A. A year later the society has \$200
 2. An economy with *inefficient* financial industry may allocate \$50 to each firm. A year later the society has \$155



How does Finance Create Value?

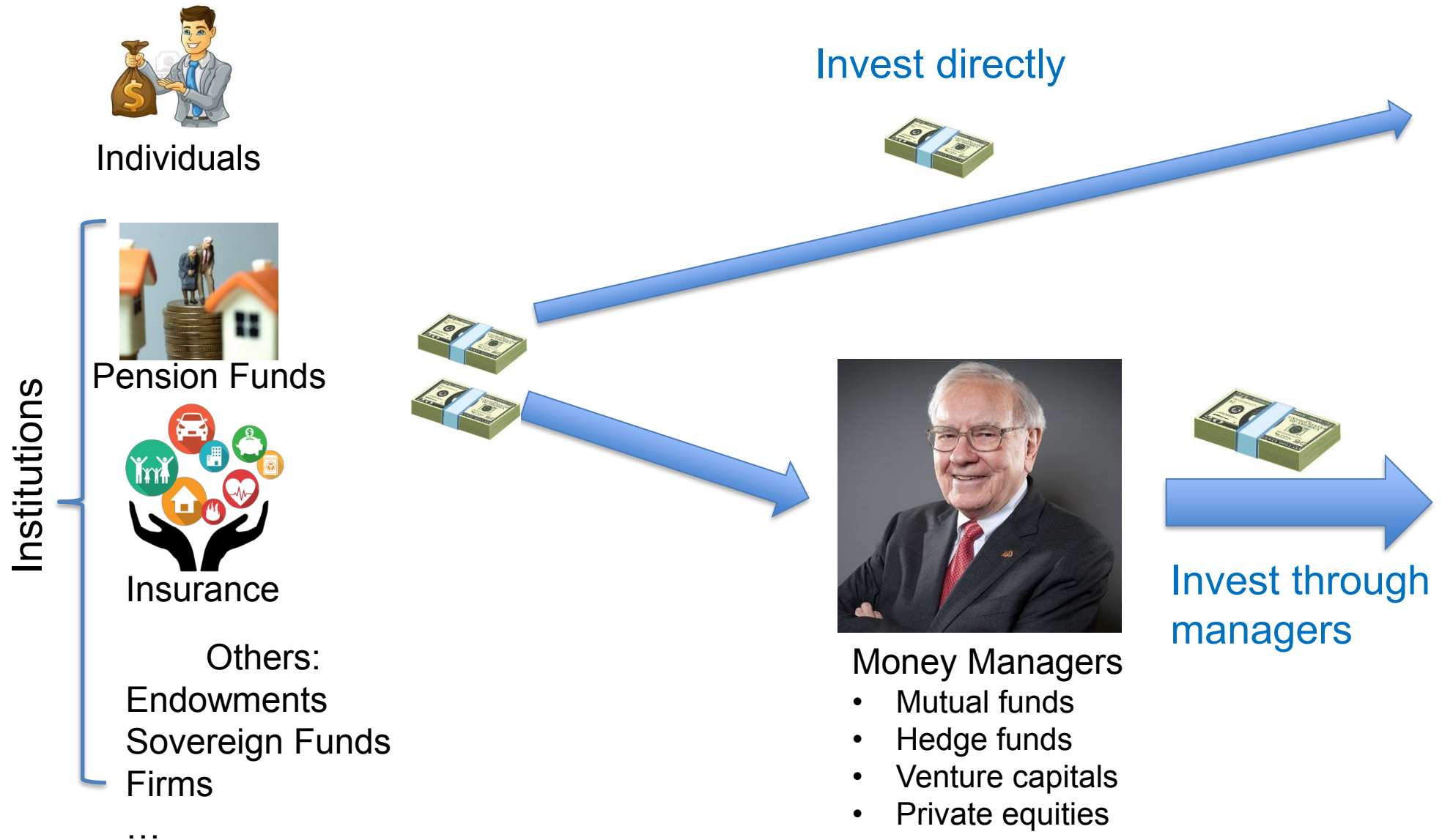


Why do We Need the Middleman?



- Without a middleman, # of negotiations: 1000
With a middleman, # of negotiations: 110 — reduces search costs!
- The middleman provides useful service
 - Due diligence (collect info on borrowers)
 - Risk sharing, diversification, liquidity
 - Advisory
 - Monitoring

Who are the Investors?



