Glossary

Term	Definition
Amortization	An annual amount representing the allocation of the cost of an intangible asset over a period of time.
Capital Expenditure (CapEx)	Money spent by a company on acquiring or maintaining fixed assets such as property, plant and equipment.
Cost of Goods Sold (COGS)	The direct costs of producing the goods sold by a company. Examples include the cost of raw materials, distribution and labor *directly* involved in the production of the goods.
Depreciation	An annual amount representing the allocation of the cost of an tangible asset over a period of time.
Dividend Payout Ratio	The dividend payout ratio is the percentage of net income that a company pays out to its shareholders as dividends. On the other hand, the part of net income that is not paid out to shareholders is left for re-investment into the company to provide for future growth.
EBITDA	A company's earnings before interest, taxes, depreciation and amortization (EBITDA) is a common financial metric used as a proxy for a company's operational profitability. However, it can be misleading in some circumstances, because it does not include the cost of capital investments such as property, plant and equipment, whose cost is recognised over time in the depreciation and amortization line items.
EBIT	A company's earnings before interest and taxes (EBIT) is an financial metric that includes all income and expenses, except net interest expense and income tax. It is another common proxy for a company's operational profitability.
F9 Key (Calculate the Workbook) / Fn+F9 on Mac	Within large Excel files, at times, the file can freeze and not calculate a new formula or change for some time. In this case, hit the F9 key which should cause the workbook to calculate.
Inventory Days	The average number of days that a company holds its inventory before selling it. The lower the number, the more efficient the company is at selling its stock.
Net Working Capital (NWC)	Net working capital is the difference between a company's current assets and current liabilities. For most companies, this involves adding accounts receivable and inventory, and subtracting accounts payable. Taking this one step further, to calculate the Change in NWC for a given period, the formula is Change in NWC (Period 2) = NWC (Period 1) - NWC (Period 2). The formula may seem counterintuitive. An example will help clear this up. For instance, if NWC(2) is 10 and NWC(1) is 6, then the Change in NWC = 6 - 10 = -4. The change in NWC is negative as it represents a use of cash in period 2 (i.e. to increase the net current asset base from 6 to 10 in period 2, this had to be paid for using cash, and hence represents a use of cash).
Operating Expenses (OpEx)	An operating expense is an ongoing cost incurred in running a business, that is not a direct cost. Examples include head office costs, general and administrative costs, and centralised marketing costs.
Payable Days	The average number of days that a company takes to pay its suppliers. Also known as Days Payable Outstanding (DPO). The higher the number, the longer it takes the company to pay its suppliers.
Receivable Days	The average number of days that it takes a company to collect payment after a sale has been made. Also known as Days Sales Outstanding (DSO). The lower the number, the quicker it is for the company to get paid.

Forecast Assumptions

Dec-YE	Unit	FY20E	FY21E	FY22E	FY23E	FY24E
* **Revenue**						
Cupcakes						
Number of Units Sold	#	100,000	110,000	119,900	129,492	138,556
Average Sale Price	$	4.00	4.16	4.33	4.50	4.68
Ice Cream						
Number of Units Sold	#	60,000	66,000	71,940	77,695	83,134
Average Sale Price	$	3.00	3.12	3.24	3.37	3.51
Drinks						
Number of Units Sold	#	50,000	55,000	59,950	64,746	69,278
Average Sale Price	$	2.50	2.60	2.70	2.81	2.92
* **Costs**						
Cost of Goods Sold (COGS)						
COGS per Cupcake	$	1.50	1.53	1.56	1.59	1.62
COGS per Ice Cream	$	0.80	0.82	0.83	0.85	0.87
COGS per Drink	$	1.10	1.12	1.14	1.17	1.19
Operating Expenses (OpEx)						
Staff Costs	$	150,000	157,500	165,375	173,644	182,326
Occupancy Costs	$	60,000	61,800	63,654	65,564	67,531
Marketing Costs	$	10,000	10,500	11,025	11,576	12,155
Other Costs	$	5,000	5,250	5,513	5,788	6,078
Depreciation & Amortization (D&A)						
Annual D&A	% of revenue	(5.0%)	(4.8%)	(4.5%)	(4.3%)	(4.0%)
* **Cash Flow**						
Capital Expenditure (Capex)	% of revenue	(5.0%)	(4.8%)	(4.5%)	(4.3%)	(4.0%)
Change in Net Working Capital (NWC)	% of revenue	(1.0%)	(1.0%)	(1.0%)	(1.0%)	(1.0%)
Dividend Payout Ratio	%	60.0%	60.0%	60.0%	60.0%	60.0%
* **Other**						
Tax Rate	%	21.0%	21.0%	21.0%	21.0%	21.0%
Debt Interest Rate	%	4.0%	4.0%	4.0%	4.0%	4.0%
Cash Interest Rate	%	1.0%	1.0%	1.0%	1.0%	1.0%
* **END**						

