



Here, we will try to show you the main steps that are necessary to build a complete financial model (the same model that is created in the video lessons).



_/ A	В	С	D	E	F	G	Н
1	P&L						
2							
						Var %	Var %
3	\$ in million	2014	2015	2016		14-15	15-16
4	Revenue	2,922.0	2,984.0	3,040.0		2.1% 🔵	1.9%
5	Cost of goods sold	(1,401.0)	(1,383.0)	(1,367.0)		-1.3% 🛑	-1.2%
6	Gross Profit	1,521.0	1,601.0	1,673.0		5.3%	4.5%
7	Operating expenses	(1,212.2)	(1,245.3)	(1,068.2)		2.7% 🔵	-14.2%
8	EBITDA	308.8	355.7	604.8		15.2%	70.0%
9	D&A	(31.0)	(44.0)	(41.0)		41.9% 🛑	-6.8%
10	EBIT	277.8	311.7	563.8		12.2%	80.9%
11	Interest expenses	(56.0)	(65.0)	(52.0)		16.1% 🔵	-20.0%
12	EBT	221.8	246.7	511.8		11.2%	107.5%
13	Taxes	(207.5)	(210.0)	(208.6)		1.2% 🔵	-0.7%
L4	Net Income	14.3	36.7	303.2		156.5%	726.6%
15							
16	Gross Profit %	52.1%	53.7%	55.0%			
17	EBITDA %	10.6%	11.9%	19.9%			
18	Net Income %	0.5%	1.2%	10.0%			

_/ A	В	С	D	E
1	Balance Sheet			
2				
3	\$ in million	31-Dec-14	31-Dec-15	31-Dec-16
4	Trade Receivables	143.9	154.8	169.3
5	Inventory	85.0	92.0	110.0
6	PP&E	632.5	632.5	659.5
7	Cash	24.8	21.8	220.0
8	Other assets	45.9	46.9	68.0
9	Assets	932.1	948.0	1,226.8
10				
11	Trade Payables	68.0	68.9	68.9
12	Provisions	32.5	28.7	28.7
13	Financial Liabilities	615.8	610.4	605.0
14	Other liabilities	48.3	43.3	38.9
15	Equity	167.5	196.7	485.3
16	Liabilities & Equity	932.1	948.0	1,226.8
17		_		
18	Check	0.0	0.0	0.0
19				

First off, start by organizing historical financials in clean and good-looking output sheets. Calculate historical growth and profitability margins.





4	АВ	С	D	Е	F	G	Н
1	P&L						
2							
3	Scenario:	Base case	₩				
4							
						Var %	Var %
5	\$ in million	2014	2015	2016		14-15	15-16
6	Revenue	2,922.0	2,984.0	3,040.0		2.1% 🔵	1.9%
7	Cost of goods sold	(1,401.0)	(1,383.0)	(1,367.0)		-1.3% 🔵	-1.2%
8	Gross Profit	1,521.0	1,601.0	1,673.0		5.3% 🔵	4.5%
9	Operating expenses	(1,212.2)	(1,245.3)	(1,068.2)		2.7% 🔵	-14.2%
10	EBITDA	308.8	355.7	604.8		15.2%	70.0%
11	D&A	(31.0)	(44.0)	(41.0)		41.9% 🛑	-6.8%
12	EBIT	277.8	311.7	563.8		12.2%	80.9%
13	Interest expenses	(56.0)	(65.0)	(52.0)		16.1% 🛑	-20.0%
14	EBT	221.8	246.7	511.8		11.2%	107.5%
15	Taxes	(207.5)	(210.0)	(208.6)		1.2% 🛑	-0.7%
16	Net Income	14.3	36.7	303.2		156.5%	726.6%
17							

