Financial Forecasting

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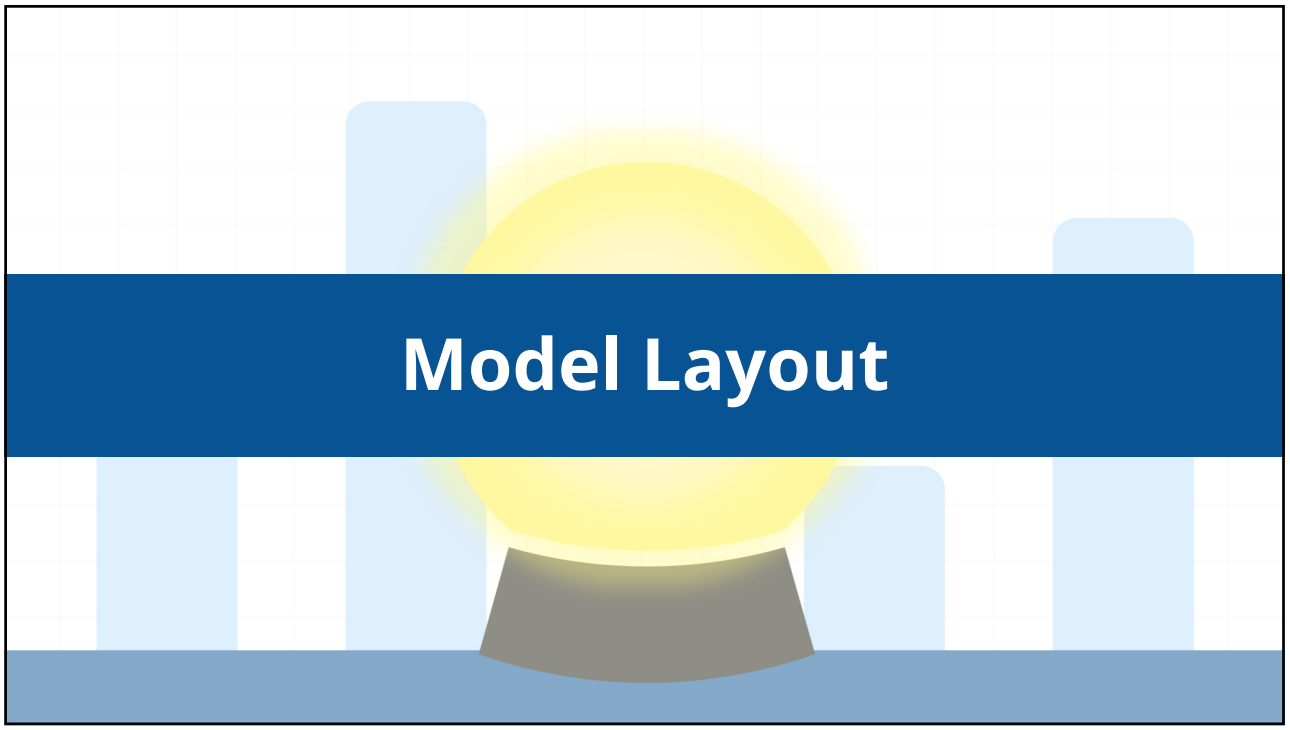

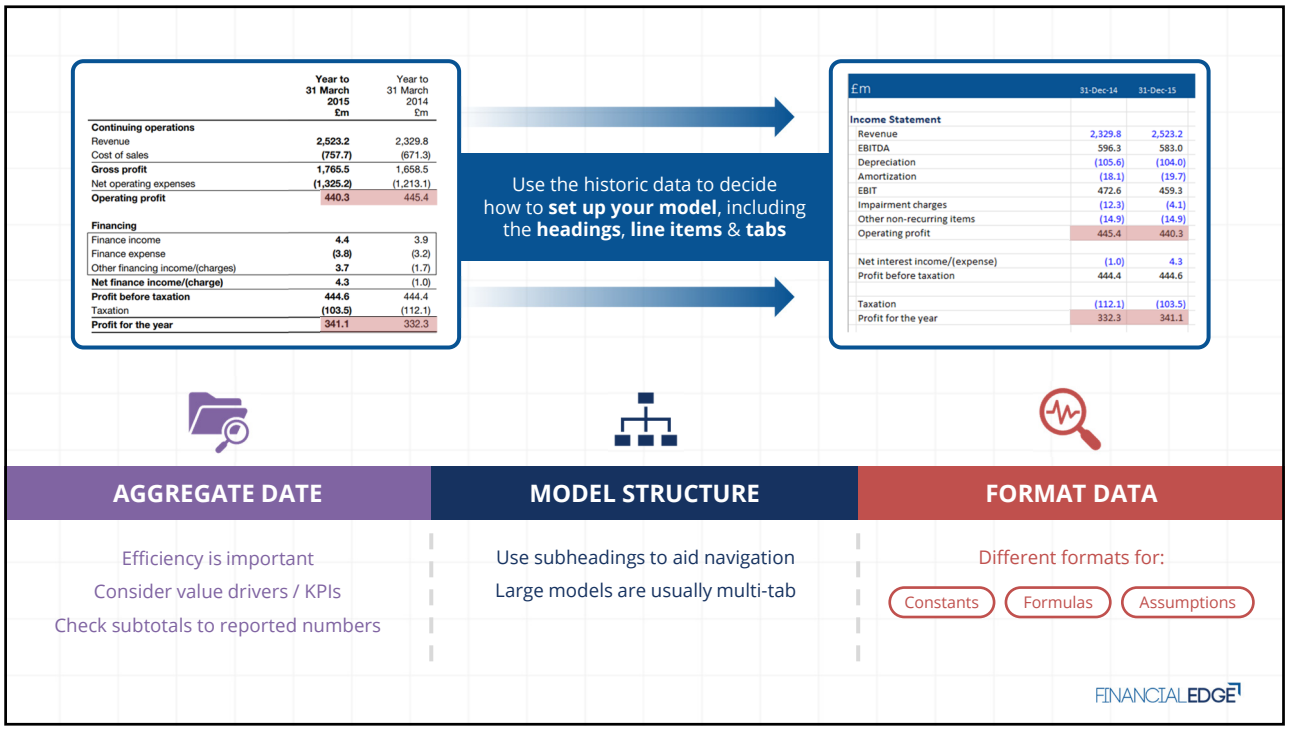

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Revenue Growth – Using Historic Trends

