# VALUATION TOOLS WEBCAST: VALUING A PATENT

# The "option to delay"

- If you are given the "exclusive" right to do something (sell a product or service), you have to separate the value of that right from the value of the product or service today.
- The value of the product or service today can be computed using conventional DCF approaches, i.e., as the present value of the expected cash flows, if you introduce the product or service today.
- The value of the right is an option and reflects expectations about the future.
- Bottom line: A product, service or technology may not be financially viable today but the exclusive rights to it can still be valuable.

# Step 1: Check the exclusivity box

- Before you get carried away using real options technology, check to make sure that you have the exclusive rights to a product or service.
- That exclusive right has to be provided to you contractually and needs to be enforceable effectively in a court of law.

# Step 2: Value the product/technology, if introduced today.

- In this step in the process, you are doing conventional capital budgeting, projecting expected cash flows from developing the technology/product/service today, over its life.
- You will discount these cash flows at a risk-adjusted discount rate (cost of equity or cost of capital).
- Even in the face of uncertainty, you should be able to come up with a present value of the cash flows. (Don't net out the initial investment you will need to make yet).
- Example: Assume that you have the exclusive rights to a mobile technology that has expected cash flows of $25 million a year, in perpetuity, growing 2% a year.

  The cost of capital is 12%.

  Present value of cash flows = $25/(.12-.02) = $250 million

# Step 3: The Exercise Price

- Exercising this option is effectively developing the technology today. The complete initial cost of making a patent into a commercial product will become the strike price of the option.
- Example: Assume that the technology that you valued at $250 million in step 2 will require a total initial investment of $400 million today.
  - Conventional NPV = $ 250 –$ 400 = -$150 million

# Step 4: Define the life of the option and the cost of delay

- In this step, you are determining the period for which you will have exclusive rights. Note that this is separate from the asset life you used in step 2 to get your expected cash flows and value.
- You then have to consider whether there is a cost to waiting, once the product/ service becomes viable. That cost is usually estimated in one of two ways:
  - If you have the cash flow in year 1, you can divide that cash flow by the PV of the cash flows (estimated in step 1).
  - If you are uncertain about the cash flow, you can assume that the cost of delay is losing a year of protection from competition. (Cost of delay = 1/ Remaining life of the option).
- Example: Assume that you are given the exclusive rights to this technology for the next 20 years. If the technology becomes viable and you don't invest in it, you will effectively lose the cash flow you could have made in the year. Here are the two ways of computing cost of delay:
  - Cash flow measure = 25/250 = 10%
  - Year-based measure = 1/20 = 5%

  I will use the latter measure.

# Step 5: Estimate a standard deviation in your "present" value