Pension Funds

Country	Fund	Assets (in billions)
United States	Federal Old-age and Survivors Insurance Trust Fund (Social Security)	\$2,722
Australia	Australian National Superannuation Scheme	\$2,199
Japan	Government Pension Investment Fund	\$1,103
Norway	Government Pension Fund of Norway	\$898
United States	Civil Service Retirement and Disability Fund	\$880
United States	Military Retirement Fund	\$584
United States	Thrift Savings Plan (TSP)	\$443
South Korea	National Pension Service (NPS)	\$419
Netherlands	Stichting Pensioenfondsen ABP (ABP)	\$388
United States	California Public Employees' Retirement System (CalPERS)	\$289.80

[Source: Wikipedia](#)

Model: Take monthly contribution from young people; pay back (more) when they get old

Investment Goal: (1) Meet future obligations (2) Maximize return



Global Money Management Firms–2018

Rank	Company	Country of Origin	AUM (US\$ Billion)
1	BlackRock, Inc	United States	6,671
2	Vanguard	United States	5,133
3	State Street Global Advisers	United States	2,907
4	Fidelity Investments	United States	2,514
5	BNY Mellon	United States	1,990
6	Capital Group	United States	1,888
7	J.P. Morgan Asset Management	United States	1,846
8	PIMCO (Pacific Investment Management Company)	United States	1,835
9	Amundi	France	1,790
10	Prudential Financial	United States	1,457

[Source: IPE](#)

Model: Invest other people's money and earn management fees (typically 0.1 to 1% of AUM).

Investment Goal: Maximize AUM by delivering what investors want and outperforming competitors

AUM: asset under management.

Who are the Borrowers?

- Government

	Central Gov.	Local Gov.	GDP
US	<u>\$26.5 T</u>	<u>\$3.9 T</u>	<u>\$21.4 T</u>
China	<u>\$2.4 T</u>	<u>\$3.4 T</u>	<u>\$14.3 T</u>

- Business

	Equity	Bond
US	<u>\$37.7 T</u>	<u>\$9.6 T</u>
China	<u>\$12.2 T</u>	<u>\$8.3 T</u>

- Household

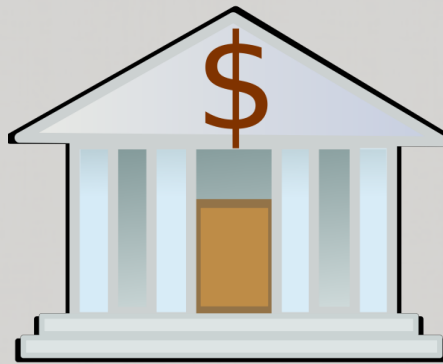
	Home Loan	Auto Loan
US	<u>\$16.0 T</u>	<u>\$1.2 T</u>
China	<u>\$4.9 T</u>	<u>\$0.2 T</u>

* As of the end of 2019.



Who are the Middlemen?

