Chapter 16
Retirement and Pension Planning

Chapter objectives
- To evaluate the features of a company pension plan
- To analyze alternative company retirement plans
- To list individual tax-deferred methods of saving
- To estimate your retirement needs
- To learn how to establish a personal saving plan for retirement

What Are Sources of Retirement Income?
- Social Security
- Company pension plans
- Private retirement savings

How much are Social Security Benefits?
- Are you eligible to receive SS benefits? http://www.ssa.gov/r&m2.htm
- Request a Social Security statement https://s044a90.ssa.gov/apps6z/isss/main.html

How is retirement saving different from regular saving? - Tax deferral
- Most retirement savings programs offer tax advantages - tax deferral
- You pay tax when the funds are taken out in future years
- Penalty to withdraw early
- Penalty to withdraw too late

Example: No Deferral of Taxes
$2,000 Annual Savings -Flat 28% tax rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Contribution after taxes</th>
<th>Interest inc. after taxes 7.2%</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$1,440</td>
<td>$104</td>
<td>$1,544</td>
</tr>
<tr>
<td>2</td>
<td>1,440</td>
<td>215</td>
<td>3,199</td>
</tr>
<tr>
<td>3</td>
<td>1,440</td>
<td>334</td>
<td>4,972</td>
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<tr>
<td>18</td>
<td>1,440</td>
<td>3,593</td>
<td>53,503</td>
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<tr>
<td>19</td>
<td>1,440</td>
<td>3,956</td>
<td>58,899</td>
</tr>
<tr>
<td>20</td>
<td>1,440</td>
<td>4,344</td>
<td>64,683</td>
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</tbody>
</table>

Taxes due at maturity -0-
Ending year’s balance after taxes $64,683
Example: Deferral of Taxes Tax-deductible IRA

<table>
<thead>
<tr>
<th>Year</th>
<th>Contribution after taxes</th>
<th>Interest inc. after taxes 10%</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$2,000</td>
<td>$200</td>
<td>$2,200</td>
</tr>
<tr>
<td>2</td>
<td>2,000</td>
<td>420</td>
<td>4,620</td>
</tr>
<tr>
<td>3</td>
<td>2,000</td>
<td>662</td>
<td>7,282</td>
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<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>18</td>
<td>2,000</td>
<td>9,120</td>
<td>100,318</td>
</tr>
<tr>
<td>19</td>
<td>2,000</td>
<td>10,232</td>
<td>112,550</td>
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<tr>
<td>20</td>
<td>2,000</td>
<td>11,455</td>
<td>126,005</td>
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</table>

Taxes due at maturity -35,281
Ending year's balance after taxes $90,724

Examples: The Power of a Tax Advantage

<table>
<thead>
<tr>
<th>Ending Balances</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax advantaged savings</td>
<td>$90,723.60</td>
</tr>
<tr>
<td>No deferral of taxes</td>
<td>64,683.27</td>
</tr>
<tr>
<td>Net Savings</td>
<td>$26,040.33</td>
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</tbody>
</table>

What is Erisa?
- Passed in 1974
- Regulating funding and coverage guidelines for tax-qualified, employer-sponsored pension plans

What is a “qualified retirement plan”?
- Any retirement plan that satisfies conditions set down in ERISA and therefore qualifies for special tax advantages
- Currently, almost all company plans satisfy the ERISA requirements and are thus qualified retirement plans.

What are the types of company pension plans?
- Defined-benefit plans
  - Specifies monthly benefit you will receive at retirement
- Defined-contribution plans
  - Specifies amount you receive today.
  - Future benefits are uncertain.
- Other company saving plans

Pension Terminology
- Credit Year of Service
  - Typically requires 1,000 hours
  - Determines pension benefits
- Accrued benefits: Accumulated benefits based upon credited years
- Vested benefits: Benefits you are entitled to regardless of future service
  - Cliff vesting: see textbook page
  - Graded vesting schedule
- Normal Retirement Age: age at which you are entitled to full benefits
- Early Retirement Age: earliest age at which you can retire with reduced benefits
**Defined Benefit Pension Formulas**

- **Flat benefit method**
  - benefits = a specified $ amount or % of income

- **Unit benefit method**
  - benefits depend upon units of credit service

- **Salary calculation in pension formula**
  - career average
  - final average

- **Cash balance method**
  - present value of future benefits credited to employee account for each year of service

**Survivor’s Benefits in Defined Benefit Plans for Married Workers**

- Joint and last survivor annuity unless both spouses elect otherwise
  - Payments continue as long as you or your spouse is alive
  - Reduced benefits for surviving spouse

- Alternative is a single life annuity
  - benefits cease at death of pensioner

**What you should know about your pension rights?**

- Visit the Department of Labor Website at [http://www.dol.gov/dol/topic/retirement/participantrights.htm](http://www.dol.gov/dol/topic/retirement/participantrights.htm)

**Defined Contribution Plans**

- Each worker has an account
- Your future benefit will dependent on your investment choices

**Other Company Retirement Plans**

- **401(k), 403(b) and 457 Salary Reduction Plans**
  - Taxability of earnings can be deferred until the income is withdrawn
  - Employer may provide matching contribution
  - There may be a choice of savings vehicles
  - Contributions contingent upon the profitability of the firm
  - May payout before retirement