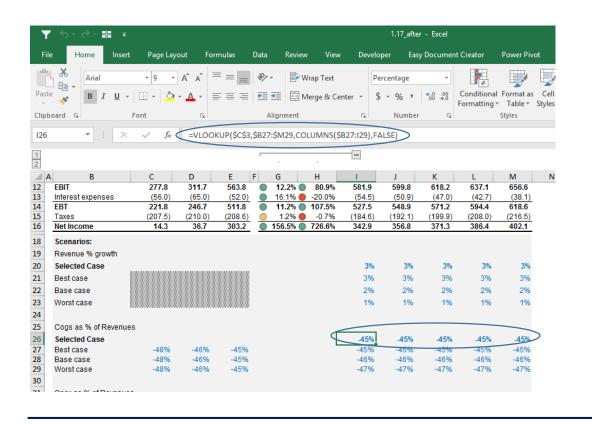
Create a scenario switch cell above the P&L or in a separate sheet (depending on the complexity of the model). Consider using 3 cases (Worst, Base, and Best case). In some situations the Base case may differ or coincide with the so-called Management case (the numbers projected by the firm's Management team).



Scenarios:								
Revenue % growth	1							
Selected Case				1%	1%	1%	1%	1%
Best case				3%	3%	3%	3%	3%
Base case				2%	2%	2%	2%	2%
Worst case				1%	1%	1%	1%	1%
Cogs as % of Reve	enues				_			
Selected Case				-47%	-47%	-47%	-47%	-47%
Best case	-48%	-46%	-45%	-45%	-45%	-45%	-45%	-45%
Base case	-48%	-46%	-45%	-46%	-46%	-46%	-46%	-46%
Worst case	-48%	-46%	-45%	-47%	-47%	-47%	-47%	-47%
Opex as % of Reve	enues							
Selected Case				-41%	-41%	-41%	-41%	-41%
Best case	-41.5%	-41.7%	-35.1%	-35%	-35%	-35%	-35%	-35%
Base case	-41.5%	-41.7%	-35.1%	-39%	-39%	-39%	-39%	-39%
Worst case	-41.5%	-41.7%	-35.1%	-41%	-41%	-41%	-41%	-41%

Build assumptions for the development of Revenues (considering historical trends and industry outlook), Cogs (project as a percentage of revenues and consider historical trends), and Opex (project as a percentage of revenues and consider historical trends).





You will need a combination of functions that will extract the respective scenario you have selected. Check out the videos. We showed several combinations (Choose & Match, Offset & Match, Vlookup & Columns, Vlookup & Match, etc.).

