Real Options – Example

- Biongen is a biotechnology firm that has patented a drug for the cure of the multiple sclerosis called Avonex.
- The objective is to estimate the value of the patent with the following information:
  - the value of the expected cash flows, without taking into account the development cost, is 3.578 mln $ (discounted at t=1)

Scenario	Expected cash flows (mln $)	Probability
A	1900	0,6
B	8600	0,1
C	5500	0,3

  - the investment in the current year to go ahead with the development of the drug is 290 mln$, the cost to complete the development is 2.585 mln$

  - the patent will protect for the next 17 years and the risk free interest rate is 2%

1. Estimate the value of the patent using the traditional NPV technique
2. Estimate now the value of the patent using the real options analysis.