

# Corporate Finance Exam - Sample Solutions May 2024

ACF838 Corporate Financial Management

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## Table of contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>SECTION A - QUESTION 1: MYLAN CONTRACT ANALYSIS</b>          | <b>2</b>  |
| <b>2</b> | <b>SECTION A - QUESTION 2: KENDALL PLC COST OF CAPITAL</b>      | <b>6</b>  |
| <b>3</b> | <b>SECTION B - QUESTION 3: DAVISON LTD INVENTORY MANAGEMENT</b> | <b>9</b>  |
| <b>4</b> | <b>SECTION B - QUESTION 4: VONN LTD RATIO ANALYSIS</b>          | <b>10</b> |
| <b>5</b> | <b>SECTION B - QUESTION 5: DIVIDEND POLICY AND FINANCING</b>    | <b>13</b> |

# 1 SECTION A - QUESTION 1: MYLAN CONTRACT ANALYSIS

## 1.1 Part (a): NPV under Option 1 (13 marks)

### Key Information:

- Contract cash inflows: £750k (Y1), £900k (Y2), £1,500k (Y3-Y5)
- Total investment: £3,000,000
- Option 1: £1,200k immediately, then £600k at end of each of next 3 years
- Cost of capital: 10%
- **Important:** Question states “Ignore tax” - do not apply corporation tax

### Additional cash flows under Option 1:

- Expanding other businesses: £50k (Y1), £150k (Y2-Y3), £200k (Y4-Y5)

### Annual operating expenses (both options):

- Staff costs: £200,000 per year
- Manager salary: £70,000 (Y1-Y3), £80,000 (Y4-Y5)
- UU resources: £60,000 per year

#### 1.1.1 Step 1: Calculate Net Cash Flows for Option 1

| Year | Contract | Other Bus. | Investment | Staff   | Manager | UU     | Net Cash Flow |
|------|----------|------------|------------|---------|---------|--------|---------------|
| 0    | £0       | £0         | (£1,200k)  | £0      | £0      | £0     | (£1,200k)     |
| 1    | £750k    | £50k       | (£600k)    | (£200k) | (£70k)  | (£60k) | (£130k)       |
| 2    | £900k    | £150k      | (£600k)    | (£200k) | (£70k)  | (£60k) | £120k         |
| 3    | £1,500k  | £150k      | (£600k)    | (£200k) | (£70k)  | (£60k) | £720k         |
| 4    | £1,500k  | £200k      | £0         | (£200k) | (£80k)  | (£60k) | £1,360k       |
| 5    | £1,500k  | £200k      | £0         | (£200k) | (£80k)  | (£60k) | £1,360k       |

**Note:** All figures in £'000s except where stated. Contract = Contract Revenue, Other Bus. = Other Business expansion, UU = Ulster University resources.

#### 1.1.2 Step 2: Apply Discount Factors and Calculate NPV

**Discount factors at 10%:** (from present value tables)

- Year 0: 1.000, Year 1: 0.909, Year 2: 0.826, Year 3: 0.751, Year 4: 0.683, Year 5: 0.621

### Present Value Calculations:

| Year | Cash Flow    | Discount Factor | Present Value     |
|------|--------------|-----------------|-------------------|
| 0    | (£1,200,000) | 1.000           | (£1,200,000)      |
| 1    | (£130,000)   | 0.909           | (£118,170)        |
| 2    | £120,000     | 0.826           | £99,120           |
| 3    | £720,000     | 0.751           | £540,720          |
| 4    | £1,360,000   | 0.683           | £928,880          |
| 5    | £1,360,000   | 0.621           | £844,560          |
|      |              | <b>NPV =</b>    | <b>£1,095,110</b> |

