

Chapter 06: Section 3

Investment Category	Primary Objective	Analytical Focus
Expansion and Growth	Increase market share, revenue, or capacity	Market demand, competitive response, incremental cash flows
Modernisation and Replacement	Improve efficiency, maintain existing operations	Incremental cost savings, operational disruption, asset life comparison
Cost Reduction	Lower operating expenses, improve profitability	Process efficiency, automation ROI, payback period
Sustainability-Related	Meet ESG goals, enhance brand, manage non-financial risk	Tangible and intangible value, stakeholder impact, integrated reporting
Mandatory and Compliance	Meet legal, regulatory, or safety requirements	Cost-effectiveness (NPVC), technical reliability, compliance assurance

Practice Question 170:

Option A costs Rs. 10 million initially with Rs. 1 million annual costs for 5 years. Option B costs Rs. 8 million initially with Rs. 1.5 million annual costs for 5 years. Calculate the present value of all costs using a 10% discount rate.

Practice Question 171:

As the Corporate Development Manager for Zenith Logistics Lanka Pvt Ltd, you must evaluate a major capital investment. The commercial team has proposed expanding the Kandy warehouse to include a new 10,000 sq ft cold storage facility.

This aims to capture growing demand from online grocery and pharmaceutical delivery services. With the e-commerce market growing rapidly, this presents a key opportunity (O1) for expansion.

The CEO requires a full analysis to answer: **How should Zenith Logistics evaluate the financial viability and strategic fit of investing Rs. 200 million to expand its cold-chain warehousing capacity in Kandy?**

Your task is to conduct a rigorous analysis to justify the expenditure and confirm its alignment with the company's growth strategy.

Practice Question 172:

As the Plant Controller for Mango Holdings' Textiles & Apparel division, you face intense margin pressure from competitors in Bangladesh and Vietnam (T3).

Modernising the dyeing plant is a potential strategy to improve efficiency and maintain competitiveness. The current dyeing machines are 10 years old and fully depreciated. While still functional, they are inefficient in water and energy consumption.

A new water-reuse dyeing system promises a 40% reduction in water consumption and a 15% reduction in energy costs. However, this requires a significant capital outlay of Rs. 250 million and will cause a two-week production shutdown during installation.

The board has asked you: **How should Mango Holdings' textile division analyse the potential replacement of its 10-year-old dyeing machines with a new water-reuse dyeing system?**

You must prepare a formal investment justification.

Practice Question 173:

As Head of Operations at Trident Logic Ltd., you face mounting pressure to improve service delivery efficiency. Your company must remain competitive against global IT firms whilst managing rising wage inflation that threatens profitability.

The managed services division currently employs 50 engineers performing routine L1 support tasks, including ticket logging and system health checks. An RPA platform presents an opportunity to automate an estimated 30% of these tasks. The implementation would require an investment of Rs. 150 million.

The CEO has asked a direct question: **How should Trident Logic evaluate an investment in a new Robotic Process Automation (RPA) platform to automate routine tasks in its managed services division?**

Your challenge is to build a robust business case that demonstrates whether the projected cost savings and operational benefits justify this substantial capital investment.

Practice Question 174:

As the Chief Sustainability Officer at OceanLeaf Exports Ltd., you must ensure investment decisions align with the company's sustainability values. The Galle processing facility's water consumption is high, and local environmental regulations are expected to become stricter. A proposed water-recycling system requires an investment of Rs. 100 million.

This system would reduce water use by 30% and lower wastewater discharge fees by Rs. 10 million each year. It would also reinforce the company's reputation with environmentally conscious European buyers.

This situation presents a clear question: **How should OceanLeaf Exports evaluate an investment in a new water-recycling system for its Galle processing facility, considering both financial and non-financial benefits?**

You are tasked with preparing a complete evaluation for the board.

Practice Question 175:

As the Group Director of Engineering at Serendib Hospitality, you face a mandatory investment decision. The Sri Lanka Tourism Development Authority requires your Beach Resort to upgrade its wastewater treatment system by 2025.

You have two options to achieve compliance. Option one is retrofitting the existing system for Rs. 80 million with annual operating costs of Rs. 15 million. Option two is installing a new advanced system for Rs. 120 million with annual operating costs of Rs. 10 million.

The retrofit meets minimum standards while the new system exceeds them with higher efficiency.

What is the most cost-effective way for Serendib Hospitality to meet the new mandatory SLTDA waste-management standards at its Beach Resort?

Your task is to analyse both options and recommend the most economically efficient solution.

Practice Question 176:

Scenario: BlueGem Textiles is considering the purchase of a new weaving machine for its production line. The company's management has a minimum required Accounting Rate of Return (target rate) of 20% for all new investments.

Given Information:

- Initial Cost of the Machine: Rs. 5,000,000
- Estimated Residual (Salvage) Value: Rs. 500,000
- Useful Life of the Machine: 5 years
- Total Expected Net Profit After Tax over 5 years: Rs. 2,750,000

Practice Question 177:

Scenario: Trident Logic Ltd is evaluating an investment in new server infrastructure and data centre equipment. The company's board requires an ARR of at least 22% for technology projects.

Given Information:

- Initial Investment Cost (including installation): Rs. 10,000,000
- Estimated Residual Value: Rs. 1,000,000
- Useful Life: 4 years
- Depreciation Method: Straight-line
- Corporate Tax Rate: 30%
- Projected Earnings Before Depreciation and Tax (EBDT) are as follows:
 - Year 1: Rs. 3,500,000
 - Year 2: Rs. 4,000,000
 - Year 3: Rs. 4,200,000
 - Year 4: Rs. 3,800,000

Practice Question 178:

Scenario: Oceanleaf Exports is evaluating a cold storage expansion project that requires an initial outlay of Rs. 5,000,000. The projected net cash inflows from increased seafood processing capacity are variable. Management has set a maximum payback period of 3.5 years.

Given Cash Inflows:

- Year 1: Rs. 1,000,000
- Year 2: Rs. 1,500,000
- Year 3: Rs. 2,000,000
- Year 4: Rs. 2,500,000

Practice Question 179:

Calculate the discounted payback period of scenario given in question 178, provided a discount rate of 6%.

Practice Question 180:

Calculate the modified rate of return at 12% required rate of return.

Year	Cash Flow (Rs.)
0	(50,000,000) -
1	11,000,000
2	16,000,000
3	21,000,000
4	16,000,000
5	11,000,000

Practice Question 181:

As the Corporate Finance Manager at Serendib Hospitality, you are assessing a major renovation for the Beach Resort. The project involves complex, non-conventional cash flows. There is an initial outlay of Rs. 500 million, followed by positive inflows of Rs. 200 million for two years. A further outflow of Rs. 100 million is required in year three for the final phase.

The project then generates large positive inflows of Rs. 300 million for the next two years. A standard Internal Rate of Return (IRR) calculation produces two different results, creating decision uncertainty.

The board needs you to answer a key question: **What is a more realistic measure of the percentage return for the phased renovation of the Serendib Beach Resort, and how does it compare to the standard IRR?**

Your task is to calculate a single, reliable rate of return to support a clear investment decision.

Calculate MIRR if the cost of capital is 11% and reinvestment rate is 12%.