Accounting Finance & Risk Management: Session 600

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Goals

- Explain core concepts
  1. Role of accounting and finance in business
  2. Core risk management fundamentals
  3. Risk management tools and building blocks used
  4. Case study - Why Lehman Brothers failed and key lessons learned

What is Accounting

?

Accounting

The systematic recording, reporting and analysis of financial transactions of a business

Accounting Process

1. **Identify** accounting transactions
2. **Measure** attributes of transactions
3. **Record** them in a financial system
4. **Prepare** financial statements

Financial Statements

1. Balance Sheet
2. Income Statement
3. Cash Flow Statement

Accounting

Relatively few people become accountants or CPAs but almost all people rely on accounting information

Accounting

Accounting information is used to make decisions by numerous stakeholders

1. Management
2. Investors
3. Potential Investors
4. Analysts
5. Governmental agencies
6. Regulators

Accounting

Financial Accounting - primarily externally oriented

1. Directed to those not intimately involved with entity day-to-day financial activities
2. Concerned with historical results of entity performance

Accounting

Managerial Accounting - primarily internally oriented

1. Use of financial and economic information to plan, control and support management decision making process
2. Cost accounting is a subset of managerial accounting and involves the determination of product, process and service cost

Other Key Accounting Terms

1. <u>GAAP</u> - Generally Accepted Accounting Principles are pronouncements
2. <u>FASB</u> – Financial Accounting Standards Board established 1973
3. <u>Accrual Accounting</u> – recognition of revenues and expenses as they occur, not when cash receipt occurs

Other Key Accounting Terms

4. Bookkeeping - procedures used to record entity transaction activities
5. Controller – Title used to denote the chief accounting officer of the company

History of Accounting

- 3000 B.C. – Clay tablets used by Mesopotamians to record tax receipts
- 1494 – Franciscan Monks developed the double-entry bookkeeping system
- 1750 –1850 - Industrial Revolution generated the need for large amounts of capital to finance enterprises
  - Corporate form of organization
  - Need of investors and financial reporting
  - Accounting profession followed British money to America

History of Accounting

US Accounting System Milestones

1. 1932-34 – American Institute of Accountants and NYSE agree on 5 broad principles of accounting

2. 1933 – SEC is created

3. 1973 – Financial Accounting Standards Board (FASB) and the International Accounting Standards Committee (IASC) created

4. 1988 – Code of Conduct - American Institute of Certified Public Accountants revised the standards for management accountants

What is Finance

?

Finance

The art and science of raising capital and how best to deploy it to generate greater profit

Types of Finance

Three areas:

1. Corporate Finance
2. Public Finance
3. Personal Finance

The Money Machine

(Revenue – Expenses) = Profit $$$

1. Revenue = Price x Quantity

2. Expenses = Fixed + Variable

Profit = Revenue – Expenses

Corporate Finance Challenge

Firms have finite capital

- How to raise capital and at what cost
- Risk-Return relationship
- Capital deployment decision making

The Holy Grail of Finance

- Capital should flow to its highest and best use
- When it doesn’t…we have asset bubbles, crashes and recessions

Historical Asset Bubbles

The capital markets have a long history of generating dangerous asset bubbles

1. Tulip - 1637
2. South Sea - 1720
3. Railroad - 1873
4. Stock Crash 1929
5. Nikkei - 1989

Asset Bubbles

Capital markets have a long history of generating asset bubbles

6. Dotcom - 2000
7. Real Estate/Credit – 2007/08
8. Gold – 2012?
9. Others ?

Corporate Finance

- Designated department that makes financial decisions
  - Short-term – Working capital management
  - Long-term – Capital budgeting decisions
- Executives that run these areas typically hold titles of Treasurer, CFO or VP of Finance
- Capital should flow to its highest and best use

The 10 Finance Principles

1. Maximize shareholder value
2. Financial capital
3. Human capital
4. Capital markets – greater than 1 year
5. Money markets - less than 1 year

Finance Principles

6. Firm capital structure – Debt/equity
7. Cost of capital
8. Public/Private financing
9. Leverage
10. Profits

Financial Statement Basics

The Banking Example

Assets		Liabilities	
Cash	$5	Deposits	$75
Loans	$90	Debt	$15
Portfolio	$5		
	$100	Equity	$10

Company Balance Sheet

Assets = Liabilities + Owners' Equity

Uses of funds

Productive capacity

Creditors' Claims

Owners' Claims

Sources of funds

(Financing)

Income Statement

- Report of profitability for a period of time.
- Based on the accrual method of accounting
  - Revenues are recognized when earned without regard to the timing of cash payments.
  - Expenses are recognized in the same period as the related revenues (or benefits) without regard to timing of cash payments.

