



The Emperor Has No Cash Flow

Why It May Be Time to Say Goodbye to DCF and Say Hello Again to the Payback Period

The Science-Fiction Novel Called “Perpetual Growth”

The Question I Have Carried for Twenty Years

For roughly twenty years, I have carried around a nagging suspicion about one of the most sacred ideas in corporate finance: if 80% to 90% of a company’s value comes from Terminal Value, what exactly are we valuing—and how much of it is real?

I have kept using discounted cash flow (DCF) models in my professional life. I built them, checked the formulas, challenged assumptions, and reviewed investment proposals brought to me by executives of our U.S. subsidiaries. I did so because DCF was the accepted language of finance, because textbooks said investment decisions should be made using NPV, and because there was no obvious alternative that could replace it wholesale. A professional cannot simply throw out the rulebook because a spreadsheet makes him uncomfortable.

But the discomfort never went away. In a typical ten-year DCF model, the majority of enterprise value can come from Terminal Value—the value assigned to cash flows after the explicit forecast period. In my own experience, it was not unusual for Terminal Value to account for 80% to 90% of the total. We could spend months polishing the income statement, balance sheet, working-capital assumptions, depreciation schedules, and capital expenditures. Then a handful of assumptions about the distant future would determine most of the answer.

That is a curious way to create the appearance of precision. We may have thousands of cells in a model, but the valuation can end up resting on a single, very large “trust me.”

The Science-Fiction Novel Called “Perpetual Growth”

The standard perpetuity-growth model assumes that after the forecast period, a company’s cash flow will continue to grow forever at a constant rate, usually represented by the innocent-looking letter g . The formula is mathematically elegant. In the real world, however, “forever” is a rather ambitious forecasting horizon.

Civilizations disappear. Empires collapse. Technologies become obsolete. Products lose relevance. Entire industries shrink or vanish. Yet a valuation model may assume that a company selling industrial products today will continue generating growing cash flows indefinitely. The assumption would be amusing if it were not used to support decisions involving billions of dollars.



The problem is not that mathematics is wrong. The problem is that a mathematically valid result can be built on an economically implausible premise. A formula does exactly what we tell it to do—even when what we tell it is fantasy.

In fact, the intellectual foundation behind many billion-dollar valuations is essentially the geometric-series formula that students encounter in high-school mathematics. The spreadsheets became more sophisticated. The software became more sophisticated. The presentation decks became more sophisticated. The mathematics did not.

Lower the weighted average cost of capital (WACC) by half a percentage point, or raise the perpetual growth rate by the same amount, and the valuation can jump by hundreds of millions—or, in large transactions, billions. The model looks scientific, but its output may be extraordinarily sensitive to assumptions that nobody can reliably verify.

When the Business Does Not Grow Forever

I spent much of my professional life observing the decline of traditional printing-related businesses. Offset printing once seemed permanent. Newspapers seemed permanent. Commercial printing seemed permanent. Paper consumption seemed permanent. Then the internet arrived. It did not send a polite letter asking the old business model for permission to disrupt it. It simply showed up.

Printing volumes declined, business models weakened, capacity became excessive, and demand continued to contract. I saw this transformation at close range. Since 2000, much of my professional life has involved dealing with businesses in decline. After watching markets shrink year after year, it became increasingly difficult for me to accept perpetual growth as a reasonable default assumption.

For some businesses, value does not grow forever. It declines. It may eventually disappear. And in some cases, a business that once looked valuable can become a liability.

That is why the idea of perpetual growth feels less like a conservative assumption and more like a science-fiction novel. The plot is simple: the company survives every technological revolution, every new competitor, every shift in consumer behavior, and every economic cycle—and keeps growing forever. Hollywood might buy the rights. An investment committee should at least ask for a better script.

The Terminal-Value Trap—and the Temptation to Justify a Deal

When 80% or 90% of a valuation depends on Terminal Value, the detailed forecasts for Years 1 through 5 can become almost theatrical. They look rigorous, and they may well be carefully prepared, but the final result can be dominated by one assumption about a future no one can see.

This creates a troubling temptation. Over the years, I have sometimes wondered whether DCF has drifted from being a tool for measuring value into a tool for justifying a value that someone already wants. First comes the desired transaction price. Then comes the model. Finally, the assumptions are adjusted until the model gives the desired answer.

Want to justify a higher acquisition price? Nudge the perpetual growth rate upward or the WACC downward. Need to support a larger goodwill figure? Move a few assumptions. The spreadsheet remains



immaculate. The answer becomes acceptable. And the uncomfortable question—whether the business can actually deliver those cash flows—may be left for someone to answer several years later, when an impairment charge arrives.

