AGENDA

ESG DATA PROJECT 2021

01 **PROJECT OUTLINE**
Overview on the task

02 **TECHNICAL BACKGROUND**
Introduction to credit analysis & ESG

03 **DATA & GUIDANCE**
Introduction to the data package

04 **NEXT STEPS**
How to execute your project

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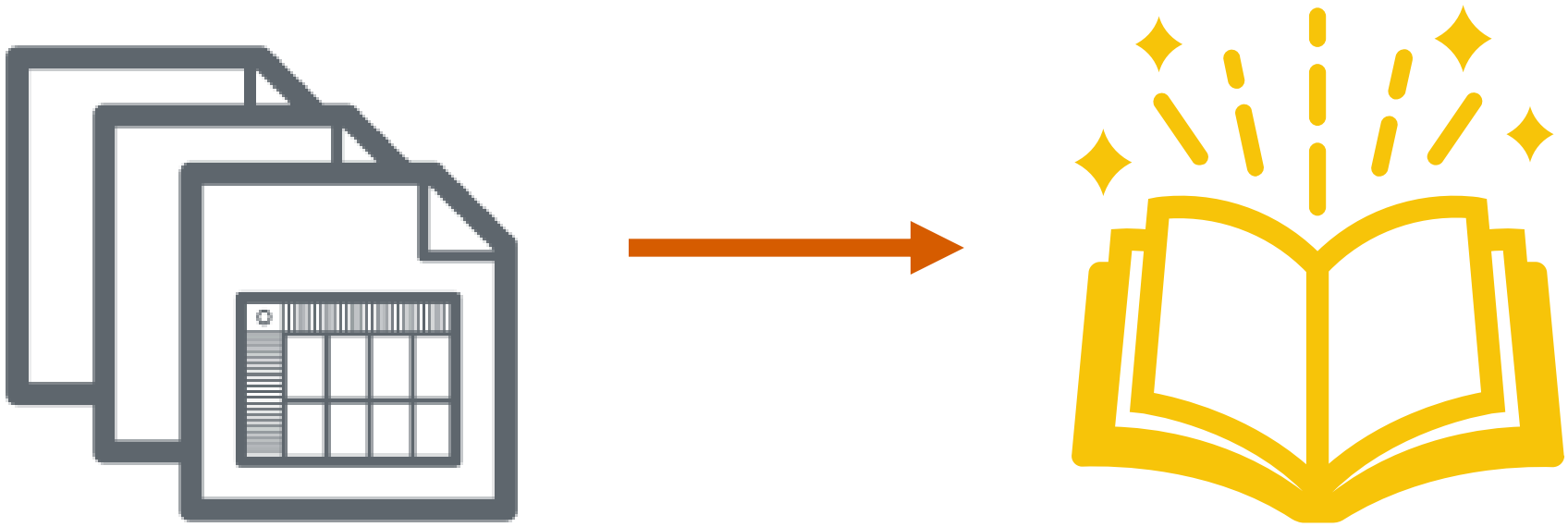
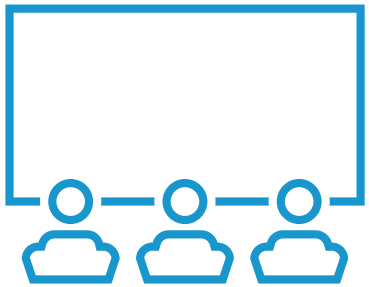
PROJECT INTRODUCTION

THE TASK

In groups, create a storied presentation to give effective insight into the data set.



THE TASK



- Assume that your audience is the **senior management team of the bank** who have requested an update on the lending business.
- You should be prepared to **present** your **visualizations and story, talking through the insights** you have made and your **reasons** for choosing/positioning the elements of your visualization in the way you have

- The audience are particularly interested in the following topics:
  - Understanding **which factors** have tended to predict good or bad loans.
  - How the rate of default has **changed over time.**
  - **Recommendations** for changes to lending policy in future.
  - What steps can the bank take to build a **sustainability linked loan program**? What metrics would you identify and track?