P&L Forecast

Dec-YE	Unit	FY20E	FY21E	FY22E	FY23E	FY24E
Cupcakes Revenue Fill Cupcakes Revenue	$	400,000	457,600	518,735	582,644	648,366
Ice Cream Revenue Fill Ice Cream Revenue	$	180,000	205,920	233,431	262,190	291,765
Drinks Revenue Fill Drinks Revenue MACRO Button	$	125,000	143,000	162,105	182,076	202,614
Total Revenue	$	**705,000**	**806,520**	**914,271**	**1,026,909**	**1,142,745**
Growth	%		*14%*	*13%*	*12%*	*11%*
Cupcakes COGS	$	150,000	168,300	187,116	206,127	224,967
Ice Cream COGS	$	48,000	53,856	59,877	65,961	71,989
Drinks COGS	$	55,000	61,710	68,609	75,580	82,488
Gross Profit	$	**452,000**	**522,654**	**598,669**	**679,242**	**763,300**
Margin	%	*64%*	*65%*	*65%*	*66%*	*67%*
Staff Costs	$	150,000	157,500	165,375	173,644	182,326
Occupancy Costs	$	60,000	61,800	63,654	65,564	67,531
Marketing Costs	$	10,000	10,500	11,025	11,576	12,155
Other Costs	$	5,000	5,250	5,513	5,788	6,078
EBITDA	$	**227,000**	**287,604**	**353,102**	**422,670**	**495,211**
Margin	%	*32%*	*36%*	*39%*	*41%*	*43%*
Annual D&A	$	(35,250)	(38,310)	(41,142)	(43,644)	(45,710)
EBIT (Operating Income)	$	**191,750**	**249,294**	**311,960**	**379,026**	**449,502**
Margin	%	*27%*	*31%*	*34%*	*37%*	*39%*
Net Interest	$	(15,850)	(13,909)	(11,256)	(7,821)	(3,539)
Profit Before Tax (PBT)	$	**175,900**	**235,386**	**300,704**	**371,206**	**445,962**
Margin	%	*25%*	*29%*	*33%*	*36%*	*39%*
Annual Tax	$	36,939	49,431	63,148	77,953	93,652
Net Profit After Tax (NPAT)	$	**138,961**	**185,955**	**237,556**	**293,253**	**352,310**
Margin	%	*20%*	*23%*	*26%*	*29%*	*31%*
Dividend Payout Ratio	%	60%	60%	60%	60%	60%
Gross Dividends	$	**83,377**	**111,573**	**142,534**	**175,952**	**211,386**