Purpose of Income Statement

- Provides investors with information about
  - earnings generated by the firm in the past fiscal year and its ability to generate wealth in the future.
  - the various revenues, expenses, gains and losses of the firm
- The information is most useful to stock investors.
- Income does not necessarily correspond to cash flows.

Statement of Cash Flows

- Reports cash flows during a period related to the firm's operating, investing, and financing activities.

Purpose of Statement of Cash Flows

- Provides investors with details about cash inflows and outflows during the period.
  - Does the firm generate enough cash to make its debt payments in the next period?
  - Does the firm generate enough cash to finance growth with internal funds, or will it have to raise money by issuing stock or debt?

Statement of Cash Flow

- Operating activity
  - Cash receipts from sales
  - Cash payments to suppliers
  - Cash payments to employees
- Investing activity
  - Cash payments for property, plant, equipment, intangible assets, acquisitions.
  - Cash receipts from sales of long-term assets.
- Financing activity
  - Cash receipts/payments related to debt
  - Cash receipts from stock issuances
  - Cash payments for dividends and stock repurchases

What is Risk Management

?

"We've considered every potential risk except the risks of avoiding all risks."

Risk Management

- Use of techniques to identify, prioritize and mitigate against undesirable risks

Risk Management – The Facts

1. All of life, not just banking, is the management of risk - not its elimination

2. Companies have to seek risk to gain return

3. Companies that take <u>no</u> risk can go out of business just as fast as those that take <u>too much</u> risk

Finance & Risk Management

- Finance is how to get and manage the cash needed to create profit and long-term shareholder value

- Risk management is how to make sure you don’t lose the cash you make, or take excessive risk and burn down the house

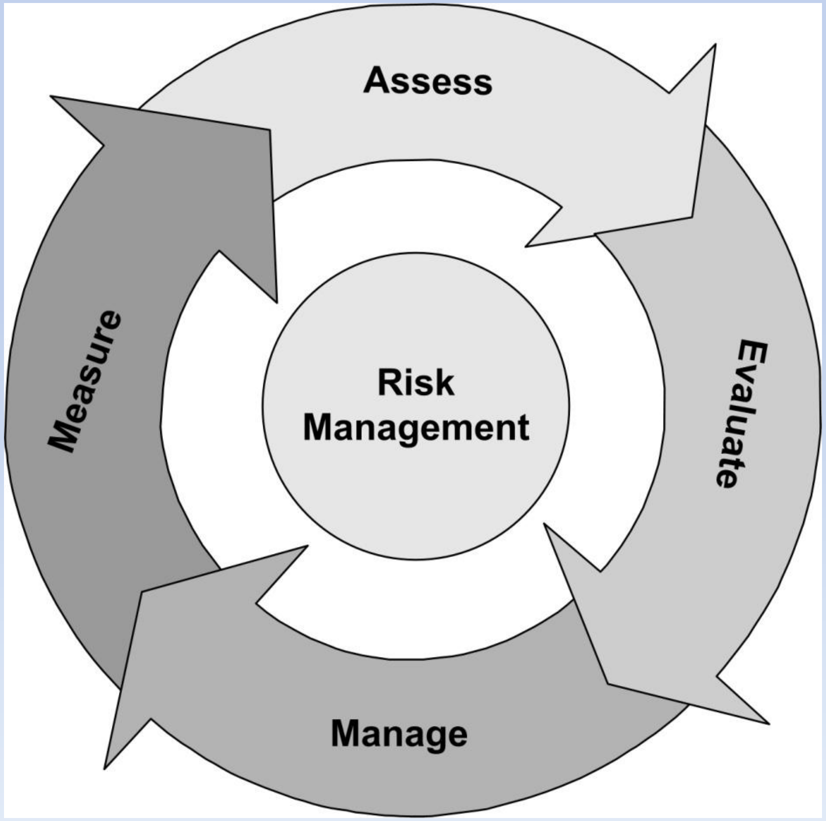
Risk Management

- Is corporate counsel in the risk management business?

