Accretive Investment
(Online Appendix)

Itzhak Ben-David[*] and Alex Chinco[†]

June 24, 2026
[Click here for the latest version]

A Case Studies

The accretive investment rule in Equation (2) is not a hypothesis about what we think CEOs might be doing. It is a description of what they say they are doing. The companies below explicitly frame capital allocation decisions in per-share terms, with the expected first-year earnings contribution and financing cost either disclosed or straightforward to compute from the filing. The cases span acquisitions, organic build programs, and unit-level expansion, but the underlying logic is the same: invest when $\mathbb{E}[\Delta \mathrm{NOI}_1] > \mathrm{FY} \times \mathrm{Cost}$.

A.1 Microsoft: All-Cash Acquisition

In January 2022, Microsoft (MSFT) announced a \$68.7B all-cash deal for Activision Blizzard, a video game publisher. The company called the deal "accretive to EPS upon close."[1] Activision's FY2021 GAAP net income was \$2.7B, before any synergies. The expected income added in the first full year was thus

$$\mathbb{E}[\Delta \mathrm{NOI}_1] \;=\; \$2.7\mathrm{B} \tag{A.1}$$

Microsoft financed the deal with internal cash. The opportunity cost of spending cash is the interest Microsoft would have earned by holding it instead. The

[*]The Ohio State University and NBER. ben-david.1@osu.edu

[†]Michigan State University. alexchinco@gmail.com

[1]Microsoft Press Release. "Microsoft to Acquire Activision Blizzard to Bring the Joy and Community of Gaming to Everyone, Across Every Device." Jan 18, 2022. [link]

one-year Treasury yield in January 2022 was approximately 0.8%. The hit to Microsoft's next-twelve-month earnings forecast was

$$\text{FY} \times \text{Cost} \;=\; 0.8\% \times \$68.7\text{B} \;=\; \$0.55\text{B} \tag{A.2}$$

Microsoft had approximately 7.5B diluted shares outstanding and standalone EPS near \$9.50/sh. The immediate EPS impact was

$$\frac{\mathbb{E}[\Delta \text{NOI}_1] - \text{FY} \times \text{Cost}}{\#\text{Shares}} \;=\; \frac{\$2.7\text{B} - \$0.55\text{B}}{7.5\text{B}} \;=\; +\$0.29/\text{sh} \tag{A.3}$$

This translates to $\frac{\$0.29/\text{sh}}{\$9.50/\text{sh}} \approx +3\%$ EPS growth. The near-zero short rate in early 2022 made the financing cost trivial relative to Activision's earnings. Even at the ten-year Treasury rate of 1.8%, the financing cost would have been $1.8\% \times \$68.7\text{B} \approx \$1.24\text{B}$, and the deal would still have been accretive, $\frac{\$2.7\text{B} - \$1.24\text{B}}{7.5\text{B}} \approx +\$0.19/\text{sh}$, or $\frac{\$0.19/\text{sh}}{\$9.50/\text{sh}} \approx +2\%$ on a relative basis.

A.2 ExxonMobil: All-Stock Acquisition

In October 2023, ExxonMobil (XOM) announced a \$59.5B all-stock deal for Pioneer Natural Resources, a Permian Basin oil producer. The press release promised the deal would be "immediately accretive to … earnings per share, operating cash flow, and free cash flow" in 2024, and "highly accretive" over the medium to long term.[2] The company disclosed every input needed to check this claim.

Pioneer's FY2023 GAAP net income was \$4.9B. ExxonMobil projected roughly \$2B per year in synergies from increased resource recovery and lower development costs, but these were framed as a medium-term benefit phased over several years. In the first full year, the expected income added was approximately

$$\mathbb{E}[\Delta \text{NOI}_1] \;=\; \$4.9\text{B} \tag{A.4}$$

Because the deal was all-stock, no interest expense or preferred dividends appear. The financing cost instead comes from diluting ExxonMobil's existing shareholders. ExxonMobil issued approximately 544M new shares at an exchange ratio of 2.3234. With ExxonMobil trading near \$109/sh and earning \$8.89/sh in FY2023, the firm's forward earnings yield was $\text{EY} = \frac{\$8.89/\text{sh}}{\$109/\text{sh}} \approx 8.2\%$. The resulting earnings drag from all these new shares was

$$\text{FY} \times \text{Cost} \;=\; 8.2\% \times \$59.5\text{B} \;=\; \$4.85\text{B} \tag{A.5}$$

[2] ExxonMobil Press Release. "ExxonMobil Announces Merger with Pioneer Natural Resources." Oct 11, 2023. [link]

ExxonMobil had approximately 4.05B shares at the time. So, the deal's first-year EPS impact was

$$\frac{\mathbb{E}[\Delta\mathrm{NOI}_1] - \mathrm{FY} \times \mathrm{Cost}}{\#\mathrm{Shares}} = \frac{\$4.9\mathrm{B} - \$4.85\mathrm{B}}{4.05\mathrm{B}} = +\$0.01/\mathrm{sh} \tag{A.6}$$

Barely positive, $\frac{\$0.01/\mathrm{sh}}{\$8.89/\mathrm{sh}} \approx +0.1\%$. The 18% premium ExxonMobil paid over Pioneer's undisturbed stock price nearly erased the yield advantage, leaving the two firms' earnings yields essentially equal.

Once synergies are included, the picture changes. At a run-rate of \$2B per year, the medium-term expected income rises to

$$\mathbb{E}[\Delta\mathrm{NOI}_2] = \$4.9\mathrm{B} + \$2\mathrm{B} = \$6.9\mathrm{B} \tag{A.7}$$

The per-share accretion becomes

$$\frac{\mathbb{E}[\Delta\mathrm{NOI}_2] - \mathrm{FY} \times \mathrm{Cost}}{\#\mathrm{Shares}} = \frac{\$6.90\mathrm{B} - \$4.85\mathrm{B}}{4.05\mathrm{B}} = +\$0.51/\mathrm{sh} \tag{A.8}$$

This translates to roughly $\frac{\$0.51/\mathrm{sh}}{\$8.89/\mathrm{sh}} \approx +6\%$ EPS growth. The "immediately accretive" claim was technically correct, but the first-year accretion was negligible. The "highly accretive" medium-term claim rested entirely on the \$2B per year in projected synergies from consolidating Permian Basin operations.

A.3 Keurig Dr. Pepper: Mixed Financing

In August 2025, Keurig Dr. Pepper (KDP) announced a \$17.5B deal to acquire JDE Peet's, a European coffee and tea company. The press release promised "approximately 10% EPS accretion in its first full year."[3] The company disclosed every input needed to verify this claim directly.

JDE Peet's had trailing twelve-month earnings of \$702M. KDP projected \$400M in run-rate synergies phased over three years, implying approximately \$150M in the first full year. Thus, the acquisition would add the following amount to KDP's next-twelve-month earnings forecast

$$\mathbb{E}[\Delta\mathrm{NOI}_1] = \$702\mathrm{M} + \$150\mathrm{M} = \$852\mathrm{M} \tag{A.9}$$

The deal's enterprise value was approximately \$23B. The \$5B gap between enterprise value and equity value reflects assumed JDE bonds whose interest expense is already inside JDE's net income. KDP financed the \$17.5B equity portion with approximately \$9B in new debt, \$4.5B in convertible preferred

[3] Keurig Dr. Pepper Press Release. "Keurig Dr Pepper to Acquire JDE Peet's." Aug 25, 2025. [link]

stock at a 4.75% coupon, and a \$4B pod manufacturing joint venture with outside investors.[4] The convertible preferred was out of the money at issuance, so it carried no immediate share dilution. Interest on the new debt came to \$400M. The preferred dividend added 4.75% × \$4.5B ≈ \$214M. The joint venture does not appear in the financing-expense calculation because the outside investors take an equity stake in the pod business, not a claim on KDP's income statement. KDP's total financing expense the following year was thus

$$\mathrm{FY} \times \mathrm{Cost} \;=\; \$400\mathrm{M} + \$214\mathrm{M} \;=\; \$614\mathrm{M} \tag{A.10}$$

KDP had approximately 1.37B diluted shares outstanding and standalone EPS near \$2.06/sh before the deal. The EPS impact is thus

$$\frac{\mathbb{E}[\Delta\mathrm{NOI}_1] - \mathrm{FY} \times \mathrm{Cost}}{\#\mathrm{Shares}} \;=\; \frac{\$852\mathrm{M} - \$614\mathrm{M}}{1.37\mathrm{B}} \;=\; +\$0.17/\mathrm{sh} \tag{A.11}$$

This is approximately +8% EPS accretion, approaching the stated ∼10% target. The deal is accretive even without synergies. JDE Peet's standalone income of \$702M exceeds the \$614M financing expense by \$88M, giving roughly +3% accretion on standalone economics alone. The synergies widen the yield spread but are not what makes the deal work.

