

Analysis of the Impact of Exchange Rates on Specialty Profit Optimization imports of Cheese

Lara Hasan

LTUC

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The report describes how a data model for a cheese import company was improved iteratively, with a particular emphasis on controlling exchange rate volatility and how it affected earnings.

With careful development and input from users, we have converted a complicated spreadsheet into a user-friendly, effective analytical tool.

Basic Development and Design

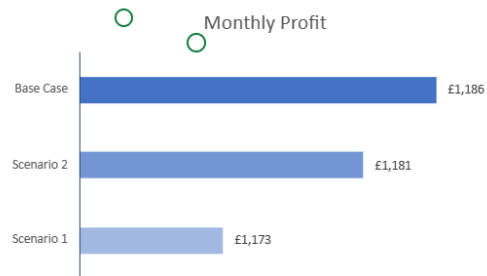
The main objective of the model's design is to offer a user-friendly interface to people with little experience with spreadsheets. It includes exchange rate input boxes, gives users the option to raise prices or decrease the margin, and displays calculated results for total profit and sales volume.

Overview of the development and design procedure

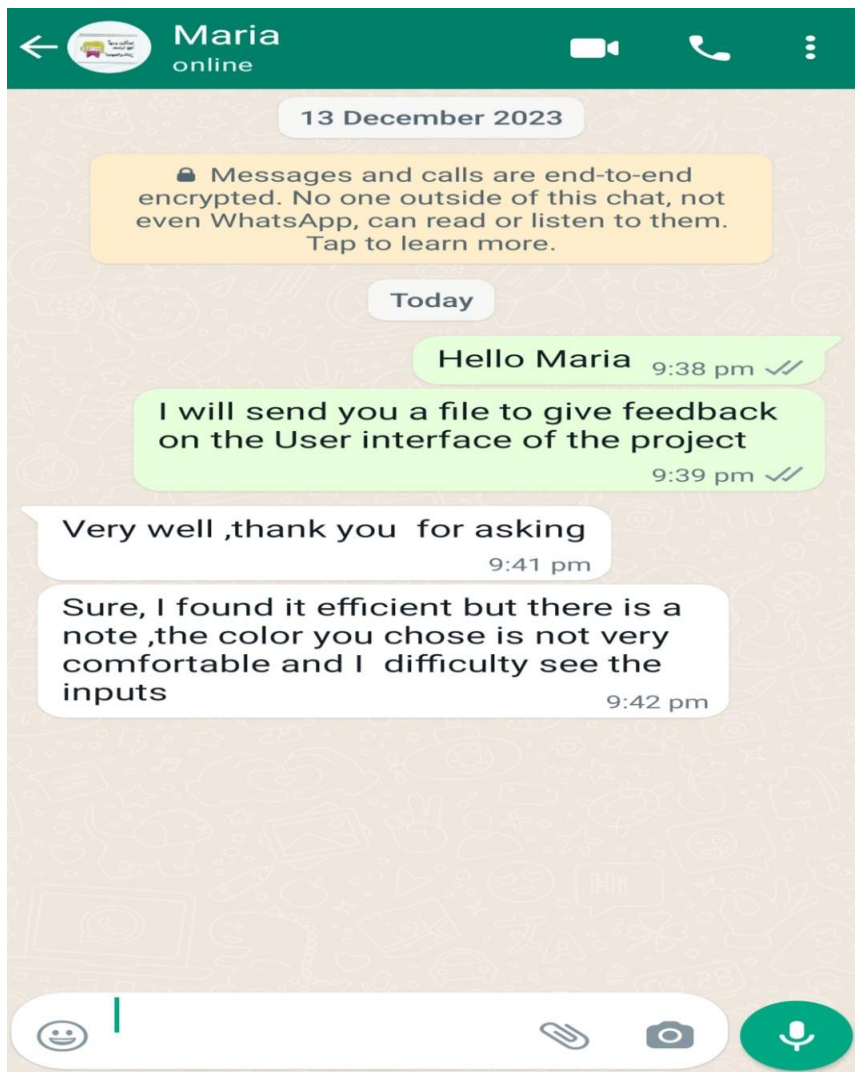
A careful and deliberate process went into developing the spreadsheet model with the goal of striking a balance between user-friendliness and accuracy. Managing the company's essential requirement to control the effect of exchange rate swings on profit margins was central to this. The model guarantees accurate estimates, which are crucial for the company's sales strategy, by concentrating on the top-selling cheeses. This method emphasizes the significance of user-friendly design while maintaining technical correctness.

