

BPP Business School

Coursework Cover Sheet

Please use this document as the cover sheet of for the 1st page of your assessment.

Please complete the below table – the grey columns

Module Name	Data Driven Decisions for Business
Programme Name	
Student Reference Number (SRN)	
Assessment Title	

Please complete the yellow sections in the below declaration :

<u>Declaration of Original Work:</u> I hereby declare that I have read and understood BPP's regulations on plagiarism and that this is my original work, researched, undertaken, completed and submitted in accordance with the requirements of BPP School of Business and Technology. The word count, excluding contents table, bibliography and appendices, is words. Student Reference Number: Date: 	
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Msc Management

Data driven Decisions for Business

Coursework Assessment Brief [CW1(S)]

1. General Assessment Guidance

- Your summative assessment for this module is made up of this **2500** submission which accounts for 100% of the marks
- **Please note late submissions will not be marked.**
- You are required to submit all elements of your assessment via **Turnitin online access**. Only submissions made via the specified mode will be accepted and hard copies or any other digital form of submissions (like via email or pen drive etc.) **will not be accepted**.
- For coursework, the submission word limit is **2500** words. You must comply with the word count guidelines. You may submit LESS than **2500** words but not more. **Word Count guidelines can be found on your programme home page and the coursework submission page.**
- **Do not put your name or contact details anywhere on your submission**. You should only put your student registration number (SRN) which will ensure your submission is recognised in the marking process.
- A total of 100 marks are available for this module assessment, and you are required to achieve minimum **50%** to **pass** this module.
- You are required to use only Harvard Referencing System in your submission. Any content which is already published by other author(s) and is not referenced will be considered as a case of plagiarism.
You can find further information on Harvard Referencing in the online library on the VLE. You can use the following link to access this information: <http://bpp.libguides.com/Home/StudySupport>
- BPP University has a strict policy regarding authenticity of assessments. In proven instances of plagiarism or collusion, severe punishment will be imposed on offenders. You are advised to read the rules and regulations regarding plagiarism and collusion in the GARs and MOPP which are available on VLE in the Academic registry section.
- You should include a completed copy of the **Assignment Cover sheet**. Any submission without this completed Assignment Cover sheet may be considered invalid and not marked.

1. Assessment Brief

2.1. Assessment learning outcomes

This assessment is designed to gauge your understanding, skills and application of common data analysis techniques used in business and other organisations today. As such you need to demonstrate your attainment in these areas according to the four Module Learning Outcomes (LOs):

- LO1: Critically evaluate the evolving use of data in solving business problems, presenting logical arguments based on evidence
- LO2: Explore how data analytics can be used within a business context
- LO3: Critically appraise the presentation of data within a business environment
- LO4: Critically evaluate different business analytical techniques as part of planning a data analytics initiative.

2.2. Scenario

You have recently been employed by Darcy & Bennet Bank as a data analyst. Darcy & Bennet Bank is a retail bank offering consumer banking service through branches around the UK. Its services include checking accounts, savings accounts, personal loans, lines of credit, mortgages, debit and credit cards.

Darcy & Bennet Bank has been providing exceptional banking services for over 30 years. Its commitment to people-centric banking has allowed the bank to support a wide range of customers achieve their financial goals, while keeping its duty to shareholders. Darcy & Bennet Bank's personalised approach to commercial banking and the creative delivery of technology has helped fuel its continued growth. During all of its success, the bank has delivered meaningful client experiences by remaining true to a core operating principle: Think Big, Act Local.

As Darcy & Bennet Bank expands, it continues to increase its data analytic roles with the organisation to strengthening its strategic decision-making capabilities. The recruitment strategy is to employ young professionals with strategic and data analytics skills willing to provide Darcy & Bennet Bank top management with strong evidence-based foundation for their business decisions. They like recruits to have a broad management experience combine with strong academic background. Your MSc degree at BPP University was a key element in their decision to recruit you.

As part of your first assignment at Darcy & Bennet Bank, you have joined the Retail Banking division as data analyst. Retail banking division provides financial services to individual consumers and their families, and it is responsible to run all branches of the bank. Other divisions of the bank include credit card lending and investment banking & markets.

Your manager requested you to complete a number of tasks to ensure that you have a grounded knowledge and understanding of data analytics and its application in decision-making. This is your opportunity to demonstrate your capability and give your employer the confidence to let you run your own project in the future.