Corporate history contains a long procession of goodwill write-offs and painful impairments. Not every one of them can be blamed on DCF, of course. But when a model places most of a business's value in a far-off future, it is worth asking whether the model has helped decision-makers see reality—or helped them avoid it.

One alternative is the exit-multiple approach: instead of assuming perpetual growth, estimate what the business might sell for at the end of the forecast period based on an EBITDA multiple. That can be useful, but it does not make the uncertainty disappear. It merely replaces “What will this business generate forever?” with “What multiple will the market assign it ten years from now?” We have changed the question, not escaped the problem.

What My Professor, Joe Finnerty, Told Us

My skepticism did not emerge in isolation. More than thirty years ago, while studying at the University of Illinois business school, I had the privilege of learning from Professor Joe Finnerty.

In the 1990s, DCF and NPV were central to the finance curriculum. Academic papers celebrated mathematical rigor, and textbooks presented discounted cash flow analysis as the proper framework for investment decisions. Yet Professor Finnerty sometimes offered advice that sounded remarkably different from the polished orthodoxy.

When students raised questions about investment evaluation, he would tell us, in effect: “These investment-evaluation criteria aren’t nearly as reliable as you think. If you really have to make a judgment, look at the Payback Period.”

At the time, I wondered whether he was expressing a practical truth that was difficult to state too loudly in academic circles. Perhaps he was carefully distinguishing what finance theory could calculate from what a manager could actually know. Whatever his reasons, his advice stayed with me.

The University of Illinois sits in America’s Midwest, the country’s heartland—not Wall Street. I remember that setting as part of the impression: a straightforward, unpretentious way of looking at a problem. The message was not that mathematics was useless. It was that a beautiful formula should not be mistaken for a reliable forecast.

I wonder whether Joe has retired by now. In any case, I feel that one of his former students should say something about the practical wisdom he shared with us. If nothing else, it is a way of acknowledging a teacher whose advice has become more relevant with time.

A Harvard-Published Case Meets the Year 2026

Recently, I asked an AI system to read a well-known case published by Harvard Business Publishing and estimate the fair market value (FMV) of the business. The company in the case made desk-top tear-off calendars. It had roughly 60% market share, but its seasonal working capital was a bottleneck: cash was



tied up as the business prepared for the selling season, then gradually released as the calendars began moving out the door from October onward. The owner was in somewhat fragile health and wanted to retire. He had offered the sales manager the opportunity to buy the business. What terms could make the transaction work?

It was a relatively straightforward and entirely plausible case. The AI considered the facts and produced an answer in minutes. When I compared its response with the analysis I had prepared back then, the results were not dramatically different. That, by itself, was not especially surprising. AI can now produce a polished finance-case analysis faster than a human can finish a cup of coffee.

But the exercise raised a much more important question: would the same business deal still make sense in 2026? The case was set in the 1970s. Since then, the internet has eaten into the market for printed materials, and the decline of offset printing has been a reality I have experienced directly. Paper, ink, printing equipment, and related products all face the consequences when demand for printed matter dries up.

So I found myself asking a question that the original case may not have needed to ask: does the market still need this kind of printed product in the same way? If the market is shrinking, a business with a dominant share of that market may still be a business in a shrinking pond. A 60% share of a market that is drying up is not necessarily a comfortable place to be.

The case also exposed the limits of a valuation exercise that treats the business as if its future were an extension of its past. The AI could analyze the case's stated facts and produce a competent answer. But no amount of computational fluency can make an obsolete industry grow again, or reliably predict the speed at which technology will reshape demand. If an AI can assemble a tidy valuation in minutes, why should we pretend that a human can confidently forecast cash flows decades into the future? Perhaps the weakest part of the model is not the calculation. It is the premise.

Why Payback Period Deserves a Comeback

In an environment of extreme uncertainty, it may be more rational to begin with a blunt question: how quickly can we get our money back? That is the central logic of the Payback Period approach.

First, payback supports liquidity and survival. When capital comes back quickly, management has more flexibility. It can reinvest in the next technology, respond to a market shift, fund a defensive move—or simply keep the cash on hand until the next opportunity becomes clearer. In a volatile world, cash is not merely a number on the balance sheet. It is the ability to choose what to do next.

Second, payback respects the limits of forecasting. Many executives struggle to forecast three years accurately. Five years can already be ambitious. Ten years may be closer to fiction than planning. A shorter recovery period reduces the time during which the investment depends on assumptions about a world that may change beyond recognition.

Payback Period is not perfect. Used alone, it can ignore cash flows after the payback date and understate the value of long-lived infrastructure or platform investments whose returns arrive later. The answer is not to replace one religion with another. Payback is not a magic wand, and DCF is not automatically worthless.



