333-201 Business Finance

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Lecture 18:
Debt, Dividends and Taxes I

Debt, Dividends and Taxes I

- Provide an overview of company and personal taxes
- Examine the taxation of ordinary income
- Examine the taxation of capital gains
- Examine the taxation of dividends in a classical tax system
- Examine the taxation of dividends in an imputation tax system

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Overview of Corporate and Personal Taxes

- Corporate (or company) taxes in Australia are flat and currently at 30%
  - Denoted as t_c
- Personal taxes are progressive - tax rates rise with the taxable income
  - Denoted as t_p

- Taxable income at the personal level is defined as the total assessed income minus allowable tax deductions
  - Assessable income includes salary and wages, investment income, realized capital gains, etc
  - Deductions include those related to work, managing investments, etc

Overview of Corporate and Personal Taxes

Example: Your friend has asked you for some help with her taxes for the current tax year. You have figured out her taxable income for the year to be $95,000. Ignoring the Medicare levy, compute her tax liability. What are her average and marginal tax rates?

Tax payable on first $80,000 = $18,000
Tax payable on remaining $15,000 = 0.40(15000) = $6,000
Total tax payable = 18000 + 6000 = $24,000
Average tax rate = 24000/95000 = 25.3%
Marginal tax rate = 40%

Note: The marginal tax rate is the tax rate applicable to the last dollar of taxable income and will be higher than the average tax rate

Capital Gains Taxes

- For individuals, a capital gains tax (CGT) is the tax that is paid on the net capital gains realized in a particular tax year

- A net capital gain is defined as the total capital gain realized during the tax year minus the total capital loss realized in that year and any unapplied net capital losses from earlier years
    - Capital losses can be carried forward to future years and deducted against future, realized capital gains
    - No time restriction on how long one can carry forward a net capital loss

Classical Tax System for Dividends

- In a classical tax system for dividends…
  - A dollar of corporate profits is taxed at a flat corporate tax rate, t_c, leaving $(1 – t_c)$ to be distributed as a dividend
  - Dividends received by shareholders are then taxed at the shareholder's personal marginal tax rate, t_p

Implication?

- From a dollar of corporate profit, the shareholder ends up with $(1 – tc)(1 – tp)$ dollars of after-personal-tax dividend
- Earnings (profits) paid as a dividend are effectively taxed twice

In Australia, a classical tax system operated until July 1, 1987, when it was replaced by an imputation tax system

Classical Tax System for Dividends

Illustration: ABL Ltd had the following net income during 2007-08 and it pays out all of its after tax earnings as dividends to its shareholders

Net operating income	$2,000,000
Interest expense	$400,000
Taxable income	$1,600,000
Tax payable (at 30%)	$480,000
Net income	$1,120,000

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Classical Tax System for Dividends

An Australian resident who owns 5% of the shares of ABL will receive a dividend of $56,000 (= 0.05 × $1,120,000).

Assume the resident's other taxable income is high enough to put her in the 45% marginal tax rate bracket. The tax payable on the dividend and the after-personal-tax dividend received are as follows

Dividend received	$56,000
Tax payable (at 45%)	$25,200
Dividend income after tax	$30,800

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Classical Tax System for Dividends

- The shareholder's share of the total taxes paid by the firm is…
  - Share of the total taxes paid = 0.05 × $480,000 = $24,000

- Personal tax payable = $25,200

- The shareholder's share of firm's taxable income is…
  - Share of the taxable income = 0.05 × $1,600,000 = $80,000

- So, the effective tax rate is…
  - Effective tax rate = (24000 + 25200)/80000 = 61.5%

- Note: The shareholder's after-personal-tax dividend on a dollar of corporate profit is…
  - After-personal-tax dividend = $(1 – t_c)(1 – t_p) = \$0.385$
  - So, effective tax rate = $1 – (1 – t_c)(1 – t_p) = 61.5\%$

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Imputation Tax System for Dividends

• Under the imputation tax system taxes paid at the firm and individual levels are treated in an integrated manner

• Dividends paid to shareholders from earnings on which taxes have been paid at the corporate level are taxed using an imputation system
  - •Tax paid by the firm on its earnings are imputed (or attributed) to shareholders

• The tax paid by the firm is allocated to shareholders via “franking credits” attached to the dividends paid
  - • Franking credits are treated as both (imputed) personal income and (imputed) taxes paid on that income
  - • Franking credits can be used by shareholders to fully (or partly) offset tax payable on the dividends

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Imputation Tax System for Dividends

Illustration (continued): ABL Ltd had the following net income during 2007-08 and it pays out all of its after tax earnings as fully franked dividends to shareholders

