

instructor, as compared to the same course in-person. You should expect to devote at least 12 hours per week to this course; if you cannot devote this amount of time, please consider taking the course in a different format.

Contacting the professor is easy:

- by email: ppeter@fau.edu
- by phone: 772.873.3314
- in person: 309 JU, FAU's Port St. Lucie campus.

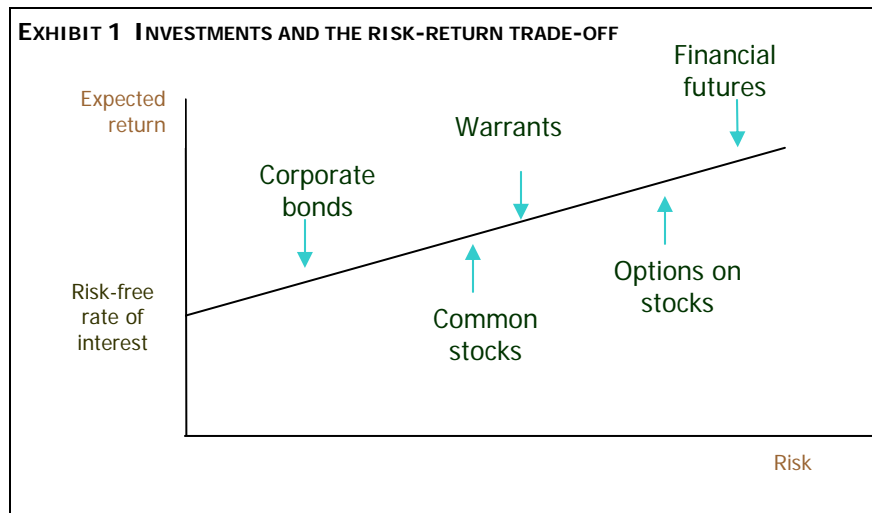
Please be aware that there will be times during the semester in which I am unavailable by either email or phone. If I will not be checking my email every 24 hours, I will notify you of that situation (e.g., traveling with limited access). If you email me and I do not reply within 24 hours, simple re-send the email.¹

B. The investment setting

We will be studying investments this semester. An **investment** is simply any expenditure at a point in time that is expected to generate future cash flows. It is expected that the investment will produce future cash flows sufficient to compensate the investor for the opportunity cost of the funds and risk. The **opportunity cost of funds** is what investors could have earned in a similar-risk investment. We often refer to this opportunity cost of funds as the **required rate of return**. As you will see throughout this course, risk and return are both important in evaluating an investment.

We will be looking at different investments and how the returns on these investments are related to risk. Consider the investments detailed in Exhibit 1. A U.S. Treasury Bill (T-Bill) is, essentially, a default risk-free security. The return you earn on a T-Bill is the risk free rate of interest. Other investments, such as

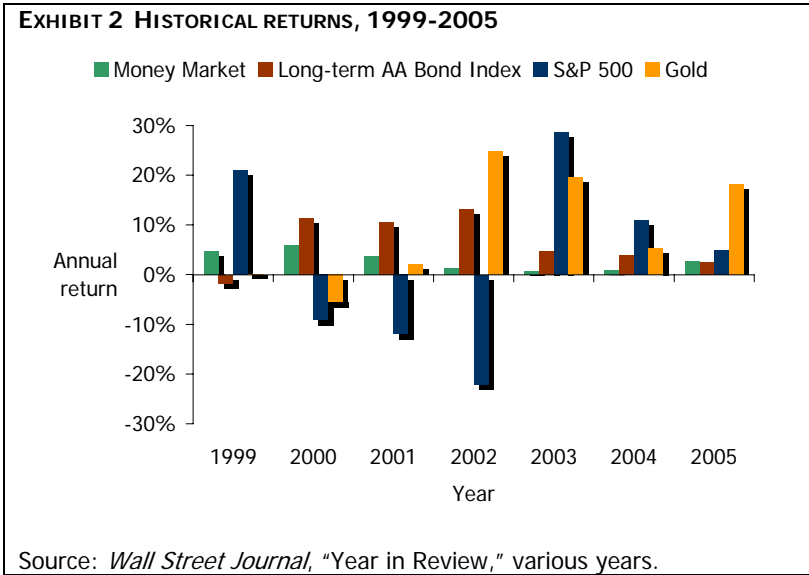
corporate bonds and common stocks, have additional risk, but also a higher expected return. **Derivatives**, which include warrants, options, and futures, all have much higher potential returns – but also higher risk.