A.4 IBM: Context-Dependent Decisions

International Business Machines (IBM) runs the world's largest industrial research program and regularly funds moonshot projects. IBM researchers helped develop the universal barcode (Weightman, 2015), the magnetic swipe card (Svigals, 2012), and SQL (Chamberlin, 2012). In the early 2010s, IBM used cheap debt financing to pump over \$1B into the Watson AI Group,[5] which first gained notoriety in 2011 for engineering a computer program that won 'Jeopardy!'.[6] From 2000 through 2024, the company spent \$140B on R&D.[7]

Throughout this period, IBM's senior management publicly named EPS growth as its primary objective. In his 2006 letter to shareholders (IBM, 2006), CEO Samuel Palmisano set an explicit target of \$10/sh by 2010. IBM's earnings stood at \$6.05/sh at the time. By the end of 2010, earnings had risen to \$11.52/sh, surpassing the target by over \$1.50/sh. Palmisano invested his way there. Figure A(1) shows that "Growth Initiatives & Acquisitions" contributed \$2.10/sh of IBM's \$5.47/sh EPS gain. "Share Repurchases" contributed \$1.30/sh.

[4] Keurig Dr. Pepper Press Release. "Keurig Dr Pepper Announces Updated Financing Plan for JDE Peet's Acquisition." Feb 23, 2026. [link]

[5] Spencer Ante. "IBM Set to Expand Watson's Reach." *Wall Street Journal.* Jan 9 2014.

[6] John Markoff. "Computer Wins on 'Jeopardy!': Trivial, It's Not." *New York Times.* Feb 16 2011.

[7] Annual R&D expenditure data from IBM 10-K filings. [link]

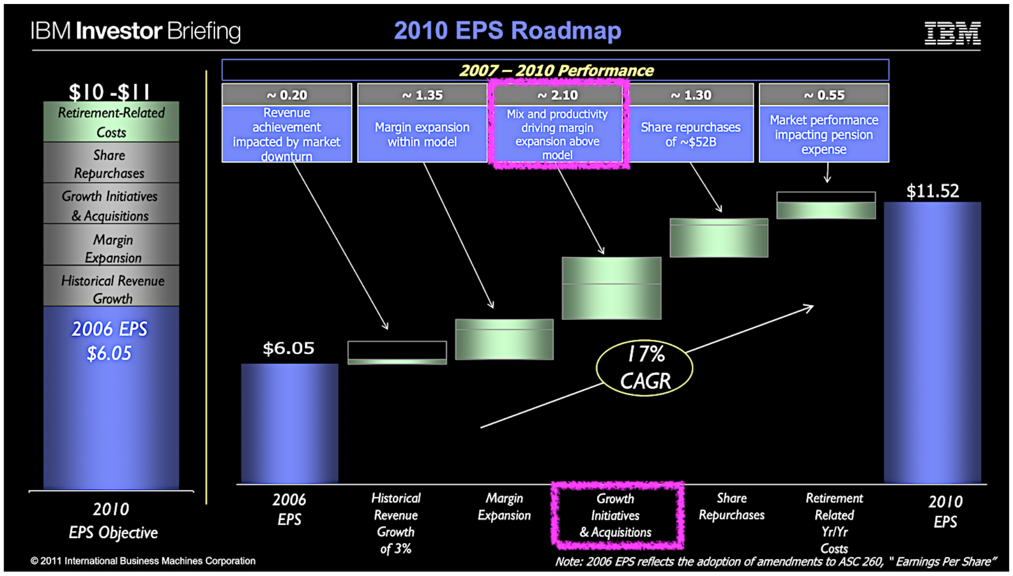


Figure A(1). May 2011 shareholder presentation touting the success of IBM's 2010 EPS roadmap. \$2.10/sh of the company's \$5.47/sh EPS gain came from "Growth Initiatives & Acquisitions". Only \$1.30 came from "Share Repurchases".

The min operator in the financing yield, $\mathrm{FY} = \min\{\mathrm{EY}, \mathrm{i}, \mathrm{rf}\}$, leads to context-dependent financing predictions. EPS-maximizing managers ask: what is the least amount of earnings I have to sacrifice to pay the project's upfront cost? Figure A(2) plots IBM's forward earnings yield (EY), marginal interest rate (i), and the 10-year Treasury rate (rf) each year since 1970. IBM uses whichever source of capital was cheapest at the time.

IBM financed its \$3.5B purchase of Lotus in 1995 with cash.[8] The 10-year Treasury rate was sitting at $\mathrm{rf} \approx 6.5\%$, so paying cash meant that IBM would miss out on collecting $6.5\% \times \$3.5\mathrm{B} \approx \$230\mathrm{M}$ in riskfree interest in 1996. This might sound like a lot, but \$230M was cheaper than IBM's other options. With a forward earnings yield of $\mathrm{EY} \approx 9\%$, the company would have had to commit $9\% \times \$3.5\mathrm{B} \approx \$320\mathrm{M}$ to new shareholders to raise \$3.5B from equity markets. Alternatively, IBM's bond yield was $\mathrm{i} \approx 8\%$. If the company had borrowed \$3.5B, it would have had to pay $8\% \times \$3.5\mathrm{B} \approx \$280\mathrm{M}$ in interest the following year.

By November 2007, IBM's forward earnings yield and marginal interest rate had both fallen to $\mathrm{EY} \approx \mathrm{i} \approx 5\% < 6.5\%$. In other words, twelve years later, it was cheaper for Big Blue to issue equity and/or sell bonds than it was to spend

[8] L. Zuckerman. "IBM Wins Lotus as Offer Is Raised Above \$3.5B." *New York Times.* Jun 12, 1995. [link]

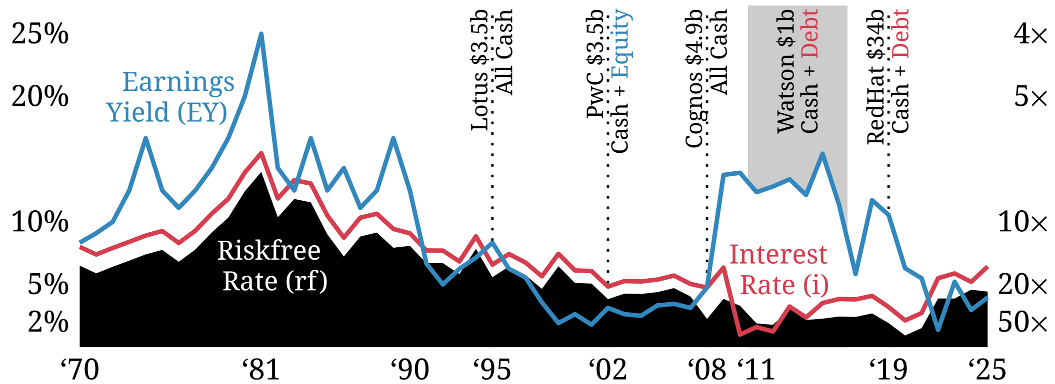


Figure A(2). Annual data from 1970 to 2025 showing IBM's investment decisions and its three costs of capital. **Blue line** is IBM's forward earnings yield, EY. **Red line** is the interest rate IBM would have to pay to borrow an extra $1 from bond markets, i. Black ribbon is the 10-year Treasury rate, rf. Vertical dotted lines ⁞⁞⁞ indicate M&A deals. Shaded bar indicates a multi-year R&D project.

cash in 1995. Nevertheless, IBM paid $4.9B cash for Cognos.[9] Treasuries had fallen to rf ≈ 2% as the deal closed in early 2008, putting the opportunity cost of spending cash at just 2% × $4.9B ≈ $100M. The earnings drag would have been 2.5× higher, 5% × $4.9B ≈ $250M, if IBM had gone with external financing.

In July 2019, the 10-year Treasury rate was back to rf ≈ 2%. At this price point, IBM would have liked to pay $34B cash for Red Hat, but the company only had ~$14B in reserve at the time.[10] So, to cover the remaining $20B, IBM turned to its next cheapest option: debt. The firm's marginal interest rate was i ≈ 3.5%, meaning that acquiring Red Hat had a total earnings drag of 2% × $14B + 3.5% × $20B ≈ $1B. Given IBM's forward earnings yield of EY ≈ 10.5% at the time, an all-equity deal would have cost 3.5× more, 10.5% × $34B ≈ $3.5B.

There was nothing normal about stock prices during the late 1990s. IBM's price-to-earnings ratio rose to nearly 30×, giving the firm a forward earnings yield of EY ≈ $\left(\frac{1}{30\times}\right)$ ≈ 3%. With Treasuries trading at rf ≈ 4%, equity was the cheapest source of capital for the first time in decades. IBM used equity financing for its $3.5B acquisition of PwC's business consulting division.[11]

IBM also used debt to finance internal R&D. In the early 2010s, IBM's stock price remained depressed after the financial crisis, but its earnings stayed stable.