Investors

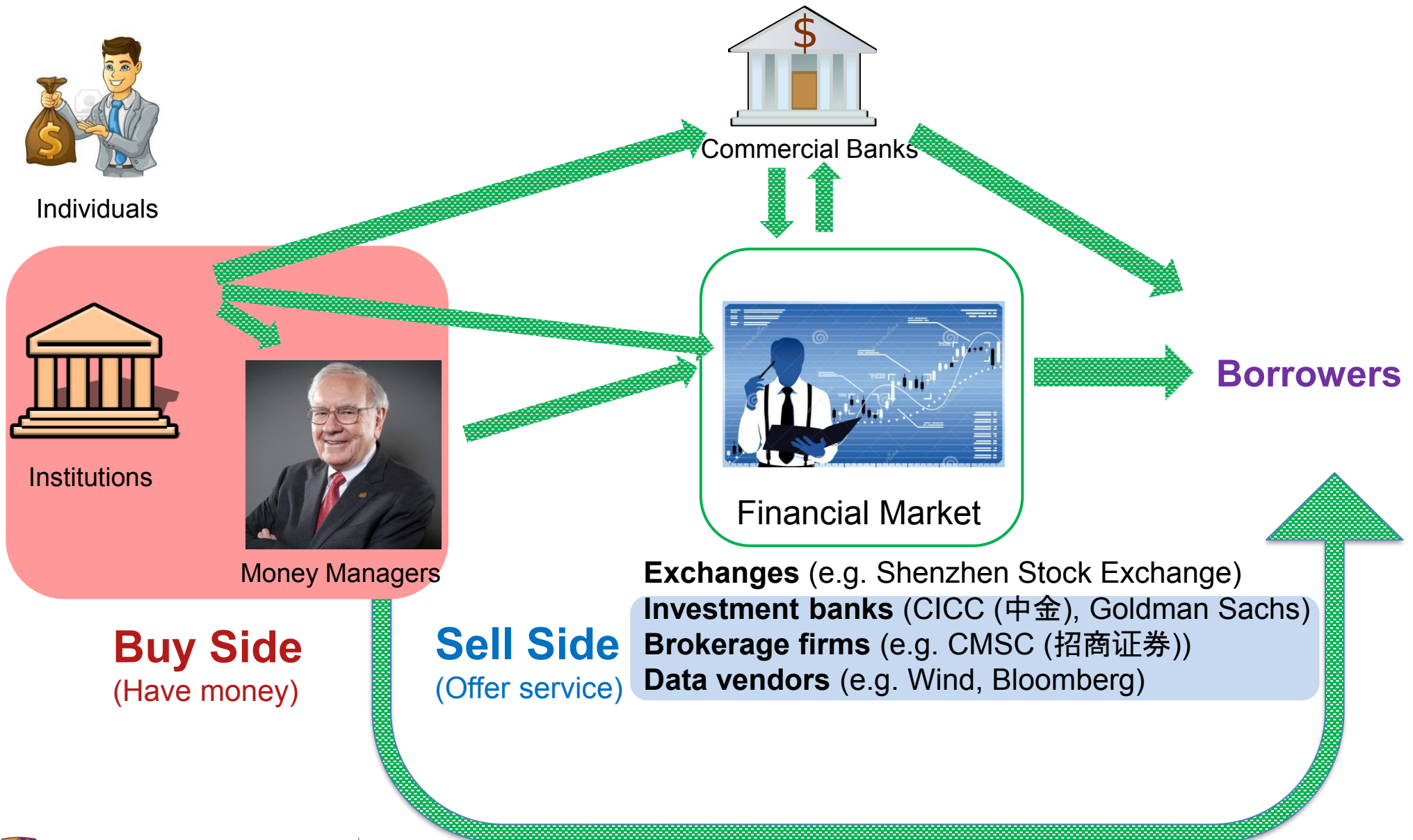


Financial Industry

Borrowers



Who are the Middlemen?



What Securities do They Play with?

Products in the financial markets are called securities.

- Equity instrument
 - Stock
- Simple Debt Instruments
 - Bond
 - Mortgage
- Derivatives
 - Forward and Future (transaction to be made in the future)
 - Option (right to execute a transaction in the future)
 - Swap (exchange of two cash flows)



Jobs—Buy Side Institutions

Tasks

- Manage cash flows to meet future obligations
- Manage risks of investments
- Identify good money managers to delegate the investments to

Good

- Light workload/working hours
- Have power so everyone respects you

Bad

- Pay is usually not as high as sell side institutions and limited room to grow
- Hard to get in (may require connection)



Institutions

Jobs—Money Managers

Tasks

- Generate superior investment performance
 - Quantitative models
 - Fundamental analysis
- Convince investors to put money into your fund (build trust)

Good

- Extremely high pay (if you perform well)
- Everyone around you is smart

Bad

- Can be stressful because pay is usually tied to performance
- Can be fired easily



Money Managers

Jobs—Banks

Commercial Banking Tasks

- Deal with depositors
- Make loans to borrowers
- Sell investment products to investors to earn incentive fees
- Manage risks

Good

- Stable (hard to get fired)
- Have many different posts so it is easy to switch jobs

Bad

- Pay is usually not high
- Can be boring



Banks

Investment Banking Tasks

- Primary market: help companies finance (IPO, merger & acquisition, liquidation)
- Trading: help meet the hedging needs

Good

- Very high pay (a large portion is bonus)
- Able to meet with important people
- Good exit options

Bad

- Extremely long working hours
- Sometimes toxic working environment



Jobs—Other Institutions

Brokerage Firms

- Help clients access the financial markets
 - Technology
 - Compliance
 - Execution
- Provide market research