Net operating income	$2,000,000
Interest expense	$400,000
Taxable income	$1,600,000
Tax payable (at 30%)	$480,000
Net income	$1,120,000

Imputation Tax System for Dividends

An Australian resident who owns 5% of the shares of ABL will receive a dividend of $56,000 (= 0.05 × $1,120,000).
Assume the resident's other taxable income is high enough to put him in the 45% marginal tax rate bracket

Dividend received	$56,000	Row 1
Franking credit[1]	$24,000	Row 2
Grossed-up dividend[2]	$80,000	Rows 1 + 2
Tax liability (at 45%)	$36,000	0.45 × Row 3
Less Franking credit[1]	$24,000	Row 5
Tax payable on dividend	$12,000	Row 4 – 5

[1] Franking credit = $Div[t_c/(1 - t_c)] = 56000(0.3)/(1 - 0.3) = \$24{,}000$

[2] Grossed-up dividend = $Div + Div[t_c/(1 - t_c)]$

Grossed-up dividend = $Div/(1 - t_c) = 56000/(1 - 0.3) = \$80{,}000$

Imputation Tax System for Dividends

- The shareholder's share of the total taxes paid by the firm is the same as under the classical tax system
  - Share of the total taxes paid = 0.05 × $480,000 = $24,000

- Personal tax payable = $12,000

- The shareholder's share of firm's taxable income is also the same as under the classical tax system
  - Share of taxable income = 0.05 × $1,600,000 = $80,000

- The effective tax rate now is…
  - Effective tax rate = (24000 + 12000)/80000 = 45%

- What happens if the shareholder's marginal tax rate is (a) equal to or (b) lower than the marginal corporate tax rate?

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Imputation Tax System for Dividends

If the shareholder's marginal tax rate is equal to the corporate tax rate (t_p = 30%) a fully franked dividend is effectively tax free

Dividend received	$56,000	Row 1
Franking credit[1]	$24,000	Row 2
Grossed-up dividend[2]	$80,000	Rows 1 + 2
Tax liability (at 30%)	$24,000	0.30 × Row 3
Less Franking credit[1]	$24,000	Row 5
Tax payable on dividend	$0	Row 4 – 5

[1] Franking credit = $Div[t_c/(1 - t_c)] = 56000(0.3)/(1 - 0.3) = \$24{,}000$

[2] Grossed-up dividend = $Div + Div[t_c/(1 - t_c)]$

Grossed-up dividend = $Div/(1 - t_c) = 56000/(1 - 0.3) = \$80{,}000$

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Imputation Tax System for Dividends

If the shareholder's marginal tax rate is less than the corporate tax rate (t_p = 15%) a fully franked dividend will result in excess tax credits which can be used to reduce the tax payable on other income, or refunded if it cannot be used

Dividend received	$56,000	Row 1
Franking credit[1]	$24,000	Row 2
Grossed-up dividend[2]	$80,000	Rows 1 + 2
Tax liability (at 15%)	$12,000	0.15 × Row 3
Less Franking credit[1]	$24,000	Row 5
Tax payable on dividend	-$12,000	Row 4 – 5

[1] Franking credit = $Div[t_c/(1 - t_c)] = 56000(0.3)/(1 - 0.3) = \$24{,}000$

[2] Grossed-up dividend = $Div + Div[t_c/(1 - t_c)]$

Grossed-up dividend = $Div/(1 - t_c) = 56000/(1 - 0.3) = \$80{,}000$

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Imputation Tax System for Dividends

- In the second case, the shareholder has no tax payable on the dividend and the effective tax rate is…
  - Effective tax rate = (24000 + 0)/80000 = 30%

- In the last case, the shareholder has a tax refund due and the effective tax rate is…
  - Effective tax rate = (24000 – 12000)/80000 = 15%

- Implications?
  - The imputation tax system eliminates the double taxation of corporate earnings (or profits)
  - Each shareholder is effectively taxed at their marginal personal tax rate
  - Caveat: Analysis is based on the assumption that the firm pays all of its after tax earnings as dividends

Key Concepts

- Compute the personal taxes of resident individuals based on the current tax schedule

- Compute the capital gains tax system of resident individuals using the appropriate CGT method

- Examine the difference between the indexation and discount methods of computing capital gains taxes

- Examine the taxation of dividends in a classical tax system and the problems of double taxation associated with it

- Examine the taxation of dividends in an imputation tax system and how it eliminates the double taxation of earnings

Key Relationships/Formula Sheet

Franking credit: $Div[t_c/(1-t_c)]$

Grossed-up dividend: $Div + Div[t_c/(1-t_c)]$

Grossed-up dividend: $Div/(1-t_c)$