### Formula Demonstration:

$$NPV = \sum [Cash\ Flow \times (1 + r)^{-n}]$$

$$NPV = -£1,200,000 + (-£130,000 \times 0.909) + (£120,000 \times 0.826) + \dots + (£1,360,000 \times 0.621)$$

$$NPV\ Option\ 1 = £1,095,110$$

## 1.2 Part (b): NPV under Option 2 and Recommendation (8 marks)

### Key differences from Option 1:

- Initial investment: £1,500,000 (half of £3,000,000) paid immediately
- Return 10% of contract cash flows to Accellent each year
- One-off payment of £1,000,000 to Accellent at end of Year 5
- No additional business income (not available under Option 2)

### Calculate Net Cash Flows for Option 2

| Year | Contract | Return (10%) | One-off   | Staff   | Manager | UU     | Net Cash Flow |
|------|----------|--------------|-----------|---------|---------|--------|---------------|
| 0    | £0       | £0           | £0        | £0      | £0      | £0     | (£1,500k)     |
| 1    | £750k    | (£75k)       | £0        | (£200k) | (£70k)  | (£60k) | £345k         |
| 2    | £900k    | (£90k)       | £0        | (£200k) | (£70k)  | (£60k) | £480k         |
| 3    | £1,500k  | (£150k)      | £0        | (£200k) | (£70k)  | (£60k) | £1,020k       |
| 4    | £1,500k  | (£150k)      | £0        | (£200k) | (£80k)  | (£60k) | £1,010k       |
| 5    | £1,500k  | (£150k)      | (£1,000k) | (£200k) | (£80k)  | (£60k) | £10k          |

**Note:** All figures in £'000s. Contract = Contract Revenue, Return = Return to Accellent, UU = Ulster University resources.

### 1.2.1 Step 3: Calculate NPV for Option 2

| Year | Cash Flow    | Discount Factor | Present Value   |
|------|--------------|-----------------|-----------------|
| 0    | (£1,500,000) | 1.000           | (£1,500,000)    |
| 1    | £345,000     | 0.909           | £313,605        |
| 2    | £480,000     | 0.826           | £396,480        |
| 3    | £1,020,000   | 0.751           | £766,020        |
| 4    | £1,010,000   | 0.683           | £689,830        |
| 5    | £10,000      | 0.621           | £6,210          |
|      |              | <b>NPV =</b>    | <b>£672,145</b> |

### 1.2.2 Step 4: Recommendation

#### Comparison:

- Option 1 NPV: £1,095,110
- Option 2 NPV: £672,145
- **Difference: £422,965 in favour of Option 1**

**Recommendation:** Mylan should choose **Option 1** as it provides a significantly higher NPV (£422,965 higher). Despite requiring more initial capital commitment, Option 1 offers:

- Additional income from expanding other businesses
- Better overall financial return
- Greater value creation for shareholders

### 1.3 Part (c): Sensitivity Analysis - Cost of Capital (4 marks)

Sensitivity analysis examines how changes in key variables affect project viability.

For Option 1, we need to find the Internal Rate of Return (IRR) - the discount rate where NPV = 0.

Using interpolation method:

**Step 1:** Try different discount rates

- At 10%: NPV = £1,095,110 (positive)
- At 20%: NPV = ?

**Calculate NPV at 20%:**

Discount factors at 20%: 1.000, 0.833, 0.694, 0.579, 0.482, 0.402

| Year | Cash Flow    | DF at 20%    | Present Value   |
|------|--------------|--------------|-----------------|
| 0    | (£1,200,000) | 1.000        | (£1,200,000)    |
| 1    | (£130,000)   | 0.833        | (£108,290)      |
| 2    | £120,000     | 0.694        | £83,280         |
| 3    | £720,000     | 0.579        | £416,880        |
| 4    | £1,360,000   | 0.482        | £655,520        |
| 5    | £1,360,000   | 0.402        | £546,720        |
|      |              | <b>NPV =</b> | <b>£394,110</b> |

**Step 2:** Use interpolation formula

$IRR = R + [NPV / (NPV - NPV)] \times (R - R)$  (See formula sheet for how to pick R2)

Where: R = 10%, NPV = £1,095,110, R = 20%, NPV = £394,110

$IRR = 10\% + [£1,095,110 / (£1,095,110 - £394,110)] \times (20\% - 10\%)$

$IRR = 10\% + [£1,095,110 / £701,000] \times 10\%$

$IRR = 10\% + 15.6\% = \mathbf{25.6\%}$

**Sensitivity Interpretation:** The project remains viable until the cost of capital reaches 25.6%. This provides substantial safety margin above the current 10% cost of capital.

