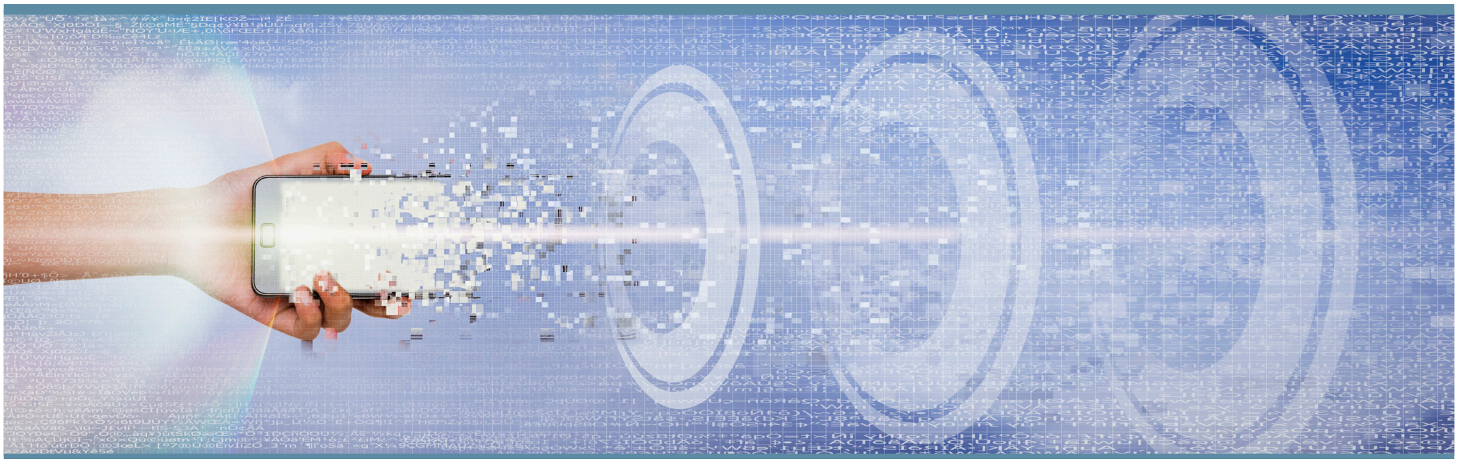

Executive Insights

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Victim or Messiah — Terminal Values and NPV, and What You Can Do About It

Kodak. Booksellers. Alarm clocks. The landline. These are all well-covered victims of the first wave of digital disruption.

Fast-forward a few years. The fourth industrial revolution is upon us. Unicorns are no longer mythical animals (although their valuations sometimes appear to be)! Business models that were the cornerstones of our economy over the past century — the taxi industry (vs. Uber), the TV industry (vs. OTT services like Netflix) and even the hotel industry (vs. Airbnb) — are already suddenly starting to look questionable within a very short period of time.

This, unfortunately, is before disruption driven by machine learning and artificial intelligence really hits us in full force, all enabled by Moore's Law on processing power and deep learning algorithms deployed at scale. Most proponents of machine learning are guiding toward a period of increase in the cognitive and responsive capabilities of machines, at a gradient that is unprecedented. (If you haven't seen it yet, watch Jeremy Howard's TED talk and listen for the specific reference to the pace of change toward the end.)

A number of businesses stand to have the shape of their markets radically altered in this new world — and to see this happen within a relatively short period of time. Here are just a few (the list is too long):

1. Car manufacturers, which are suddenly pivoting and relabeling themselves as "mobility providers" as deep learning enables driverless transportation (see Chris Urmson's TED talk to see an application of Jeremy Howard's car classification at work in Google's driverless cars)
2. Medical diagnostics and drug development businesses, as deep learning enables new diagnostic tools, drug developments and treatment paradigms (IBM's big focus on Watson is in the healthcare space)
3. Insurers, as the fundamental nature of insured risk and the quantum of claims evolves

And this is just the big picture. At the product and project level within companies, this trend is being rapidly replicated as well. The explosion of data and analytical techniques is enabling disruptive product design, customer segmentation and targeting, all at an incredible pace. Data, tools and techniques that were cutting edge less than six months ago are rapidly losing their distinctiveness. As an example, just when we thought mobile apps were the future, we're now being led to believe that chat bots will take over.

In this world, how should companies think about evaluating projects and products? How should equity investors think about valuing companies? What is an appropriate leverage level that debt providers should accept? Historically, this decision has largely been performed using the venerable cash flow-based tool most favored for valuation by MBA professors — the classic net present value (NPV) model. However, any developer of an NPV model will know that the bulk of the value (particularly in start-up J-curve ventures) often relies on the "terminal value," which in most cases is a perpetuity after five years of explicit cash flows.

Victim or Messiah - Terminal Values and NPV, and What You Can Do About It was written by **Ashish Khanna**. Ashish is a partner in L.E.K. Consulting's Financial Services practice and is based in London.

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While terminal values have never been perfect, one could still take some comfort in knowing that changes to cash flows — if any — would be slow, and value could still be realized from investments. However, if the pace of disruption has now fundamentally changed, what confidence can today's investors and companies place on this perpetuity, if any? Is money still being put into projects under old paradigms in which investors and companies expect that products will have eternal or at least longer lives?

NPV as the victim:

Does the NPV tool rapidly become outmoded as it ceases to have relevance? Assuming that investors are irrational (and arguably some are) or have deep pockets / conviction (e.g., Google with its driverless cars) and look for other ways to justify investments — what replaces it then — how accurate are the alternatives?

- Earnings multiples for established companies — still anchored to some extent of NPVs
- Venture valuation models — eyeballs, clicks, user numbers, etc. (Can these really apply to big companies and projects in any reasonable fashion?)

NPV as the messiah (to Incumbents):

(I would like to preface this with the fact that my personal view is that this scenario is unlikely.) Assuming investors are rational, at some point, investments could dry up. If investors have no confidence in the outlook for certain sectors and for the longevity of their investments, then they could cease writing big checks. This is good news for incumbents, as large-scale disruption ends up not being funded, and venture funding only follows incremental improvements. The open question then concerns itself with how deep the investment has to be in order to fund innovation and disruption in this phase of the industrial revolution — and, according to some, the answer is "not very."

Clearly these are some important open questions that hopefully are the subject of academic research. However, what is clear is that the NPV in tomorrow's world will cease to be as accurate a predictor of value as it has been over the past century. The public equity markets are also likely to have a higher level of volatility because of the uncertainties in valuations.

What investors must do:

There are, however, a few things that investors can and must do:

- Think through investments very carefully, conducting "disruption due diligence" to identify potential weaknesses of business models, but also the opportunity to be disruptors given the capabilities of the target
- Focus more on engendering a balance within management teams and their collective ability not only to manage Business As Usual but also to adapt and evolve with the times
- Encourage, incentivize and organize around disruptive thinking and strategic agility within investments. As Uber's Travis Kalanick said when he was launching UberX, "I don't care about the brand. If we don't cannibalize ourselves, someone else will cannibalize us"

About the Author

Ashish Khanna is a partner in L.E.K.'s London office. His primary focus is on financial services, covering insurance, asset / wealth management, banking and other specialist markets across both B2B and B2C settings. He has substantial experience in strategy, decision support, mergers and acquisitions, and performance improvement projects across the U.K., European and global markets.

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