IBM

Corporate Financial Restructuring

Prof. Ian Giddy
New York University
Restructuring

- Restructuring: Any substantial change in a company’s financial structure, or ownership or control, or business portfolio.
- Designed to increase the value of the firm.
A Simple Framework

- A company is a “nexus of contracts” with shareholders, creditors, managers, employees, suppliers, etc.
- Restructuring is the process by which these contracts are changed – to increase the value of all claims.
- Applications:
  - restructuring creditor claims (Conseco);
  - restructuring shareholder claims (AT&T);
  - restructuring employee claims (UAL)
“Nexus of Contracts”

Franchisors

Senior lenders

Salespeople

Subordinated lenders

Management

Shareholders

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Corporate Financial Restructuring

Professor Ian Giddy

Goals
Corporate restructuring involves any substantial change in a company’s financial structure, or ownership or control, or business portfolio, design or operations. This course will focus on financial restructuring, in particular major topics employing in-depth group discussions and case studies. Examples of such situations include stress-induced financial restructuring, recapitalizations, private equity and leveraged buyouts, mergers and acquisitions, and divestitures. In many cases resolving these issues will require structured finance solutions. Structured finance techniques include the design of debt, equity and hybrid financing techniques in order to resolve particular issuer or investor problems that cannot be solved by conventional methods.

Instructor
Prof. Ian Giddy is a graduate of the University of Michigan (MBA 1972, PhD 1974) and the University of the Witwatersrand (BSc 1970). He has taught finance at NYU, Columbia, Wharton, Chicago and abroad for the past twenty-five years. He was Director of International Fixed Income Research at Drexel Burnham Lambert from 1986 to 1989. He is the author or co-author of numerous articles and books, including The Handbook of International Finance, The International Money Market, Cases in International Finance, Global Financial Markets, Asset Securitization in Asia and The Hudson River Watertrail Guide.

Pedagogy
The course employs cases and problems as well as classroom lectures and discussions, and “live case studies” to offer a hands-on learning experience. We will make use of international as well as domestic examples. Each student will be expected to prepare thoroughly and to participate actively in class discussion. Material covered in the assigned readings will generally not be repeated in class. Rather, class time will be devoted to lecture and case discussion, applying the material covered in the readings.
Why and How

- Why restructure?
  - What is the fundamental problem to be solved?
- How restructure?
  - Create or preserve value, and negotiate how the gains are distributed
- When restructure?
  - Pre-emptive, or under duress?
- Implementing restructuring
Restructuring at Tower

Music Retailer Seeks Bankruptcy Protection

By JANNY SCOTT

Tower Records, one of the largest specialty retailers of music and video in the country and one of the last family-run dynasties in an industry increasingly dominated by mass merchants like Wal-Mart, filed for Chapter 11 bankruptcy protection yesterday.

The filing by Tower and its parent company, MTS Inc., comes at a time when the traditional record stores, where generations of Americans first discovered music, are under siege from big-box and electronics stores as well as from the growing availability of music online.

The filing is intended to reduce the company’s debt by $80 million so that interest costs will consume less of the company’s revenue.

Tower officials said that its 93 stores from California to New York would remain open and that neither its customers nor its employees need worry.

But some analysts said Tower’s plight was a bad sign for the industry at large.

“The future looks particularly grim for all land-based music retailers,” said Bert P. Ehrman III, managing director of the S&P group of analysts who covers Tower and record companies. He said such stores literally have a toe-tag on them and they’re boxed up for the proverbial ‘They’ve been here a long time’ situation.

With the demise of once-dominant stores like Tower that specialize in selling every category of music and do it with great care, the consumer will move to a much narrower band of music — what they hear of the top 25 songs that are programmed in various rotation styles, from MTV to Billboard.

Michael Dresner, chief executive of Newbury Comics, an independent chain of 25 record stores in the Boston area, said: “Tower is a seller of goods — that’s probably not desirable. But if the society loses 10,000 artists’ voices, that’s a disaster. Because music is the most accessible form of entertainment.”