### 1.4 Part (d): Payback Period Analysis (5 marks)

**Payback Period** measures how long it takes to recover the initial investment from project cash flows.

#### 1.4.1 Option 1 Payback:

**Cumulative Cash Flow Analysis:**

| Year | Annual Cash Flow | Cumulative Cash Flow |
|------|------------------|----------------------|
| 0    | (£1,200,000)     | (£1,200,000)         |
| 1    | (£130,000)       | (£1,330,000)         |
| 2    | £120,000         | (£1,210,000)         |
| 3    | £720,000         | (£490,000)           |
| 4    | £1,360,000       | <b>£870,000</b>      |

Payback occurs during Year 4:

Payback Period =  $3 + (£490,000 \div £1,360,000) = 3 + 0.36 = \mathbf{3.36 \text{ years}}$

### 1.4.2 Option 2 Payback:

| Year | Annual Cash Flow | Cumulative Cash Flow |
|------|------------------|----------------------|
| 0    | (£1,500,000)     | (£1,500,000)         |
| 1    | £345,000         | (£1,155,000)         |
| 2    | £480,000         | (£675,000)           |
| 3    | £1,020,000       | <b>£345,000</b>      |

Payback Period =  $2 + (£675,000 \div £1,020,000) = 2 + 0.66 = \mathbf{2.66 \text{ years}}$

### 1.4.3 Use of Payback Period in Investment Appraisal:

#### Advantages:

- Simple to calculate and understand
- Focuses on liquidity and cash recovery
- Useful for companies with cash flow constraints
- Good initial screening tool

#### Disadvantages:

- Ignores time value of money
- Ignores cash flows after payback period
- May favour short-term projects over profitable long-term ones
- Doesn't measure profitability

**Application:** Best used alongside NPV analysis. Here, Option 2 has shorter payback (2.66 vs 3.36 years) but Option 1 has higher NPV, demonstrating why multiple criteria should be considered.

## 2 SECTION A - QUESTION 2: KENDALL PLC COST OF CAPITAL

### 2.1 Part (a): Redeemable Debentures - Uses and Effects (5 marks)

Why companies use redeemable debentures:

1. **Cost Advantage:** Debt financing is typically cheaper than equity due to:
  - Tax deductibility of interest payments
  - Lower required returns (debt is less risky than equity for investors)
  - No dilution of existing shareholders' control
2. **Flexibility:** Companies can:
  - Choose redemption timing
  - Refinance when interest rates are favourable
  - Match debt maturity with project life cycles
3. **Financial Leverage:** Allows companies to:
  - Magnify returns to equity holders
  - Maintain operational control while accessing capital

Effects on Liquidity and Finance Risk:

Liquidity Impact:

- **Negative short-term:** Regular interest payments reduce cash availability
- **Negative long-term:** Large redemption payment required at maturity
- **Positive aspect:** Structured repayment schedule aids financial planning

Finance Risk Impact:

- **Increased gearing** raises financial risk due to:
  - Fixed interest obligations regardless of performance
  - Potential covenant restrictions
  - Bankruptcy risk if unable to meet obligations
- **Credit rating implications:** Higher debt levels may affect borrowing costs
- **Future financing constraints:** High gearing may limit access to additional capital

