

How Can Financial Modeling Transform Your Business Decision-Making?

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Introduction

Financial modelling is the process of creating a mathematical model to represent the financial performance of a business, project, or any other investment. In simpler terms, it's a tool used to forecast a company's financial numbers and analyze its operations under various conditions.

Purpose Of Financial Modelling

01

Forecasting and Budgeting:
Financial forecasting models predict the future financial performance of a company based on historical data and various assumptions. This helps in preparing budgets and setting expectations for future revenue, expenses, and cash flows.

02

Valuation:
Financial models are widely used for valuing businesses and assets. Discounted cash flow (DCF) models, for example, estimate the present value of a company based on its projected future cash flows. These models are essential in mergers and acquisitions, investment analysis, and for assessing the financial health of companies.

03

Investment Analysis:
Models help investors and companies evaluate potential investments, comparing the expected returns against the risks. They are used to assess different scenarios, optimize the allocation of capital, and determine the financial feasibility of projects.

04

Risk Management:

Financial modeling allows businesses to analyze and simulate different financial and operational risks. This can include sensitivity analysis, scenario planning, and stress testing, helping companies understand potential impacts on their finances under various conditions.

Purpose Of Financial Modelling

05

Decision Support:
Financial models provide quantitative analysis that supports strategic decision-making across the company. They help leaders make informed decisions about expansions, acquisitions, new projects, and other strategic initiatives.

06

Business Planning and Strategy:
Models are instrumental in strategic planning, helping companies to map out their future operations. They can test different business strategies and forecast their long-term effects, providing insight into how strategic decisions might alter the company's trajectory.

07

Capital Raising:
When businesses need to raise capital through debt or equity, financial models are used to present to potential investors or lenders. These models demonstrate the company's potential for growth and returns, showcasing its viability and the soundness of its business plan.

08

Operational Planning:
Financial models help in operational planning by linking financial outcomes with operational metrics. They can forecast the impact of operational decisions, like changes in production capacity or operational efficiencies, on the financial health of the business.

Components of Financial Modelling

01

Input Gathering: The first step in financial modeling is gathering historical data and making assumptions about the future. This can include past financial statements, industry data, market analysis, and forecasts.

02

Model Construction: Using the gathered inputs, a financial model is constructed typically in spreadsheet software like Microsoft Excel. The model translates assumptions and historical data into financial forecasts. It usually includes:

- Profit and Loss Statement: Estimates revenues, costs, and expenses to predict net income.
- Balance Sheet: Models assets, liabilities, and equity to assess the financial position at a given point in time.
- Cash Flow Statement: Projects how cash is expected to flow in and out of the business, highlighting the company's liquidity.

Components of Financial Modelling

03

Analysis and Forecasting: The model can forecast future financial performance based on different scenarios and assumptions. This helps in making predictions about the company's health and its capacity to generate profit and cash flow.

04

Decision Making: The outcomes of a financial model facilitate decision-making in areas like investment appraisal, risk assessment, funding needs, and more. It can help determine the value of a business, the feasibility of projects, or the returns of potential investments.

Uses of Financial Modelling

01

Business Valuation: Often used in mergers and acquisitions, financial modeling helps determine the value of a business.

02

Risk Analysis: Models various scenarios to see how changes in market conditions or business operations affect the company's performance

03

Capital Budgeting: Assists in evaluating investment projects, helping managers decide where to allocate capital to maximize returns.

Uses of Financial Modelling

04

Strategic Planning: Helps companies in strategic planning by forecasting future scenarios and assessing the financial impact of different strategic choices.

05

Fundraising: Useful in presentations to potential investors, providing a detailed view of past performance and future prospects.

Skills Required for Financial Modelling

01

Accounting Knowledge:

A solid understanding of accounting principles is crucial. You need to know how different financial statements (income statement, balance sheet, cash flow statement) interact and how transactions affect each statement.

02

Finance Expertise:

Familiarity with corporate finance concepts such as discounted cash flow (DCF), internal rate of return (IRR), net present value (NPV), and financial metrics is essential. Understanding these concepts allows you to interpret the outputs of a financial model and to build models that are financially robust.