¹ Please be aware that repeated emails within one day may be interpreted by an email filter as spam.

If we look back on returns historically, we see that the level and volatility of returns is consistent with the expectations regarding risk and return.

Consider the returns in Exhibit 2 for money market funds, corporate AA bonds, stocks (represented by the S&P 500 index), and gold. The money market returns are low, but have very little variation from year to year. Stocks and gold produced the higher returns, but these investments also had the greater volatility.



C. Calculating returns

We often describe a return on an investment in terms of an annual holding period. The return for one year on an investment is calculated as:

$$\text{Holding period return} = \frac{\text{Ending value of the investment} - \text{Beginning value of the investment} + \text{Cash flow from the investment}}{\text{Beginning value of the investment}}$$

When we refer to returns over a multiple of years, we state returns on an average annual basis. By average, we mean **geometric average**, not arithmetic average. For example, consider an investment that produces the following annual returns:

<u>Year</u>	<u>Return</u>
2006	20%
2007	15%
2008	25%

The geometric average annual return is:

$$\text{geometric average annual return} = \sqrt[3]{(1+0.2)(1+0.15)(1+0.25)} - 1 = 19.928\%$$

The arithmetic average annual return, which in this example is 20%, is not an accurate measure of the three-year return performance because it ignores compounding from period to period.

You should be prepared to calculate returns, given end-of-period values. You should also be prepared to calculate returns on investments if there are intermediate cash flows, such as dividends or interest. You should review your time value of money skills. Be sure to take the Time Value of Money Quiz at the course Blackboard site. If you score at least a 70%, we know you're ready for this course.

D. Sarbanes-Oxley Act of 2002

The Sarbanes-Oxley Act of 2002

(SOX Act) is the most wide-sweeping legislation to affect the securities industry since the Securities Act of 1933 and the Securities Exchange Act of 1934. The SOX Act affects many participants in our financial markets: investors, security analysts, corporate management, and accountants. The provisions of this Act include:

- Establishes the Public Company Accounting Oversight Board (PCAOB), with Securities and Exchange Commission (SEC) oversight.
- Prohibits an accounting firm from performing non-audit services for an audit client.
- Reduces potential conflicts of interest for CEO, Controller, CFO or Chief Accounting Officer.
- Specifies rules for "independent" audit committees.
- Requires certifications of audit reports by CEO and CFO.
- Requires reimbursement of bonuses or other incentive based compensation in the event of a restatement.
- Prohibits insider trading during pension fund black-outs.
- Prohibits personal loans to executives.
- Requires disclosure of management assessment of internal controls.
- Requires disclosure of whether at least one member of the audit committee is a financial expert.
- Requires real time disclosures of changes in operations or financial condition.
- Specifies that destroying documents to impede an investigation is a felony.
- Specifies that securities fraud is a crime punishable by fines and up to 10 years of prison.
- Grants additional powers to the SEC (e.g., freeze payments to officer).

The SOX Act came about following numerous financial scandals that involved publicly-traded corporation, accountants, investment bankers, and brokers. As you can see in Exhibit 3, most of the provisions of the SOX Act are a response to specific misdeeds.

EXAMPLE: ANNUAL RETURNS

Problem

Consider the following returns on an investment.

Year	Return
2006	10%
2007	-5%
2008	20%

What is the average annual return on this investment?

Solution

$$\text{Return} = \sqrt[3]{(1.1)(0.95)(1.2)} - 1$$

$$\text{Return} = [(1.1)(0.95)(1.2)]^{1/3} - 1 = 7.837\%$$

How do you take a value to the 1/3 power? Using an HP10B calculator, use the y^x key. Using a TI-83/84 calculator, use the \wedge key.

EXHIBIT 3 SOME OF THE IMPETUS FOR SOX

AUDIT AND NON-AUDIT FEES

- In 2000, Adelphia paid Deloitte & Touche LLP audit fees of \$1,319,000 and non-audit fees of \$2,182,000.
- Founding family members (Rigas) were found guilty of bank fraud and conspiracy; Adelphia filed for bankruptcy in 2002.