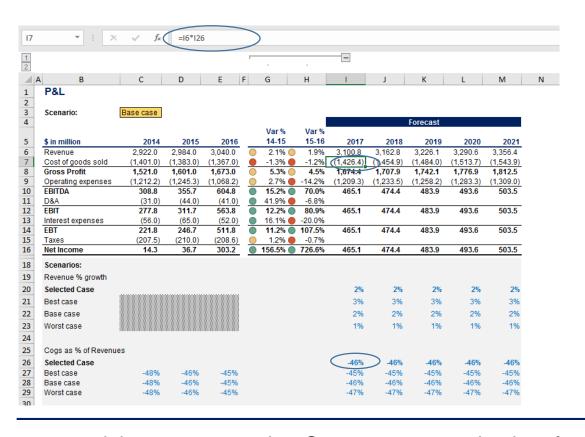


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1					_			_				
_ A	В	С	D	E	F	G	Н	1	J	K	L	M
1	P&L											
2												
3	Scenario:	Base case										
4										Forecast		
						Var %	Var %					
5	\$ in million	2014	2015	2016	_	14-15	15-16	2017	2018	2019	2020	2021
6	Revenue	2,922.0	2,984.0	3,040.0	0	2.1% 🔵	1.9%	3,100.8	3,162.8	3,226.1	3,290.6	3,356.4
7	Cost of goods sold	(1,401.0)	(1,383.0)	(1,367.0)	_	-1.3%	-1.2%	(1,426.4)	(1,454.9)	(1,484.0)	(1,513.7)	(1,543.9)
3	Gross Profit	1,521.0	1,601.0	1,673.0	0	5.3%	4.5%	1,674.4	1,707.9	1,742.1	1,776.9	1,812.5
9	Operating expenses EBITDA	(1,212.2)	(1,245.3) 355.7	(1,068.2) 604.8	_	2.7% (-14.2% 70.0%	(1,209.3) 465.1	(1,233.5) 474.4	(1,258.2) 483.9	(1,283.3) 493.6	(1,309.0) 503.5
1	D&A	(31.0)	(44.0)	(41.0)		41.9%	-6.8%	405.1	4/4.4	463.9	493.0	503.5
2	EBIT	277.8	311.7	563.8	-	12.2%	80.9%	465.1	474.4	483.9	493.6	503.5
3	Interest expenses	(56.0)	(65.0)	(52.0)		16.1%	-20.0%	403.1	4/4.4	403.3	433.0	303.3
14	EBT	221.8	246.7	511.8	-	11.2%	107.5%	465.1	474.4	483.9	493.6	503.5
15	Taxes	(207.5)	(210.0)	(208.6)	0	1.2%	-0.7%	10011		10010	10010	000.0
16	Net Income	14.3	36.7	303.2		156.5%	726.6%	465.1	474.4	483.9	493.6	503.5
18	Scenarios:											
9	Revenue % growth						,		\			
20	Selected Case	***************************************					(2%	2%	2%	2%	2%
21	Best case							3%	3%	3%	3%	3%
22	Base case							2%	2%	2%	2%	2%
23	Worst case							1%	1%	1%	1%	1%
								170	170	170	170	170

Multiply last year revenues by the expected annual growth rate of revenues to calculate revenues in the forecast period.







Multiply revenues and the percentage that Cogs are expected to be of revenues to obtain Cogs. Do the same for Opex





- 41			_	_
4	А В	С	D	E
1	Balance Sheet			
2				
3				
4	\$ in million	31-Dec-14	31-Dec-15	31-Dec-16
5	Trade Receivables	143.9	154.8	169.3
6	Inventory	85.0	92.0	110.0
7	PP&E	632.5	632.5	659.5
8	Cash	24.8	21.8	220.0
9	Other assets	45.9	46.9	68.0
10	Assets	932.1	948.0	1,226.8
11				
12	Trade Payables	68.0	68.9	68.9
13	Provisions	32.5	28.7	28.7
14	Financial Liabilities	615.8	610.4	605.0
15	Other liabilities	48.3	43.3	38.9
16	Equity	167.5	196.7	485.3
17	Liabilities & Equity	932.1	948.0	1,226.8
18				
19	DSO	17.7	18.7	20.0
20	DPO	17.5	17.9	18.1
21	DIO	21.8	23.9	29.0
22	Other assets %	1.6%	1.6%	2.2%
23	Other liabilities %	1.7%	1.5%	1.3%
24				
25	Check	0.0	0.0	0.0
26				

Calculate historical DSO, DIO and DPO figures. Calculate the historical weight of Other assets and Other liabilities with respect to revenues.