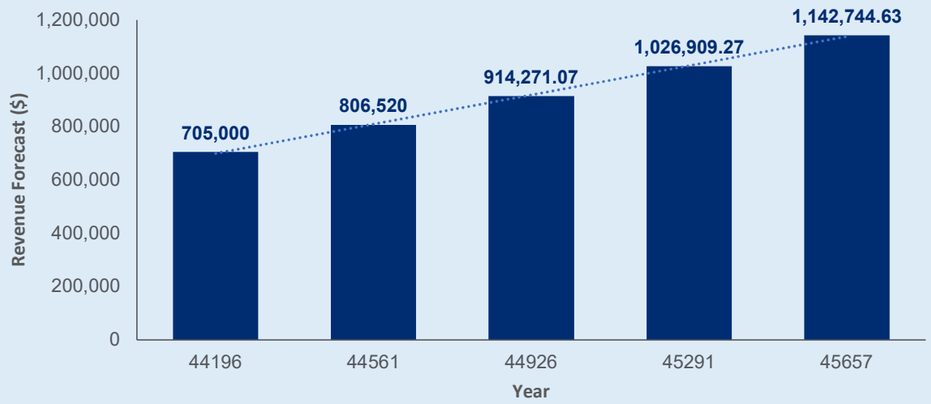
* **END**

Cash Flow Forecast

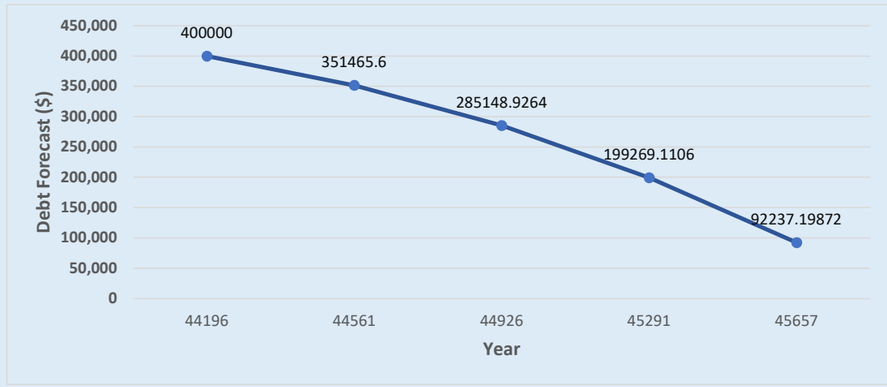
Dec-YE	Unit	FY19A	FY20E	FY21E	FY22E	FY23E	FY24E
EBITDA	$		227,000	287,604	353,102	422,670	495,211
Tax Expense	$		(36,939)	(49,431)	(63,148)	(77,953)	(93,652)
Dividends	$		(83,377)	(111,573)	(142,534)	(175,952)	(211,386)
Change in Net Working Capital (NWC)	$		(7,050)	(8,065)	(9,143)	(10,269)	(11,427)
Net Interest	$		(15,850)	(13,909)	(11,256)	(7,821)	(3,539)
Net CapEx	$		(35,250)	(38,310)	(41,142)	(43,644)	(45,710)
Net Cash Flow	$		**48,534**	**66,317**	**85,880**	**107,032**	**129,497**
Debt Repayment	$		(48,534)	(66,317)	(85,880)	(107,032)	(92,237)
Cash to Balance Sheet	$		**-**	**-**	**-**	**-**	**37,259**
Opening Cash	$		15,000	15,000	15,000	15,000	15,000
Cash to Balance Sheet	$		-	-	-	-	37,259
Closing Cash	$	**15,000**	**15,000**	**15,000**	**15,000**	**15,000**	**52,259**
Supporting Debt Schedule							
Opening Debt	$		400,000	351,466	285,149	199,269	92,237
Debt Repayment	$		(48,534)	(66,317)	(85,880)	(107,032)	(92,237)
Closing Debt	$	**400,000**	**351,466**	**285,149**	**199,269**	**92,237**	**-**
END							

Outputs

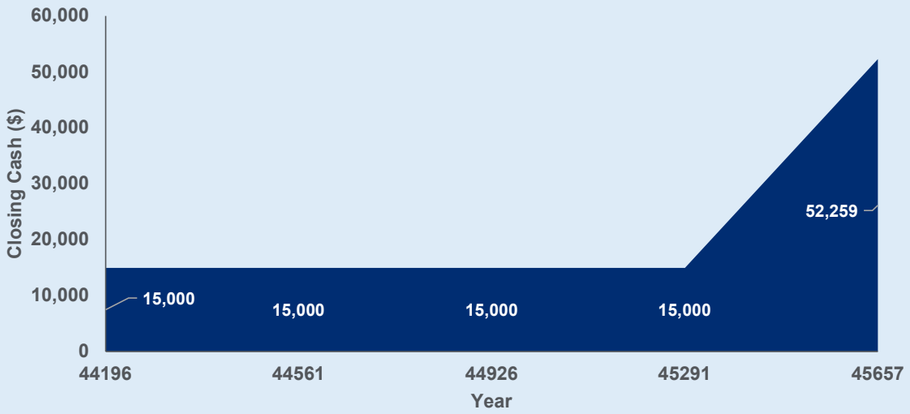
Forecast Revenue (2020-24) - Column Chart