As part of your first duties, your manager asked you to join the team in charge of the operations for retail branches for the bank. As many other banks, Darcy & Bennet Bank has the market pressure to provide more services online. Business and technological change have allowed banks to offer more efficient – and generally online – methods of operating to deliver services to the new generation of customers accustomed to computers and mobiles to access their services.

However, the top management of the bank is very much aware that individual customer savings is one of the bank's key sources of low-cost funding because they provide much of the 'on-demand' deposits but paid lower rates of interest on them. Darcy & Bennet Bank has traditionally delivered its services through physical branch networks, so the closure of one branch is taken very seriously by the top management. In an aging population environment like the one in UK, having branches to attract this funding would likely be critical for the bank.

The retail banking team is analysing different growth options so they can provide a more balanced growth in the future, combining traditional high-street branches with online/mobile distribution channels. They want to avoid the "vicious circle" in which the more branches they close, the more people move online, so there are fewer people relying on high street branches, so more of them close. However, it makes sense to define the strategy based on these options only if the current retail banking business model does not provide the expansion and growth opportunities expected by the bank's top management. So, you have been given the responsibility to analyse Darcy & Bennet Bank current retail banking business performance.

Your job will be to analyse the performance of three of the best high-street branches of the bank located one in London, one in Manchester, and one in Liverpool. Darcy & Bennet Bank has experienced strong competition in these cities from traditional banks such as Barclays and Lloyds. So, the performance of these three bank branches is a good indication of the current overall market performance of the bank.

2.3. Research objectives and tasks

The Retail Banking Manager, who is leading the project, is interested in understanding the options available for a branch volume expansion strategy. For this purpose, he wants you to:

Question 1: Perform an analysis of the deposit value and volume of clients of the three bank branches to identify the best city to open new branches.

As part of the analysis, the Marketing Manager wants to consider the re-development of the marketing plan to support the service offering of the branches. Her objective is to improve the deposit value per customer through a strong marketing plan. In order to do so, she wants to focus the promotion efforts only on the high-performance saving services of the bank. The money saving services the bank offers in its branches is made of the following categories¹: traditional savings accounts, high-yield savings accounts, money market accounts, certificates of deposit, cash management accounts and ISA accounts. In this respect, she wants you to:

¹ <https://www.forbes.com/advisor/banking/savings/types-of-savings-accounts/#:~:text=The%20options%20include%20traditional%20savings,accounts%20and%20specialty%20savings%20accounts.>

Question 2: Perform an analysis of the services offered in the branches to identify the best performance money saving services.

Darcy & Bennet Bank invested on the expansion and renovation of the branch located in Manchester around July 2022, so the branch could allocate more self-service machines and desk for advisers so in this way combining the advantages of automated machines with personalised customer service. The Branch Manager is keen to understand if this renovation could be applied to other branches of the bank. So, he wants you to address the question:

Question 3: Did the expansion and renovation of the bank in Manchester have a positive impact on deposit value of the branch?

The responses to requests detailed below should be included in a summary MS Word report that you save and submit as a PDF format file.

Because this is your first project within Darcy & Bennet Bank, the Retail Banking Manager has given you additional details regarding the structure and content that it is expected to see in your report. This is set out in Section 3 – Report Structure.

A set of data is available (see module dataset spreadsheet file). The dataset include several parameters: city of the branch, year, month, saving category, customer volume (it shows the number of customers visiting a branch) and deposit value (money saved in a particular saving category). Since the data comes directly from the bank branches, quality issues are present which will require your attention!

You have five tasks to complete for your summative report. The first three are exactly the same as for your formative report and you should update your answers to these tasks based both on feedback on your formative submission together with your own further learning across the module.

Task 1: Introduction and project plan (20 marks)

Summarise what you are going to present in the report and justify your plan for delivering the research project to the Retail Banking Manager. Ensure you also clearly reference a data analytics implementation framework as part of your plan. Finally, specifically explain how data analytics can add value and drive business performance improvement for Darcy & Bennet Bank's branches.

Guidelines:

- State the purpose of report and describe the report structure and contents.
- Present your overall project plan for delivering the project.
- Ensure that your project plan explicitly refers to a data analytics implementation framework and explain how the selected framework can be used to addresses the core business questions assigned to you.
- Suggest a list of Key Performance Indicators (KPIs) for Darcy & Bennet Bank's branches and explain how better data analytics enables improvements against these KPIs.