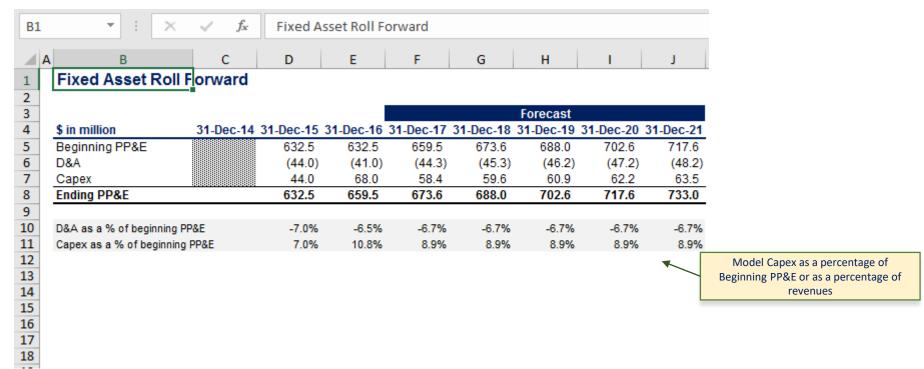


_ A	В	С	D	E	F	G	Н	1	J
1 E	Balance Sheet	'							
2									
3							Forecast		
	in million	31-Dec-14	31-Dec-15	31-Dec-16	31-Dec-17	31-Dec-18		31-Dec-20	31-Dec-21
5 T	rade Receivables	143.9	154.8	169.3	163.7	168.6	173.6	178.8	184.2
5 lr	nventory	85.0	92.0	110.0	97.5	100.5	103.5	106.6	109.8
7 F	PRE	632.5	632.5	659.5					
3 0	Cash	24.8	21.8	220.0					
9 (Other assets	45.9	46.9	68.0	56.1	57.8	59.6	61.4	63.2
.O A	Assets	932.1	948.0	1,226.8	317.4	326.9	336.7	346.8	357.2
1									
2 T	rade Payables	68.0	68.9	68.9	69.9	72.0	74.1	76.3	78.6
3 F	Provisions	32.5	28.7	28.7	28.7	28.7	28.7	28.7	28.7
4 F	inancial Liabilities	615.8	610.4	605.0					
	Other liabilities	48.3	43.3	38.9	45.8	47.1	48.5	50.0	51.5
	Equity	167.5	196.7	485.3					
	iabilities & Equity	932.1	948.0	1,226.8	144.3	147.8	151.4	155.0	158.8
8									
)SO	17.7	18.7	20.0	18.8	18.8	18.8	18.8	18.8
)PO	17.5	17.9	18.1	17.9	17.9	17.9	17.9	17.9
	OIO	21.8	23.9	29.0	24.9	24.9	24.9	24.9	24.9
	Other assets %	1.6%	1.6%		1.8%		1.8%		
	Other liabilities %	1.7%	1.5%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%
4									
	Check	0.0	0.0	0.0	173.0	179.1	185.3	191.7	198.4
6									

Use the average number of Days in the historical period to forecast Trade Receivables, Inventory, and Trade Payables in the forecast period. Use the average weight on revenues to forecast Other assets and Other liabilities.



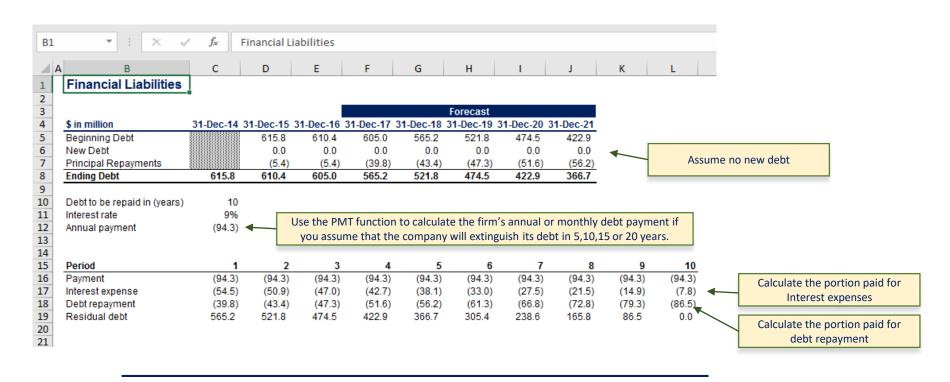




Create a "Fixed Asset Roll Forward" sheet. Calculate historical percentage of D&A and Capex with respect to Beginning PP&E. Then use the average in order to forecast D&A and Capex in the forecast period. An alternative approach could be to model Capex as a percentage of revenues.