Tower, which has 8 stores in New York State, 44 in California and outlets in states ranging from Oregon to Tennessee, had been losing money and had tried unsuccessfully to find a buyer.

Under the planned restructuring, the Solomon family, which owned Tower, would give control of the company to its creditors.

“Our issues are financial, not operational,” E. Allen Rodriguez, Tower’s chief executive, said yesterday in a statement. He said the reorganization was expected to be completed within 45 to 60 days.

Tower is far from the first record retailer to encounter problems in recent years.

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- Portfolio?
- Financial?
- Organizational?
- Or what?
Why Restructure? Some Reasons

- Address poor performance
- Exploit strategic opportunities
- Correct valuation errors
How Restructure?

- Fix the business
- Fix the financing
- Fix the ownership/control
- Create or preserve value
- Negotiate distribution of the value
How Restructure? Some Obstacles

- There are market imperfections or institutional rigidities that make it difficult for the firm to recontract

- These include:
  - Transaction costs
  - Taxes
  - Agency costs
  - Information asymmetries

- Example: The restructuring of UAL
TDI in Trouble

![Bar chart showing TDI, Debt, and EBITDA for years 1986 to 1995.](chart.png)
When The Creditors are Prowling

- **Reason**
  - The financing is bad
  - Business mix is bad
  - The company is bad

- **Remedy**
  - Raise equity or change debt mix
  - Sell some businesses or assets to pay down debt
  - Change control or management through M&A
Average Impact of Restructuring on Company Performance

Source: Bowman et al, “When Does Restructuring Improve Economic Performance?”
Novartis
Operating Restructuring

The increase in value that comes from the operating side:

- Better operating margins (usually economies of scale i.e., lower costs)
- or
- Future increased sales/profits from higher growth
Value-Based Management

NOPAT* → Economic Profit

NOPAT* = 
- Sales
- Operating margin
- Notional taxes
- Net Working capital
- Net Fixed Capital
- Goodwill

Invested Capital
Cost of Capital

*Net Operating Profit After Tax

Source: Ciba Specialty Chemicals
### Economic Profit: Positive

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1997change mio CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additives</td>
<td>115</td>
<td>138</td>
</tr>
<tr>
<td>Consumer Care</td>
<td>(38)</td>
<td>13</td>
</tr>
<tr>
<td>Perf. Polymers</td>
<td>(26)</td>
<td>9</td>
</tr>
<tr>
<td>Pigments</td>
<td>2</td>
<td>49</td>
</tr>
<tr>
<td>Textile Dyes</td>
<td>(75)</td>
<td>(7)</td>
</tr>
<tr>
<td>(Corporate)</td>
<td>(177)</td>
<td>(138)</td>
</tr>
<tr>
<td>Total Group</td>
<td>(199)</td>
<td>64</td>
</tr>
</tbody>
</table>
Novartis: Financial Restructuring

- Fixed the cash and working capital
- Assets
  - Cash
  - Fixed Assets
- Liabilities
  - Debt
  - Equity
- Fixed the capital structure
Financial Restructuring

The increase in value that comes from a purely financial effect:

• Lower taxes
• Higher debt capacity
• Better use of idle cash
Valuation is a Key to Unlock Value

- Value with and without restructuring
- Consider means and obstacles
- Who gets what?
- Minimum is liquidation value
Dear Michael,

February 11, 2004

Mr. Michael D. Eisner
The Walt Disney Company
500 South Buena Vista Street
Burbank, California 91521

Dear Michael:

I am writing following our conversation earlier this week in which I proposed that we enter into discussions to merge Disney and Comcast to create a premier entertainment and communications company. It is unfortunate that you are not willing to do so. Given this, the only way for us to proceed is to make a public proposal directly to you and your Board.

