Promoting ESG Awareness
+ Risk Literacy in SMEs

PEARL
Case Study
Module 6

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Case Study Identification

Case Study Title: Investing in the Sun: The Green Financing Dilemma for "Bursa MetalWorks"

Partner Institution: Bursa Uludağ University

Country: Türkiye

Sector /Industry: Metal Processing & Machinery Manufacturing (Automotive Supply Chain)

SME Profile:

Company size (micro / small / medium):
Medium-sized (60 employees)

Ownership structure (family-owned, partnership, etc.):
Family-owned

Market scope (local / regional / international):
National & International (Direct exports to the EU)

2. Relevant PEARL Curriculum Module(s)

*(**Select one primary module and, if relevant, secondary modules:** Module 1 – Introduction to ESG, Module 2 – ESG Onboarding, Vision and Responsibility, Module 3 – ESG Risk Analysis and Materiality Assessment, Module 4 – ESG Strategy and Implementation, Module 5 – Reporting, Communication and Branding, Module 6 – Sustainable Financing and Funding Options for SMEs)*

Primary Module:

Module 6 – Sustainable Financing and Funding Options for SMEs

Secondary / Supporting Modules (if any):

Module 3 – ESG Risk Analysis and Materiality Assessment

3. Learning Purpose of the Case

What ESG challenge, decision, or dilemma does this case illustrate?

This case addresses the financial dimension of the green transition and the barriers SMEs face in accessing low-cost capital. The core dilemma is the choice between high-cost traditional loans and low-cost "Green Loans" tied to ESG performance. The company must learn how to present "ESG data" to a bank instead of just traditional financial statements.

Why is this case relevant for SMEs?

In markets with high inflation and high interest rates, sustainability projects like Solar PV are only feasible with subsidized financing. This case demonstrates that ESG data is not just a reporting burden but a "key" to lowering financing costs.

Which competence gaps (knowledge, skills, attitudes) does it address?

Knowledge Gaps: Lack of awareness regarding sustainable finance instruments and bank ESG scoring criteria.

Skills Gaps: Inability to integrate ESG performance into financial feasibility reports and calculate ROI based on "Green Premiums."

Attitude Gaps: Shifting the perception of ESG reporting from a "regulatory cost" to a "financial opportunity."

4. Case Context and Background

Provide a concise but concrete description of the SME's situation:

In the office of Bursa MetalWorks, located in one of Bursa's specialized industrial zones, Kerim Bey dropped the latest electricity bill onto his desk and let out a deep sigh. As the founder, he had seen many crises in thirty years, but this felt different.

"My daughter," he said, turning to Suzan, "We used to only worry about raw materials and labor. Now, we have to look at the sky. Look at this bill; our annual consumption has hit 1,800,000 kWh. We are paying 6.5 million TRY. Almost a quarter of our operating expenses (OPEX) is just the electricity for these machines. If we don't install that $850,000 (approx. 27.2 million TRY) solar power plant (Solar PV) on the roof, we'll soon have to sell the machines just to pay the bills."

But it wasn't just the bills bothering Kerim Bey. A recent email from their primary customer in Europe stated that starting in 2026, they would no longer work with suppliers who lack a carbon footprint certificate. Kerim Bey summarized the situation: "On one side, the European buyer says, 'If you don't lower your carbon, I won't buy from you; and even if I do, I'll make you pay a carbon tax (CBAM) of €80 per ton.' That's an extra 3.3 million TRY burden per year. On the other side, I go to the bank for an investment loan, and they offer me a standard commercial loan at 60% annual interest. Our net profit margin is 12%; if we take that loan, the factory belongs to the bank, not us."

Suzan understood her father's frustration, but she had a potential solution. In a recent ESG workshop, she had learned about "Green Investment Loans." "Dad," Suzan said, "Banks don't just look at whether you have money anymore. They look at how much you are harming the planet. If we can prove our ESG performance—our environmental and social management—to the bank, we can lower the interest rate to the 35%-40% range. Plus, a 5-year tenor with a 1-year grace period... But the banker was clear: 'Financials aren't enough; bring us a minimum B+ ESG Rating and a verified carbon reduction plan.'

Kerim Bey frowned: "What does a banker know about carbon or trees? We want money, and they say ESG. But it seems we have no other choice. We either collect this data and get that low-interest green loan, or we slowly pull out of the European market."

5. ESG Challenge / Problem Statement

Clearly describe the central ESG-related issue, for example:

Task 1 **(Financial Analysis):** Compare the total repayment amount (Principal + Interest) between the Standard Loan and the Green Loan over 5 years. Calculate how much the "Green Interest Saving" contributes to the company's net profit margin.

Task 2 (Operational): Identify which "Quick Wins" (energy efficiency, waste management, etc.) the facility should implement immediately to reach the required **B+ ESG Rating** for the loan.

Task 3 (Strategic): Draft a short "ESG Business Case" for the loan application, showing how the Solar PV investment creates a positive cash flow by combining energy savings and avoided carbon taxes.