Create a "Financial liabilities" sheet. Depending on the number of debt facilities that the company has you will have to build a detailed schedule of payments for each of them. Try to separate debt repayments and interest expenses.





 Taxes	(207.5)	(210.0)	(208.6)	0 1.2% 0 -0.7%	(184.6)	(192.1)	(199.9)	(208.0)	(216.5)
Net Income	14.3	36.7	303.2	156.5% 726.6%	342.9	356.8	371.3	386.4	402.1
Scenarios:									
Revenue % growth									
Selected Case					3%	3%	3%	3%	3%
Best case					3%	3%	3%	3%	3%
Base case					2%	2%	2%	2%	2%
Worst case					1%	1%	1%	1%	1%
Cogs as % of Rever	nues								
Selected Case					-45%	-45%	-45%	-45%	-45%
Best case	-48%	-46%	-45%		-45%	-45%	-45%	-45%	-45%
Base case	-48%	-46%	-45%		-46%	-46%	-46%	-46%	-46%
Worst case	-48%	-46%	-45%		-47%	-47%	-47%	-47%	-47%
Opex as % of Reven	ues								
Selected Case					-35%	-35%	-35%	-35%	-35%
Best case	-41.5%	-41.7%	-35.1%		-35%	-35%	-35%	-35%	-35%
Base case	-41.5%	-41.7%	-35.1%		-39%	-39%	-39%	-39%	-39%
Worst case	-41.5%	-41.7%	-35.1%		-41%	-41%	-41%	-41%	-41%
Taxes %	Assume	that the co	ompany wi	II pay the statutory	-35%	-35%	-35%	-35%	-35%
				nere it operates	-				