We have a wonderful opportunity to create a company that combines distribution and content in a way that is far stronger and more valuable than either Disney or Comcast can be standing alone. To this end, we are proposing a tax-free stock for stock merger in which Comcast would issue 0.78 of a share of its Class A voting common stock for each share of Disney. This represents a premium of over $5 billion for your shareholders, based on yesterday’s closing prices. Under our proposal, your shareholders would own approximately 42% of the combined company.

The combined company would be uniquely positioned to take advantage of an extraordinary collection of assets. Together, we would unite the country’s premier cable provider with Disney’s leading filmed entertainment, media networks and theme park properties.

.....
Capital Structure: Too Little or Too Much?

VALUE OF THE FIRM

DEBT RATIO

Nokia

Ahold

Optimal debt ratio?
See Saw

Business Uncertainty

Operating Leverage

Financial Risk

Financial Leverage
Debt Restructuring Analysis

- Fix the Leverage
  - Leverage Up
    - Optimize
      - Investment opportunities
      - Finance with debt
  - Lev. Recap
    - No investment opportunities
    - Issue debt pay dividend
  - LBO
    - Issue debt pay big dividend
    - Analyze debt service capacity
  - Negotiate
    - Analyze debt service capacity
    - Negotiate allocation
  - Leverage Down
    - Ch 11
      - Restructure
      - Analyze debt service capacity
      - Pecking order
        - Force allocation

- Ch 7
“Nexus of Contracts”

- Franchisors
- Senior lenders
- Salespeople
- Subordinated lenders
- Management
- Shareholders
Restructuring Debt and Equity

- TDI (sequence of operational and financial restructuring efforts)
  - Restructuring under threat of financial distress
  - Restructuring to exploit free cash flows
  - Exit options
TDI Financial History

![Bar Chart: TDI Financial History]

- **Leveraged Buyout**
- **New Management**

**EBITDA**

<table>
<thead>
<tr>
<th>Year</th>
<th>$millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td></td>
</tr>
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<td>1989</td>
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<tr>
<td>1993</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td></td>
</tr>
</tbody>
</table>
Restructuring Debt and Equity at TDI

Evaluate the financial restructuring that took place at TDI:

- Effect of an LBO on capital structure?
- How would LBO lenders protect their interests?
- With too much debt, what possible restructuring plans?
# Restructuring, Phase 1

A company is struggling with a weaker market. It expects a turnaround in a couple of years, but now must work out the amount of debt it can carry.

Based on last year's performance, management estimates EBIT at 12 m

Discussions with the banks show that in order to avoid violating covenants a minimum EBIT interest coverage ratio of 1.3 must be maintained

Currently US treasurys pay 4%

It currently has debt of 90 m

What is the company’s debt capacity?

### Estimating borrowing capacity

<table>
<thead>
<tr>
<th>Given:</th>
<th>EBIT/Cov. ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT</td>
<td>$ 12</td>
</tr>
<tr>
<td>Min EBIT int coverage ratio</td>
<td>1.3</td>
</tr>
<tr>
<td>Interest capacity</td>
<td>$ 9</td>
</tr>
<tr>
<td>Interest rate</td>
<td>14.00%</td>
</tr>
<tr>
<td>Debt capacity</td>
<td>$ 66</td>
</tr>
</tbody>
</table>