### 2.2 Part (b): Calculate Individual Costs of Capital (12 marks)

#### 2.2.1 Cost of Ordinary Shares

Method: Dividend Growth Model

Formula:  $K_e = (D/P) + g$

Step 1: Calculate ex-dividend price

Current market price = £1.60

Upcoming dividend = 7.0p = £0.070

Ex-dividend price = £1.60 - £0.070 = **£1.53**

Step 2: Calculate dividend growth rate

Historical dividends: 4.6p (2018) → 5.0p (2019) → 5.4p (2020) → 6.0p (2021) → 6.5p (2022)

Using geometric mean:  $g = [(D_5/D_1)^{1/4}] - 1$

$g = [(6.5/4.6)^{1/4}] - 1 = [1.4130^{0.25}] - 1 = 0.0903 = \mathbf{9.03\%}$

Step 3: Calculate next year's expected dividend

$D_6 = D_5 \times (1 + g) = £0.070 \times (1 + 0.0903) = \mathbf{£0.0763}$

Step 4: Apply dividend growth model

$K_e = (£0.0763/£1.53) + 0.0903 = 0.0499 + 0.0903 = \mathbf{14.02\%}$

### 2.2.2 Cost of Preference Shares

**Method:** Dividend Yield Model

**Formula:**  $K_p = D/P$

Annual preference dividend =  $8\% \times £1 = \text{£}0.08$

Market price = **£0.63**

$K_p = £0.08/£0.63 = \textbf{12.70\%}$

### 2.2.3 Cost of Debentures

**Method:** Yield to Maturity (IRR calculation)

**Given:**

- Nominal value: £100
- Coupon rate: 8% (£8 annual interest)
- Current market price: £88
- Maturity: 3 years
- Tax rate: 20%

**After-tax interest** =  $£8 \times (1 - 0.20) = \text{£}6.40$

**Cash flows from investor perspective:**

- Year 0: Pay £88
- Years 1-3: Receive £6.40 annual after-tax interest
- Year 3: Receive £100 redemption value

**IRR Calculation using interpolation:**

Try 10%:  $NPV = -£88 + £6.40(2.487) + £100(0.751) = -£88 + £15.92 + £75.10 = \text{£}3.02$

Try 12%:  $NPV = -£88 + £6.40(2.402) + £100(0.712) = -£88 + £15.37 + £71.20 = \text{-£}1.43$

Using interpolation:

$K_d = 10\% + [£3.02 / (£3.02 - (-£1.43))] \times (12\% - 10\%)$

$K_d = 10\% + [£3.02 / £4.45] \times 2\% = 10\% + 1.36\% = \textbf{11.36\%}$

## 2.3 Part (c): Calculate WACC and Explain Application (7 marks)

### 2.3.1 Step 1: Calculate Market Values

**Ordinary Shares:**  $2,000,000 \times £1.60 = \text{£}3,200,000$

**Preference Shares:**  $2,000,000 \times £0.63 = \text{£}1,260,000$

**Debentures:**  $£1,300,000 \times (£88/£100) = \text{£}1,144,000$

**Total Market Value:**  $£3,200,000 + £1,260,000 + £1,144,000 = \text{£}5,604,000$

### 2.3.2 Step 2: Calculate Weights

**Ordinary Shares:**  $£3,200,000 / £5,604,000 = \textbf{57.10\%}$

**Preference Shares:**  $£1,260,000 / £5,604,000 = \textbf{22.49\%}$

**Debentures:**  $£1,144,000 / £5,604,000 = \textbf{20.41\%}$

### 2.3.3 Step 3: Calculate WACC

$$\text{WACC} = (W_e \times K_e) + (W_p \times K_p) + (W_d \times K_d)$$

$$\text{WACC} = (0.571 \times 14.02\%) + (0.2249 \times 12.70\%) + (0.2041 \times 11.36\%)$$

$$\text{WACC} = 8.01\% + 2.86\% + 2.32\% = \mathbf{13.19\%}$$

### 2.3.4 Application of WACC in Investment Appraisal:

#### Primary Uses:

1. **Discount Rate:** Use WACC to discount project cash flows in NPV calculations
2. **Hurdle Rate:** Projects must exceed WACC to create shareholder value
3. **Performance Measurement:** Compare project returns against cost of capital