[9] IBM 8-K. "IBM to Acquire Cognos to Accelerate Information on Demand Business Initiative." Nov 12, 2007. [link]

[10] IBM 8-K. "IBM To Acquire Red Hat." Oct 28, 2018. [link]

[11] W. Bulkeley and K. Dunham. "IBM Boosts Consulting Service With $3.5B PwC Deal." *Wall Street Journal.* Jul 31 2002.

Bond markets were willing to lend to the company at a discount to Treasuries, $\text{i} \approx 1\% < 2\% \approx \text{rf}$.[12] IBM used this cheap debt to fund over $1B in investment in the Watson AI Group.[13] Each financing decision reflects the same logic. The cheapest source of capital shifts over time as EY, i, and rf move relative to one another. The CEO's job is to read the configuration and pick the minimum.

A.5 BP Bunge Bioenergia: JV Buyout

In 2019, BP (BP) and Bunge (BG) formed a 50:50 biofuel joint venture (JV), BP Bunge Bioenergia. The JV combined both companies' Brazilian sugarcane ethanol assets.[14] Five years later, BP bought out Bunge's 50% stake in the JV at an enterprise value of approximately $1.4B.[15]

BP justified the acquisition using an IRR threshold and a valuation multiple. Figure A(3) advertises an expected return of greater than 15% and a purchase price of less than 4× trailing-twelve-month adjusted EBITDA.[16] The fine print explicitly states that the expected return is not a risk-adjusted discount rate. Instead, BP chose to report a "full cycle IRR" that "excludes future optionality."

The full venture reported adjusted EBITDA of approximately $0.8B for FY2023. But EBITDA overstates the income available to shareholders. Bunge's FY2023 earnings report discloses a more modest net income

$$\mathbb{E}[\Delta \text{NOI}_1] \;=\; \$157\text{M} \tag{A.12}$$

This adjusted figure reflects the venture's depreciation, debt service, lease expense, and Brazilian taxes.[17] The income yield on the $800M equity value is $\frac{\$157\text{M}}{\$800\text{M}} \approx 19.6\%$, consistent with BP's stated return threshold of greater than 15%.

The $1.4B enterprise value for BP Bunge Bioenergia included approximately $0.5B of venture-level net debt and $0.7B of lease obligations. The cost of these obligations are already deducted from the $157M earnings figure. BP paid Bunge approximately $800M and financed the deal with debt. BP's marginal borrowing rate in mid-2024 was approximately 5%, based on notes the company issued that year. The incremental financing cost was

$$\text{FY} \times \text{Cost} \;=\; 5\% \times \$800\text{M} \;=\; \$40\text{M} \tag{A.13}$$

[12] S. Gandel. "The Top 10 of Everything 2010: IBM Sells 1% Bonds." *Time Magazine.* Dec 9 2010.
[13] Spencer Ante. "IBM Set to Expand Watson's Reach." *Wall Street Journal.* Jan 9 2014.
[14] E. Voegele. "Bunge, BP launch BP Bunge Bioenergy joint venture in Brazil." *Ethanol Producer Magazine.* Dec 2, 2019.
[15] BP Press Release. "BP to acquire full ownership of BP Bunge Bioenergia while refocusing plans for new biofuels projects." Jun 20, 2024. [link]
[16] BP 2Q 2024 Financial Results. Jul 30, 2024. [link]
[17] Bunge Global. "Bunge Reports Fourth Quarter and Full-Year 2023 Results." Feb 7, 2024. [link]

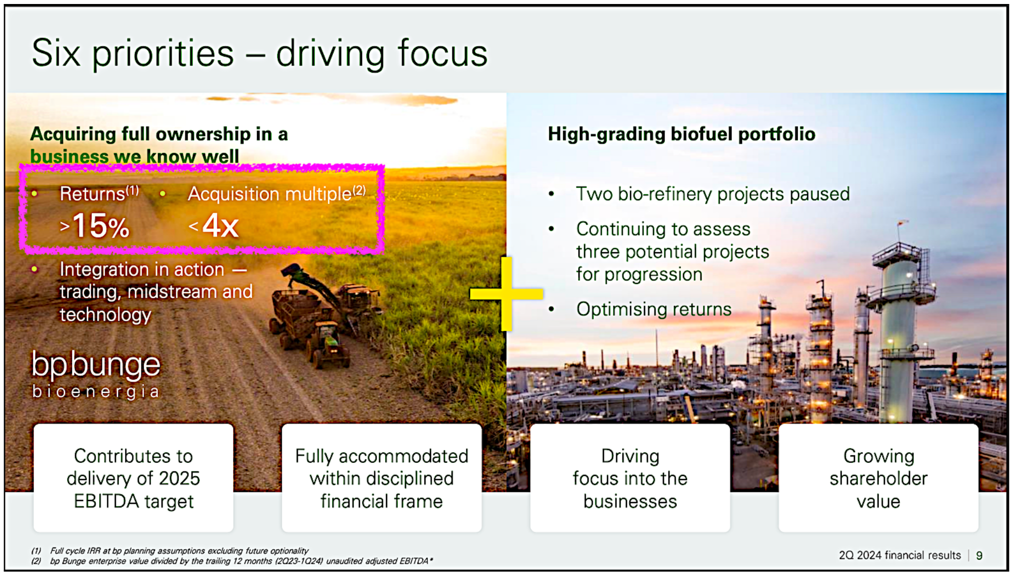


Figure A(3). BP presentation to shareholders on Jul 15 2024, which justifies paying \$800M to buy out Bunge's (BG) 50% stake in BP Bunge Bioenergia.

BP had 17.75B diluted ordinary shares outstanding in FY2023 and an EPS forecast in the neighborhood of \$0.86/sh. The first-year EPS impact was

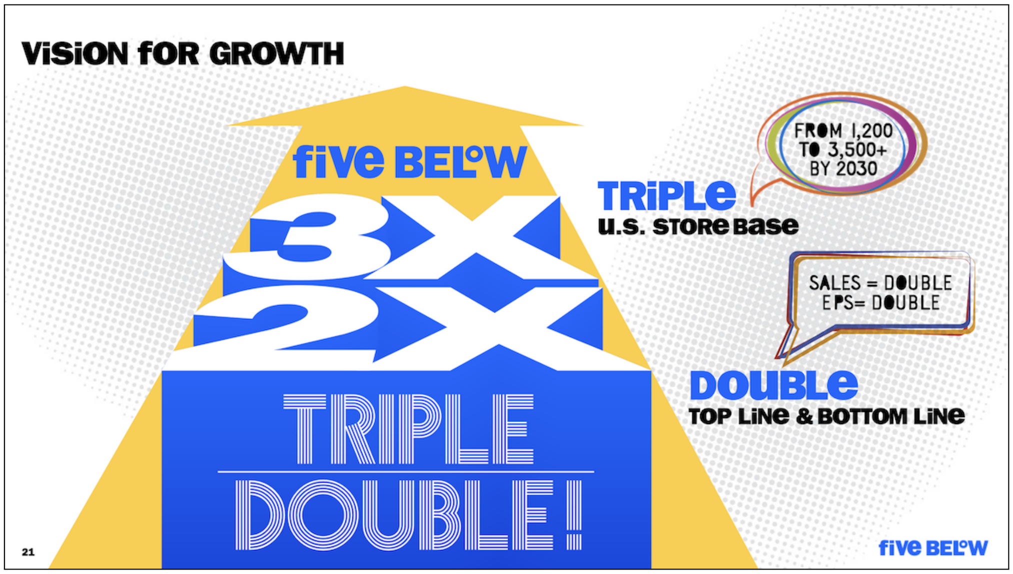
$$\frac{\mathbb{E}[\Delta\mathrm{NOI}_1] - \mathrm{FY} \times \mathrm{Cost}}{\#\mathrm{Shares}} = \frac{\$157\mathrm{M} - \$40\mathrm{M}}{17.75\mathrm{B}} = +\$0.007/\mathrm{sh} \tag{A.14}$$

The JV buyout pushed BP's EPS forecast up by about $\frac{\$0.007/\mathrm{sh}}{\$0.86/\mathrm{sh}} \approx +0.8\%$. Small in absolute terms, but the yield spread tells the real story. The acquisition multiple of less than 4× implies an EBITDA yield of greater than 25%, far above BP's 5% financing cost.