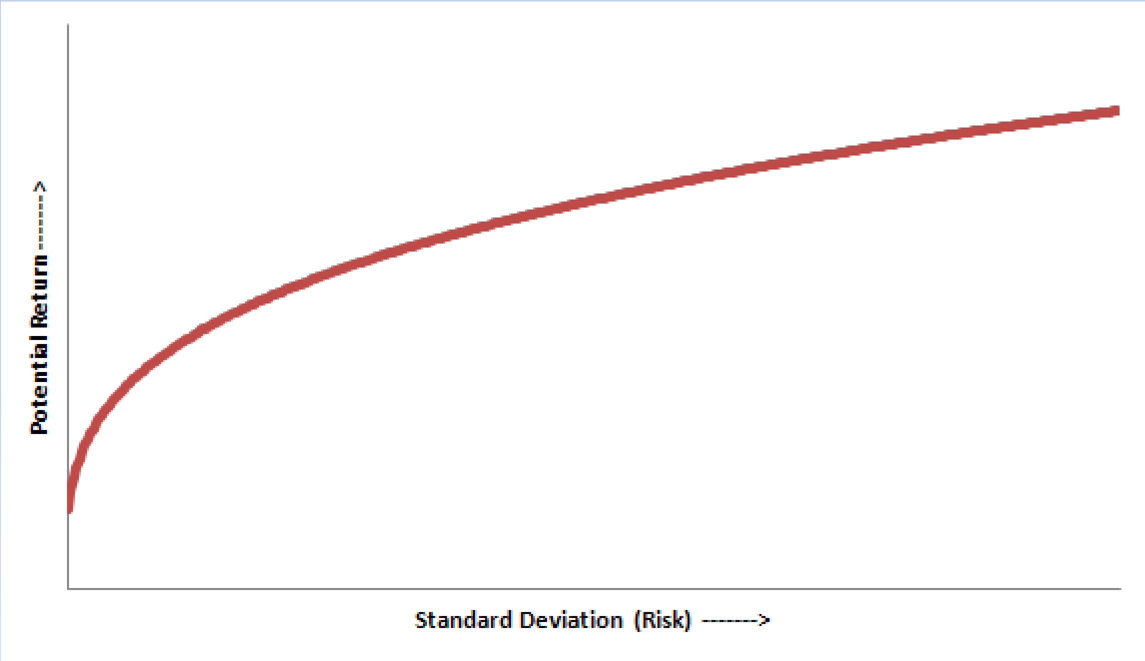
Risk Management Theory

- Risk Management is part math, art and common sense
- Policies, procedures, controls and systems are needed for effective risk management