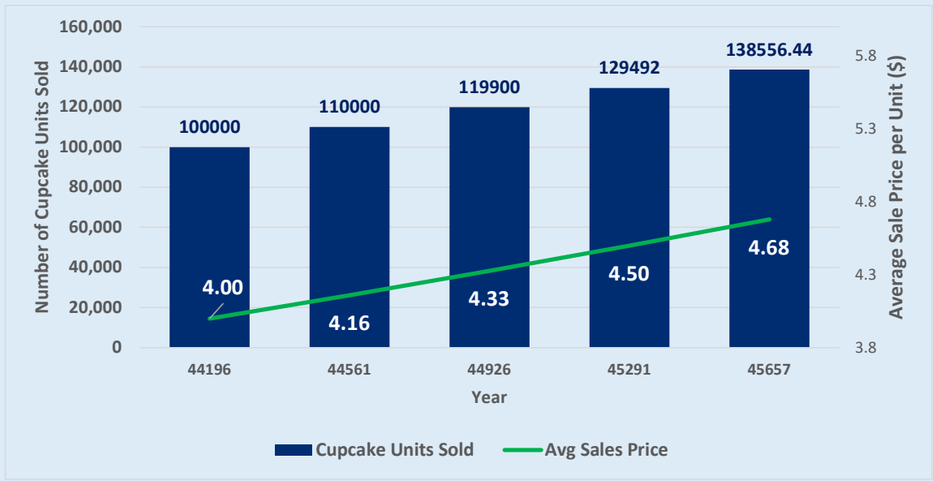
Forecast Debt (2020-24) - Line Chart



Forecast Cash (2020-24) - Area Chart



Cupcakes Operating Metrics (2020-24) - Combination Column & Line Chart



"Business Virtual Experience Program by Goldman Sachs" on Forage learning experience >>

In this program, I applied fundamental accounting concepts using MS Excel, utilizing a business case scenario to enhance my skills and see firsthand how these principles are applied in the Banking and Finance industries.

Case Background:

While working through this program, I took on the role of an analyst at Goldman Sachs. The task was to assist a client—a "cupcake shop" that makes baked goods for both individual consumers and businesses—in forecasting their business plan. The client wanted a clear picture of their business's potential over the next five years if everything went as planned.

Tasks I Completed: [applicable to each worksheet in the workbook respectively]

1. Forecasting Operating Assumptions: I created a comprehensive set of operating assumptions using an Excel template provided by the company, drawing on the client's data. These assumptions covered areas such as Revenue, Costs, Cash Flow, and other relevant metrics.

2. Translating Assumptions to P&L: With a full set of forecast assumptions in hand, I developed a forecast profit and loss (P&L) statement. This involved detailing revenue, direct costs, gross profit, operating expenses, depreciation, amortization, net interest, taxes, and net profit in a structured manner.

3. Forecasting Cash Flows: I utilized the cash flow assumptions and the completed P&L statement to populate the Cash Flow tab. My goal was to ensure the cupcake shop would have sufficient cash flow to support their 5-year plan, pay down their debt, and maintain a positive cash balance. This required calculating the net cash flow for each year, factoring in key operating, investing, and financing activities. I also adhered to the client's directive to use any excess net cash flow for debt reduction, rather than adding to the cash reserves.

4. Creating Outputs in Excel: To wrap up the project, I conducted a comprehensive forecast analysis in Excel for the cupcake shop. With the forecast assumptions and financial metrics established, I summarized the data into various charts and visualizations, preparing them for client review.

Overall, this program allowed me to apply my skills in a practical setting, reinforcing my understanding of financial forecasting and data analysis within the Banking and Finance sectors.