Task 2: Data quality issues and remedies (10 marks)

Discuss first the generic issues that data analysts encounter in collecting, reviewing and cleansing data. Second discuss specific issues with the project data that the Retail Banking team has provided and how you propose to address those issues.

Guidelines:

- List and explain generic data problems and how to identify them. What are the different options for resolving these generic issues?
- List all the data problems you have identified with the Darcy & Bennet Bank dataset. Explain how you identified the problems (give examples) and how you propose to address them.

Task 3: Data analysis and commentary (20 marks)

Using tables, set out and explain the results of your numeric data analysis, including summary of exploratory data and supporting commentary. Explain how your results provide an understanding of Darcy & Bennet Bank's branches performance. This should include three tables setting out:

(Table A) Data and trends in customer volume and deposit value by month, by year and across the 3 years period,

(Table B) Benchmark comparisons of saving services categories performance covering customer volume and deposit value by quarter, by year and across the 3 years period, and

(Table C) Benchmark comparisons of customer volume and deposit value between bank branches by quarter, by year and across the 3 years period.

Guidelines:

- Include summary exploratory data calculations for total deposit value and customer volume. The analysis could include for example top and bottom performing saving service categories, ranges, averages, standard deviations; top and bottom performing time-periods, etc.
- Ensure your tables are professionally presented: Headings, units, data formats. Highlight and annotate key data elements.
- For each table, include firstly an explanation of the table and its contents and then a bullet-point list of what you can see or infer from your analysis of the data.

Task 4: Data charting and commentary (20 marks)

Use your data charting and interpretation skills to develop graphic presentations of your findings together with bullet-points setting out the key findings and inferences from the charting. This should include three charts presenting:

(Chart A) Comparison of deposit value trends across bank branches over time

(Chart B) Saving service category performance comparisons between bank branches, and

(Chart C) Impact of the expansion and renovation done in the Manchester branch of the bank, and in comparison with other two bank branches.

Guidelines:

- Ensure you provide well-presented and labelled charts
- Use a combination of visual data presentation techniques such as bar charts, stacked bar charts, trend charts, pie charts and tree map charts

- For each chart, include firstly an explanation of the chart and its contents and then a bullet-point list of what you can see or infer from your analysis of the data.

Task 5: Conclusions and recommendations (20 marks)

Based on your analysis and findings in Tasks 3 and 4 set-out your conclusions and recommendations.

Guidelines:

- What conclusions can be inferred regarding Darcy & Bennet Bank's branches deposit performance and operations? Remember to answer the three questions raised by Darcy & Bennet Bank top management.
- What are your business recommendations to Darcy & Bennet's CEO and top management?
- Include any suggestions related to data analytics and its better use within the bank.
- Note that it is also acceptable to add to your data analytics recommendations, possible actions that Darcy & Bennet Bank might take, based not only on your findings but also on your wider knowledge of business and Darcy & Bennet Bank market sector.

Report Structure and References (10 marks)

In addition, ten marks are awarded for the overall professionalism of your report and the adoption of academic standards.

Guidelines:

- Your report should follow the section naming structure and order set out in the Brief. You should also add your own sub-headings as you see fit to demonstrate your ability to on-develop structure and content
- Your report should include an auto-generated contents page including section headings and sub-headings. The contents page should also include a page-referenced list all tables, charts and figures provided in our report. Remember to number all pages in your report, for example 'Page 8 of 12'.
- Ensure you develop your discussion in a logical progression: Findings, inferences, conclusions, recommendations
- Do not make general assertions without supporting evidence
- Zero spelling errors and grammatical mistakes
- Cite all your sources in the body of the text and in the Referencing using the Harvard Referencing style
- Include a blend of industry research, case studies and academic references

2. Report Structure

You should set out your report according to the following heading structure. You should add sub-headings under this overall structure as you feel fit to demonstrate your ability to on-develop the section themes and to provide meaningful sub-structure. But you must use this overall structure in

order to provide a consistent framework against which your marker will allocate marks. You will be deducted marks if you do not follow this structure. Also note that there is no requirement for producing an Executive Summary.