Source: debtcapacity.xls
# Interest Coverage, Ratings, and Cost

For smaller and riskier firms

<table>
<thead>
<tr>
<th>If EBIT interest coverage ratio is</th>
<th>&gt;</th>
<th>≤</th>
<th>Rating is</th>
<th>Spread is</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.4999999</td>
<td>D</td>
<td>14.00%</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td>0.7999999</td>
<td>C</td>
<td>12.70%</td>
<td></td>
</tr>
<tr>
<td>1.25</td>
<td>1.2499999</td>
<td>CC</td>
<td>11.50%</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1.4999999</td>
<td>CCC</td>
<td>10.00%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1.9999999</td>
<td>B-</td>
<td>8.00%</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>2.4999999</td>
<td>B</td>
<td>6.50%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2.9999999</td>
<td>B+</td>
<td>4.75%</td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>3.4999999</td>
<td>BB</td>
<td>3.50%</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>4.4999999</td>
<td>BBB</td>
<td>2.25%</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5.9999999</td>
<td>A-</td>
<td>2.00%</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>7.4999999</td>
<td>A</td>
<td>1.80%</td>
<td></td>
</tr>
<tr>
<td>9.5</td>
<td>9.4999999</td>
<td>A+</td>
<td>1.50%</td>
<td></td>
</tr>
<tr>
<td>12.5</td>
<td>12.5</td>
<td>AA</td>
<td>1.00%</td>
<td></td>
</tr>
<tr>
<td>100000</td>
<td>100000</td>
<td>AAA</td>
<td>0.75%</td>
<td></td>
</tr>
</tbody>
</table>
What Possible Restructuring?

- Extend debt maturity (principal and/or interest)
- Reduce interest
- Swap debt into equity
- Raise new funding
- Sell assets
TDI Financial History

Banks are getting really annoyed

<table>
<thead>
<tr>
<th>Year</th>
<th>Debt</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>1987</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>1988</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td>1989</td>
<td>90</td>
<td>25</td>
</tr>
<tr>
<td>1990</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td>1991</td>
<td>110</td>
<td>25</td>
</tr>
<tr>
<td>1992</td>
<td>120</td>
<td>20</td>
</tr>
<tr>
<td>1993</td>
<td>120</td>
<td>20</td>
</tr>
<tr>
<td>1994</td>
<td>130</td>
<td>25</td>
</tr>
<tr>
<td>1995</td>
<td>130</td>
<td>25</td>
</tr>
</tbody>
</table>
Restructuring, Phase 2

A company is struggling with a too much debt. It expects to resume a growth rate of 7% soon, but now must renegotiate its capital structure.

Based on last year’s performance, management estimates EBIT at 11 m. Discussions with the banks show that in order to extend credit, they insist on a minimum EBIT interest coverage ratio of 1.5.

<table>
<thead>
<tr>
<th>Currently US treasurys pay</th>
<th>4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The company has debt of</td>
<td>110 m</td>
</tr>
<tr>
<td></td>
<td>paying 12.0%</td>
</tr>
<tr>
<td>Equity is estimated to be worth</td>
<td>30 m</td>
</tr>
<tr>
<td>What is the debt worth?</td>
<td>0.8</td>
</tr>
</tbody>
</table>

What is the company’s debt capacity?
What new capital structure could be negotiated with the banks?

### Estimating borrowing capacity

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBIT</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Min EBIT int coverage ratio</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Interest capacity</td>
<td>$ 7</td>
<td></td>
</tr>
<tr>
<td>Interest rate</td>
<td>12.00%</td>
<td></td>
</tr>
<tr>
<td>Debt capacity</td>
<td>$ 61</td>
<td></td>
</tr>
</tbody>
</table>

### Possible capital structure

<table>
<thead>
<tr>
<th></th>
<th>Debt</th>
<th>Mezzanine</th>
<th>Equity</th>
<th>Total financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-restr debt value:</td>
<td>79.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks happy with</td>
<td></td>
<td>Debt 61</td>
<td>Equity 20</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td></td>
<td></td>
<td></td>
<td>81</td>
</tr>
</tbody>
</table>
Restructuring Debt and Equity at TDI (C)

Consider the choices facing TDI in 1994:

- Evaluate the alternatives available to take best advantage of TDI’s free cash flow:
  - Leveraged buyout
  - Leveraged ESOP
  - Leveraged recapitalization

- Or: Invest cash or debt in growth opportunities
- Or: Do nothing to retain flexibility
TDI Financial History

![Bar chart showing TDI financial history from 1986 to 1995. The chart compares Debt and EBITDA over the years.]
# Restructuring, Phase 3

The company has succeeded in improving EBIT. Now management is considering doing a leveraged recap.