CONFLICTS OF INTEREST

- HIH Insurance Ltd (Australia) included two retired members of the external auditor's firm as board members.
- Results? "undesirable corporate governance practices" [The company collapsed]

INDEPENDENCE OF AUDIT COMMITTEE MEMBERS

- Adelphia 2000 audit committee: Pete J. Metros and Timothy Rigas

REIMBURSEMENT OF BONUSES

- Gateway fraud, 2000 [earnings manipulation by extending credit to those denied credit, manipulating revenue, etc.], with exiting executives receiving bonuses.
- John J. Todd (CEO), 2000: salary of \$412,500 + \$224,500 bonus; \$1,567,500 cash severance payment
- Jeffrey Weitzen (CFO), 2000: salary of \$1 million + \$4.95 million in exercised options gain; \$5.64 million cash severance payment.

PROHIBITS INSIDER TRADING DURING PENSION FUND BLACK-OUTS

- Kenneth Lay, CEO of Enron, "went so far as to tout the [Enron] stock as a good investment for his own employees -- even after he had been warned that a wave of accounting scandals was about to engulf the corporation."
- Enron stock fell from \$85/share to under \$1/share once the scandal was revealed. Insiders sold before the price fell, but employees (who had invested on average 60% of their pension in Enron) could not trade because of the pension black-out period.

Learn more about the recent scandals (links):

- [CNN's Money Scandal](#) site
- [Corporate Scandal Primer](#) by the *Washington Post*
- [Adelphia](#), presented by the AICPA
- [Enron](#), summarized by *Business Week*

How does SOX change things? There are many implications, including increased disclosures and increased disclosures. In addition, any misstatements by the company are now a greater cause for concern for corporate management and auditors.

The recent problems related to the option back-dating of options, however, further frustrates the efforts to restore confidence in corporate management and financial statement reporting. A **back-dated option** is an executive option grant in which the date of the grant has been manipulated to provide greater benefits to the executive and to minimize taxes. Such manipulation, however, violates financial disclosure laws, as well as tax laws.

OPTION BACK-DATING

Many companies were swept up in back-dating of option include companies Affiliated Computer Services, CNET, KB Home, and Home Depot. At this time cases are still being investigated, though there have been some plea deals and executives resigning.

- [The Perfect Payday](#), Wall Street Journal special section.
- ["Untainted Firms Alter How they Offer Options"](#), by Joann S. Lublin, Wall Street Journal.

2. Learning outcomes

- LO1.1 Rank investments on the basis of both expected returns and risk.
- LO1.2 Calculate the return on an investment.
- LO1.3 List and briefly describe the key provisions of the Sarbanes-Oxley Act of 2002.
- LO1.4 Describe the implications of Sarbanes-Oxley Act of 2002 for auditors, corporate management, and investors.

3. Module Tasks

A. Review the course material

- [Syllabus](#)
- [Course Schedule](#)
- [Blackboard site](#)
- [Mirror site](#)

B. Required readings

- Chapter 1, "Understanding Investments," *Investments: Analysis and Management*, by Charles P. Jones, 9th edition.

C. Other material

- Time Value of Money Review Quiz, available at the [course Blackboard site](#). Retake this exam until you score above a 70%.
- Current events, a course journal available through Blackboard®.

D. Optional readings

- [The time value of money: Part I](#), a reading prepared by Pamela Peterson Drake
- [The time value of money: Part II](#), a reading prepared by Pamela Peterson Drake

E. Practice problems sets

- [Textbook author's practice questions, with solutions.](#)

F. Module quiz

- Available at the [course Blackboard site](#). See the [Course Schedule](#) for the dates of the quiz availability.

G. Project progress

- You will be assigned a company by the end of the first week. You should do the following:
 1. Locate your company's investors/shareholders web site.
 2. Research your company's line(s) of business, basic history, and industry.
 3. Begin the write-up of the company's operations.
 4. Post a message on your group's discussion board, letting your group members know how best to reach you for information sharing purposes.

4. What's next?

In Module 2, we will look at the different types of direct and indirect investments. Direct investments include stocks, bonds, and derivatives. Indirect investments include mutual fund shares, closed-end fund shares, and exchange traded fund shares.