Simple to do but doesn't explicitly consider what is **driving revenue growth**

	Historic	FY1	FY2	FY3
Revenues (m$)	100.0	110.0	121.0	133.1
Revenue growth	10.0%	10.0%	10.0%	10.0%

Bottom-Up Forecasting – Using Company Revenue Drivers

Explicit link to revenue drivers but doesn't consider **dynamics of market**

	Historic	FY1	FY2	FY3
Volumes (m units)	50.0	55.0	57.8	60.6
Price per unit ($)	2.0	2.1	2.2	2.3
Revenues (m$)	100.0	110.0	115.6	121.2
Revenue growth	10.0%	10.0%	5.1%	4.8%

Top-Down Forecasting – Using Market Size & Share Expectations

Considers industry dynamics but requires estimate of **market size and share**

	Historic	FY1	FY2	FY3
Market size (m$)	2,000	2,160	2,250	2,300
Market share	5.0%	5.0%	5.0%	5.0%
Revenues (m$)	100.0	108.0	112.5	115.0
Revenue growth	10.0%	8.0%	4.2%	2.2%

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Bottom-Up Revenue Forecasting

Revenue drivers are industry-specific and dependent on company disclosure

Company **may disclose** only **percentage changes** in drivers

Percent Change 2013 vs. 2012

	Volume	Structural Changes	Price, Product & Geographic Mix	Currency Fluctuations	Total
Consolidated	2%	(3)%	1%	(2)%	(2)%

We **can't** do this:

	Hist	Growth	Proj		
Price	10.0	10.0%	11.0	=10* (1+10%)	
Volume	10.0	10.0%	11.0	=10*(1+10%)	
Revenue	100.0		121.0	=11*11	

CONSIDER

Management guidance and business mix

Industry dynamics

Wider economy

We **can** do this:

	Hist	Growth	Proj		
Price		10.0%			
Volume		10.0%			
Revenue	100.0		121.0	=100*(1+21%)	
Overall Growth		21.0%	=(1+10%) * (1+10%)-1		

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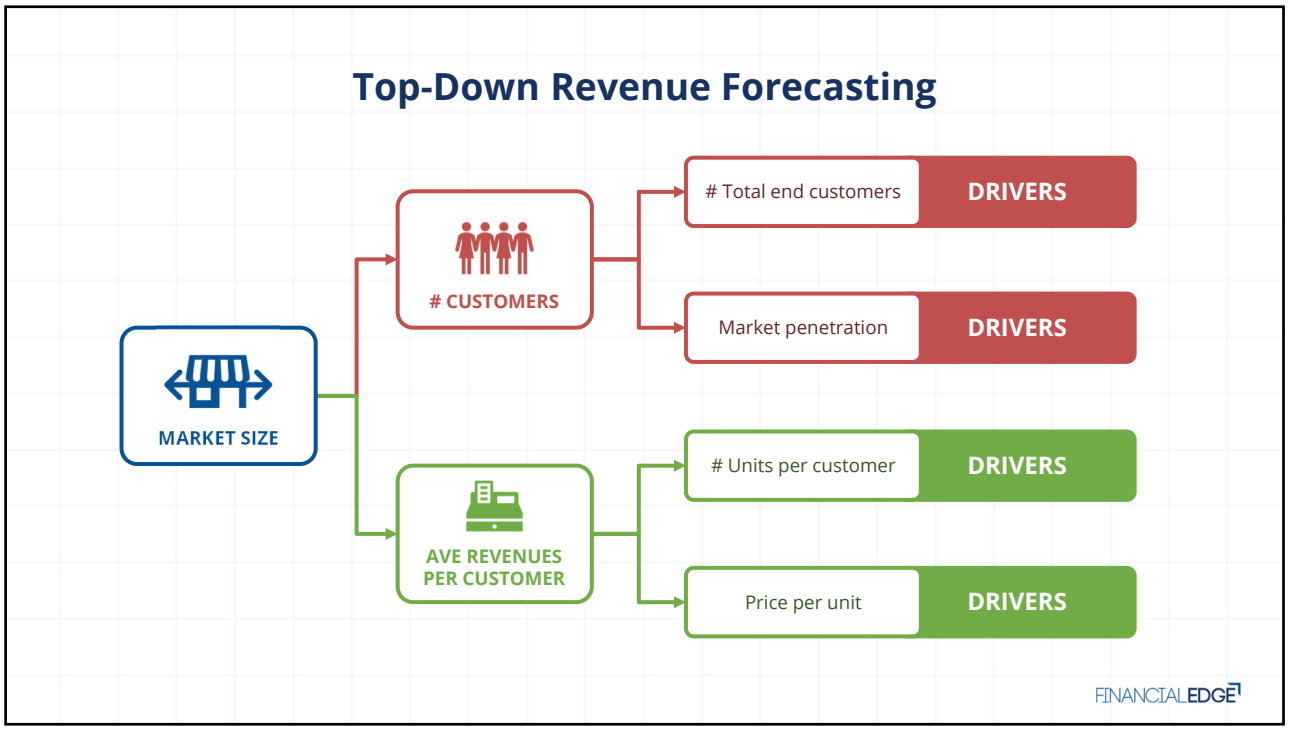