- **Profit Sharing Plans**
  - Future savings may be highly uncertain

- **Employee Stock Ownership Plans (ESOP)**
  - Contributions are invested primarily in the employer’s stock
  - Distributions are also made in stock
  - Lack of diversification
  - As you near retirement you may elect to put part of your ESOP into diversified investments
Simplified Employee Pension Plans (SEP):
- Company sponsored pension plan utilizing individual retirement accounts
- Simplified accounting for the employer
- All contributions immediately vested
- Employee may make additional tax deferred contributions

Savings Incentive Match Plans (SIMPLE):
- For firms that employ 100 or fewer workers
- Simplifies reporting requirements
- Plan may consist of either an IRA or a 401k

What are private retirement saving tools?
- Individual Retirement Accounts
- Traditional IRA
- Roth IRA
- Keogh (HR-10) Plans
- Retirement Annuities

What are IRAs?
Trust or custodial account approved by the IRS
- the approval is based on the tax status of the account, not the merits of the investment
- Who is eligible for an IRA?
  - every individual receiving income, or alimony
  - spouses of workers with market earnings

Who much can I contribute to an IRA?

<table>
<thead>
<tr>
<th>Year</th>
<th>Limit</th>
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<tbody>
<tr>
<td>2001</td>
<td>$2,000</td>
</tr>
<tr>
<td>2002-2004</td>
<td>$3,000</td>
</tr>
<tr>
<td>2005-2007</td>
<td>$4,000</td>
</tr>
<tr>
<td>2008+</td>
<td>$5,000</td>
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</table>

Special catch up provisions for those age 50 and older

What is a traditional IRA?
- Contributions are before-tax dollars
- Tax deferred until withdrawal during retirement

What is a Roth IRA?
- Contributions not tax deductible
- Same contribution limits as traditional IRA
- More generous limits on phase out for high incomes
- Returns and qualified distributions are tax-free
- Withdrawals are qualified if:
  - the account has existed for 5 years, and
  - you are over 59 1/2
For more information on IRAs

- Visit IRS Website for publication 590: Individual Retirement Arrangements (IRAs)

What are Keogh (HR-10) Plans?

- Anyone with earnings from self-employment
- In addition to a company sponsored pension plan
- Generous contribution limits
- For more information, go to [http://invest-faq.com/articles/ret-plan-keogh.html](http://invest-faq.com/articles/ret-plan-keogh.html)

What are Retirement Annuities?

- Annuity contract
  - provides for some form of periodic payment
- Accumulation period
  - term over which the principal in the contract is building
- Liquidation period
  - term over which the annuity pays out periodic benefits

Form of annuity
- Fixed annuity: the principal is guaranteed but the earnings can vary
- Variable annuity: invested in a portfolio of securities
- Annuity starting date
  - when the annuity begins periodic payments
- Immediate annuity
  - payments begin one period from current date
- Deferred annuity
  - payments deferred until some later time period

How Much Will $100,000 Buy

<table>
<thead>
<tr>
<th>Interest Rate</th>
<th>Males - Starting Age</th>
<th>60</th>
<th>65</th>
<th>70</th>
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<tbody>
<tr>
<td>8%</td>
<td>866</td>
<td>964</td>
<td>1,103</td>
<td></td>
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<tr>
<td>7%</td>
<td>803</td>
<td>952</td>
<td>1,041</td>
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<tr>
<td>6%</td>
<td>741</td>
<td>840</td>
<td>979</td>
<td></td>
</tr>
<tr>
<td>Females - Starting Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8%</td>
<td>783</td>
<td>847</td>
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<td>7%</td>
<td>719</td>
<td>784</td>
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<tr>
<td>6%</td>
<td>656</td>
<td>723</td>
<td>821</td>
<td></td>
</tr>
</tbody>
</table>

How much do you need to save? – A retirement planning worksheet

1. Current salary $60,000
2. Percentage replacement x 0.60
3. Retirement income target $36,000
4. Minus vested defined benefits -0
5. Minus Social Security -17,503
6. Required supplement $18,497

Estimates based on 1983 Group Annuity Mortality Table
Retirement Planning Worksheet

6. Required supplemental income $18,497
7. Years to retirement 30
   Inflation rate 3%
   Future value of $1 x 2.4273
   Future value of supp. income $44,897
8. Years of retirement 24
   Net discount rate 4%
   Present value of $1 annuity due x 15.8568
   Lump sum needed at retirement $711,926

8. Lump-sum needed at retirement $711,926
9. Years to retirement 30
   After-tax return on investments 7%
   Present funds $50,000
   Future value of $1 x 7.6123
   Future target resources $380,613
10. Needed savings $331,313

Visit these Websites for Retirement Planning Worksheets

- Quicken
  http://www.quicken.com/retirement/planner/
- GE
  http://www.financiallearning.com/ge/basics.jsp?c=basics_retire&s=rp_basics2
- American Savings Education Council
  http://partners.financenter.com/choosetosave/calculate/us-eng/retire02a.fcs