Multiply EBT and the forecasted tax rate to obtain Taxes and Net Income

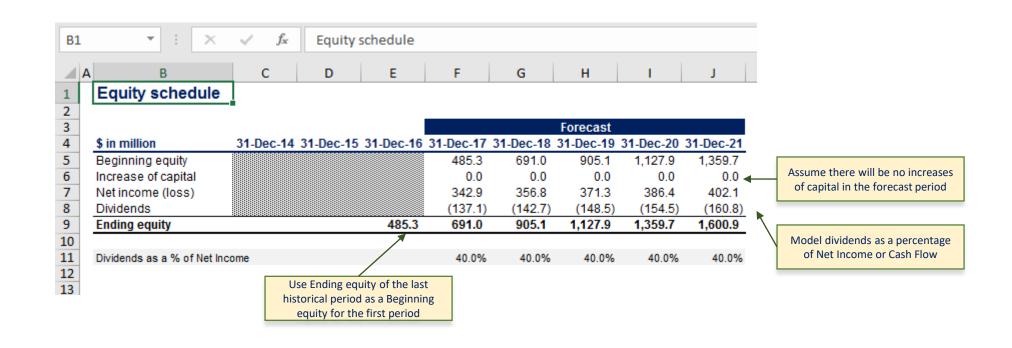


116	* : ×	√ f _x	=SUM(114:115)								
1								_				
1	А В	С	D	E	F	G	Н	1	J	K	L	M
1	P&L											
2												
	Scenario:	Best case										
4						Var%	Var %			Forecast		
5	\$ in million	2014	2015	2016		14-15	15-16	2017	2018	2019	2020	2021
6	Revenue	2,922.0	2,984.0	3,040.0		2.1%	1.9%	3,131.2	3,225.1	3,321.9	3,421.5	3,524.2
7	Cost of goods sold	(1,401.0)	(1,383.0)	(1,367.0)	Ö	-1.3%	-1.2%	(1,409.0)	(1,451.3)	(1,494.9)	(1,539.7)	(1,585.9)
8	Gross Profit	1,521.0	1,601.0	1,673.0		5.3% 🔵	4.5%	1,722.2	1,773.8	1,827.0	1,881.9	1,938.3
9	Operating expenses	(1,212.2)	(1,245.3)	(1,068.2)	\circ	2.7% 🔵	-14.2%	(1,095.9)	(1,128.8)	(1,162.7)	(1,197.5)	(1,233.5)
10	EBITDA	308.8	355.7	604.8		15.2%	70.0%	626.2	645.0	664.4	684.3	704.8
11	D&A	(31.0)	(44.0)	(41.0)		41.9% 🔵	-6.8%	(44.3)	(45.3)	(46.2)	(47.2)	(48.2)
12	EBIT	277.8	311.7	563.8		12.2%	80.9%	581.9	599.8	618.2	637.1	656.6
13	Interest expenses	(56.0)	(65.0)	(52.0)		16.1% 🔵	-20.0%	(54.5)	(50.9)	(47.0)	(42.7)	(38.1)
14	EBT	221.8	246.7	511.8		11.2%	107.5%	527.5	548.9	571.2	594.4	618.6
15	Taxes	(207.5)	(210.0)	(208.6)		1.2% 🔵	-0.7%_	(184.6)	(192.1)	(199.9)	(208.0)	(216.5)
16	Net Income	14.3	36.7	303.2		156.5%	726.6%	342.9	356.8	371.3	386.4	402.1

Now that we have calculated Net Income, we can build an equity schedule. Let's create a new sheet called "Equity schedule".







Net Income feeds the Equity schedule. The other parameters are Beginning equity, Increase of capital, Dividends, and the end result is Ending equity. Then, once we have forecasted Ending equity, it feeds the Balance Sheet.





A A	В	С	D	Е	F	G	н	1	J
1	Balance Sheet								
2									
3							Forecast		
4	\$ in million	31-Dec-14	31-Dec-15	31-Dec-16	31-Dec-17	31-Dec-18		31-Dec-20	31-Dec-21
5	Trade Receivables	143.9	154.8	169.3	163.7	168.6	173.6	178.8	184.2
6	Inventory	85.0	92.0	110.0	97.5	100.5	103.5	106.6	109.8
7	PP&E	632.5	632.5	659.5	673.6	688.0	702.6	717.6	733.0
8	Cash	24.8	21.8	220.0					
9	Other assets	45.9	46.9	68.0	56.1	57.8	59.6	61.4	63.2
10	Assets	932.1	948.0	1,226.8	990.9	1,014.8	1,039.3	1,064.4	1,090.1
11									
12	Trade Payables	68.0	68.9	68.9	69.9	72.0	74.1	76.3	78.6
13	Provisions	32.5	28.7	28.7	28.7	28.7	28.7	28.7	28.7
14	Financial Liabilities	615.8	610.4	605.0	565.2	521.8	474.5	422.9	366.7
15	Other liabilities	48.3	43.3	38.9	45.8	47.1	48.5	50.0	51.5
16	Equity	167.5	196.7	485.3	691.0	905.1	1,127.9	1,359.7	1,600.9
17	Liabilities & Equity	932.1	948.0	1,226.8	1,400.5	1,574.7	1,753.7	1,937.6	2,126.4
18									
19	DSO	17.7	18.7	20.0	18.8	18.8	18.8	18.8	18.8
20	DPO	17.5	17.9	18.1	17.9	17.9	17.9	17.9	17.9
21	DIO	21.8	23.9	29.0	24.9	24.9	24.9	24.9	24.9
22	Other assets %	1.6%	1.6%	2.2%	1.8%	1.8%	1.8%	1.8%	1.8%
23	Other liabilities %	1.7%	1.5%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%
24	Charle	0.0	0.0	0.0	(400.0)	/FF0.0\	(74.4.4)	/070 O	/4 000 O
25 26	Check	0.0	0.0	0.0	(409.6)	(559.8)	(714.4)	(873.2)	(1,036.3)
26									

The only Balance Sheet item missing is Cash. The check is not equal to zero too.