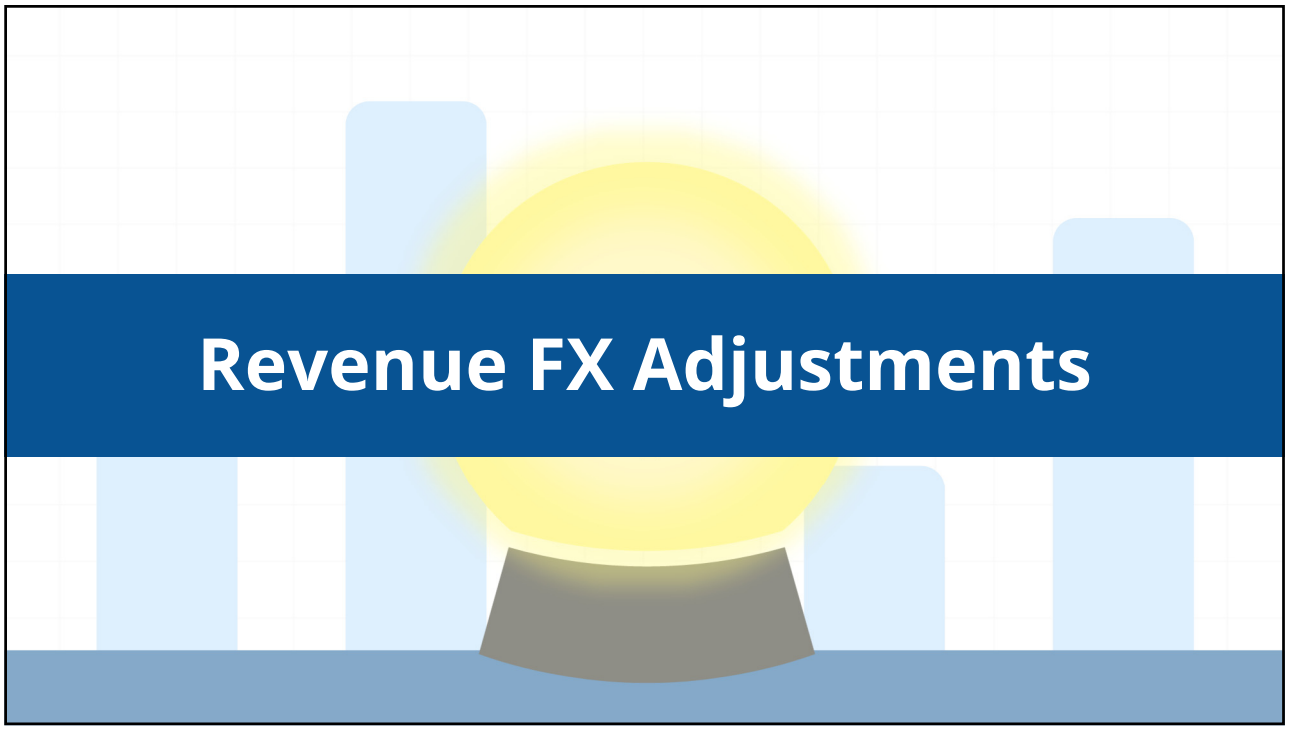

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Revenues in global businesses are affected by FX.
Constant exchange rate (CER) disclosures help us to understand the impact.

Revenue Analysis				
Revenue by Channel	Year to 31 March		% change	
£ Million	2015	2014	Reported FX	Underlying
Retail	1,907.4	1,622.6	11	14
Wholesale	648.1	628.0	3	6
Licensing	67.7	79	(14)	_
Revenue	**2,523.2**	**2,329.8**	**8**	**11**

Forecasts are usually based on analysis of CER growth rates i.e. we treat FX as a non-recurring price change

Forecasts may be affected by currency swings since year-end. Where this occurs we estimate the impact on FY1 forecasts.

The company above generates 50% of revenues in the US. The GBP:USD rate has fallen by 10% in early 2016.

	2015	2016	
Wholesale revenue (£m)	**648.0**	719.3	=(1+11.0%)*648
CER revenue growth %		**6.0%**	
FX gain		5.0%	=50%*10%
Total revenue growth %		11.0%	=6.0% + 5.0%

FX gain is treated as a non-recurring price change, so no adjustment needed to 2017 growth assumptions

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Analysts typically focus on **EBITDA margins** as **D&A** are forecast separately

Usually start with **historic margins** and then adjust for the following:

Non-recurring income and expense

Product mix effects

Competitive pressures & industry dynamics

Supply chain dynamics

Fixed vs variable costs

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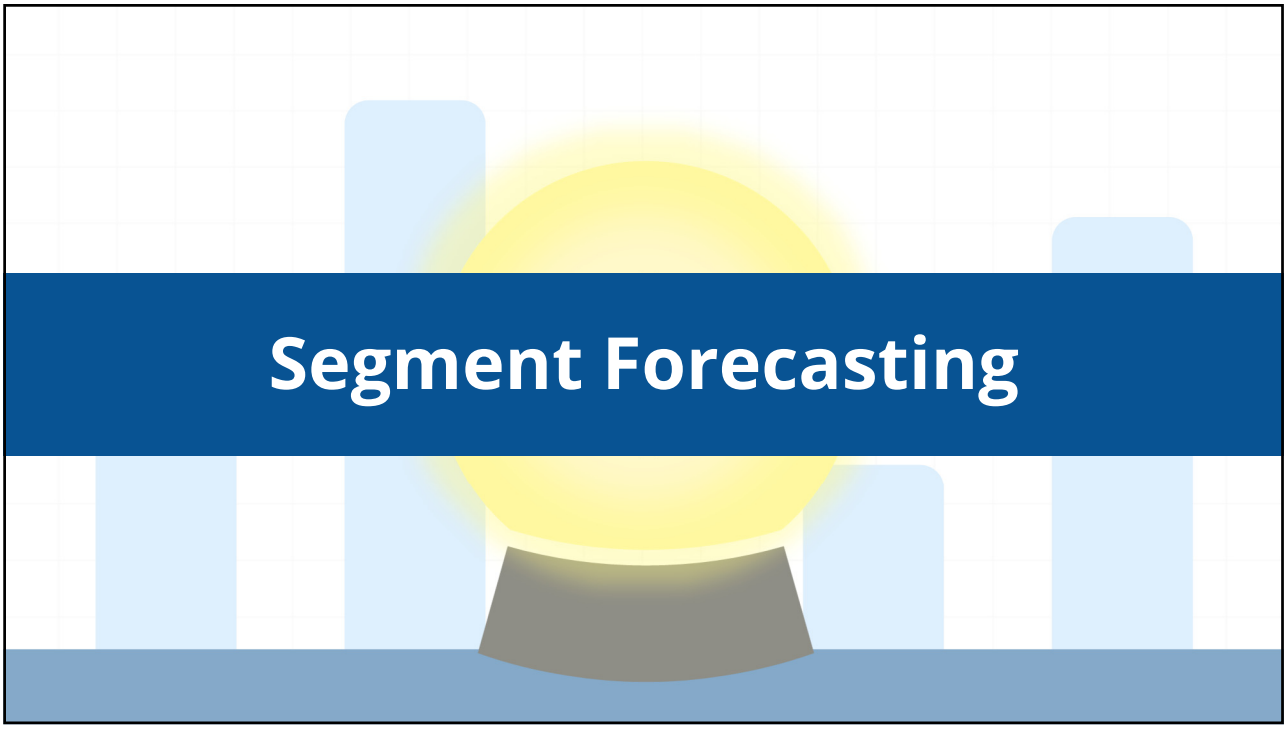

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Disaggregating by product or market allows a better understanding of underlying trends

REVENUES BY **DIVISION**

	20X0	20X1	20X2
Wholesale Business	50.0	60.0	70.0
Retail Business	50.0	50.0	51.0
Total Sales	100.0	110.0	121.0
Revenue Growth		10.0%	10.0%

REVENUES BY **REGION**

	20X0	20X1	20X2
US and Canada	100.0	105.0	110.0
EMEA	50.0	40.0	30.0
Asia Pacific	50.0	60.0	70.00
Total Sales	200.0	205.0	210.0
Revenue Growth		2.5%	2.4%

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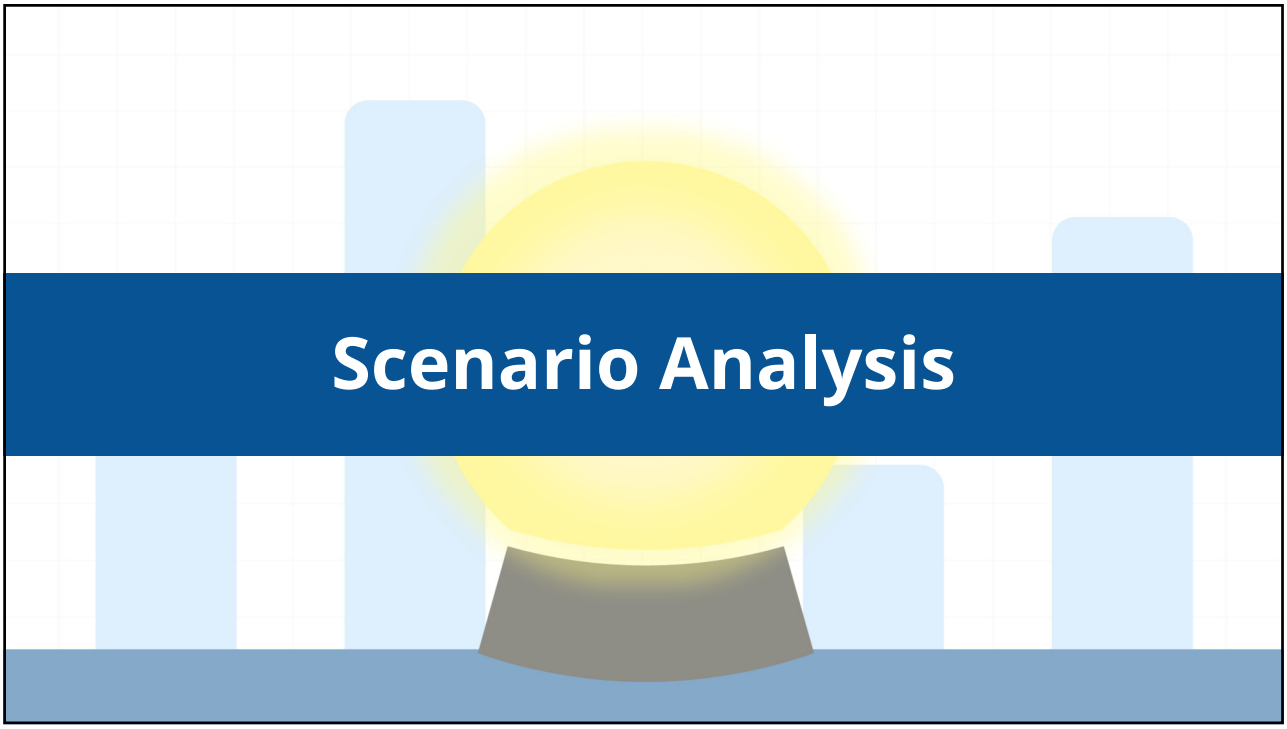

