



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	B	C	D	E	F	G	H
1		P&L						
2								
3		\$ in million	2014	2015	2016		Var % 14-15	Var % 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%
14		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	B	C	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.



	A	B	C	D	E	F	G	H
1		P&L						
2								
3		Scenario:	Base case					
4								
5		\$ in million	2014	2015	2016		Var %	Var %
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					
Selected Case					
Best case					
Base case					
Worst case					
Cogs as % of Revenues					
Selected Case					
Best case					
Base case					
Worst case					
Opex as % of Revenues					
Selected Case					
Best case					
Base case					
Worst case					

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).

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



	A	B	C	D	E	F
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	B	C	D	E	F	G	H	I	J
1		Balance Sheet								
2										
3										
4		\$ in million	31-Dec-14	31-Dec-15	31-Dec-16	Forecast				
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					
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	317.4	326.9	336.7	346.8	357.2
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					
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					
17		Liabilities & Equity	932.1	948.0	1,226.8	144.3	147.8	151.4	155.0	158.8
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	173.0	179.1	185.3	191.7	198.4
26										
27										

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.



Taxes	(207.5)	(210.0)	(208.6)	1.2%	-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 Revenues										
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 Revenues										
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 %						-35%	-35%	-35%	-35%	-35%

Assume that the company will pay the statutory tax rate in the country where it operates

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



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



	A	B	C	D	E	F	G	H	I	J
1		Balance Sheet								
2										
3										
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					
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										
25		Check	0.0	0.0	0.0	(409.6)	(559.8)	(714.4)	(873.2)	(1,036.3)
26										
27										

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



	A	B	C	D	E	F	G
1		Cash Flow					
2							
3							
4		\$ in mln					
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							
21							

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



	A	B	C	D	E	F	G	H	I	J
1		Balance Sheet								
2										
3										
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										

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 😊