#### Conditions for Use:

- Project has similar risk profile to company's existing operations
- Project maintains current capital structure proportions
- Company operates in stable business environment

#### Limitations:

- May not reflect project-specific risks
- Assumes constant capital structure
- Based on current market conditions

## 2.4 Part (d): Alternative Sources of Finance (6 marks)

### 2.4.1 Short-term Financing Sources:

1. **Trade Credit**
  - Delaying payment to suppliers
  - Often interest-free for early payment discount period
  - Readily available but limited amount
2. **Bank Overdraft**
  - Flexible borrowing facility
  - Interest only on amount used
  - Can be recalled by bank at short notice
3. **Factoring/Invoice Discounting**
  - Convert receivables to immediate cash
  - Improves cash flow timing
  - Service fees reduce effective proceeds

### 2.4.2 Long-term Financing Sources:

1. **Rights Issue**
  - Raise equity from existing shareholders
  - Maintains proportional ownership
  - May be issued at discount to market price
2. **Bank Term Loans**
  - Fixed-term borrowing with regular repayments
  - May include covenants and security requirements
  - Interest rates can be fixed or variable
3. **Leasing**
  - Acquire asset use without ownership
  - Spreads cost over asset life
  - May include maintenance and support services



### **3 SECTION B - QUESTION 3: DAVISON LTD INVENTORY MANAGEMENT**

**Note:** This Question is NOT EXAMINABLE for May 2025

## 4 SECTION B - QUESTION 4: VONN LTD RATIO ANALYSIS

### 4.1 Part (a): Calculate Financial Ratios (10 marks)

#### Liquidity Ratios

**Current Ratio:** Formula: Current Assets / Current Liabilities

**2023:** £17,960 / £16,880 = **1.06:1**

**2022:** £17,660 / £16,410 = **1.08:1**

**Acid Test (Quick) Ratio:** Formula: (Current Assets - Inventory) / Current Liabilities

**2023:** (£17,960 - £6,570) / £16,880 = £11,390 / £16,880 = **0.67:1**

**2022:** (£17,660 - £6,430) / £16,410 = £11,230 / £16,410 = **0.68:1**

#### Gearing Ratios

**Debt-to-Equity Ratio:** Formula: Total Debt / Total Equity

**2023:** £1,900 / £6,380 = **29.8%**

**2022:** £1,900 / £6,350 = **29.9%**

**Alternative Gearing Calculation (Total Debt / Total Capital):**

**2023:** £1,900 / (£1,900 + £6,380) = £1,900 / £8,280 = **23.0%**

**2022:** £1,900 / (£1,900 + £6,350) = £1,900 / £8,250 = **23.0%**

#### Interest Cover

**Interest Cover Ratio:** Formula: Profit Before Interest and Tax / Interest Expense

**2023:** £5,280 / £1,000 = **5.3 times**

**2022:** £3,000 / £1,000 = **3.0 times**

#### Return on Capital Employed (ROCE)

**ROCE Formula:** ROCE = Earning Before Interest and Tax(EBIT) / Capital Employed × 100

**Capital Employed = Total Assets - Current Liabilities**

**2023:**

Capital Employed = £25,160 - £16,880 = £8,280

ROCE = £5,280 / £8,280 × 100 = **63.8%**

**2022:**

Capital Employed = £24,660 - £16,410 = £8,250

ROCE = £3,000 / £8,250 × 100 = **36.4%**

#### Summary of Calculated Ratios:

| Ratio           | 2023   | 2022   | Industry Avg | Local Competitor |
|-----------------|--------|--------|--------------|------------------|
| Current Ratio   | 1.06:1 | 1.08:1 | 2.1:1.0      | 1.9:1.0          |
| Acid Test Ratio | 0.67:1 | 0.68:1 | 1.0:1.0      | 1.1:1.0          |
| Interest Cover  | 5.3x   | 3.0x   | 9x           | 8x               |
| Gearing         | 23.0%  | 23.0%  | 30%          | 25%              |
| ROCE            | 63.8%  | 36.4%  | 65%          | 50%              |