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Scenarios can be used to **sensitize key assumptions**

	Scenario	FY1	FY2	FY3
REVENUE GROWTH				
Segment A				
Upside Case	1	5.5%	5.0%	4.5%
Base Case	2	5.0%	4.5%	4.0%
Downside Case	3	4.5%	4.0%	3.5%
Segment B				
Upside Case	1	4.5%	4.0%	3.5%
Base Case	2	4.0%	3.5%	3.0%
Downside Case	3	3.5%	3.0%	2.5%
MARGINS				
Segment A				
Upside Case	1	8.6%	8.7%	8.7%
Base Case	2	8.5%	8.6%	8.6%
Downside Case	3	8.4%	8.5%	8.5%
Segment B				
Upside Case	1	10.8%	10.7%	10.6%
Base Case	2	10.6%	10.5%	10.4%
Downside Case	3	10.4%	10.3%	10.2%

We can use the **CHOOSE**, **OFFSET** or **INDEX** function in Excel to select the **scenario assumptions**

Usually sensitize **revenue growth** and **margins**

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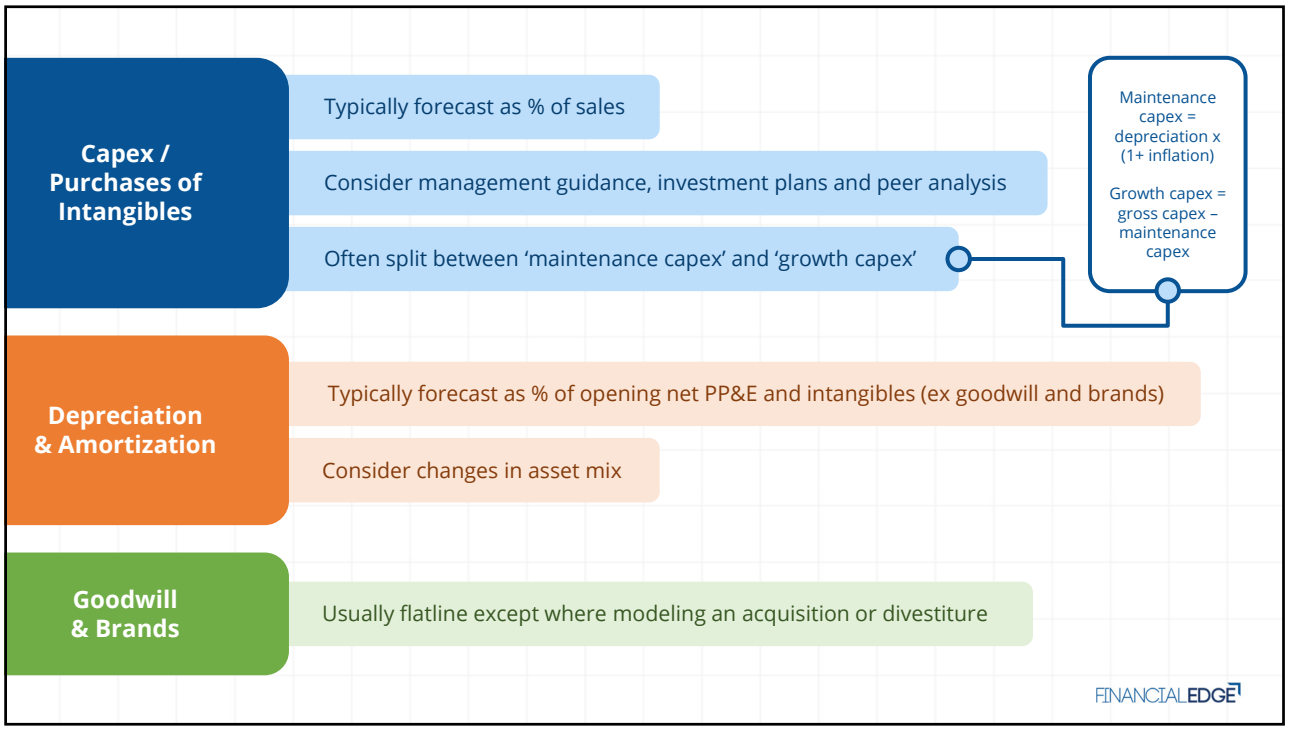

