Opening Remarks

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Climate change is a "super wicked" problem.

We humans live in the short-term. We are largely indifferent to present actions that will have consequences in the future. We are designed that way.

The earth's climate, on the other hand, lives in the long-term. It is the consequence of present actions that play out (mostly) in the future. It is designed that way.

Imagine that we dump 100 additional ppm of CO2 into the atmosphere. In the short term, little changes with our earth's climate. We go about our business.

A scientific consensus tells us that the additional CO2 will have dire consequences in 50 years, unfathomable consequences in 100 years. Today, who cares.

Our short-term nature shows up especially in business. Companies have record earnings; hedge fund managers make billions in a year. Today, all is good.

So the Law Review asked a terrific group of speakers to consider whether the symposium title, "The Sustainable Corporation," is an oxymoron.

I open this conclave by wondering whether we are wasting our time. My sense is that the corporation, as designed, cannot foster sustainability.

The corporation by design is meant to be a short-term, externalizing, self-referential machine. And it is super good at what it does.

What does "sustainable" mean? Anthropomorphically, something is sustainable when current human needs are met, without sacrificing future human needs.

Let's test the corporation's sustainability. Consider the following three scenarios and apply a bit of rudimentary math.

Suppose a business decision maker must choose among three business scenarios, each with future annual returns that grow or shrink in different ways.

For each scenario, the decision hinges on the present value of the future returns, discounted based on uncertainty (risk) and the time value of money.

Scenario 1 ("life is good") – returns will grow steadily for 50 years

- Net income: \$1 million
- Growth rate: 3%
- Discount rate: 12%

Scenario 2 ("future is dicey") - returns will rise for 25 years, and then taper off

- Net income: \$1 million
- Growth: 3% (then, after 25 years, negative 3%)
- Discount rate: 12%

Scenario 3 ("future is bleak") – returns will rise for 25 years, and then plummet

- Net income: \$1 million
- Growth: 3% (then, after 25 years, negative 10%)
- Discount rate: 12%

Important in my calculations are the growth rate and the discount rate. I chose a modest 3% growth rate to reflect something just above historic inflation.

The discount rate – an amalgam of uncertainty (risk) and time value of money – is my best guess of the average cost of capital for business around the world.*

The discount rate also incorporates what investors in the business expect as a return from the business – and its decisions. Their expectations drive the system.

^{*} I recognize that the discount rate is the driver here. If you use cost of debt for big business, the rate is a good deal lower – and the future matters more.

If you use cost of equity for small business, the discount rate is a good deal higher – and the future matters even less.

So, for me, this is where the valuation maxim comes in: "Valuation is an art, not a science. Better to be inexactly right, than precisely wrong."

Here are the results for Scenario 1, where the \$1 million returns grow each year by 3% (modest by business standards), with a typical discount rate of 12%.





spreadsheet

This means that \$1 million annual returns that grow each year by 3% over 50 years are worth about \$10.9 million today. Financially speaking.

Here are the results for Scenario 2, where the \$1 million grows each year by 3% for 25 years and then declines 3% each for the next 25 years. Same discount rate.



spreadsheet

This means that the returns of \$1 million growing 3% for 25 years and declining 3% for another 25 years have a present value of about \$10.5 million.

Here are the results for Scenario 3, where there are 10% declines after 25 years, assuming that losses are not internalized because of limited liability.

Scenario 3



spreadsheet

This means that counting only the positive returns for the first 35 years or so, but not any negative returns, the present value of the returns is about \$10.1 million.

Here are the results for Scenario 3, even assuming that the losses in the future are internalized and figure into net present value.





spreadsheet

This means that even if we count the 15 years or so of negative returns, the present value of all returns (positive and negative) is about \$9.8 million.

Look at the results. What is the present value of each scenario? How might the decision maker compare the scenarios?

Scenario 1 ("life is good") = \$10.9 million Scenario 2 ("future is dicey") = \$10.5 million Scenario 3 ("future is bleak – with limited liability) = \$10.1 million Scenario 3 ("future is bleak – no limited liability) = \$9.8 million

Pretty amazing. The future (at least 25 years out) has minimal impact on present value. Rational business decisions will be largely indifferent to future catastrophes.

A present decision that produces 25 years of growth has about the same value whether after 25 years

- it is sustainable and continues to produce healthy returns for the next generation (Scenario 1)
- it is not as sustainable and produces weaker returns for the next generation (Scenario 2)
- it is unsustainable and produces no returns or even large losses for the next generation (Scenario 3).

If we tweak Scenarios 2 or 3 to produce a bit more "up front" returns, the decision maker could readily find them to have even higher present value than Scenario 1.

These scenarios reflect how today's business decision will affect our children and grandchildren. They don't figure much into the calculation.

That's what makes climate change super wicked.