Brokers

Data Vendors

- Provide data to other participants

Exchanges

- Technology platform
- Answer to regulators



Financial Market

Market makers

- Maintain market liquidity

Arbitrageurs

- Correct mispricing

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Plan for this Semester

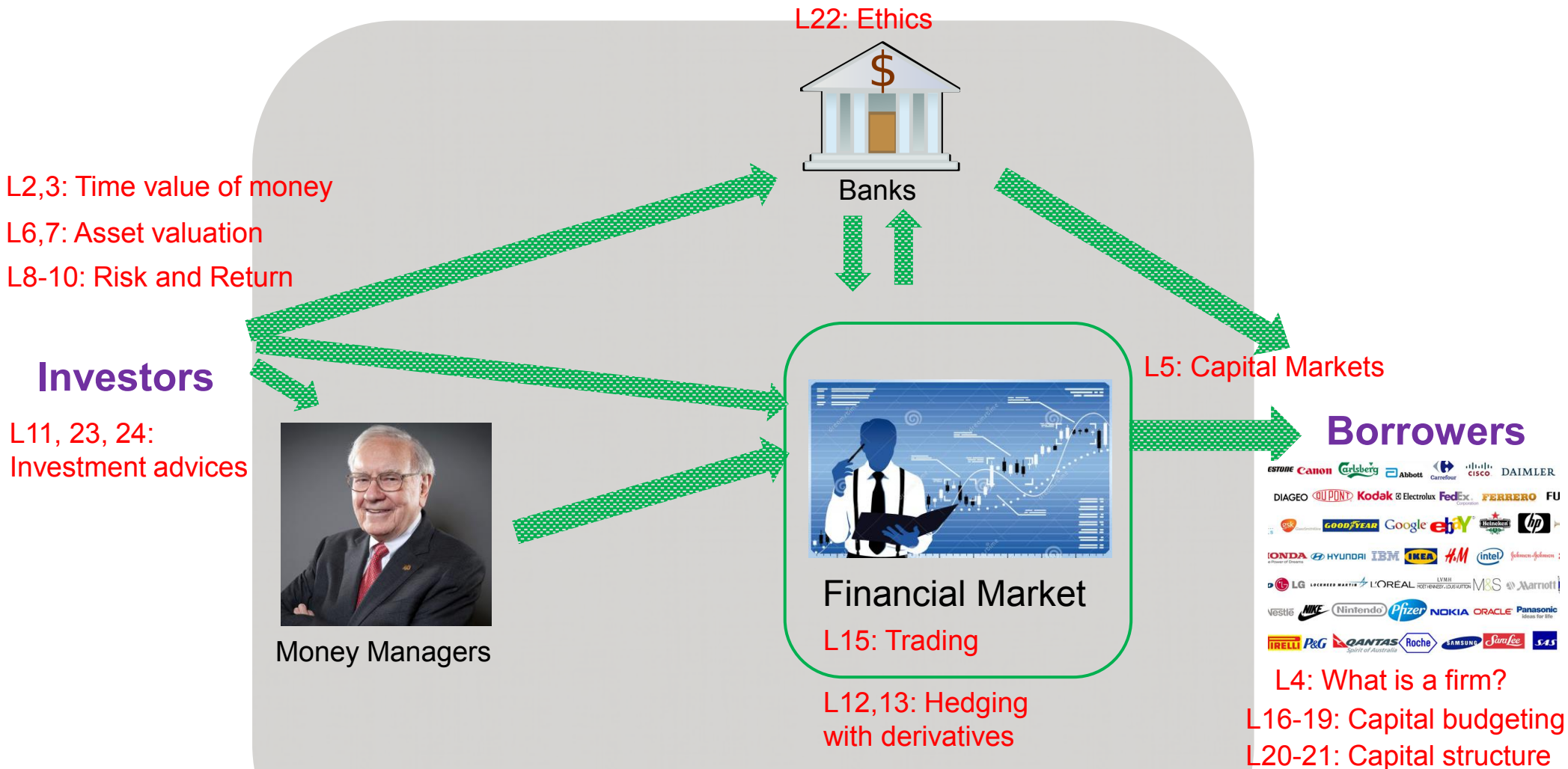
- Basic tools (1-5)
 - Time value of money, institutional knowledge
- Investors' problems (6-10,12-13)
 - Asset valuation
 - Risk and Return
 - Financial Derivatives
- **Midterm**
- Corporates' problems (16-21)
 - Project valuation
 - Raising capital
- Personal investment (11, 23-24)
- Project Presentation
- **Final**

Everyone will be an investor sometime in life!