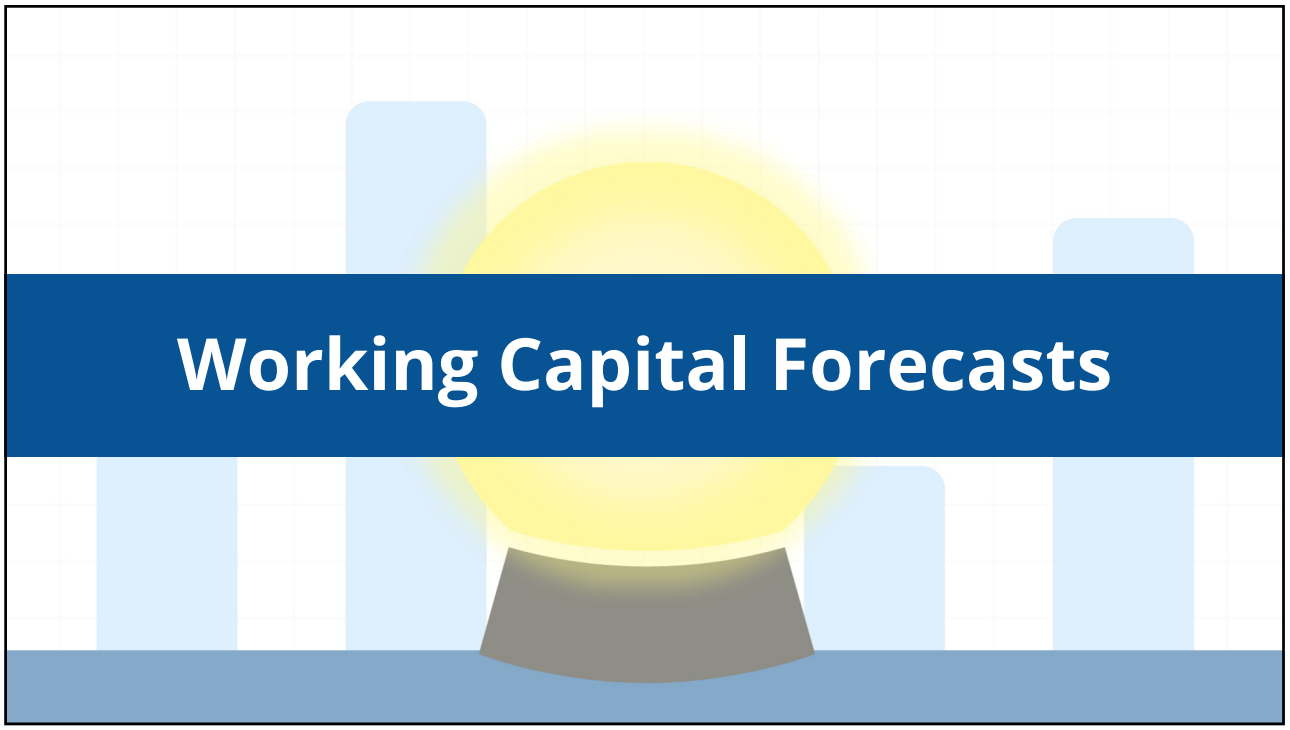

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Working Capital Days	**TYPICALLY FORECAST**	% Sales

$$\text{Inventory Days} = \frac{\text{Inventory}}{\text{Costs of Goods Sold}} \times 365$$

Usually, start with historic working capital ratios and adjust for:

- Changes in business mix e.g. B2B vs B2C
- Supply chain dynamics
- Growth / scale

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Long Term Debt	Use Financial Statement disclosures to estimate the repayment schedule
	Consider management guidance, financing need and investment plans for new debt issuance
Dividends	Make assumption about dividend policy (often Dividend per Share growth rate)
	Sense check at end by checking dividend payout ratio and leverage ratios
Shares Outstanding	Usually flatline but adjust where company has announced equity issuance or share repurchase

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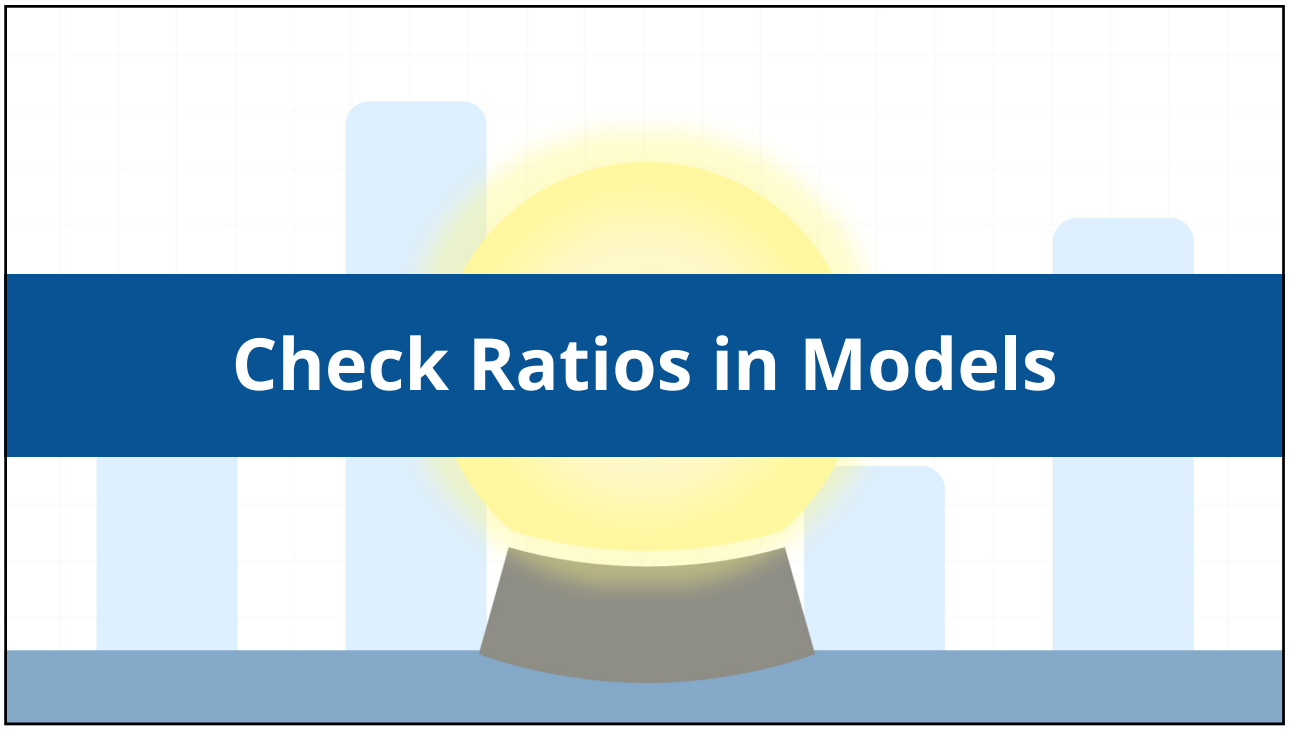