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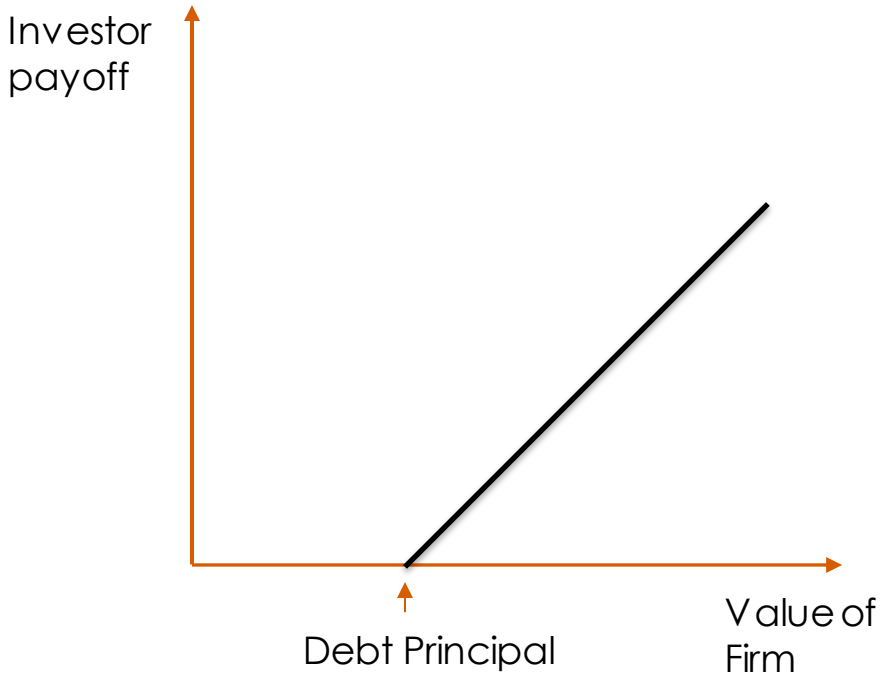
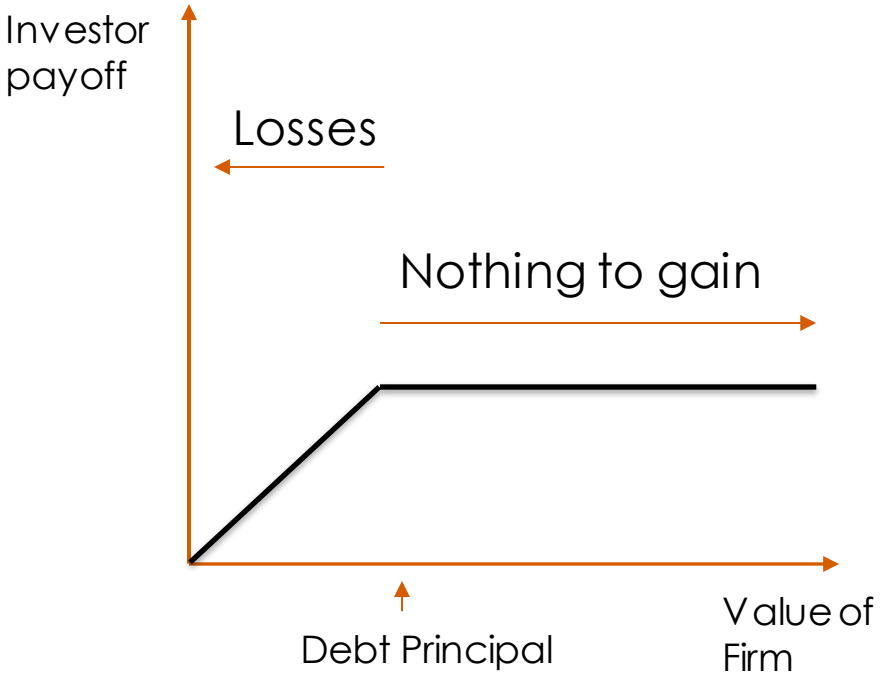
INTRODUCTION TO CREDIT RISK ANALYSIS