## 4.2 Part (b): Performance Analysis and Recommendations (10 marks)

### Liquidity Analysis:

#### Current Position:

Vonn Ltd's liquidity position shows **significant weakness** compared to industry standards:

- Current ratio of 1.06:1 is substantially below industry average (2.1:1) and competitor (1.9:1)
- Acid test ratio of 0.67:1 indicates **potential cash flow problems**, falling short of the ideal 1:1 benchmark

#### Trend Analysis:

The **marginal deterioration** from 2022 to 2023 (current ratio: 1.08 to 1.06) suggests liquidity pressures are worsening.

#### Risk Assessment:

The company may struggle to meet short-term obligations, particularly given the high overdraft balance (£4,789k represents 28% of current liabilities).

#### Gearing and Financial Risk:

##### Positive Aspects:

- Gearing at 23% is **below industry average (30%)** and competitive levels (25%)
- **Stable gearing** between years indicates controlled debt management
- Interest cover **improved significantly** from 3.0x to 5.3x, showing enhanced ability to service debt

##### Strategic Position:

Low gearing provides **debt capacity** for future growth financing, though liquidity constraints may limit immediate opportunities.

#### Profitability Performance:

##### Exceptional ROCE Improvement:

- ROCE increased dramatically from 36.4% to 63.8%
- **Approaching industry benchmark (65%)** and significantly exceeding competitor performance (50%)
- Demonstrates **effective capital utilisation** and operational improvement

##### Profit Growth Analysis:

EBIT increased by 76% (£3,000k to £5,280k), indicating strong operational performance despite economic challenges.

#### Strategic Recommendations for Improvement:

##### Immediate Liquidity Enhancement:

###### 1. Working Capital Management:

- **Accelerate receivables collection:** Implement stricter credit terms and collection procedures
- **Optimise inventory levels:** Review stock holding policies to reduce tied-up capital
- **Extend payables period:** Negotiate improved payment terms with suppliers where possible

###### 2. Cash Flow Generation:

- **Convert profitability to cash:** Focus on cash conversion cycle improvement
- **Asset utilisation:** Consider disposing of non-essential assets to generate cash

##### Medium-term Strategic Actions:

###### 3. Financing Structure Optimisation:

- **Reduce overdraft dependence:** Convert short-term overdraft to term debt for better cash flow management
- **Equity injection:** Consider rights issue to strengthen balance sheet if shareholders willing

###### 4. Operational Efficiency:

- **Leverage strong ROCE:** Reinvest profits strategically to maintain growth momentum
- **Cost management:** Continue operational improvements that have driven profitability gains

## Performance Monitoring:

### 5. Financial Controls:

- **Daily cash management:** Implement robust cash forecasting and monitoring
- **Quarterly ratio tracking:** Regular monitoring against industry benchmarks
- **Early warning systems:** Establish triggers for liquidity management actions

### Overall Assessment:

Vonn Ltd presents a **mixed performance profile**:

- **Strengths:** Excellent profitability improvement, strong capital efficiency, conservative gearing
- **Weaknesses:** Poor liquidity position, high dependence on overdraft financing
- **Priority:** Address liquidity concerns while maintaining profitable growth trajectory

The company has demonstrated strong operational management but needs urgent attention to working capital and cash flow management to ensure financial stability supports continued growth.