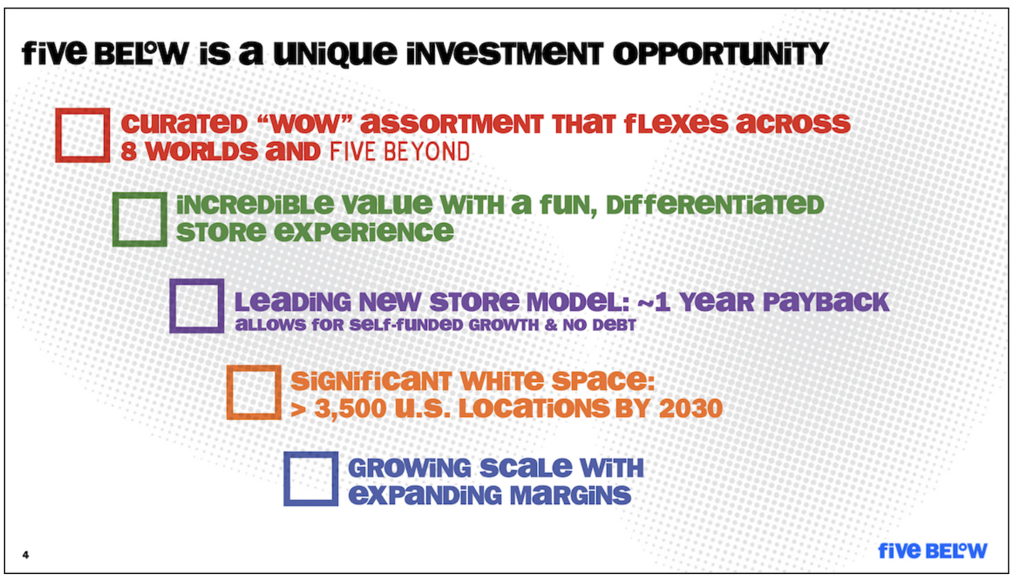
A.6 Five Below: Payback Period

Five Below (FIVE) is a discount retailer whose capital allocation is built around a single unit-economics test. Each new store should pay back its build-out cost within approximately one year. The company's 10-K states that a new store requires an average cash investment of approximately \$0.4M and targets a payback period of approximately one year on that investment.[18] Figure A(4) reproduces slides from the company's March 2024 investor presentation highlighting this framework.

[18] Five Below 10-K for the fiscal year ended February 1, 2025. "Our new store model targets an average payback period of approximately one year on our initial investment." [link]



(a) Triple Double



(b) Payback Period

Figure A(4). Five Below (FIVE) investor presentation, March 2024. Panel (a) advertises the "Triple-Double" growth plan, which targets tripling the US store count and doubling EPS. Panel (b) highlights the unit economics underlying the plan, including a "~1 year payback" on new store investment that "allows for self-funded growth & no debt."

A one-year payback on a \$0.4M investment means the expected first-year contribution equals the build-out cost. The corresponding income yield is

$$\mathrm{IY} = \frac{\mathbb{E}[\Delta \mathrm{NOI}_1]}{\mathrm{Cost}} = \frac{1}{\mathrm{Payback}} = 100\% \tag{A.15}$$

This is an extraordinary income yield by any standard. Any reasonable financing yield is cleared by a wide margin, so the accretiveness test is essentially a formality for any location that meets the company's screening criteria.

At Five Below's 2022 Investor Day, CEO Joel Anderson announced a growth plan branded "Triple-Double."[19] The targets were to triple the US store count from approximately 1,200 to 3,500+ by fiscal 2030 and to double both sales and EPS by fiscal 2025. The plan was built on a single capital allocation lever. Open more stores. There is no separate margin story, no e-commerce pivot, no international expansion. The entire corporate EPS target reduces to the observation that IY $\approx$ 100% is far above any financing yield the company faces, so every qualifying location is accretive on day one. The mechanism by which EPS doubles is the mechanism by which the store count triples.

The constraint on Five Below's growth is not whether a given store clears the accretiveness threshold. It is how many qualifying locations the real estate market can supply. The company opened 227 net new stores in fiscal 2024 and 150 in fiscal 2025, moderating the pace to focus on per-store economics.[20] With an income yield this far above the hurdle, the binding constraint is real estate supply, not the cost of capital.

A.7 Kinder Morgan: Build vs. Buy

Kinder Morgan (KMI) reports both organic build projects and acquisitions in the same "investment-to-EBITDA multiple" units, making the build-versus-buy comparison explicit. On the organic side, the company reports its project backlog (capital committed to expansion projects not yet in service) alongside an aggregate "Project EBITDA multiple," the ratio of committed capex to expected first-full-year EBITDA. On the acquisition side, the company reports the same ratio for any pending or completed deal, using identical terminology.

KMI's Q1 2026 earnings release puts both figures in the same document.[21] The organic project backlog stood at \$8.9B with "an expected first-full-year Project EBITDA multiple of about 5.6×." In the same release, KMI announced

[19] Five Below 8-K. "Long-Term 'Triple-Double' Vision at Investor Day." Mar 30, 2022. [link]

[20] Five Below 8-K. "Five Below Inc. Announces Fourth Quarter and Fiscal 2024 Financial Results." Mar 19, 2025. [link]

[21] Kinder Morgan 8-K. "KMI Reports First Quarter 2026 Financial Results." Apr 16, 2026. [link]

a \$505M acquisition of Monument Pipeline at "an expected medium-term investment-to-EBITDA multiple of less than 8.0×." Build projects at 5.6× and an acquisition at less than 8.0×, reported in the same units, in the same paragraph.

Each of these multiples is the reciprocal of the income yield

$$\frac{\text{Cost}}{\mathbb{E}[\Delta \text{NOI}_1]} = \frac{1}{\text{IY}} \tag{A.16}$$

A build multiple of 5.6× implies an income yield of $\frac{1}{5.6\times} \approx 17.9\%$. An acquisition multiple of 8.0× implies $\frac{1}{8.0\times} \approx 12.5\%$. The comparison KMI invites the reader to make is between these two income yields. Both clear the company's financing yield, but organic expansion generates more EBITDA per dollar of capital.

The convention is not limited to one disclosure. KMI's November 2023 8-K announcing the \$1.815B acquisition of STX Midstream, a South Texas natural gas pipeline system, used the same vocabulary: "a 2024 EBITDA multiple of 8.6× and a long-term investment-to-EBITDA multiple of approximately 7.0× to 7.5×."[22] The phrase "investment-to-EBITDA multiple" is the same phrase the company uses for its organic project backlog. Whether the investment is a \$1.8B pipeline acquisition or a \$1.7B pipeline build, the ratio is the same statistic.

The convention extends back at least a decade. KMI's January 2017 8-K, reporting Q4 2016 results, disclosed the \$12.0B organic project backlog at "an average capital-to-EBITDA multiple of approximately 6.7×."[23] The build multiple is a top-line operating metric in every KMI earnings release, reported in the same units as the company's acquisition multiples, and treated as a commensurable input to the same capital allocation decision.

A.8 Thermo Fisher: Yield-Spread Machine

In October 2025, Thermo Fisher Scientific (TMO) announced an \$8.875B deal for Clario Holdings, a provider of endpoint data solutions for clinical trials, funded with new debt and cash on hand.[24] Figure A(5) reproduces a slide about the deal from TMO's Investor Day presentation. The left panel reports Clario's financial profile: approximately \$1.25B in 2025 revenue. The right panel lists three justifications for the deal: "accretive to adjusted EPS," \$175M of synergies by year five, and a "double-digit internal rate of return." The deal closed on March 24, 2026.

To fund the acquisition, TMO issued approximately \$6.3B in senior notes across two offerings in October 2025 and February 2026, with coupons ranging

[22] Kinder Morgan 8-K. "KMI to Purchase NextEra Energy Partner's STX." Nov 6, 2023. [link]
[23] Kinder Morgan 8-K. "KMI Reports Fourth Quarter 2016 Results." Jan 18, 2017. [link]
[24] Thermo Fisher 8-K. "Thermo Fisher to Acquire Clario Holdings, Inc." Oct 29, 2025. [link]

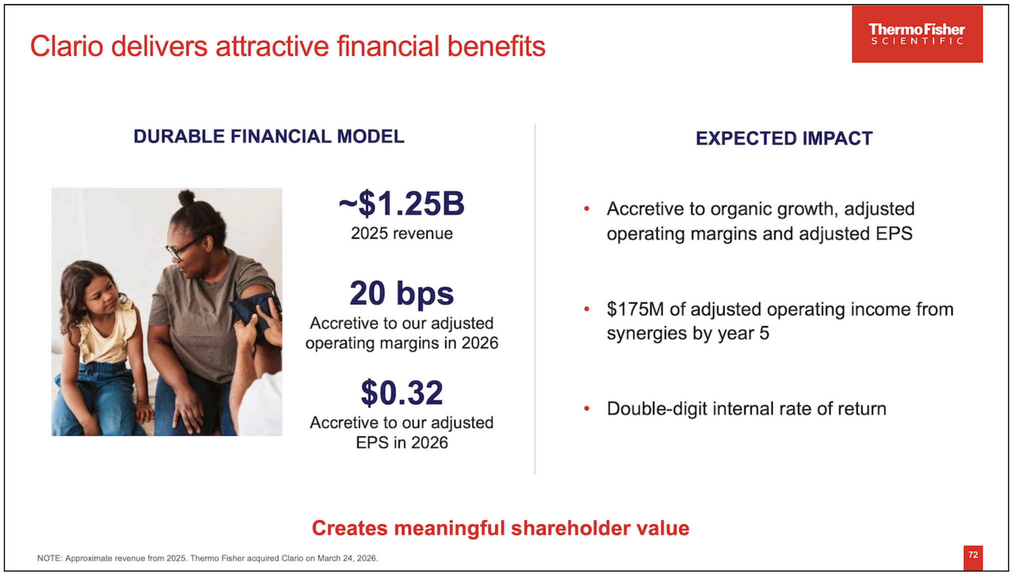


Figure A(5). Thermo Fisher Scientific (TMO) presentation to shareholders on Oct 29, 2025, which justifies the acquisition of Clario Holdings. The slide lists "accretive to adjusted EPS" and "double-digit internal rate of return" as parallel criteria for the same deal.