DEBT AND EQUITY PAYOFFS

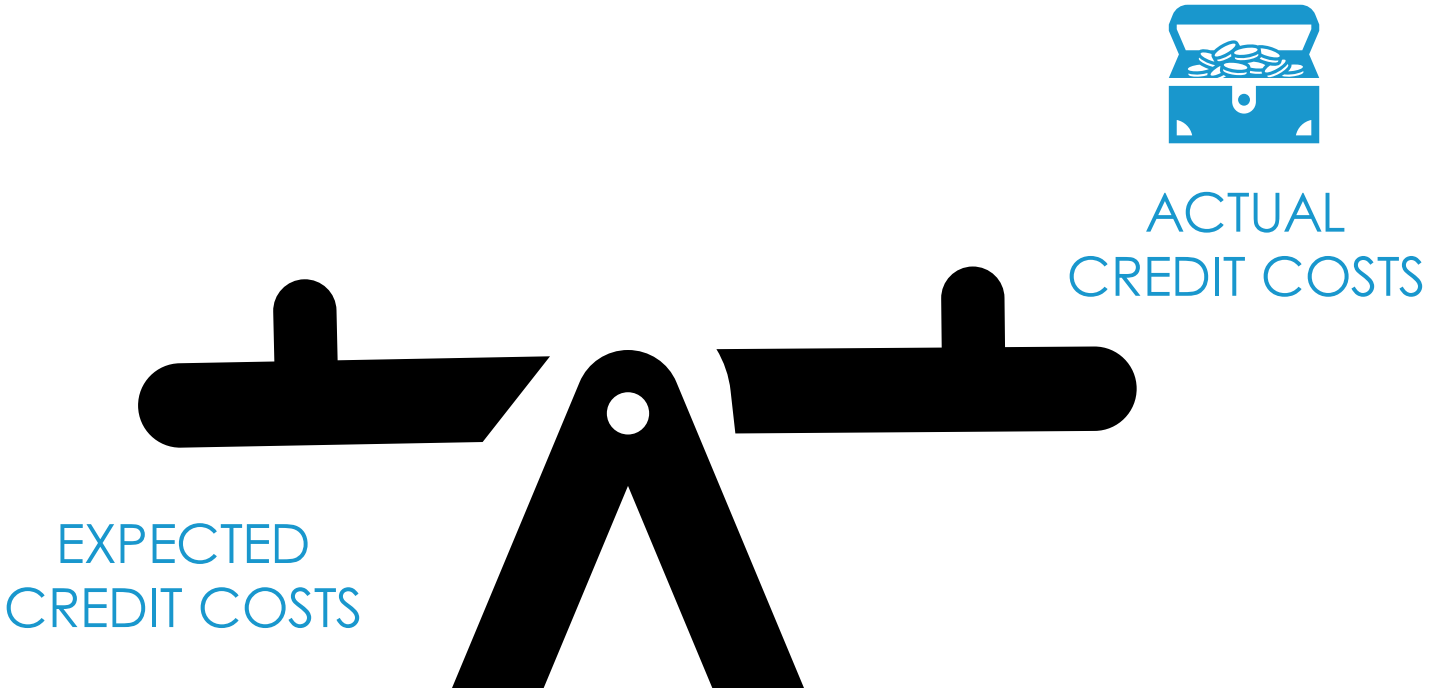
EQUITY



DEBT (including loans)