<table>
<thead>
<tr>
<th>Current the company has debt of</th>
<th>$90 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management estimates EBIT at</td>
<td>$45 m</td>
</tr>
<tr>
<td>Banks' minimum EBIT interest coverage ratio</td>
<td>2</td>
</tr>
<tr>
<td>Currently US treasurys pay</td>
<td>4%</td>
</tr>
<tr>
<td>The estimated value of the firm is</td>
<td>$250 m</td>
</tr>
<tr>
<td>The firm's tax rate is</td>
<td>30%</td>
</tr>
</tbody>
</table>

What is the company's debt capacity?
What should they do?
What effect would this have on the share price?

<table>
<thead>
<tr>
<th>Estimating borrowing capacity</th>
<th>Preliminary capital structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given:</td>
<td></td>
</tr>
<tr>
<td>EBIT</td>
<td>Debt $214</td>
</tr>
<tr>
<td>Min EBIT int coverage ratio</td>
<td>Mezzanine</td>
</tr>
<tr>
<td>Interest capacity</td>
<td>Equity $36</td>
</tr>
<tr>
<td>Interest rate</td>
<td>Total financing $250</td>
</tr>
<tr>
<td>Debt capacity</td>
<td>Dividend? $124</td>
</tr>
<tr>
<td></td>
<td>Tax shield gain? 13.05</td>
</tr>
<tr>
<td></td>
<td>PV tax shield gain? $125</td>
</tr>
<tr>
<td></td>
<td>Assumes growth 3%</td>
</tr>
<tr>
<td></td>
<td>WACC 10.50%</td>
</tr>
<tr>
<td></td>
<td>Equity value: $285</td>
</tr>
<tr>
<td></td>
<td>Gain of 78%</td>
</tr>
</tbody>
</table>

Source: debtcapacity.xls
Time for an IPO?
## Restructuring Checklist

| Figure out what the business is worth now | Use valuation model – present value of free cash flows |
| Fix the business mix – divestitures | Value assets to be sold |
| Fix the business – strategic partner or merger | Value the merged firm with synergies |
| Fix the financing – improve D/E structure | Revalue firm under different leverage assumptions – lowest WACC |
| Fix the kind of equity | What can be done to make the equity more valuable to investors? |
| Fix the kind of debt or hybrid financing | What mix of debt is best suited to this business? |
| Fix management or control | Value the changes new control would produce |
Applying the Checklist

Goldfield Corporation: Company Report

Goldfield Corporation is engaged in electrical construction and real estate development. Its electrical construction business, through its subsidiary Southeast Power Corporation, includes the construction of transmission lines, distribution systems and substations and other electrical installation services for utility systems and industrial and specialty projects, including fiber optic cable installation which is primarily overhead (Optical Ground Wire and All-Dielectric Self Supporting Cable). The primary focus of the Company's real estate operations is the development of waterfront condominium projects. Goldfield had purchased five sites on the east coast of Central Florida, on all of which it has developed or plans to develop condominium complexes. The Company has developed two of the sites that were sold, one site is under construction and the remaining two sites are in the permitting/planning stage of development.

Stock Activity

| Last Price | 0.56 |
| 52 Week High | 1.16 |
| 52 Week Low | 0.51 |
| Volume | 22,400 |
| Average Daily Volume (13wk) | 103,300 |
| 50 Day Moving Average | 0.66 |
| 200 Day Moving Average | 0.70 |
| Volatility (beta) | 1.7 |

Quick Facts

Location: 100 Rialto Place
Suite 500
Melbourne FL 32901
Phone: (321) 724-1700
Fax: (407) 724-1703

Web Site: http://www.goldfieldcop.com

Industry: Heavy Construction

Employees: 133

Exchange: AMEX

Stock Price History

| Fy1 | Last 3 Months | -6.7% | 61 |
| Fy1 | Last 6 Months | -13.8% | 18 |
| Fy1 | Last 12 Months | -9.7% | 16 |