## 5 SECTION B - QUESTION 5: DIVIDEND POLICY AND FINANCING

### 5.1 Part (a): Evolution of Corporate Dividend Decisions (12 marks)

- **Historical Perspective: The Dividend Evolution**
- **1970s-1980s: The Traditional Era**

During this period, **dividend stability** was paramount. Companies followed the “**sticky dividend policy**” where maintaining consistent dividend payments was viewed as essential for shareholder confidence. The prevailing wisdom, supported by **Lintner’s (1956) findings**, showed that managers were extremely reluctant to cut dividends due to negative market signals.

- **Key characteristics:**
- **Regular cash dividends** as the primary distribution method
- **Conservative payout ratios** typically 40-60% of earnings
- **Dividend smoothing** to avoid volatility in payments
- **Strong signalling effects** where dividend changes conveyed management’s confidence about future prospects
- **1990s-2000s: The Flexibility Revolution**

The landscape began shifting toward more **flexible distribution mechanisms**:

- **Share Repurchases Emergence:**

**Grullon and Michaely (2002)** documented the dramatic rise in share buybacks, which offered several advantages:

- **Tax efficiency** for shareholders in higher tax brackets
- **Timing flexibility** for companies (no ongoing commitment)
- **Signalling undervaluation** rather than future cash flow expectations
- **EPS enhancement** through share count reduction
- **Special Dividends:**

Companies increasingly used **one-off special dividends** to:

- **Return excess cash** without creating ongoing payment expectations
- **Maintain dividend policy flexibility**
- **Respond to exceptional circumstances** (asset sales, windfall profits)

### 2010s-Present: The Diversified Approach

#### Modern Dividend Forms:

1. **Stock Dividends/Bonus Issues:**
  - **Capital restructuring** tool maintaining cash for growth
  - **Psychological benefits** for shareholders receiving additional shares
  - **Maintained proportional ownership** unlike cash distributions
2. **Dividend Reinvestment Plans (DRIPs):**
  - **Shareholder choice** between cash and additional shares
  - **Transaction cost reduction** for investors seeking growth
  - **Company benefits** from reduced cash outflow
3. **Hybrid Securities:**
  - **Convertible preferred shares** offering dividend priority with equity upside
  - **PIK (Payment-in-Kind) dividends** allowing cash conservation during growth phases

#### ESG Integration:

Modern dividend policies increasingly consider **Environmental, Social, and Governance** factors:

- **Sustainable payout ratios** ensuring long-term viability
- **Stakeholder considerations** beyond shareholder returns
- **Climate change impacts** on future cash generation capacity

#### Technology Sector Influence:

Tech companies have fundamentally altered dividend norms:

- **Growth reinvestment** prioritised over current distributions
- **Stock-based compensation** as alternative to cash distributions
- **Platform economics** requiring massive scale investments

#### Regulatory and Tax Evolution:

- **International tax coordination** affecting cross-border dividend policies
- **Corporate tax reform** impacting optimal capital structure decisions
- **Beneficial ownership rules** affecting dividend distribution strategies

#### Critical Assessment:

The evolution reflects a shift from **rigid traditional approaches** to **sophisticated, flexible strategies** that consider:

- **Multiple stakeholder interests**
- **Dynamic market conditions**
- **Regulatory complexity**
- **Technological disruption impacts**

#### Future Implications:

Dividend policy will likely become increasingly **personalised** through technology, with **AI-driven** distribution strategies optimising for individual shareholder preferences while maintaining regulatory compliance.