PROFIT



COMPONENTS OF CREDIT RISK

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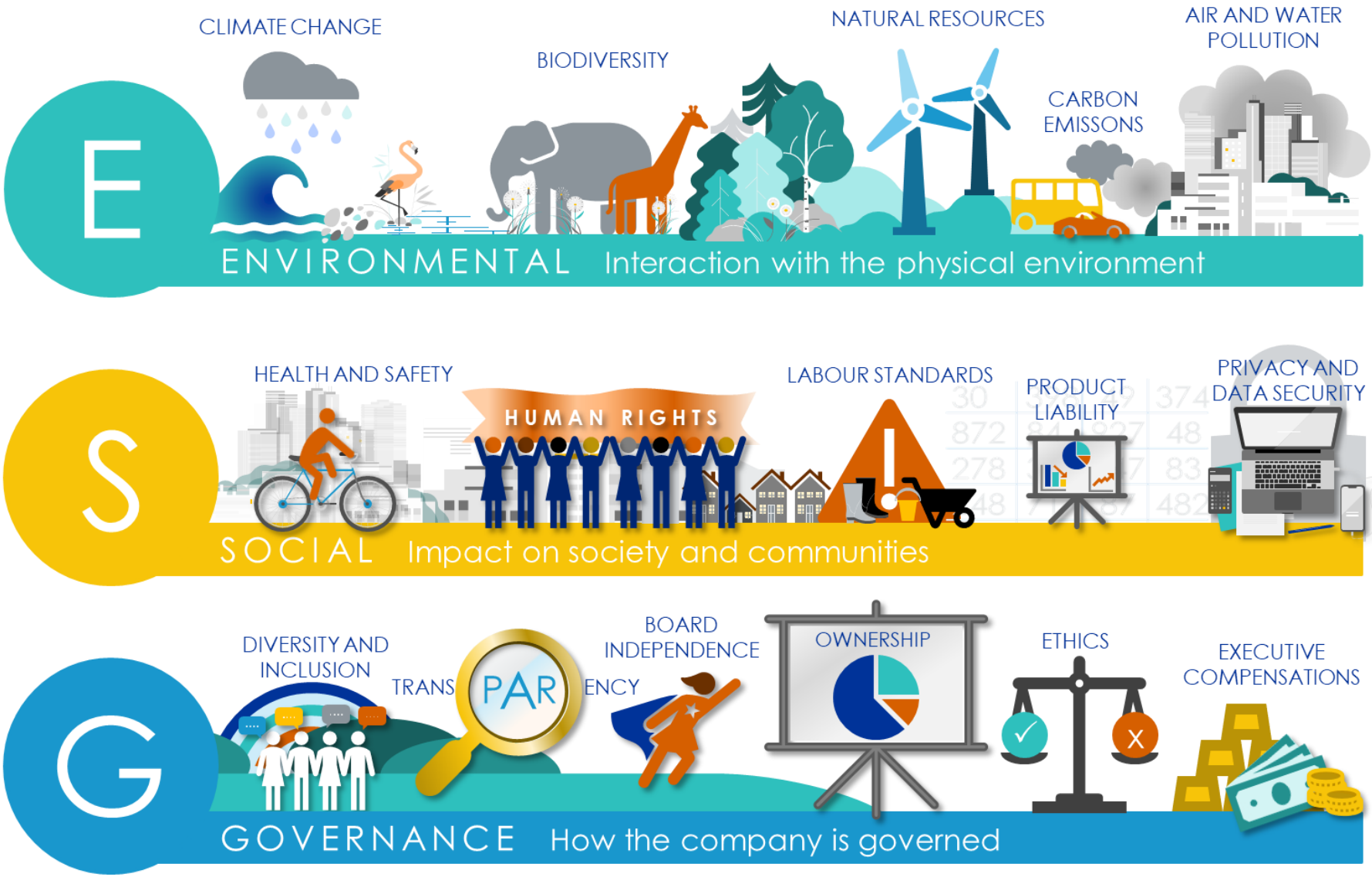
INTRODUCTION TO ESG

INTRODUCTION TO ESG



WHAT IS A SUSTAINABILITY-LINKED LOAN?