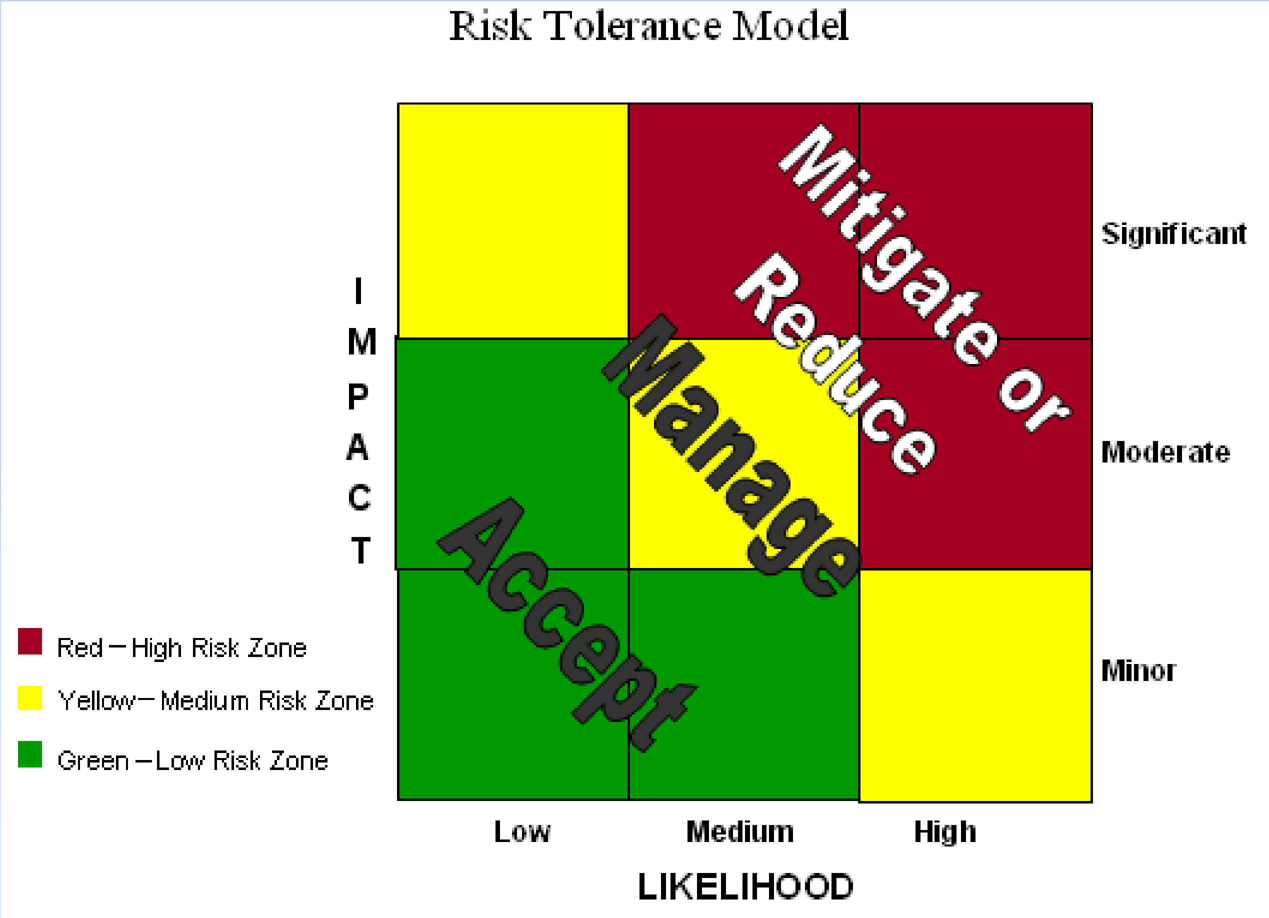
Risk Management Relationship



Risk and Return Relationship



Risk Tolerance Model



Risk Management

- What types of risk(s) should companies be concerned about?
- How many major types of risks can you think of????
  - 3, 5, 10, 12…

Risk Management

Major Types of Risks

1. Credit Risk
2. Market Rate
3. Foreign Exchange
4. Interest Rate Risk
5. Operational – error and/or fraud
6. Systemic
7. Reputation

Risk Management

Types of Risks

8. Technology
9. Funding Risk
10. Liquidity
11. Model Risk
12. Sovereign Risk
13. Acts of nature
14. Legal Risk

Risk Management

Stronger risk measurement can reduce the level of financial mistakes and losses

Red Flags To Watch For

Recent Accounting Scandals

1. Xerox – 2000
2. Enron – 2001
3. Worldcom/Tyco/Adelphia Communications – 2002
4. Parmalat/HealthSouth – 2003
5. AIG – 2004
6. Bernie Madoff - 2008
7. Lehman Brothers – 2010
8. Olympus Corporation - 2011

Accountants "Wall of Shame"

1. KPMG – Xerox
2. Arthur Andersen – Enron/Worldcom
3. Deloitte & Touche – Adelphia Communications
4. Pricewaterhouse Coppers – Tyco
5. Grant Thornton – Parmalat
6. Friehling & Horowitz - Bernie Madoff
7. Lehman Brothers/HealthSouth/Olympus – Ernst & Young

Reasons to Manage Earnings

Partial list of incentives to manage earnings lower:

- Bonus plans
- Stock option compensation
- Regulation
- Government scrutiny
- Earnings smoothing

