

# International Corporate Finance 2020-21 Coursework Assignment

## Project Model Answer

### Belgium

Year			0	1	2	3	4	5	6	7	8	9	10	11
Equipment	5%	residual	-3,000,000										+150,000	
Capital allowances					+180,000	+144,000	+115,200	+92,160	+73,728	+58,982	+47,186	+37,749	+30,199	+75,796
Working capital			-200,000										+214,449	
<b>Capital cash flows</b>			<b>-3,200,000</b>	<b>0</b>	<b>+180,000</b>	<b>+144,000</b>	<b>+115,200</b>	<b>+92,160</b>	<b>+73,728</b>	<b>+58,982</b>	<b>+47,186</b>	<b>+37,749</b>	<b>+394,648</b>	<b>+75,796</b>
<i>Additional units</i>	<i>15,000</i>			<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	<i>15,000</i>	
<i>Selling price</i>	<i>100.00</i>	<i>+1.0%</i>		<i>101.00</i>	<i>102.01</i>	<i>103.03</i>	<i>104.06</i>	<i>105.10</i>	<i>106.15</i>	<i>107.21</i>	<i>108.29</i>	<i>109.37</i>	<i>110.46</i>	
<i>Direct cost</i>	<i>(50.00)</i>	<i>-1.0%</i>		<i>(49.50)</i>	<i>(49.01)</i>	<i>(48.51)</i>	<i>(48.03)</i>	<i>(47.55)</i>	<i>(47.07)</i>	<i>(46.60)</i>	<i>(46.14)</i>	<i>(45.68)</i>	<i>(45.22)</i>	
Additional revenue				+1,515,000	+1,530,150	+1,545,452	+1,560,906	+1,576,515	+1,592,280	+1,608,203	+1,624,285	+1,640,528	+1,656,933	
Additional direct cost				-742,500	-735,075	-727,724	-720,447	-713,243	-706,110	-699,049	-692,059	-685,138	-678,287	
<b>Additional contribution</b>				<b>+772,500</b>	<b>+795,075</b>	<b>+817,727</b>	<b>+840,459</b>	<b>+863,273</b>	<b>+886,170</b>	<b>+909,154</b>	<b>+932,227</b>	<b>+955,390</b>	<b>+978,647</b>	
Staff costs	120,000	+2.0%		-122,400	-124,848	-127,345	-129,892	-132,490	-135,139	-137,842	-140,599	-143,411	-146,279	
Relevant overheads	40,000	0.0%		-40,000	-40,000	-40,000	-40,000	-40,000	-40,000	-40,000	-40,000	-40,000	-40,000	
<b>Trading cash flows</b>				<b>+610,100</b>	<b>+630,227</b>	<b>+650,382</b>	<b>+670,567</b>	<b>+690,783</b>	<b>+711,031</b>	<b>+731,312</b>	<b>+751,627</b>	<b>+771,979</b>	<b>+792,367</b>	
Corporate tax at effective rate	30%				-183,030	-189,068	-195,115	-201,170	-207,235	-213,309	-219,394	-225,488	-231,594	-237,710
<b>Net cash flows in</b>	<b>EUR</b>		<b>-3,200,000</b>	<b>+610,100</b>	<b>+627,197</b>	<b>+605,314</b>	<b>+590,652</b>	<b>+581,773</b>	<b>+577,524</b>	<b>+576,985</b>	<b>+579,420</b>	<b>+584,239</b>	<b>+955,422</b>	<b>-161,914</b>
Foreign exchange rate	EUR	/	GBP	1.1000	1.0956	1.0913	1.0870	1.0827	1.0784	1.0741	1.0699	1.0657	1.0614	1.0572
<b>Net cash flows in</b>	<b>GBP</b>		<b>-2,909,091</b>	<b>+556,839</b>	<b>+574,718</b>	<b>+556,869</b>	<b>+545,539</b>	<b>+539,472</b>	<b>+537,659</b>	<b>+539,292</b>	<b>+543,719</b>	<b>+550,419</b>	<b>+903,690</b>	<b>-153,756</b>
Discount factors at (assumed) WACC of	6%		1.000	0.943	0.890	0.840	0.792	0.747	0.705	0.665	0.627	0.592	0.558	0.527
<b>Present values in</b>	<b>GBP</b>		<b>-2,909,091</b>	<b>+525,320</b>	<b>+511,497</b>	<b>+467,558</b>	<b>+432,118</b>	<b>+403,125</b>	<b>+379,029</b>	<b>+358,660</b>	<b>+341,136</b>	<b>+325,792</b>	<b>+504,616</b>	<b>-80,997</b>
<b>Net present value</b>	<b>GBP</b>		<b>+1,258,763</b>											
<b>Internal rate of return</b>			<b>14.2%</b>											
<b>Discounted payback period</b>	<b>years</b>		<b>6.5</b>											

### Capital allowances calculation

Year		0	1	2	3	4	5	6	7	8	9	10	11
Bought forward			3,000,000	2,400,000	1,920,000	1,536,000	1,228,800	983,040	786,432	629,146	503,316	402,653	
Capital allowance @ overseas rate	20%		(600,000)	(480,000)	(384,000)	(307,200)	(245,760)	(196,608)	(157,286)	(125,829)	(100,663)	(252,653)	
Carried forward			2,400,000	1,920,000	1,536,000	1,228,800	983,040	786,432	629,146	503,316	402,653	150,000	
Corporate tax cash flow @ overseas rate	30%			+180,000	+144,000	+115,200	+92,160	+73,728	+58,982	+47,186	+37,749	+30,199	+75,796

### Relevant overheads calculation

Additional overheads		325,000
Equipment cost	3,000,000	
Equipment disposal proceeds	(150,000)	
Depreciable amount	<u>2,850,000</u>	
Project life (years)	<u>10</u>	
Annual depreciation (amount ÷ years)		(285,000)
Relevant overheads		<u>40,000</u>