- A sustainability-linked loan is a new innovation where the terms of a lending instrument are linked to the borrower achieving pre-determined sustainability objectives.
- An example would be that the interest rate on a loan was (say) 3% if KPIs were met, but increase to (say) 5% if KPIs were missed – or conversely would step-down if tougher KPIs in the future were met.
- Sustainability-linked loans are closely related to Green Bonds which have now have a market size exceeding $1 trillion.
- One key benefit of sustainability-linking vs 'use of proceeds' funding is that they can be deployed for general commercial purposes.
- Areas of focus include:
  - Energy efficiency
  - Greenhouse Gas Emissions
  - Use of renewable power
  - Water consumptions
  - Recycling rates
  - Biodiversity
  - Overall ESG assessment

Source: Loan Market Association

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DATA IN YOUR FILE

CREDIT METRICS IN YOUR DATA FILE

In your data file, we have supplied five datapoints that may or may not be predictive of default

PERIOD	QUICK RATIO	PROFIT GROWTH	MANAGEMENT TURNOVER	LOAN SIZE	LEVERAGE RATIO	DEFAULTED
1	0.29	-0.18	0.11	53.06	0.7	1
1	4.38	0.36	0.12	192.66	0.67	1
1	2.87	0.45	0.46	34.47	0.71	0
2	2.07	0.44	0.38	403.37	0.21	0
2	1.64	0.88	0.4	469.82	0.58	0
2	1.82	-0.39	0.4	213.06	0.53	0

PERIOD

- Data is supplied for 3 periods (1,2,3)
- For the purpose of the credit exercise, you can assume these are independent, non-overlapping periods of sufficient duration.
- For the purpose of the ESG exercise, you can combine the three time periods and look at a single data period

QUICK RATIO

$$Quick\ ratio = \frac{Current\ Assets\ - Inventory}{Current\ Liabilities}$$

- Quick ratio also known as the acid-test ratio
- How quickly can a company pay off its current liabilities using its liquid current assets?
- In general a quick ratio below 1 suggests that short-term liabilities can be covered using the cash and short-term debts of the company

PROFIT GROWTH

$$Year\ on\ Year\ Profit\ Growth = \frac{Latest\ Annual\ Profits}{Prior\ Annual\ Profits} - 1$$

- Expressed as a percentage
- Single year, year-on-year, growth in profits

MANAGEMENT TURNOVER

$$Management\ Turnover = \frac{Management\ leaving\ in\ the\ last\ year}{Prior\ year\ management\ headcount}$$

- Proportion of management leaving in the last year

LOAN SIZE

- Size of loan in million USD

LEVERAGE RATIO

$$Leverage\ Ratio = \frac{Borrower\ debt}{Borrower\ debt + equity}$$

- How much has the company borrowed relative to its total capital?
- In terms of a domestic mortgage, this is the loan to value (LTV) ratio
- Accounting equation:
  - $Fixed\ Assets + Current\ Assets\ - Current\ liabilities = Debt + Equity$

ENVIRONMENTAL DATA IN YOUR FILE

- Numeric Sector code (1-10)
  - The number of companies in each sector is not equal
  - For the exercise we are not disclosing which numeric code corresponds to any actual sector in order that you can focus on the results of the data science
- Normalized score around a mean of zero for each of Environmental, Social and Governance
  - The mean of zero holds for the whole population, not for each sector
  - E, S & G have been scored independently and you should consider how to combine them

Do **NOT** use the Environmental Data to drive your credit score in this exercise

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NEXT STEPS

DATA ANALYSIS

Tools

Time

Great analysis + A Poor Presentation = A Poor Presentation

Review

STORY TELLING USING DATA

The data should drive the story, not vice versa

Use graphs and infographics

Tell the story in the data, not of your project

Create memorable anecdotes

Don’t make too many points

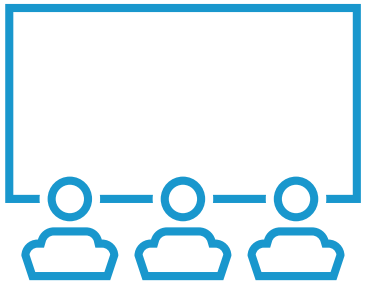
REPORTS TO SENIOR MANAGEMENT

- Executive Summary
  - Get your key takeaways upfront

- Key findings
  - Use data story telling to explain/justify your key takeaways

- Appendices
  - Supporting material

THE TASK (REMINDER)



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