6. Data, Evidence, and Inputs

(Use realistic but simplified data where needed)

(ESG-related qualitative information, Basic quantitative indicators (where applicable), Stakeholder inputs or assumptions, Regulatory or market references (e.g. CSRD, VSME, customer demands)

Not needed for this case

7. Suggested Tools from the PEARL Toolbox

Indicate which PEARL tools can be applied in this case and how?

- *CO_2 Footprint Overview for SMEs (M4)*
- *ESG Key Metrics Overview for SMEs Topics(M4)*
- *Sustainable Finance Options for SMEs (M6)*

To address the financial dilemma in this case and secure the "Green Loan" approval for Kerim Bey, learners are expected to actively utilize the following tools from the PEARL Toolbox:

Tool 1: Sustainable Finance Options for SMEs (M6)
Role in the Case: To address Kerim Bey's primary resistance—the high cost of capital.
Application: Learners will use this tool to compare standard commercial loans with subsidized green loan packages (e.g., from KOSGEB, EBRD, or World Bank sources). By using the comparison matrix within the tool, they will visualize how a green loan with a 35-40% interest rate and a 1-year grace period significantly eases the company's cash flow compared to a 60% standard rate.
Output: A proposal for the most optimized hybrid financing model for the company.

CO2 Footprint Overview for SMEs (M4)
Role in the Case: To convert the "environmental value" of the investment into financial data.
Application: Learners will calculate the current emissions (1,200 tons of CO2) and the projected reduction after the Solar PV installation. This tool helps calculate not just the tonnage, but also the "avoided carbon tax cost" (approx. 3.3 million TRY annually) under the EU's Carbon Border Adjustment Mechanism (CBAM).
Output: A "Carbon Reduction Commitment and Projection" report to be submitted to the bank.

Tool 3: ESG Key Metrics Overview for SMEs (M4)
Role in the Case: To achieve the "B+ ESG Rating Score" required by the bank for loan approval.
Application: Banks evaluate more than just solar panels; they look at overall management quality. Using this tool, learners will document Key Performance Indicators (KPIs) found in the bank's checklist, such as:
Environmental (E): Energy intensity and waste management records.
Social (S): Occupational health and safety (OHS) performance and training records.
Governance (G): Transparent financial reporting and anti-corruption policies.
Output: An "ESG Data Set Checklist" that proves the company's ESG maturity and justifies the B+ rating for the bank's credit officers.

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8. Suggested Solution

This guide provides instructors (academics or VET specialists) with the ideal solution approaches and criteria for evaluating student responses, focusing on the financial value of ESG in a high-interest market.

Task 1: Financial Feasibility Analysis (Ideal Approach)
Instructors should guide students to focus not just on environmental benefits, but on the direct cash flow advantage created by the "Green Interest Spread."
Interest Spread Analysis: Students should calculate the impact of the **20-point difference** between the 60% (Standard) and 40% (Green) interest rates. On a principal of 27.2 million TRY, this represents millions of TRY in interest savings over a 5-year period.
ROI and Payback Period: Students should demonstrate that the combination of annual electricity savings (6.5M TRY) and avoided carbon taxes/CBAM levies (3.3M TRY) reduces the investment's payback period from approximately **8 years to 4.5 years**.
Criterion: The solution must prove, using financial data, that a "Green Loan" is the only realistic option to protect the company's net profit margin.

Task 2: Operational "Quick Wins" for an SME
To achieve the **B+ ESG Rating** required by the bank, Kerim Bey’s facility can implement low-cost, high-impact steps:
Environmental (E): Repairing leaks in compressed air lines and switching to LED lighting (instantly reducing energy intensity).
Social (S): Formalizing and documenting Occupational Health and Safety (OHS) training and launching an initial employee satisfaction survey.
Governance (G): Aligning current financial records with "transparent reporting" standards (e.g., structured balance sheets) and publishing a basic Code of Ethics.

Task 3: Strategic "Business Case" Report
The report designed to convince both Kerim Bey and the Bank should be built on three pillars:
Revenue Protection: Maintaining access to the European market by ensuring CBAM compliance.
Cost of Capital Reduction: Significant annual savings in interest expenses achieved through the ESG score.
Operational Stability: Reducing dependence on the grid and fixing long-term operational expenses (OPEX) in a volatile energy market.

Key Discussion Questions for the Instructor:
"Why does the bank offer Kerim Bey a lower interest rate? How does his ESG performance reduce the bank's risk?" (Answer: A company that avoids heavy carbon taxes has a stronger cash flow to repay its debt).
"If Kerim Bey could fund this investment with his own equity, should he still collect ESG data?" (Answer: Yes, because this data is essential to protect his primary export market in Europe).

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9. Expected Learning Outcomes

After working on this case, which KSAs will learners be able to develop?
(Aligned with Related competences (ref.PEARL framework)

Knowledge: Understands the landscape of green finance instruments and the specific requirements for SMEs in high-interest markets like Turkey.

Skills: Able to merge ESG data with financial feasibility to create a compelling investment case.

Attitude: Adopts the view that ESG reporting is a strategic tool for financial survival and growth rather than a bureaucratic hurdle.

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