Cheese	Cost in Euros	Monthly Sales	Monthly Cost	Profit	Cost in Pounds	Exchange Rate
Camembert	€ 28.00	£ 900.00	£ 642.86	£ 257.14	€ 19.60	0.701
Emmental	€ 32.00	£ 850.00	£ 607.14	£ 242.86	€ 22.40	
Gruyere	€ 35.00	£ 875.00	£ 625.00	£ 250.00	€ 24.50	
Edam	€ 29.00	£ 825.00	£ 589.29	£ 235.71	€ 20.30	
Gouda	€ 31.00	£ 700.00	£ 500.00	£ 200.00	€ 21.70	
			Total profit	£ 1,186		

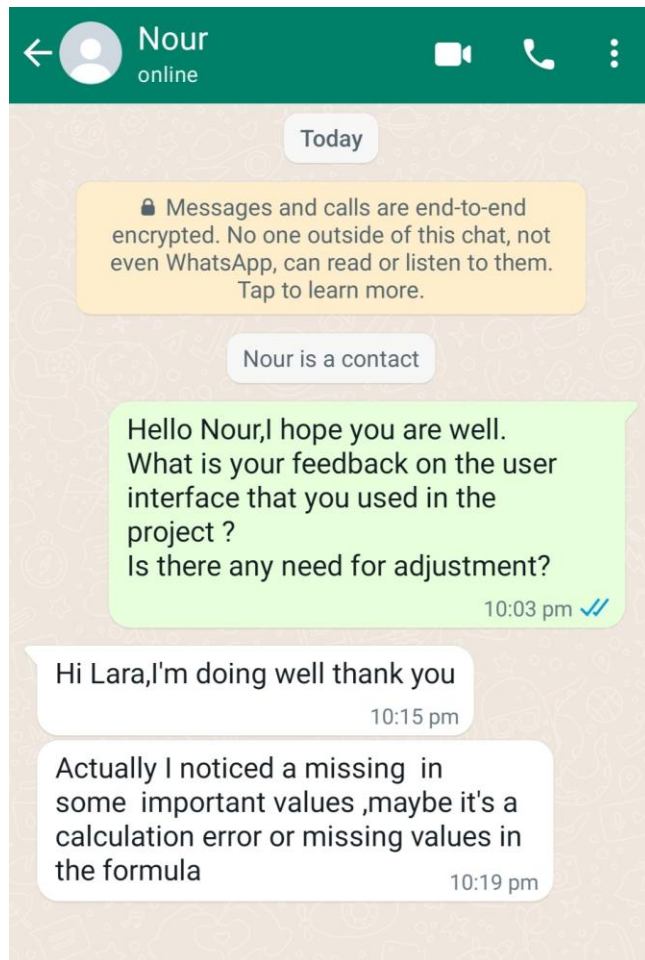
Cheese	Selling Price	Monthly Sales	Cost in Pounds	Monthly Cost	Profit
Camembert	€ 27.44	€ 900.00	€ 19.63	€ 643.78	€ 256.22
Emmental	€ 31.36	€ 850.00	€ 22.43	€ 608.01	€ 241.99
Gruyere	€ 34.30	€ 875.00	€ 24.54	€ 625.89	€ 249.11
Edam	€ 28.42	€ 825.00	€ 20.33	€ 590.13	€ 234.87
Gouda	€ 30.38	€ 700.00	€ 21.73	€ 500.71	€ 199.29
			Total Profit	£ 1,181	

[illegible]

- The User suggested to change the colors that were used and use more comfortable colors.



- The user informed me there are missing values and after checking I found a calculation error



Before Design Review:

- The colors of the design are not an excellent choice.

Cheese	Cost per Kilo in Euros	Monthly Sales	Monthly Cost	Profit	Cost per Kilo in Pounds	Selling price
Camembert	€ 28.00	£ 900.00	£ 642.86	£ 257.14	€ 19.60	€ 27.44
Emmental	€ 32.00	£ 850.00	£ 607.14	£ 242.86	€ 22.40	€ 31.36
Gruyere	€ 35.00	£ 875.00	£ 625.00	£ 250.00	€ 24.50	€ 34.30
Edam	€ 29.00	£ 825.00	£ 589.29	£ 235.71	€ 20.30	€ 28.42
Gouda	€ 31.00	£ 700.00	£ 500.00	£ 200.00	€ 21.70	€ 30.38

- There is an error in the formula.