⊿ A	В	С	D	Е	F	G
1	Cash Flow					
2						
3				Forecast		
4	\$ in mln	2017	2018	2019	2020	2021
5	EBITDA	626.2	645.0	664.4	684.3	704.8
6	Interest expenses	(54.5)	(50.9)	(47.0)	(42.7)	(38.1)
7	Taxes	(184.6)	(192.1)	(199.9)	(208.0)	(216.5)
8	Change in Trade receivables	5.6	(4.9)	(5.1)	(5.2)	(5.4)
9	Change in Inventory	12.5	(2.9)	(3.0)	(3.1)	(3.2)
10	Change in Trade payables	1.0	2.1	2.2	2.2	2.3
11	Change in Other assets	11.9	(1.7)	(1.7)	(1.8)	(1.8)
12	Change in Other liabilities	6.9	1.4	1.4	1.5	1.5
13	Capex	(58.4)	(59.6)	(60.9)	(62.2)	(63.5)
14	Operating Cash Flow	366.6	336.4	350.4	364.9	380.1
15	Dividends	(137.1)	(142.7)	(148.5)	(154.5)	(160.8)
16	Change in Financial liabilities	(39.8)	(43.4)	(47.3)	(51.6)	(56.2)
17	Change in Provisions	0.0	0.0	0.0	0.0	0.0
18	Change in Equity	0.0	0.0	0.0	0.0	0.0
19	Net Cash Flow	189.6	150.2	154.5	158.8	163.1
20					<u> </u>	
21						

Calculate the firm's Cash flow in the forecast period.



1	В	С	D	Е	F	G	Н	1	J
1	Balance Sheet								
2		•							
3							Forecast		
4	\$ in million	31-Dec-14	31-Dec-15	31-Dec-16	31-Dec-17	31-Dec-18	31-Dec-19	31-Dec-20	31-Dec-21
5	Trade Receivables	143.9	154.8	169.3	163.7	168.6	173.6	178.8	184.2
6	Inventory	85.0	92.0	110.0	97.5	100.5	103.5	106.6	109.8
7	PP&E	632.5	632.5	659.5	673.6	688.0	702.6	717.6	733.0
8	Cash	24.8	21.8	220.0	409.6	559.8	714.4	873.2	1,036.3
9	Other assets	45.9	46.9	68.0	56.1	57.8	59.6	61.4	63.2
10	Assets	932.1	948.0	1,226.8	1,400.5	1,574.7	1,753.7	1,937.6	2,126.4
11									
12	Trade Payables	68.0	68.9	68.9	69.9	72.0	74.1	76.3	78.6
13	Provisions	32.5	28.7	28.7	28.7	28.7	28.7	28.7	28.7
14	Financial Liabilities	615.8	610.4	605.0	565.2	521.8	474.5	422.9	366.7
15	Other liabilities	48.3	43.3	38.9	45.8	47.1	48.5	50.0	51.5
16	Equity	167.5	196.7	485.3	691.0	905.1	1,127.9	1,359.7	1,600.9
17	Liabilities & Equity	932.1	948.0	1,226.8	1,400.5	1,574.7	1,753.7	1,937.6	2,126.4
18									
19	DSO	17.7	18.7	20.0	18.8	18.8	18.8	18.8	18.8
20	DPO	17.5	17.9	18.1	17.9	17.9	17.9	17.9	17.9
21	DIO	21.8	23.9	29.0	24.9	24.9	24.9	24.9	24.9
22	Other assets %	1.6%	1.6%	2.2%	1.8%	1.8%	1.8%	1.8%	1.8%
23	Other liabilities %	1.7%	1.5%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%
24									
25	Check	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26									
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Complete the Balance Sheet by summing Beginning Cash and Net Cash Flow for the respective year. Bear in mind that Beginning Cash is Ending Cash for the previous year. As you can see here, once we have done that the Balance Sheet balances. As it should ©