from 4.2% to 5.5%.[25] Using a marginal borrowing rate of approximately 5%, the next-twelve-month earnings cost of financing the acquisition would be

$$\text{FY} \times \text{Cost} \;=\; 5\% \times \$8.875\text{B} \;=\; \$444\text{M} \tag{A.17}$$

Clario is a private company, so standalone earnings are not publicly disclosed. But the slide reports \$0.32/sh of adjusted EPS accretion in 2026. TMO had approximately 378M diluted shares outstanding in FY2025 and standalone adjusted EPS of \$22.87/sh.[26] Since the deal closed on March 24, the \$0.32/sh reflects approximately nine months of Clario's contribution. Annualizing gives $\$0.32 \times \left(\frac{12}{9.25}\right) \approx \$0.42/\text{sh}$, or approximately \$157M in total. The accretiveness condition requires

$$\mathbb{E}[\Delta \text{NOI}_1] - \text{FY} \times \text{Cost} \;=\; \$0.42/\text{sh} \times 378\text{M} \;=\; \$157\text{M} \tag{A.18}$$

Since $\text{FY} \times \text{Cost} = \$444\text{M}$, this calculation would imply that Clario's annual adjusted net income contribution is approximately

$$\mathbb{E}[\Delta \text{NOI}_1] \;=\; \$157\text{M} + \$444\text{M} \;=\; \$601\text{M} \tag{A.19}$$

[25]Thermo Fisher Prospectus Supplements (Form 424B5). Oct 2025 and Feb 2026. [link]
[26]Thermo Fisher. "Thermo Fisher Reports Q4 and Full Year 2025 Results." Jan 29, 2026. [link]

The income yield on the acquisition is $\frac{\$601\text{M}}{\$8.875\text{B}} \approx 6.8\%$, which is safely above Thermo Fisher's 5% financing yield. The spread between these two numbers is what makes the deal EPS accretive.

The qualifier "adjusted" is doing real work. TMO's purchase price allocation added approximately \$3.3B of finite-lived intangible assets, which will generate roughly \$220M to \$330M per year of amortization expense.[27] This amortization is excluded from "adjusted" income but included in GAAP income. On a GAAP basis, the deal is potentially dilutive in its first year. The accretiveness test always depends on the income concept the acquirer chooses to report.

TMO lists "double-digit internal rate of return" and "accretive to adjusted EPS" as parallel bullet points on the same slide. These are the same test in different units. The 6.8% income yield falls short of double digits because the IRR incorporates future earnings growth and the \$175M of synergies expected by year five. But both metrics clear their respective hurdle for the same reason. Clario's expected income exceeds the cost of the capital deployed to acquire it.

A.9 Tesla: Convertible Debt Issuance

In March 2017, Tesla (TSLA) sold \$850M in convertible bonds at a coupon rate of 2.4%.[28] Five months later, Tesla issued \$1.8B in plain-vanilla corporate bonds. With a single-B credit rating at the time, Tesla had to pay a coupon rate of 5.3% on the later milquetoast bonds.[29]

Convertible debt widens the set of projects Tesla could fund. If Tesla had raised \$850M at the same 5.3% marginal rate, it would have faced a short-term earnings hit of

$$5.3\% \times \$850\text{M} \;=\; \$45\text{M} \tag{A.20}$$

By issuing lower-yield convertible debt, Tesla lowered its short-term financing expense to

$$2.4\% \times \$850\text{M} \;=\; \$20\text{M} \tag{A.21}$$

A \$850M project that was expected to generate \$43M of income in year $t = 1$ would be accretive when funded with convertible debt, $\frac{\$43\text{M}}{\$850\text{M}} \approx 5\% > 2.4\%$, but not when issuing standard coupon bonds at 5.3%.

Why were bondholders willing to accept 2.4% instead of 5.3%? Tesla's convertible bonds allowed the owner to exchange \$1,000 of principal for 3 shares of TSLA stock. Tesla was trading at approximately \$265/sh in March 2017. For the conversion option to be in the money, the share price needed to rise by roughly 25% to $\left(\frac{\$1{,}000}{3\text{ shares}}\right) \approx \$333/\text{sh}$. "Investors were rather attracted to the possibility

[27] Thermo Fisher Scientific 10-Q for the quarter ended March 28, 2026. [link]
[28] Tesla. SEC Filing 424(b)(5) #333-211437. Mar 15, 2017. [link]
[29] E. Chang. "Tesla's first junk bond offering is a hit." *CNBC.* Aug 11, 2017. [link]

that they could convert the bonds into stocks if Tesla's stock price appreciated enough."[30] They accepted \$24 in annual interest on a \$1,000 bond because the conversion option made up the difference.

By issuing convertible bonds, Tesla could make an \$850M project with just \$43M in year $t = 1$ income seem accretive. But this financing scheme only makes sense for projects that were expected to have a much higher steady-state income stream once fully operational, $\text{IY} > 5.3\%$. After all, if a project went well, then Tesla's price would rise, causing bondholders to exercise their conversion option, leading to higher financing costs going forward. Tesla's March 2017 SEC filing spells out this exact logic.[28] Graham and Harvey (2001) found that "among firms that issue convertible debt, the most popular factor is that convertibles are an inexpensive way to issue delayed common stock."

[30] E. Benmelech. "Tesla's Offering: Not Their First or Last." *KelloggInsight*. Oct 2, 2020. [link]

B Debt Overhang

Models of "debt overhang" (Myers, 1977) predict that the CEOs of companies with lots of risky debt will invest less. When a new project comes along, the firm's shareholders must pay the full upfront cost. However, they only get to receive the project's future benefits in states of the world where they do not default. Our max EPS theory also predicts that highly levered firms invest less, but for a different reason. They face a higher financing yield. See Proposition 3. This appendix outlines a simple binomial asset-pricing framework à la Dixit and Pindyck (1994) for thinking about the implications of debt overhang.

B.1 Simple Asset-Pricing Model

A firm starts off in year $t = 0$ with a collection of assets worth Assets_0. Over the previous year, these existing assets generated net operating income of NOI_0. Going forward, this NOI figure is expected to grow at a constant annual rate, $\mathbb{E}[\text{NOI}_t] = (1+\text{g})^t \times \text{NOI}_0$ for all $t \geq 1$. At each point in time $t \geq 0$, the firm's assets are worth the present value of the future NOI stream they are expected to produce. If $\text{r} > 0\%$ denotes the firm's risk-adjusted discount rate, then

$$\text{Assets}_t = \mathbb{E}_t[\text{NOI}_{t+1}] \times \left(\frac{1}{\text{r} - \text{g}}\right) \tag{B.1a}$$

$$= (1+\text{g}) \cdot \text{NOI}_t \times \left(\frac{1}{\text{r} - \text{g}}\right) \tag{B.1b}$$

$$= (1+\text{g})^t \cdot \text{NOI}_1 \times \left(\frac{1}{\text{r} - \text{g}}\right) \tag{B.1c}$$

What do you get by owning the firm next year absent any investment? You get the net operating income from the firm's existing assets, NOI_1. You also get to sell the assets for Assets_1. Thus, the total payoff to owning the firm in year $t = 1$ is given by

$$\text{TotalPayout}_1 = \text{NOI}_1 + \text{Assets}_1 \tag{B.2a}$$

$$= \text{NOI}_1 \times \left(\frac{1 + \text{r}}{\text{r} - \text{g}}\right) \tag{B.2b}$$

The firm's expected NOIs always grow at the same annual rate of $\text{g} > 0\%/\text{yr}$. However, as shown in Figure B(1), there is some uncertainty about whether the firm's NOIs will be high or low in year $t = 1$. The up state occurs with probability π_u, in which case the firm's net operating income will be $u > 0\%$ higher than expected. The down state occurs with probability $\pi_d = 1 - \pi_u$. If the down state