03

Excel Proficiency:

Expertise in Microsoft Excel is non-negotiable for financial modeling. This includes a strong grasp of formulas, functions (like LOOKUPs, INDEX/MATCH, SUMIF, etc.), pivot tables, data tables, and chart creation. Advanced skills may also include macros and VBA for automating repetitive tasks and handling larger datasets.

04

Analytical Thinking:

Ability to think critically and analytically is key to dissecting financial data, making reasonable assumptions, and interpreting model outputs.

Analytical skills help in understanding and forecasting financial performance and in conducting sensitivity analyses.

Skills Required for Financial Modelling

05

Attention to Detail:

Financial modeling requires a high level of precision. Small errors can significantly impact the outcome of a model, so meticulous attention to detail is crucial to ensure accuracy and reliability of the models.

06

Problem-Solving Skills:

The ability to identify problems, think through potential solutions, and decide on the best course of action is vital, especially when models do not behave as expected or when confronted with complex financial scenarios.

07

Business Understanding:

Knowledge of the business environment, industry factors, and how businesses operate within a specific sector helps in creating more realistic and relevant financial models. Understanding business operations, revenue streams, cost structures, and market dynamics is crucial.

08

Communication Skills:

While often overlooked, the ability to communicate the findings of a financial model clearly and effectively to stakeholders (who may not have a financial background) is important. This includes writing clear reports and creating presentations that succinctly summarize the model's outcomes.

Skills Required for Financial Modelling

09

Project Management:
Being able to manage a modeling project from conception through completion, including setting milestones, managing time efficiently, and coordinating with other team members, is valuable, especially for complex models that require input from various sources.

10

Ethics and Professionalism:
Financial modelers must adhere to high ethical standards, especially when handling sensitive financial data, making projections, and making recommendations based on model outputs.



CONCLUSION

Financial modelling is an essential skill in business and finance, combining accounting knowledge, Excel expertise, and analytical thinking to predict financial outcomes and guide strategic decisions. This skillset enables professionals to create accurate models that provide deep insights into financial performance, aiding in investment evaluation and business planning. Effective financial modeling also demands strong communication abilities to clearly present complex data, supporting better decision-making and strategic alignment in competitive environments.

FINANCIAL MODELS

LEVERAGE BUYOUTS (LBO) MODEL

Assumptions			Financials			Capital Structure				
(\$Millions)			Last Year Financials			Amount Cost				
Last Year EBITDA	1,350		Revenue	4,500		Bank Debt	2.0x	8.0%		
EBITDA Multiple	12.0x		EBITDA	1350		Senior Debt	3.0x	16.0%		
Enterprise Value - EV	16,200		D&A	150						
Existing Net Debt	400		Capex	400						
Equity Value	15,800		NWC	300						
Fees & Expenses	75					Note				
Sales (\$Millions)										
EBITDA Multiple	12.0x		Revenue Growth	12.0%						
			YoY margin expansion	2.0%						
			Tax Rate	25.0%						
Sources and Uses of Capital										
Sources of Capital			Uses of Capital							
	Amount	xEBITDA % Capital		Amount	xEBITDA % Capital					
Bank Debt	2,700	2.0x 15.6%	Debt amortization	400	0.3x 2.5%					
Senior Debt	4,050	3.0x 24.9%	Equity Payment	15,800	11.7x 97.1%					
Total Debt	6,750	5.0x 41.5%								
Investment Equity	9,525	7.1x 58.5%	Fees and Expenses	75	0.1x 0.5%					
Total Sources of Capital	16,275	12.1x 100.0%	Total Uses of Capital	16,275	12.1x 100.0%					
Debt Schedule										
			Year 0	Year 1	Year 2	Year 3	Year 4	Year 5		
Bank Debt										
Balance b/f			2,700	2,580	2,277	1,747	941			
Interest			216	206	182	140	75			
Principal repayment			120	304	530	806	941			
Balance c/f	2,700		2,580	2,277	1,747	941	0			
Senior Debts										
Balance b/f			4,050	4,050	4,050	4,050	4,050			
Interest			648	648	648	648	648			
Principal repayment			0	0	0	0	201			
Balance c/f	4,050		4,050	4,050	4,050	4,050	3,849			
Total Debt										
Balance b/f			6,750	6,630	6,327	5,797	4,991			
Interest			864	854	830	788	723			
Principal repayment			120	304	530	806	1,141			
Balance c/f	6,750		6,630	6,327	5,797	4,991	3,849			
Internal Rate of Return (IRR)										
Last Year EBITDA Sales										
Sales Multiple										
Enterprise Value - EV										
Net Debt										
Investment Equity Value										
Initial Equity Investment										
Multiple of Invested Capital (MOIC)										
IRR										