Institutional Statistics

Analyst Consensus: NA

Institutional Ownership: 1.10%

Want to learn how to evaluate a stock? Walk through the steps using the Research Wizard.
Risk and Return

- A positive relationship exists between risk and nominal or expected return
- The actual return earned on a security will affect the subsequent actions of investors
- Investors must be compensated for accepting greater risk with the expectation of greater return
Equity versus Bond Risk

Assets
- Uncertain value of future cash flows

Liabilities
- Debt
  - Contractual int. & principal
  - No upside
  - Senior claims
  - Control via restrictions
- Equity
  - Residual payments
  - Upside and downside
  - Residual claims
  - Voting control rights
The Minimum-Variance Frontier of Risky Assets

"Efficient frontier"

Global minimum-variance portfolio

Individual assets
The Cost of Capital

<table>
<thead>
<tr>
<th>Choice</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Equity</td>
<td>Cost of equity</td>
</tr>
<tr>
<td>- Retained earnings</td>
<td>- depends upon riskiness of the stock</td>
</tr>
<tr>
<td>- New stock issues</td>
<td>- will be affected by level of interest rates</td>
</tr>
<tr>
<td>- Warrants</td>
<td></td>
</tr>
</tbody>
</table>

**Cost of equity = riskless rate + beta * risk premium**

<table>
<thead>
<tr>
<th>2. Debt</th>
<th>Cost of debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Bank borrowing</td>
<td>- depends upon default risk of the firm</td>
</tr>
<tr>
<td>- Bond issues</td>
<td>- will be affected by level of interest rates</td>
</tr>
<tr>
<td></td>
<td>- provides a tax advantage because interest is tax-deductible</td>
</tr>
</tbody>
</table>

**Cost of debt = Borrowing rate (1 - tax rate)**

Debt + equity = Cost of capital = Weighted average of cost of equity and cost of debt; weights based upon market value.

**Cost of capital = \( k_d \left[ D/(D+E) \right] + k_e \left[ E/(D+E) \right] \)**
Pfizer’s WACC

- We do not recommend any specific changes to Pfizer's D/E ratio.
- We observe that management could safely increase the D/E ratio (slightly decreasing the WACC) if worthy projects were identified.
- Should management choose to increase the D/E ratio, the bond rating would not be lowered until the D/E ratio hits approximately 30%.

(See Excel spreadsheet for details.)
Investment Decisions: Would You Buy One of These?
Forestry Application

Forestry Profits per 100 Trees

- **Outlay $2321**
- **Year of harvest**
- **Profit**
- **Present value**

<table>
<thead>
<tr>
<th>Year of harvest</th>
<th>Profit in Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
</tr>
<tr>
<td>300000</td>
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</tr>
</tbody>
</table>
## Forestry Application