A more sensible approach is a hybrid: set a strict payback cap—for example, reject projects that cannot recover their investment within three years unless there is a compelling strategic reason. Among the projects that survive that screen, compare NPV and strategic value. Where appropriate, use discounted payback as well. The goal is not to banish financial analysis; it is to stop pretending that a distant and highly speculative Terminal Value deserves unquestioned authority.

A More Realistic Toolkit for Investment Decisions

Several practical approaches can help decision-makers deal more honestly with uncertainty.

Shorten the explicit forecast horizon. Instead of projecting ten years as a matter of habit, focus on three to five years and treat the value beyond that period conservatively. In some cases, it may be prudent to assign little or no value to the distant future unless there is strong evidence to support it.

Use real-options thinking. Management may have the option to withdraw if conditions deteriorate, or to invest more if the business develops as hoped. The ability to wait, expand, scale back, or exit has value. A good investment decision should recognize that flexibility rather than burying it in a single point estimate.

Strengthen stress testing. What happens if AI enables a new competitor to enter the market and pricing power is cut in half within three years? What if demand falls faster than expected? What if working capital cannot be released on schedule? A model should not merely describe the future management hopes for; it should test the future that could hurt it.

These tools do not eliminate uncertainty. They make it harder to hide from it. In many businesses, recovering capital sooner and preserving the next strategic move may be more valuable than chasing an elegant projection of returns ten or twenty years away.

The Professional's Dilemma—and the AI Moment

I should admit my own part in this story. I knew that Terminal Value could account for nearly 90% of enterprise value, yet I kept using the formula. I reviewed proposals and used the same framework as everyone else. I did not stand up in a meeting and announce that the emperor had no cash flow.

Why not? Because there was no accepted replacement that could be used in every case. The textbooks said to use NPV. Senior management and auditors expected a familiar methodology. As an employee within an organization, I could not simply rewrite the rules on my own. I had to do the work professionally, even when I privately wondered whether the assumptions were sound.

That was not necessarily hypocrisy. It was the dilemma of a practitioner working within the accepted system. I used the tool because it was the tool available—and because the job still had to be done. Looking back, I do not claim that I was somehow above the system. I was part of it.

But AI has sharpened the contradiction. Today, a machine can read a finance case and generate a neat valuation in a few minutes. If a polished analysis can be produced so quickly, the real intellectual work is not merely filling in the spreadsheet. It is challenging the assumptions, examining the business context, and asking whether the model's future resembles any plausible version of reality.



We cannot use today's standards to condemn every decision made decades ago. But we can use today's capabilities to question the assumptions we have inherited. If even AI cannot reliably predict the next major technological disruption, why should we confidently project a company's cash flows thirty years from now? A calculation can be flawless while its premise is absurd.

Goodbye DCF? Hello Again, Payback Period

I am not arguing that every DCF model should be thrown into the nearest recycling bin. DCF remains a useful framework when its assumptions are credible and its limitations are understood. The problem begins when a model is treated as an oracle, when a terminal-value formula is mistaken for a guarantee, or when numerical precision is allowed to conceal fundamental uncertainty.

The world has changed. AI is accelerating change. Interest rates have risen from the near-zero era. Business cycles are shorter, and disruption has become routine. In this environment, a valuation framework that places most of a company's worth in a hypothetical perpetual future deserves much more skepticism than it often receives.

The history of industries is a reminder that companies do not grow forever. Competition, technological change, stagnation, decline, and extinction are not rare exceptions; they are recurring features of business life. Assuming perpetual growth does not make those forces go away. It simply makes them disappear from the spreadsheet.

For decades, I kept my doubts to myself while using the very formulas I questioned. Now, with AI making sophisticated-looking analysis widely available and technological change undermining long-term assumptions at an accelerating pace, I think it is time to speak plainly. The challenge is not to find a prettier formula. It is to be more honest about what we can—and cannot—know.

So let us recover capital quickly, preserve liquidity, test ugly scenarios, and value managerial flexibility. Use NPV where it helps, but do not let Terminal Value dictate the decision by default. Sometimes the most useful question is not "What will this business be worth forever?" It is "How soon can we get our money back—and what choices will we still have then?"

Professor Finnerty's advice sounded unconventional more than thirty years ago. Today, it sounds practical. Perhaps it is finally time to stop treating the emperor's outfit as a masterpiece.

The emperor has no cash flow.

Goodbye, DCF. Hello again, Payback Period.



Translator's note (for review; remove before publication)

This English version consolidates overlapping passages in the Japanese source into a single article, rather than translating repeated drafts and outlines verbatim. The Harvard Business Publishing case about the desk-top tear-off calendar business is included as a central example. The source's recollection of Professor Joe Finnerty is rendered as a recollection/paraphrase, not presented as a verified verbatim quotation.