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Financials		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Model							
Revenue		4,500	5,040	5,645	6,322	7,081	7,931
% growth		12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
EBITDA		1,350	1,613	1,919	2,276	2,691	3,172
% sales		30.0%	32.0%	34.0%	36.0%	38.0%	40.0%
EBIT		1,200	1,445	1,731	2,065	2,455	2,908
% sales		26.7%	28.7%	30.7%	32.7%	34.7%	36.7%
Interest			864	854	830	788	723
EBT		1,200	581	877	1,235	1,667	2,185
% sales		26.7%	11.5%	15.5%	19.5%	23.5%	27.5%
Taxes		300	145	219	309	417	546
% tax rate		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Net Income		900	436	657	926	1,250	1,638
% sales		20.0%	8.6%	11.6%	14.7%	17.7%	20.7%
Cash flow Items		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
D&A		150	168	188	211	236	264
% sales		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Net Working Capital		300	336	376	421	472	529
% sales		6.7%	6.7%	6.7%	6.7%	6.7%	6.7%
Change in Net Working Capital			36	40	45	51	57
CapEx		400	448	502	562	629	705
% sales		8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
Levered Cash Flow		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Net Income		436	657	926	1,250	1,638	
D&A		168	188	211	236	264	
CapEx		448	502	562	629	705	
Change in NWC		36	40	45	51	57	
Levered Cash Flow		120	304	530	806	1,141	

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STRATEGIC FINANCIAL FORECASTING: NAVIGATING UNCERTAINTY WITH BEST/WORST CASE SCENARIO PLANNING

Best/Worst Case Scenario Model								
The amount is in USD	2023		2024		2024		2024	
	<u>Actuals</u>	<u>Worst</u>		<u>Base Case</u>		<u>Best</u>		
Revenue per unit	500,000	300,000	-40%	450,000	-10%	600,000	20%	
total units	200	100	-50%	250	25%	300	50%	
Total Revenue	100,000,000	30,000,000	-70%	112,500,000	13%	180,000,000	80%	
Cost of Goods Sold	40,000,000	20,000,000	-50%	47,000,000	18%	65,000,000	63%	
Gross Margin	60,000,000	10,000,000	-83%	65,500,000	9%	115,000,000	92%	
Gross Profit Margin (GPM)	60%	33%		58%		64%		

COMPREHENSIVE SCENARIO PLANNING FOR NEW PRODUCT LAUNCHES

Best/Worst Case Scenario Model

The amount is in USD	2024 <u>Worst Case</u>	2024 <u>Base Case</u>	2024 <u>Best Case</u>
Revenue per unit	400	500	600
total units	8,000	20,000	30,000
Total Revenue	3,200,000	10,000,000	18,000,000
Cost of Goods Sold	2,400,000	5,000,000	6,000,000
Gross Profit	800,000	5,000,000	12,000,000
Gross Profit Margin (GPM)	25%	50%	67%
Operating Expenses			
Marketing & Launch Cost	1,500,000	1,000,000	1,000,000
Total OPEX	1,500,000	1,000,000	1,000,000
Profit / Loss	(700,000)	4,000,000	11,000,000
Profit Margin/loss	-22%	40%	61%