## 5.2 Part (b): Debt vs Equity Financing Comparison (8 marks)

#### Cost Comparison:

##### Debt Financing Costs:

- **Explicit Interest Costs:** Direct interest payments on borrowed funds
- **Tax Shield Benefit:** Interest payments are **tax-deductible**, reducing effective cost by  $(\text{Interest Rate} \times (1 - \text{Tax Rate}))$
- **Arrangement Fees:** Initial setup costs, legal fees, and ongoing facility charges
- **Covenant Compliance Costs:** Resources required to meet lender requirements

##### Equity Financing Costs:

- **Higher Required Returns:** Equity investors demand higher returns due to residual claim status
- **No Tax Relief:** Dividend payments are **not tax-deductible**
- **Flotation Costs:** Substantial initial public offering or rights issue expenses
- **Ongoing Costs:** Regular reporting, shareholder servicing, and regulatory compliance

**Cost Hierarchy:** Generally, **debt < retained earnings < new equity** in terms of cost of capital.

#### Benefits Analysis:

##### Debt Financing Benefits:

1. **Tax Efficiency:** Interest tax deductibility reduces after-tax financing cost
2. **Retained Control:** **No dilution** of existing shareholder ownership or voting rights
3. **Financial Leverage:** Potential to **magnify returns** to equity holders during profitable periods
4. **Predictable Costs:** Fixed interest rates provide **budgeting certainty**
5. **Covenant Protection:** Lender monitoring can **improve management discipline**

##### Equity Financing Benefits:

1. **Financial Flexibility:** **No mandatory payments** during difficult periods
2. **Growth Capital:** **Permanent capital** suitable for long-term growth investments

3. **Risk Sharing:** Investors bear business risk alongside management
4. **No Maturity Pressure:** No repayment deadlines creating refinancing risk
5. **Enhanced Credibility:** Strong equity base improves credit rating and borrowing capacity

#### Risk Assessment:

#### Debt Financing Risks:

1. **Financial Risk:** Fixed payment obligations regardless of company performance
2. **Bankruptcy Risk:** Inability to service debt can lead to insolvency proceedings
3. **Restrictive Covenants:** Operational limitations imposed by lenders
4. **Refinancing Risk:** Market conditions may affect ability to refinance maturing debt
5. **Interest Rate Risk:** Variable rate exposure creates cash flow uncertainty

#### Equity Financing Risks:

1. **Dilution Risk:** Reduced ownership percentage for existing shareholders
2. **Market Dependency:** Equity valuations subject to market sentiment volatility
3. **Control Dilution:** Potential loss of control with significant new equity issues
4. **Information Disclosure:** Increased transparency requirements may benefit competitors
5. **Dividend Pressure:** Shareholder expectations for returns may constrain reinvestment

#### Tax Implications:

#### Debt Tax Considerations:

- **Corporate Level:** Interest deductibility reduces corporate tax burden
- **Investor Level:** Interest income typically taxed as ordinary income at higher rates
- **Optimal Structure:** Tax benefits favour debt financing up to the point where financial distress costs offset tax advantages

#### Equity Tax Considerations:

- **Corporate Level:** No tax relief for dividend payments or share repurchases
- **Investor Level:** Dividend tax rates often preferential compared to interest income
- **Capital Gains Treatment:** Share price appreciation taxed as capital gains (often lower rates, deferrable)

#### Capital Structure Impact:

#### Optimal Capital Structure Theory:

**Trade-off Theory** suggests optimal debt-equity mix balances: - Tax benefits of debt against financial distress costs  
- Agency benefits of debt monitoring against bankruptcy costs

#### Pecking Order Theory (Myers, 1984):

Companies prefer financing hierarchy: 1. **Internal funds** (retained earnings) 2. **Debt financing** (information asymmetry costs lower) 3. **External equity** (highest information asymmetry costs)

#### Dynamic Considerations:

- **Market Timing:** Issue equity when valuations high, debt when rates favourable
- **Financial Flexibility:** Maintain debt capacity for future opportunities
- **Industry Norms:** Consider sector-specific capital structure patterns

#### Strategic Integration:

Modern capital structure decisions must consider:

- **Business cycle positioning**
- **Growth stage requirements**
- **Competitive dynamics**
- **Regulatory environment**
- **Stakeholder expectations**

The optimal approach typically involves a **balanced mix** that evolves with company circumstances, market conditions, and strategic objectives.