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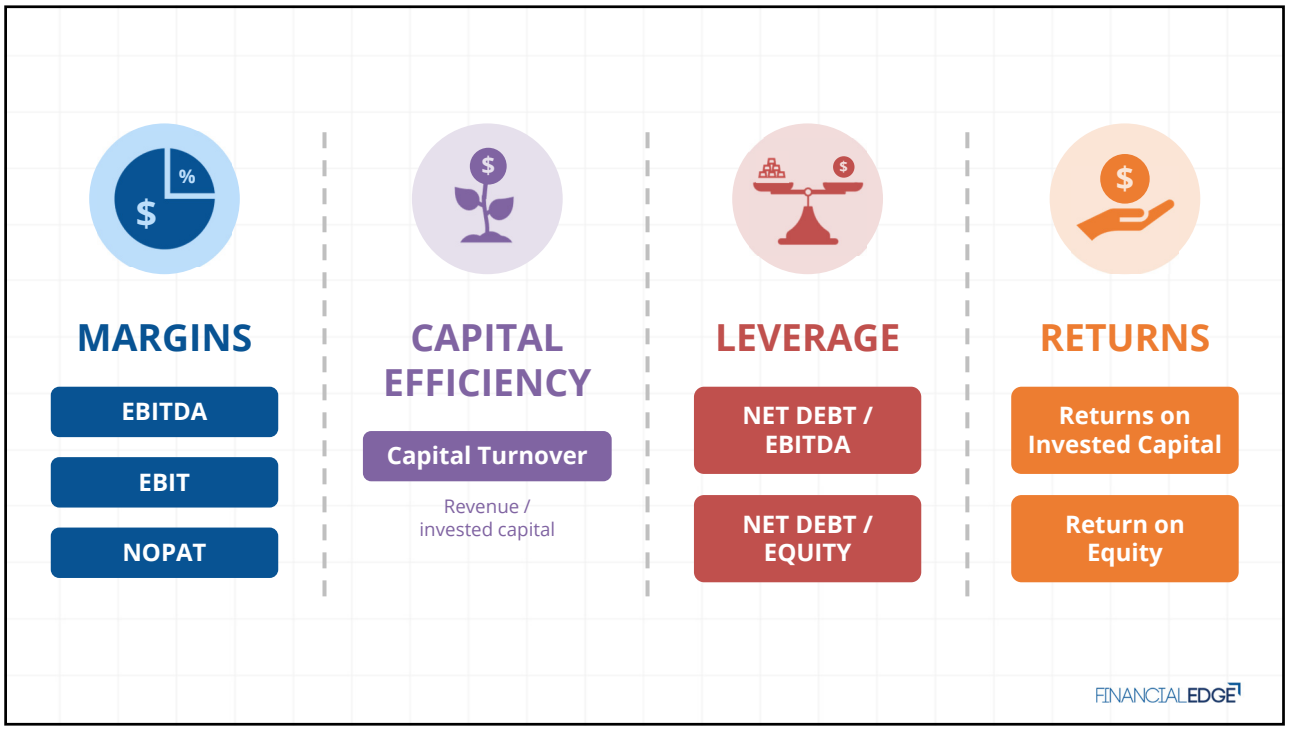