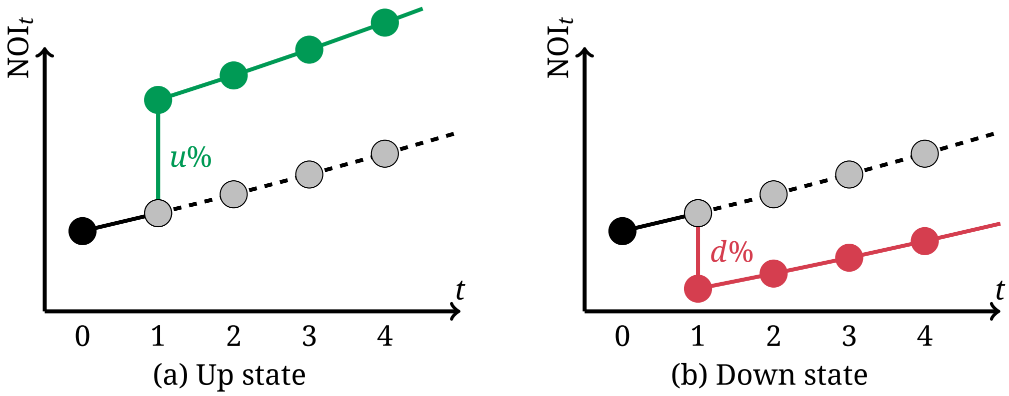


Figure B(1). (Left panel) Net operating income (NOI) in years $t = 0, 1, 2, 3, 4$ if up state realized in year $t = 1$. (Right panel) NOI stream if down state realized. **Black dots:** NOI_0 in year $t = 0$; same in both panels. **Gray dots:** Unconditional $\mathbb{E}[\mathrm{NOI}_t]$ in years $t = 1, 2, 3, 4$; same in both panels. **Green dots:** Conditional expectation of NOI_t in years $t = 1, 2, 3, 4$ after a positive shock. **Red dots:** Conditional expectation of NOI_t in years $t = 1, 2, 3, 4$ after a negative shock.

occurs, the firm's existing assets generate NOIs that are $d \in (0\%, 100\%)$ lower than expected

$$\mathbb{E}[\mathrm{NOI}_1|s] = (1{+}\mathrm{g}) \cdot \mathrm{NOI}_0 \times \begin{cases} (1+u) & \text{in the up state, } s = u \\ (1-d) & \text{in the down state, } s = d \end{cases} \tag{B.3}$$

To ensure that the unconditional expectation in year 1 still satisfies $\mathbb{E}[\mathrm{NOI}_1] = (1{+}\mathrm{g}) \times \mathrm{NOI}_0$, we require the up- and down-state probabilities to obey the condition $\mathbb{E}[\mathrm{NOI}_1] = \pi_u \cdot \mathbb{E}[\mathrm{NOI}_1|u] + \pi_d \cdot \mathbb{E}[\mathrm{NOI}_1|d]$.

Let $\mathrm{X} \in \{\mathrm{X}_u, \mathrm{X}_d\}$ denote an arbitrary payoff defined over the two future states of the world at time $t = 1$. We use $\mathbb{PV}[\mathrm{X}] = \mathrm{q}_u \cdot \mathrm{X}_u + \mathrm{q}_d \cdot \mathrm{X}_d$ to denote its present discounted value (i.e., the risk-neutral expectation) where

$$\mathrm{q}_u = \tfrac{1}{1+\mathrm{rf}} \times \left\{ \tfrac{(1+\mathrm{rf}) \times \mathrm{Assets}_0 - \mathrm{TotalPayout}_d}{\mathbb{S}\mathrm{d}[\mathrm{TotalPayout}_1]} \right\} \tag{B.4a}$$

$$\mathrm{q}_d = \tfrac{1}{1+\mathrm{rf}} \times \left\{ \tfrac{\mathrm{TotalPayout}_u - (1+\mathrm{rf}) \times \mathrm{Assets}_0}{\mathbb{S}\mathrm{d}[\mathrm{TotalPayout}_1]} \right\} \tag{B.4b}$$

Note that these state prices are not probabilities. The present value of getting \$1 in both states next year is $\mathbb{PV}[\$1] = \mathrm{q}_u \cdot \$1 + \mathrm{q}_d \cdot \$1 = \frac{\$1}{1+\mathrm{rf}} < \$1 = \mathbb{E}[\$1]$.

Let $\mathrm{Debt}_0 = \ell \cdot \mathrm{Assets}_0$ denote the value of the firm's existing debt at time $t = 0$ where $\ell \in [0, 1)$. We write the fair interest rate on the CEO's existing debt as $\bar{\imath} \geq \mathrm{rf}$. In exchange for getting Debt_0 today, the CEO has to promise to repay the principal plus interest next year, $(1+\bar{\imath}) \times \text{Debt}_0$. Shareholders get any remaining firm value in year $t = 1$ after servicing the debt. The present value of these future equity payouts is given by

$$\begin{aligned} \mathbb{PV}[\text{EquityPayout}_1] = \mathrm{q}_u \cdot \{\, \text{TotalPayout}_u - (1{+}\bar{\imath}) \cdot \text{Debt}_0 \,\} & \\ + \mathrm{q}_d \cdot \max \left\{ \underset{\substack{\text{Manager repays debt. Share-} \\ \text{holders get residual value.}}}{\text{TotalPayout}_d - (1{+}\bar{\imath}) \cdot \text{Debt}_0} \,,\, \underset{\substack{\text{Manager} \\ \text{defaults}}}{\$0} \right\} & \qquad \text{(B.5)} \end{aligned}$$

If the up state occurs in year $t = 1$, then we assume that it is optimal for the CEO to repay the firm's existing debt, $(1+\bar{\imath}) \cdot \text{Debt}_0$. However, in the down state, shareholders might prefer to default on their debt obligations and receive \$0. This outcome could be better than servicing debt, which is worth more than the firm as a whole. If the CEO defaults, then the lender gets the value of the firm. Thus, the present value of future debt service is given by

$$\begin{aligned} \mathbb{PV}[\text{DebtPayout}_1] = \mathrm{q}_u \cdot \{\, (1{+}\bar{\imath}) \cdot \text{Debt}_0 \,\} & \\ + \mathrm{q}_d \cdot \min \left\{ \underset{\substack{\text{Manager repays.} \\ \text{Lender gets pmt.}}}{(1{+}\bar{\imath}) \cdot \text{Debt}_0} \,,\, \underset{\substack{\text{Manager defaults.} \\ \text{Lender gets firm.}}}{\text{TotalPayout}_d} \right\} & \qquad \text{(B.6)} \end{aligned}$$

If the CEO pays $\text{Cost} > \$0$ to acquire new assets at time $t = 0$, then her new larger asset base will generate more NOIs next year at time $t = 1$ as well as in future years, $t \geq 2$. The higher NOIs in subsequent years will get capitalized into the sale price of the firm's assets at time $t = 1$. Thus, the change in firm value in each state of the world next year is given by

$$\Delta\text{TotalPayout}_s = \Delta\text{NOI}_s + \Delta\text{Assets}_s \qquad \text{(B.7a)}$$

$$= \Delta\text{NOI}_s \times \left(\frac{1+\mathrm{r}}{\mathrm{r}-\mathrm{g}} \right) \qquad \text{(B.7b)}$$

Importantly, when a CEO learns about a new project idea, it does not alter the state prices, $\{\mathrm{q}_u, \mathrm{q}_d\}$; her costs of raising new capital, $\{\text{EY}, \text{i}, \text{rf}\}$; or, the financing of her original assets. Existing bondholders will not accept a lower coupon rate because the CEO claims to have had a brainflash.

B.2 State-Contingent Reasoning

This leads to a "debt overhang" problem (Myers, 1977), which discourages an NPV-maximizing CEO with risky debt from investing in profitable new projects. Suppose the firm has taken out risky debt to finance its existing assets at time $t = 0$. It will cost more to service this debt in the down state than the whole firm is worth. Shareholders would be better off defaulting in the down state next year. The present value of their default option is

$$\mathbb{PV}[\text{DefaultSavings}_1] = \text{q}_u \cdot \$0 + \text{q}_d \cdot \max\left\{ \underset{\substack{\text{Manager}\\\text{repays}}}{\$0}, \underset{\substack{\text{Manager defaults to avoid making}\\\text{debt payment worth more than firm.}}}{(1+\bar{\imath}) \cdot \text{Debt}_0 - \text{TotalPayout}_d} \right\} \tag{B.8}$$

If shareholders will save \$1 by defaulting in the down state, then bondholders will lose out on that \$1 in the event of default. Creditors charge a risk premium in the up state, $\{\bar{\imath} - \text{rf}\} \cdot \text{Debt}_0 > \$0$, to make up for these losses

$$\underbrace{\text{q}_u \cdot \{(\bar{\imath} - \text{rf}) \cdot \text{Debt}_0\}}_{\mathbb{PV}[\text{RiskPremium}_1]} = \underbrace{\text{q}_d \cdot \max\left\{ \underset{\substack{\text{Manager}\\\text{repays}}}{\$0}, \underset{\substack{\text{Manager defaults to avoid making}\\\text{debt payment worth more than firm.}}}{(1+\text{rf}) \cdot \text{Debt}_0 - \text{TotalPayout}_d} \right\}}_{\mathbb{PV}[\,\text{DefaultSavings}_1 \,|\, \text{Debt}_0 \text{ @ riskfree rate}\,]} \tag{B.9}$$

A firm that can repay its debt even in the down state, $\mathbb{PV}[\text{DefaultSavings}_1] = \$0$, will not get charged a credit spread, $\bar{\imath} = \text{rf}$, because there are no down-state losses for bondholders to make up for. Otherwise, creditors will set $\bar{\imath} > \text{rf}$.