<table>
<thead>
<tr>
<th>Tree Age</th>
<th>Number of Before Harvest</th>
<th>Number of Trees Harvested</th>
<th>Useable Tree Height - Feet</th>
<th>Tree Diameter - Inches</th>
<th>Volume per Tree - Cubic Feet</th>
<th>Marketable Wood per Tree - Board Feet</th>
<th>Value per Tree</th>
<th>Gross Harvest Proceeds</th>
<th>Harvest and Process- ing Costs</th>
<th>Net Harvest Proceeds</th>
<th>Care and Management Fee</th>
<th>Net Profit per Harvest Proceeds</th>
<th>Cumulative Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-7</td>
<td>100</td>
<td>15</td>
<td>(mortality and cull loss)</td>
<td>8</td>
<td>4.5</td>
<td>22</td>
<td>$174</td>
<td>$3,472</td>
<td>$521</td>
<td>$2,951</td>
<td>$177</td>
<td>$2,774</td>
<td>$2,774</td>
</tr>
<tr>
<td>8</td>
<td>85</td>
<td>20</td>
<td>20</td>
<td>8</td>
<td>4.5</td>
<td>22</td>
<td>$174</td>
<td>$3,472</td>
<td>$521</td>
<td>$2,951</td>
<td>$177</td>
<td>$2,774</td>
<td>$2,774</td>
</tr>
<tr>
<td>12</td>
<td>65</td>
<td>20</td>
<td>27</td>
<td>11</td>
<td>11.6</td>
<td>76</td>
<td>$769</td>
<td>$15,382</td>
<td>$2,307</td>
<td>$13,074</td>
<td>$784</td>
<td>$12,290</td>
<td>$15,064</td>
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<tr>
<td>16</td>
<td>45</td>
<td>10</td>
<td>32</td>
<td>14</td>
<td>22.2</td>
<td>187</td>
<td>$2,372</td>
<td>$23,724</td>
<td>$3,559</td>
<td>$20,165</td>
<td>$1,210</td>
<td>$18,956</td>
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<tr>
<td>20</td>
<td>35</td>
<td>5</td>
<td>35</td>
<td>17</td>
<td>35.9</td>
<td>301</td>
<td>$4,830</td>
<td>$24,151</td>
<td>$3,623</td>
<td>$20,529</td>
<td>$1,232</td>
<td>$19,297</td>
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<td>25</td>
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<td>30</td>
<td>39</td>
<td>20</td>
<td>55.3</td>
<td>465</td>
<td>$9,969</td>
<td>$299,077</td>
<td>$44,861</td>
<td>$254,215</td>
<td>$15,253</td>
<td>$238,962</td>
<td>$292,279</td>
</tr>
</tbody>
</table>

### Assumptions
- Initial price per board-foot: $5
- Price growth rate: 6%
- Harvest costs: 15%
- Management fee: 6%

### Required rate of return:
- Riskfree: 5%
- Beta: 0.58
- Market risk premium: 5.50%
- Country risk premium: 5.50%

Total from CAPM: 13.69%

- Initial cost per 100 Premium Mix: $2,321
- IRR: 30%

**Forestry Profits per 100 Trees**

![Forestry Profits Chart](chart.png)

**giddy.org/ibmfinance/forestry.xls**

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**Corporate Financial Restructuring 54**
Nokia’s Risk Management

Net foreign transaction exposure (non-EUR currencies):
- USD 15%
- GBP 30%
- AUD 7%
- JPY 26%
- SEK 5%
- Others 17%

Conclusion: Nokia’s distribution of sales and production/personnel is well balanced throughout the 10 major markets, with the exception of Japan. However, the risk due to the Japanese Yen is reduced by the fact that purchases in Yen exceed sales in Yen. Japanese companies are a major source for parts.

In 2003, Nokia used the following financial instruments and notional amounts to hedge the financial risks due to currency exchange rates, interest rates and investment activities (USDm):

Derivative financial instrument notional amount, 2003:
- Foreign exchange forward contracts 12’623
- Currency options bought 3’594
- Currency options sold 3’045
- Interest rate swaps 1’844
- Cash settled equity options 280
The Gains From an Acquisition

- **Gains from merger**
  - **Synergies**
    - Top line
    - Bottom line
  - Control
    - Financial restructuring
    - Business Restructuring (M&A)
What’s the Company Worth?

Valuation
- Liquidation
  - Dissolve
  - Break-up
- Going concern
- Acquisition
  - Control
  - Rival Advantage
- Synergies
  - Top line
  - Bottom line
- PV Cash Flows
- Comparables
- Business mix
- Financial
The Decisions That Affect Value

Macro Factors
- Economy Industry

Life Cycle
- Strategic Choices
- Financial Choices

Company Dynamics

Decision Makers
- Business Issues
- Financial Issues
- Volatility of Cash Flows
- Operating Leverage
- Financial Leverage

Restructuring
- Business M&A
  - Divestitures
  - Restructuring
- Financial Debt
  - Equity
  - Risk Management

Enhance Company Value
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http://giddy.org