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- 1. Introduction and project plan**
- 2. Data quality issues and remedies**
- 3. Data analysis and commentary**
- 4. Data charting and commentary**
- 5. Conclusions and recommendations**
- 6. References**
- 7. Appendix (optional)**

In addition, you may wish to add further appendices as you see fit in order to support your work.

Word count: 2,500. Cover Page, Table of Contents, References, Appendices, Tables, Charts and Figures do not count towards word count.

3. Mapping Learning Outcomes to Assessment Tasks

The table below sets out the mapping between the four Module Learning Objectives and the key tasks in your Summative Assessment which test your achievement against these Learning Objectives.

Learning Outcome	Mapping to Summative Assessment Tasks
LO 1: Critically evaluate the evolving use of data in solving business problems, presenting logical arguments based on evidence	Task 1: Introduction and project plan Task 5: Conclusions and recommendations
LO 2: Explore how data analytics can be used within a business context	Task 2: Data quality issues and remedies Task 3: Data analysis and commentary
LO 3: Critically appraise the presentation of data within a business environment	Task 4: Data charting and commentary
LO4; Critically evaluate different business analytical techniques as part of planning a data analytics initiative	Task 1: Introduction and project plan

Marking Guide

The assignment is marked out of 100 and counts towards 100% of your module mark. The following table shows the tasks, marks and marking rubric. **You should iteratively self-assess your performance against the Marking Guide as you develop your draft submission, in order to evaluate your performance against your target grade.**

Assignment task	Distinction (70-100%)	Merit (60-69%)	Pass (50-59%)	Low Fail (40-49%)	Fail (0-39%)
1: Introduction and project plan (20 marks, LO1, LO4)	Guidelines: <ul style="list-style-type: none"> State the purpose of report and describe the report structure and contents Present your overall project plan for delivering the project Ensure that your project plan explicitly refers to a data analytics implementation framework and explain how the selected framework can be used to addresses the core business questions assigned to you. Present Darcy & Bennet Bank's branches Key Performance Indicators (KPIs) and how better analytics enables improvements against these KPIs. 				
	Excellent presentation of an analytical framework or approach that can be used to answer the business question. Excellent justification of why this analytical framework or approach can be effective in answering the business question.	Good presentation to any analytical framework or approach that can be used to answer the business question. Good justification of why this analytical framework or approach can be effective in answering the business question.	Satisfactory presentation to any analytical framework or approach that can be used to answer the business question. Satisfactory justification of why this analytical framework or approach can be effective in answering the business question.	Limited mention to analytical framework or approach that can be used to answer the business question. Limited justification of why this analytical framework or approach can be effective in answering the business question.	Weak/No mention to analytical framework or approach that can be used to answer the business question. Weak/No justification of why this analytical framework or approach can be effective in answering the business question.
2: Data quality issues and remedies (10 marks, LO2)	Guidelines: <ul style="list-style-type: none"> List and explain generic data problems and how to identify them. What are the different options for resolving these generic issues? List all the data problems you have identified with the Darcy & Bennet Bank dataset. Explain how you identified the problems and how you propose to address them. 				

Assignment task	Distinction (70-100%)	Merit (60-69%)	Pass (50-59%)	Low Fail (40-49%)	Fail (0-39%)
	Excellent identification of appropriate errors and explanation how they can be fixed. Student identifies some relevant errors in the database and give specific recommendation on how to solve them.	Good identification of appropriate errors and good explanation how they can be fixed. Student identifies some errors and give recommendation on how to solve them.	Satisfactory identification of appropriate errors and basic explanation how they can be fixed. Student has identified some errors.	Limited identification of appropriate errors and weak explanation how they can be fixed.	Weak/No identification of appropriate errors and weak explanation how they can be fixed.
3: Data analysis and commentary (20 marks, LO2)	Guidelines: <ul style="list-style-type: none"> • Include summary exploratory data calculations for total deposit value and customer volume. The analysis could include for example top and bottom performing saving service categories, ranges, averages, standard deviations; top and bottom performing time-periods, etc. • Ensure your tables are professionally presented: Headings, units, data formats. Highlight and annotate key data elements. • For each table include firstly an explanation of the table and its contents and then a bullet-point list of what you can see or infer from your analysis of the data. 				
	Excellent use of tables to present the outcome of the data analysis run to reply to the business question. Commentary to tables is detailed.	Good use of tables to present the outcome of the data analysis run to reply to the business question. Commentary to tables is good.	Satisfactory use of tables to present the outcome of the data analysis run to reply to the business question. Commentary to tables is satisfactory.	Limited use of tables to present the outcome of the data analysis run to reply to the business question. Commentary to tables is limited.	Weak/No use of tables to present the outcome of the data analysis run to reply to the business question. Commentary to tables is weak/there is not.
4: Data charting and commentary (20 marks, LO3)	Guidelines: <ul style="list-style-type: none"> • Ensure you provide well-presented and labelled charts • Use a combination of visual data presentation techniques such as bar charts, stacked bar charts, trend charts, pie charts and tree map charts • For each chart include firstly an explanation of the chart and its contents and then a bullet-point list of what you can see or infer from your analysis of the data. 				