The CEO in our model has already financed her existing assets at time $t = 0$ prior to learning about the new project. These existing creditors do not have to pay any of the upfront Cost $> \$0$, but they might get some of the benefit. There are three cases to consider.

(#1) Still optimal to default in down state even after investing.

Suppose the CEO used risky debt to finance her original assets, and it is still optimal for shareholders to default if the down state occurs next year. In this scenario, every \$1 of value created by the project in the down state will go to creditors.

(#2) No longer optimal to default in down state after investing.

Suppose the CEO used risky debt to finance her original assets, but the new project has increased the firm's value so much that it is no longer optimal to default in the down state next year. In this scenario, shareholders will get some of the project's benefits in the down state. However, the first \$\$\$s of value will go towards eroding the present value of their default option. Moreover, even though investing in the project has made their existing debt riskfree, they still have to pay their original risk premium. Investing can make the right-hand side of Equation (B.9) smaller by increasing TotalPayout_d. But the left-hand side never changes.

(#3) Was never optimal to default in down state to begin with.

In this scenario, there is no debt-overhang problem because shareholders get all project benefits in both states of the world.

C Depreciation Schedules

Proposition 7 shows that IRR = IY whenever $\mathbb{E}[\Delta\text{NOI}_t] = \text{IY} \times \text{BV}_{t-1}$ and $\frac{\text{BV}_T}{(1+\text{IY})^T \times \text{Cost}} = 0$. The first condition says the project's income each year is a constant fraction of the book value of its assets. The second ensures that the project's value mainly comes from the income stream it produces, not appreciation in the book value of its assets. Neither condition restricts the kind of depreciation that takes place between years 0 and T. This section verifies the result under five depreciation schedules: straight-line, accelerated, level cash flow, deferred cost recovery, and a perpetual project. All five examples involve a project with IY = 4% and Cost = \$100M. The first four examples assume $T = 4$. The final example looks at the $T \to \infty$ limit.

C.1 Straight-Line Depreciation

Straight-line depreciation writes the project's cost down in equal annual installments. The book value of the project's assets decreases by the same amount each year. Any remaining cash flows that do not go toward covering this depreciation expense get labeled as income. This is the standard GAAP treatment for commercial buildings, manufacturing equipment, and leasehold improvements.

Consider a project that costs \$100M upfront and has a 4-year lifespan. The project generates cash flows of \$29M in year 1, \$28M in year 2, \$27M in year 3, and \$26M in year 4. After that, it produces nothing. The first \$25M gets eaten up by depreciation expense. So the project adds \$4M of income in year 1, \$3M in year 2, \$2M in year 3, and \$1M in year 4.

t	$\mathbb{E}[\text{CF}_t]$	Deprc_t	$\mathbb{E}[\Delta\text{NOI}_t]$	BV_t
0	−\$100M			\$100M
1	\$29M	\$25M	\$4M	\$75M
2	\$28M	\$25M	\$3M	\$50M
3	\$27M	\$25M	\$2M	\$25M
4	\$26M	\$25M	\$1M	\$0M

(C.1)

The book value of the project's assets is declining over time. But, after deducting depreciation, the remaining income is always proportional to the book value at the start of the period, $\mathbb{E}[\Delta\text{NOI}_t] = 4\% \times \text{BV}_{t-1}$. So Proposition 7 applies and we have IRR = IY = 4%.

$$\frac{\$29\text{M}}{(1+4\%)} + \frac{\$28\text{M}}{(1+4\%)^2} + \frac{\$27\text{M}}{(1+4\%)^3} + \frac{\$26\text{M}}{(1+4\%)^4} = \$100\text{M} \tag{C.2}$$

C.2 Accelerated Depreciation

Accelerated depreciation front-loads the cost recovery. The project's assets start out depreciating very quickly. In later years, the depreciation rate tapers off. This is the standard treatment for assets with rapid early obsolescence: vehicles, computers, and technology equipment under MACRS.

Consider a project that costs \$100M upfront and has a 4-year lifespan. The project generates cash flows of \$54M in year 1, \$27M in year 2, \$13.5M in year 3, and \$13M in year 4. In year 1, the first \$50M go toward covering depreciation expense. In year 2, \$25M of the project's cash flows go toward depreciation. In years 3 and 4, the depreciation expense is just \$12.5M. Net of depreciation, the project's income stream is \$4M, \$2M, \$1M, and \$0.5M.

t	$\mathbb{E}[\text{CF}_t]$	Deprc_t	$\mathbb{E}[\Delta\text{NOI}_t]$	BV_t
0	−\$100.0M			\$100.0M
1	\$54.0M	\$50.0M	\$4.0M	\$50.0M
2	\$27.0M	\$25.0M	\$2.0M	\$25.0M
3	\$13.5M	\$12.5M	\$1.0M	\$12.5M
4	\$13.0M	\$12.5M	\$0.5M	\$0.0M

(C.3)

Each year, the project's income gets cut in half. But since the project's cost basis is being written down just as fast, we still have $\mathbb{E}[\Delta\text{NOI}_t] = 4\% \times \text{BV}_{t-1}$. This is another situation where IRR = IY = 4%.

$$\frac{\$54\text{M}}{(1+4\%)} + \frac{\$27\text{M}}{(1+4\%)^2} + \frac{\$13.5\text{M}}{(1+4\%)^3} + \frac{\$13\text{M}}{(1+4\%)^4} \;=\; \$100\text{M} \tag{C.4}$$

C.3 Level/Constant Cash Flow

Some projects have constant total cash flows every year during their productive lifespan, $\text{CF}_t = \text{CF}$ for all $t = 1, \ldots, T$. Toll roads with regulated constant-revenue contracts and equipment leases with level annual payments have this feature. In fixed-income terms, this sort of project is like a fully amortizing fixed-rate mortgage.

Consider the same \$100M project with a 4-year lifespan. To be fairly valued when discounting at 4%, the project would need annual cash flows of

$$\text{Cost} \;=\; \text{CF} \times \underbrace{\left(\frac{1}{4\%}\right) \cdot \left[1 - \frac{1}{(1+4\%)^4}\right]}_{\sim 3.63} \quad \rightsquigarrow \quad \text{CF} = \frac{\$100\text{M}}{3.63} \approx \$27.55\text{M} \tag{C.5}$$

In year 1, \$23.55M of the project's \$27.55M total cash flow goes toward depreciation expense. The remaining \$4M gets labeled as income. In year 2, the split is

\$24.49M depreciation and \$3.06M income. In year 3, it is \$25.47M and \$2.08M. In year 4, we have \$26.49M and \$1.06M. At the end of year 4, the project's assets have been fully depreciated.

t	$\mathbb{E}[\mathrm{CF}_t]$	Deprc_t	$\mathbb{E}[\Delta\mathrm{NOI}_t]$	BV_t
0	−\$100.00M			\$100.00M
1	\$27.55M	\$23.55M	\$4.00M	\$76.45M
2	\$27.55M	\$24.49M	\$3.06M	\$51.96M
3	\$27.55M	\$25.47M	\$2.08M	\$26.49M
4	\$27.55M	\$26.49M	\$1.06M	\$0.00M

(C.6)

As the project matures, more and more of its cash flows go toward depreciation expense. This is the opposite scenario from what we saw with accelerated depreciation. But since $\mathbb{E}[\Delta\mathrm{NOI}_t] = 4\% \times \mathrm{BV}_{t-1}$, we still have IRR = IY = 4%.

$$\frac{\$27.55\mathrm{M}}{(1+4\%)} + \frac{\$27.55\mathrm{M}}{(1+4\%)^2} + \frac{\$27.55\mathrm{M}}{(1+4\%)^3} + \frac{\$27.55\mathrm{M}}{(1+4\%)^4} = \$100\mathrm{M} \tag{C.7}$$

C.4 Deferred Cost Recovery

Some projects recover their full cost in a single lump payment in year T. Think about a build-operate-transfer infrastructure concession with a government buyback at cost. Another example might be a real-estate investment held for rental income and then sold at book value. It is the same cash-flow schedule as a coupon bond or an interest-only loan.