Cheese	selling price	difference in selling price	number of pence	number of units	monthly sales
Camembert	€ -	€ (27.44)	€ (274.40)	€ (5,488.00)	#####
Emmental	€ -	€ (31.36)	€ (313.60)	€ (6,272.00)	#####
Gruyere	€ -	€ (34.30)	€ (343.00)	€ (6,860.00)	#####
Edam	€ -	€ (28.42)	€ (284.20)	€ (5,684.00)	#####
Gouda	€ -	€ (30.38)	€ (303.80)	€ (6,076.00)	#####

Cheese	Selling Price	Monthly Sales	Cost per Kilo in Pounds	Monthly Cost	Profit
Camembert	£ 27.44	£ 900.00	£ -	#DIV/0!	#DIV/0!
Emmental	£ 31.36	£ 850.00	£ -	#DIV/0!	#DIV/0!
Gruyere	£ 34.30	£ 875.00	£ -	#DIV/0!	#DIV/0!
Edam	£ 28.42	£ 850.00	£ -	#DIV/0!	#DIV/0!
Gouda	£ 30.38	£ 700.00	£ -	#DIV/0!	#DIV/0!

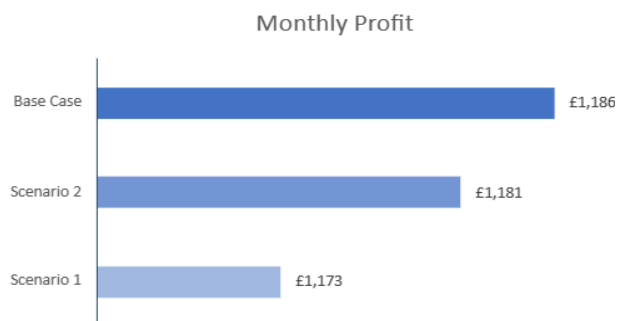
After design review

- Restructured the user interface with distinctive design and colors.

Cheese	Cost in Euros	Monthly Sales	Monthly Cost	Profit	Cost in Pounds	Exchange Rate
Camembert	€ 28.00	€ 900.00	€ 642.86	€ 257.14	€ 19.60	0.701
Emmental	€ 32.00	€ 850.00	€ 607.14	€ 242.86	€ 22.40	
Gruyere	€ 35.00	€ 875.00	€ 625.00	€ 250.00	€ 24.50	
Edam	€ 29.00	€ 825.00	€ 589.29	€ 235.71	€ 20.30	
Gouda	€ 31.00	€ 700.00	€ 500.00	€ 200.00	€ 21.70	
Total profit				€ 1,186		

Cheese	Selling Price	Selling Price Difference	# Pence	# Units	Monthly Sales	Monthly Cost	Profit	Profit
Camembert	€ 27.48	€ 0.04	€ 0.39	€ 7.84	€ 892.16	€ 637.26	€ 254.90	Base Case £1,185.71
Emmental	€ 31.40	€ 0.04	€ 0.45	€ 8.96	€ 841.04	€ 600.74	€ 240.30	Scenario 1 £1,173.31
Gruyere	€ 34.35	€ 0.05	€ 0.49	€ 9.80	€ 865.20	€ 618.00	€ 247.20	Scenario 2 £1,181.48
Edam	€ 28.46	€ 0.04	€ 0.41	€ 8.12	€ 816.88	€ 583.49	€ 233.39	
Gouda	€ 30.42	€ 0.04	€ 0.43	€ 8.68	€ 691.32	€ 493.80	€ 197.52	Scenario 1 £ 1,173
Total profit							€ 1,173	Scenario 2 £ 1,181
								Base Case £ 1,186

Exchange Rate	0.705
Monthly Profit	
Base Case	£ 1,186
Scenario 1	£ 1,173
Scenario 2	£ 1,181



- Solved the calculations error.

Cheese ▾	Selling Price ▾	Monthly Sales ▾	Cost in Pounds ▾	Monthly Cost ▾	Profit ▾
Camembert	€ 27.44	€ 900.00	€ 19.63	€ 643.78	€ 256.22
Emmental	€ 31.36	€ 850.00	€ 22.43	€ 608.01	€ 241.99
Gruyere	€ 34.30	€ 875.00	€ 24.54	€ 625.89	€ 249.11
Edam	€ 28.42	€ 825.00	€ 20.33	€ 590.13	€ 234.87
Gouda	€ 30.38	€ 700.00	€ 21.73	€ 500.71	€ 199.29
				Total Profit	£ 1,181

Written justification for design decision

Exchange Rate check:

Decision: Use a single input to calculate the exchange rate.

Justification: Automated user interaction; one input is easier to understand than several fields.

Exchange Rate

0.705

Conclusion

The produced spreadsheet model meets the company's needs for controlling exchange rate risks by carefully combining technical accuracy with simplicity of use. Its simplicity of use encourages interaction from users, enabling simple data entry and well-informed pricing and margin decisions. The development process showed the importance of user input, thorough testing, and incremental improvement. As a practical, customer-oriented approach, this model demonstrates the essential part that careful planning plays in data modeling to meet practical business concerns.