Assignment task	Distinction (70-100%)	Merit (60-69%)	Pass (50-59%)	Low Fail (40-49%)	Fail (0-39%)
	Excellent use of charts to present the outcome of the data analysis run to reply to the business question. Commentary to charts is detailed.	Good use of chart to present the outcome of the data analysis run to reply to the business question. Commentary to charts is good.	Satisfactory use of charts to present the outcome of the data analysis run to reply to the business question. Commentary to charts is basic.	Limited use of charts to present the outcome of the data analysis run to reply to the business question. Commentary to charts is limited.	Weak/No use of charts to present the outcome of the data analysis run to reply to the business question. Commentary to charts is weak/there is not.
5: Conclusions and recommendations (20 marks, LO3)	Guidelines: <ul style="list-style-type: none"> What conclusions can be inferred regarding Darcy & Bennet Bank's branches deposit performance and operations? Remember to answer the three questions raised by Darcy & Bennet Bank top management. What are your business recommendations to Darcy & Bennet 's CEO and top management? Include any suggestions related to data analytics and its better use within the bank. Note that it is also acceptable to add to your data analytics recommendations, possible actions that Darcy & Bennet Bank might take, based not only on your findings but also on your wider knowledge of business and Darcy & Bennet Bank market sector.				
	Excellent summary of key insights and satisfactory answer to the business question. Excellent discussion of how the analysis can be improved and excellent presentation of concerns about how the analysis is done.	Good summary of key insights and good answer to the business question. Good discussion of how the analysis can be improved and good presentation of concerns about how the analysis is done.	Satisfactory summary of key insights and satisfactory answer to the business question. Basic discussion of how the analysis can be improved and basic presentation of concerns about how the analysis is done.	Limited summary of key insights of the report. Limited discussion of how the analysis can be improved and weak presentation of concerns about how the analysis can be done.	Weak/No summary of key insights of the report. Weak discussion of how the analysis can be improved and weak/no presentation of concerns about how the analysis can be done.

Assignment task	Distinction (70-100%)	Merit (60-69%)	Pass (50-59%)	Low Fail (40-49%)	Fail (0-39%)
Report Structure and References (10 marks. Applies across all LOs tasks)	Guidelines: <ul style="list-style-type: none"> Your report should follow the section naming structure and order set out in the Brief. You should also add your own sub-headings as you see fit to demonstrate your ability to on-develop structure and content Your report should include an auto-generated contents page including section headings and sub-headings. The contents page should also include a page-referenced list all tables, charts and figures provided in our report. Remember to number all pages in your report, for example 'Page 8 of 12'. Ensure you develop your discussion in a logical progression: Findings, inferences, conclusions, recommendations Do not make general assertions without supporting evidence Zero spelling errors and grammatical mistakes Cite all your sources in the body of the text and in the Referencing using the Harvard Referencing style Include a blend of industry research, case studies and academic references. 				
	For a distinction the report will use a consistent approach to headings, tables and graphs. Sources will be correctly cited and there will be a complete set of references in the correct format and in alphabetical order. There is evidence of extensive independent reading and research. Formatting and presentation are professional throughout.	Referencing has few if any errors. The report is reasonably well presented but could be improved by greater attention to detail. There is evidence of wider reading and research.	There is a satisfactory number of references, but the correct format is used, albeit with some errors. There may be some errors in formatting and presentation, but the report is reasonably professional in appearance.	Limited research with inappropriate references. Limited professional appearance of report and slides	Weak/No research with inappropriate references. No professional appearance of report and slides