Vehicles for Earnings Management

1. Improper revenue recognition
2. Improper capitalization of expenses
3. Cookie-jar reserves
4. Creative acquisition accounting

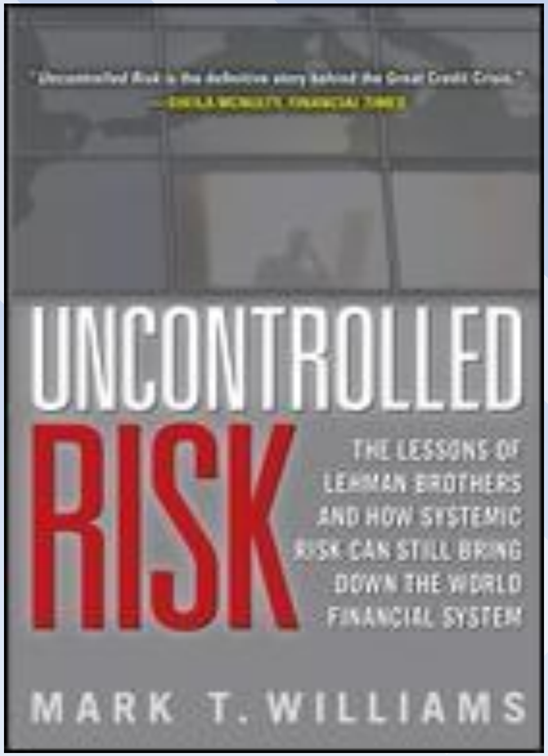
The Red Flags

- Revenue Side
  1. Recording it before it is earned
  2. Make fictitious entries
  3. Shift income to later period
  4. Boost profits with non recurring transactions

The Red Flags

- Cost Side
  1. Shift expenses to later period
  2. Shift future expenses to an earlier period
  3. Failing to disclose liabilities

A Case Study - Uncontrolled Risk: Lessons Still Unlearned from Lehman Brothers



Lehman Brothers
R.I.P.
Born: 1850
Died: 2008

Is the Story as Simple as Greed?

Risk Taking

- Investment banks take risk to gain return
- Return is generated from the following activities:
    1. Proprietary trading
    2. Underwriting
    3. Advisory work e.g., mergers and acquisitions
    4. Money management

The Role of Risk Management

1. Define, measure and report on risk
2. Allocate capital to its highest and best use
3. Make sure that risk taking is not excessive
4. Enforce firm policies and procedures

Risk Management Structure

Strong risk management structures include

1. Independent risk management
2. Independent reporting structure
3. Risk managed at the unit, division and enterprise-wide level
4. Board level risk management committee
5. Adequate budget and resources

Corporate Culture – The Gorilla

Changing Risk Culture

External factors

- Wall Street trend of consolidation
- Larger capital to do larger deals
- Securitizations and derivatives

Changing Risk Culture

Internal Factors

- Stakes and financial rewards larger
- Management was bonus driven
- Bonus structure incentivized employees to seek high risk transactions
- Risk taking culture grew unchecked and increased legal risk
- Risk management department was marginalized

Bets Placed

- Lehman was a hedge fund disguised as an investment bank
- Leverage kills – ratio exceeded 30 to 1
- Bets were sizable as measured in dollars
- Bets were concentrated on real estate
- Lehman bet that they were “too big to fail” - the worst case was a government rescue

Accounting Scandal – Repo 105

Lehman entered into repo 105 transactions

- Deliberate misstatement of financials
- Based on a shopped legal opinion
- $50 billion of transactions completed
- Done prior to each accounting quarter end
- Understated debt position
- Understated firm leverage ratios
- Transactions unwound at start of each quarter

Lehman's 9/15/08 Bankruptcy Uncorked Global Systemic Risk

Major Risk Management Lessons Learned

1. Management structure requires a strong executive team/board to challenge the boss
2. Effective risk management functions are not marginalized
3. If you cannot quantify risk don’t take it
4. Capital size matters and leverage kills

Major Risk Management Lessons Learned

5. Avoid excess concentration risk
6. Incentive systems can product dangerous risk-taking behavior
7. Following competition can cause peril
8. If a firm is making $ billions it could be risking $ billions