Useful if you ever plan to start your own business

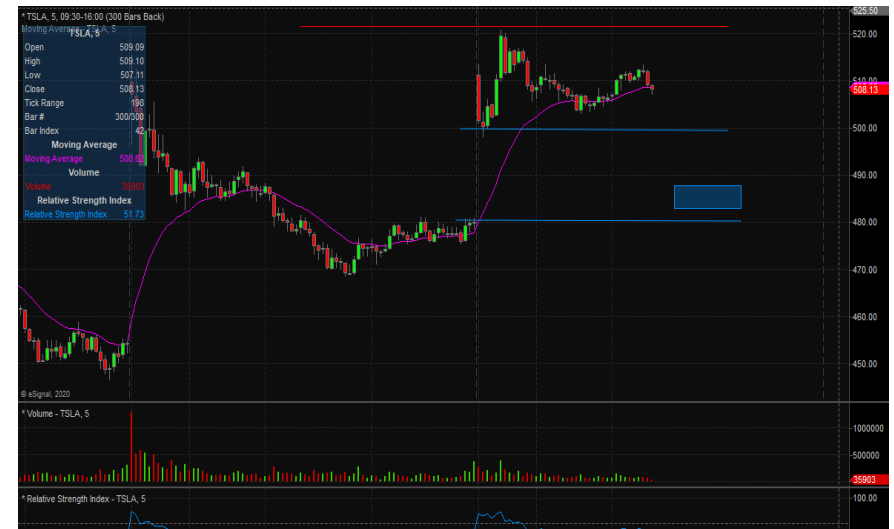
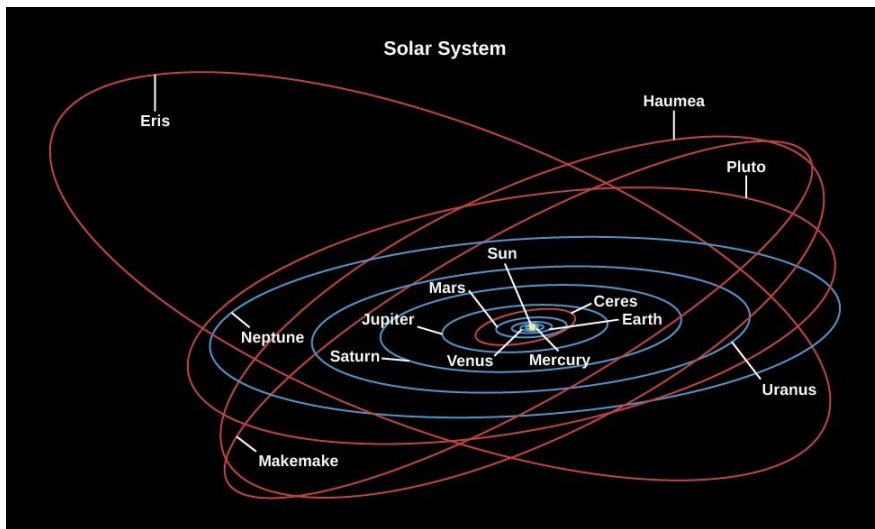


Plan for this Semester



Setting the Correct Expectation

Social science, unlike natural science, cannot accurately describe the world.



Then why do we learn this?

- It is vastly better than pure guess.
- You need to learn the primitive models first so that you can develop more advanced models in the future.



Next Lecture—Time Value of Money

- What is the time value of money (TVM)?
- TVM of a single cash flow
 - APR and EAR
- TVM of cash flow streams



Summary

- What is finance?
- Who are the investors and borrowers?
 - Investors: individuals and institutions
 - Borrowers: government, corporate, individual
- What value does the financial industry create?
 - Help allocate resource efficiently
 - Reduce searching and provide services
- What does the industry consist of?
 - Commercial banks
 - Buy side institutions and money managers
 - Brokers, investment banks, data vendors, exchanges, and many others



Lecture 1—Learning Objectives

You should :

- Understand the basic function of the financial industry
- Know who the investors and borrowers are
- Know how the financial industry connects investors and borrows, and the role of each type of financial firms

