

Black's discounting rule, Avance Newsletter Nr. 13

Peak Sales Distribution

	in log-spac	real
Median	6.4	619
Standard Error	1.3	1,342

Valuation (in USD Mio)

rf	5%	cont compounded
rm	11%	cont compounded
sigma	15%	

Phase	Preclinical	Phase 1	Phase 2	Phase 3	Review	1	2
Duration	1.5	2	2	3	1.5	1	1
Start	0	1.5	3.5	5.5	8.5	10	11
Success Rate	77%	77%	44%	58%	90%	100%	100%
Probability	100%	77%	59%	26%	15%	14%	14%
Sales Curve						8%	19%
Mean Costs	-2	-5	-11	-40	-3		
Standard Error	1	4	8	20	2		
Percentile	N/A	31%	23%	17%	12%	10%	9%
Costs	-2.0	-7.3	-18.8	-69.1	-6.9		
Sales						12.0	27.7
Op Exp						-4.2	-9.7
NCF	-2.0	-7.3	-18.8	-69.1	-6.9	7.8	18.0
rNCF	-2.0	-5.6	-11.2	-18.0	-1.0	1.1	2.4
Discount Factor	100%	93%	84%	76%	65%	61%	58%
rDCF	-2.0	-5.2	-9.4	-13.7	-0.7	0.6	1.4
rNPV	8.3 USD Mio						

	Title
	Input
	Calculation
	Result

3	4	5	6	7	8	9	10	11
1	1	1	1	1	1	1	1	1
12	13	14	15	16	17	18	19	20
100%	100%	100%	100%	100%	100%	100%	100%	100%
14%	14%	14%	14%	14%	14%	14%	14%	14%
28%	39%	52%	60%	75%	82%	90%	96%	100%

8%	7%	7%	6%	5%	5%	4%	4%	4%
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38.4	50.4	64.7	71.5	86.0	91.7	97.0	100.3	100.7
-13.4	-17.6	-22.6	-25.0	-30.1	-32.1	-34.0	-35.1	-35.2

25.0	32.7	42.0	46.5	55.9	59.6	63.1	65.2	65.5
3.4	4.4	5.7	6.3	7.6	8.1	8.6	8.8	8.9
55%	52%	50%	47%	45%	43%	41%	39%	37%
1.9	2.3	2.8	3.0	3.4	3.5	3.5	3.4	3.3



12	13	14	15	16	17	18	19	20
1	1	1	1	1	1	1	1	1
21	22	23	24	25	26	27	28	29
100%	100%	100%	100%	100%	100%	100%	100%	100%
14%	14%	14%	14%	14%	14%	14%	14%	14%
96%	79%	61%	48%	34%	27%	23%	19%	18%

3%	3%	3%	3%	2%	2%	2%	2%	2%
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94.3	74.6	56.0	43.5	30.1	23.0	19.1	15.8	14.5
-33.0	-26.1	-19.6	-15.2	-10.5	-8.0	-6.7	-5.5	-5.1

61.3	48.5	36.4	28.2	19.5	14.9	12.4	10.3	9.4
8.3	6.6	4.9	3.8	2.7	2.0	1.7	1.4	1.3
35%	33%	32%	30%	29%	27%	26%	25%	23%
2.9	2.2	1.6	1.2	0.8	0.6	0.4	0.3	0.3