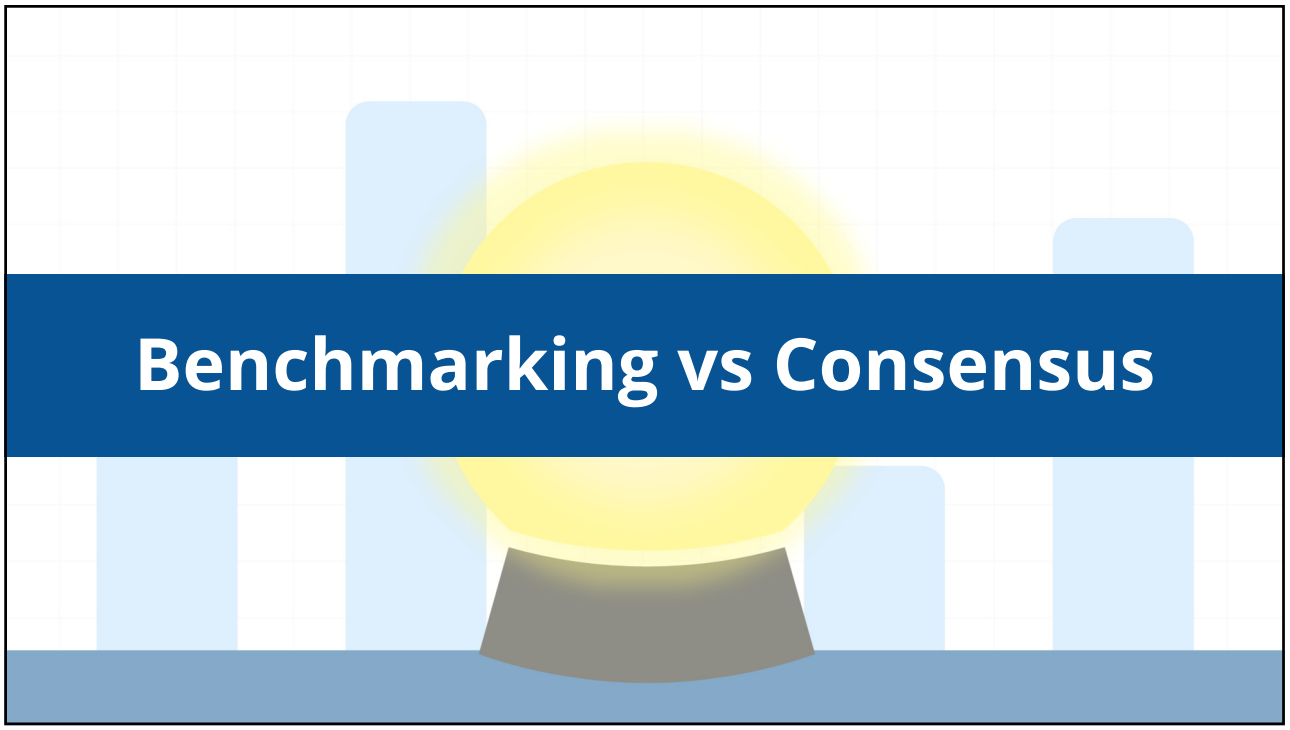

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Consensus Forecasts

Consensus numbers help us understand 'what the market thinks'

Benchmarking our forecasts against consensus helps us to challenge our own assumptions

If your forecasts are above or below consensus, what does your analysis show that the market is missing?

	31-DEC-16	31-DEC-17	31-DEC-18
Revenue Consensus	2,642.0	2,762.0	2,928.0
Forecast vs Consensus	(1.8%)	(1.4%)	(2.4%)
EBITDA Consensus	559.0	591.0	641.0
Forecasts vs Consensus	4.9%	6.2%	5.0%
Net Income Consensus	309.0	333.0	375.0
Forecast vs Consensus	9.6%	13.0%	9.6%
Capex Consensus	167.0	168.0	173.0
Forecast vs Consensus	1.0%	5.3%	7.4%

Are the differences consistent across subtotals e.g. EBITDA and Net Income above consensus

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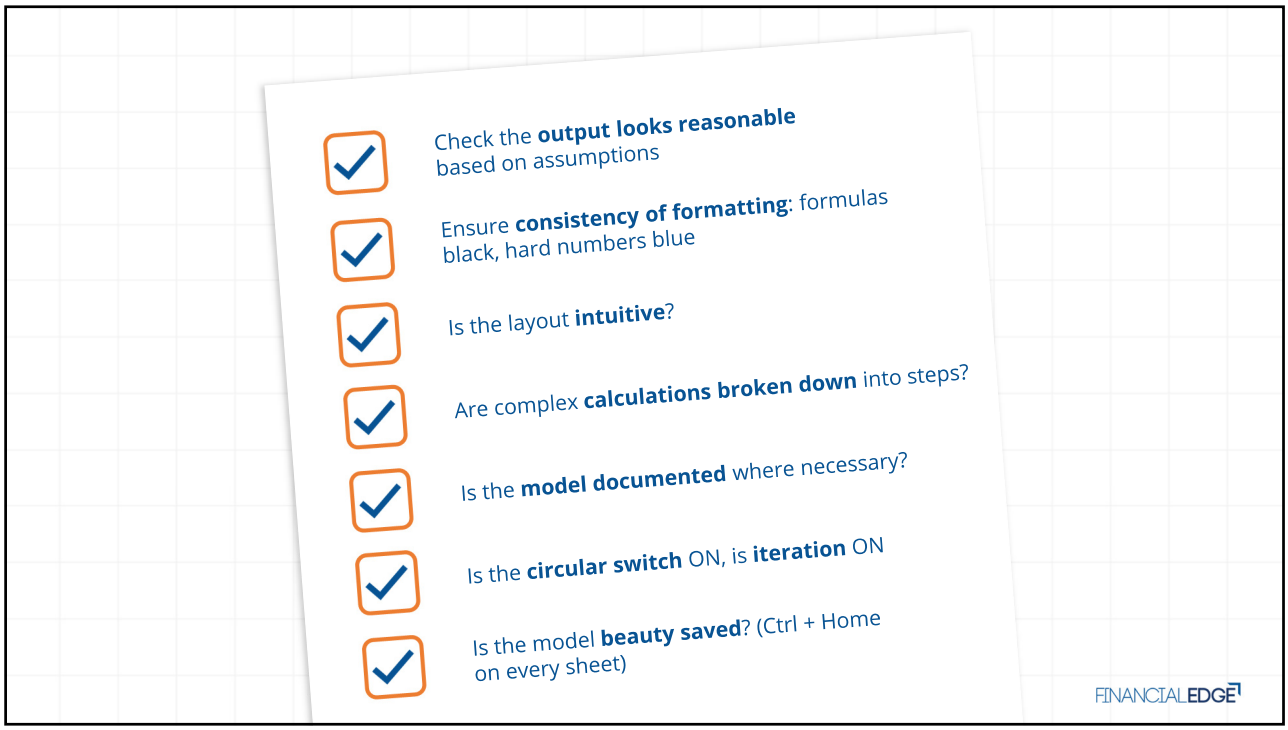
Check the **output looks reasonable** based on assumptions
Ensure **consistency of formatting**: formulas black, hard numbers blue
Is the layout **intuitive**?
Are complex **calculations broken down** into steps?
Is the **model documented** where necessary?
Is the **circular switch** ON, is **iteration** ON
Is the model **beauty saved**? (Ctrl + Home on every sheet)
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