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COMPREHENSIVE SCENARIO PLANNING FOR NEW PRODUCT LAUNCHES



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SENSITIVITY ANALYSIS AND WHAT-IF ANALYSIS

DCF ANALYSIS						
FREE CASH FLOW - USD MM	2023A	2024E	2025E	2026E	2027E	2028E
YEARS						
FREE CASH FLOW	6,000	7,800	10,140	13,182	17,137	22,278
PROJECTED YEARS	1	2	3	4	5	
PRESENT VALUE OF FREE CASH FLOW	7,290	8,857	10,760	13,073	15,884	
SHARE PRICE CALCULATION	SENSITIVITY ANALYSIS					
Sum of PV of FCF	55,864	SHARE PRICE	GROWTH RATE			
GROWTH RATE	4.00%	1,226.79	3.00%	3.50%	4.00%	4.50% 5.00%
WACC	7.00%	WACC	6.00%	1,272.24	1,507.52	1,860.44 2,448.64 3,625.04
TERMINAL VALUE	772,289	6.50%	1,084.33	1,249.25	1,480.14	1,826.48 2,403.71
PV OF TERMINAL VALUE	550,632	7.00%	943.53	1,064.93	1226.79	1,453.40 1,793.31
ENTERPRISE VALUE	606,496	7.50%	834.14	926.82	1,045.97	1,204.84 1,427.26
(+) CASH	15,000	8.00%	746.74	819.52	910.49	1,027.45 1,183.40
(-) DEBT	7,500	TERMINAL VALUE	3.00%	3.50%	4.00%	4.50% 5.00%
(-) Minority Interest	600	772,289	6.00%	764,864	922,292	1,158,434 1,552,005 2,339,146
EQUITY VALUE	613,396	6.50%	655,597	768,577	926,747	1,164,004 1,559,431
OUTSTANDING SHARE (MM)	500.00	7.00%	573,648	658,780	772,289	931,203 1,169,573
SHARE PRICE	1,226.79	7.50%	509,909	576,432	661,962	776,002 935,658
		8.00%	458,918	512,384	579,217	665,145 779,715

Effect of Price Discounts by Volume Increase						
Sales	\$ 10,000,000	\$ 500,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000
Profit	15%	30%	45%	35%	-	-
Discount	-5%	-10%	-20%	-15%	-	-
Average price before discount	\$ 5,000	\$ 2,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Volume before	2000	250	150	150	150	150
Profit per unit	\$ 750	\$ 600	\$ 2,250	\$ 1,750	-	-
Cost	\$ 4,250	\$ 1,400	\$ 2,750	\$ 3,250	-	-
New profit per unit after discount	\$ 500	\$ 400	\$ 1,250	\$ 1,000	-	-
Volume after	3000	375	270	262.5	-	-
Change volume needed	50%	50%	80%	75%	-	-

Volume increase in % necessary to maintain the same amount of profit in \$ after giving a discount							
Profit (in % of sales) before change	-1%	-2%	-3%	-4%	-5%	-10%	-15%
5%	25%	67%	150%	400%	-	-	-
10%	11%	25%	43%	67%	100%	-	-
15%	7%	15%	25%	36%	50%	200%	-
20%	5%	11%	18%	25%	33%	100%	300%
25%	4%	9%	14%	19%	25%	67%	150%
30%	3%	7%	11%	15%	20%	50%	100%
35%	3%	6%	9%	13%	17%	40%	75%
40%	3%	5%	8%	11%	14%	33%	60%
45%	2%	5%	7%	10%	13%	29%	50%
50%	2%	4%	6%	9%	11%	25%	43%

Best/Worst Case Scenario Model							
The amount is in USD	2023	2024	2024		2024	2024	% Chg
			Actuals	Worst			
Revenue per unit		500,000	300,000	-40%	450,000	-10%	600,000 20%
total units		200	100	-50%	250	25%	300 50%
Total Revenue	100,000,000	30,000,000	-70%	112,500,000	13%	180,000,000	80%
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Gross Profit Margin (GPM)	60%	33%		58%		64%	

**Should you require further insights into
Financial Analysis or wish to discuss the
content in more detail, please feel free to reach
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THANK YOU!