Consider the \$100M project with a 4-year lifespan. The project generates \$4M of income in years 1 through 4 and then nothing after. In years 1, 2, and 3, this income represents all the project's cash flows. In year 4, the project generates \$4M of income plus an additional \$100M liquidation payout for a total cash flow of \$100M + \$4M = \$104M.

t	$\mathbb{E}[\mathrm{CF}_t]$	Deprc_t	$\mathbb{E}[\Delta\mathrm{NOI}_t]$	BV_t
0	−\$100M			\$100M
1	\$4M	\$0M	\$4M	\$100M
2	\$4M	\$0M	\$4M	\$100M
3	\$4M	\$0M	\$4M	\$100M
4	\$104M	\$100M	\$4M	\$0M

(C.8)

Income is constant at \$4M because the book value of the project's assets never changes during its 4-year productive lifespan. When the project is over, the assets get liquidated to recover the \$100M cost. It is as if the project has an extremely backloaded depreciation schedule.

In fixed-income terms, this is a par bond with a face value of \$100M and an annual coupon rate of IY = 4%. The investor pays \$100M upfront. They receive a \$4M coupon each year as well as the full \$100M face value at maturity. The IRR on a par bond is the coupon rate IRR = IY = 4%.

$$\frac{\$4\text{M}}{(1+4\%)} + \frac{\$4\text{M}}{(1+4\%)^2} + \frac{\$4\text{M}}{(1+4\%)^3} + \frac{\$104\text{M}}{(1+4\%)^4} \;=\; \$100\text{M} \tag{C.9}$$

C.5 Infinitely Lived Project

The project in our running example has an infinite productive lifespan, $T = \infty$. Like the previous example, there is no depreciation prior to year T. Unlike the previous example, year T never arrives. The project is expected to produce income of $\mathbb{E}[\Delta\text{NOI}_t] = \$4\text{M}$ every year going forward, $t = 1, 2, \ldots$ The book value of the project's assets remains at Cost = $\text{BV}_t = \$100\text{M}$ in perpetuity. Land, permanent infrastructure, and indefinite-life intangible assets all carry this feature.

t	$\mathbb{E}[\text{CF}_t]$	Deprc_t	$\mathbb{E}[\Delta\text{NOI}_t]$	BV_t
0	−\$100M			\$100M
1	\$4M	\$0M	\$4M	\$100M
2	\$4M	\$0M	\$4M	\$100M
3	\$4M	\$0M	\$4M	\$100M
4	\$4M	\$0M	\$4M	\$100M
5	\$4M	\$0M	\$4M	\$100M
⋮	⋮	⋮	⋮	⋮
60	\$4M	\$0M	\$4M	\$100M
⋮	⋮	⋮	⋮	⋮

(C.10)

Notice that, while the project's assets never depreciate, they also do not grow. Hence, all the benefits to funding the project still come from the stream of income it will produce. The book value of the project's assets contributes nothing. Hence, we are looking at another situation where IRR = IY = 4%.

$$\sum_{t=1}^{\infty} \frac{\$4\text{M}}{(1+\text{IRR})^t} \;=\; \$4\text{M} \times \left(\frac{1}{\text{IRR}}\right) \;=\; \$100\text{M} \tag{C.11}$$

Proposition 7 requires $\frac{\text{BV}_T}{(1+\text{IY})^T \times \text{Cost}} = 0$. To make sense of what this means as $T \to \infty$, it is helpful to plug in a large but finite value, say, $T = 60$. Sixty years from now, the book value of the project's assets will still be $\text{BV}_{60} = \$100\text{M}$. We want to compare this dollar amount to the project's income stream, an annual flow. One way to do this would be to use a discount rate. Another approach would be to think about scaling up the project by reinvesting the income it produces. Suppose that the CEO plowed the project's annual income back into the venture every year for the next six decades. In the end, the project's asset base would grow to $(1+\text{IY})^T \times \text{Cost} = (1+4\%)^{60} \times \$100\text{M} \approx \$1.05\text{B}$. This figure is $10.5\times$ larger than the book value of the project's assets. The project's income stream is the main source of value.

D Investor-Day Presentations

This appendix gives background information on Investor Days and describes how we collected the data used in Subsection 4.1.

D.1 The Purpose Of The Event

An Investor Day is a long-form presentation that a public company hosts for the institutional investors, sell-side analysts, bondholders, and rating agencies who follow its stock. Each member of the company's senior management team gets on stage. On average, 9 executives present (Kirk and Markov, 2016). The format is built for detail. A broker conference might give the firm 30 or 45 minutes to make its case. An Investor Day might actually be a multi-day event. This provides the company with enough time to walk through a detailed plan.

Firms hold Investor Days to lay out a multi-year strategy, commit to financial targets, and give analysts access to the managers who run individual business segments. Most companies host one of these events every two or three years. Investor Days also frequently take place after a new CEO arrives, after a transformative acquisition closes, or following a spin-off that resets the story.[31]

D.2 How We Collected The Data

We collected our data on Investor Day presentations from the source. We went to the investor relations page of every current S&P 500 company and downloaded the slide deck from its most recent Investor Day whenever one was posted. This approach produced 215 documents, which span all 11 GICS sectors: Industrials (45) and Information Technology (40), followed by Health Care (31), Financials (26), Consumer Staples (21), Consumer Discretionary (15), Materials (13), Real Estate (8), Utilities (8), Communication Services (6), and Energy (2). There are several reasons why we do not have 500 observations. Some firms choose not to hold Investor Days. Some only post a webcast or a transcript, with no slides to download. Others communicate through a written letter.

We read through each presentation and recorded how the firm talked about its investment decisions. The patterns are lopsided in a way that suggests executives are mainly interested in EPS growth. Firms tout the accretive gains from investment. They regularly quote income yields, and they do so using different forms as dictated by the context. Investor Day presentations almost never name a discount rate, work through a project's net present value, or mention beta. These observations are not what one would expect to see if we lived in a world where CEOs thought in present-value terms.

[31] Edelman Smithfield. "When and How Often Should Companies Host An Investor Day?" Nov 3, 2023. [link]

D.3 Some Additional Examples

Companies focus on EPS growth. Each one spells out a plan for growing earnings per share, and in almost every case the plan runs through investment. It is worth looking at some specific examples.

Ball Corporation titles the slide in Figure D(1) “Our algorithm. Optimizing for EPS growth.” The company tells shareholders to expect EPS growth of 10% or more. This number comes from 2% to 3% volume growth, multiplied by 2× operating leverage, plus a 4% to 6% reduction in share count. The volume term sits in the numerator of the EPS forecast in Equation (1) and the share-count term sits in the denominator. Ball is not shrinking its way to a higher number. It pairs a buyback with the operating growth that new investment provides.

Carrier paints the same picture in Figure D(2). Its value-creation framework chains revenue growth, margin expansion, tax efficiency, and free cash flow into a target of mid-teens adjusted EPS growth, and its capital-deployment lever is labeled “acquisitions / net share-count reduction.” Waters and Campbell’s run the same play. Figure D(3) shows the Waters “6+2+2” waterfall. 6% sales growth plus 2% from margin expansion plus 2% from capital deployment sums to 10% EPS growth. M&A activity is another “vector of EPS growth accretion.”

Figure D(4) shows Campbell’s long-term algorithm. The company targets 7% to 9% adjusted EPS growth. The balance-sheet slide shows how the company tries to maintain a 3.0× leverage ratio. The Sovos Brands acquisition pushed the company away from this number, and it is actively trying to get back. The leverage slide shows the firm’s EPS-maximizing capital structure, which we cover in Ben-David and Chinco (2026a) and build on in the current paper.

NiSource describes how EPS accretion leads to higher shareholder returns. The fan chart in Figure D(5) builds a 9% to 11% return out of 6% to 8% EPS growth funded by rate-base investment and a 3% dividend yield. The small print underneath holds the PE ratio constant. This assumption implies that $\mathbb{E}[\text{Return}] = \mathbb{E}[\text{EPS Growth}] + \text{Dividend Yield}$.

The academic consensus holds that EPS maximizers spend too much on buybacks and too little on investment. The slides say otherwise. Robinhood offers a clean example. Figure D(6) carries the heading “Our capital allocation optimizes for EPS over time” and splits roughly $2B across organic growth, M&A, and capital returns. Organic growth and M&A together come to about $1.3B, nearly double the ~$700M the company returned to shareholders. Robinhood is not cutting investment in pursuit of short-term EPS gains. It is investing its way to a higher EPS forecast. This is the same pattern that we document across the full sample of 215 Investor Day presentations. EPS maximizers reduce their share count, but they spend even more on real investment.

Many firms quote an income yield directly as an ROI (return on investment). KLA explicitly states that this accounting return involves no discounting. Figure D(7) reports a "near 2× return on investment." The footnote states that this impressive ROI is computed via the "investment payback approach" and "does not factor in [the] time value of money." The firm is telling its own investors, in print, that it is thinking like the EPS-maximizing CEO in the main paper.

M&A is where the accretion language is sharpest. Labcorp's playbook in Figure D(8) cycles through revenue growth, margin expansion, and EPS growth. Its acquisition criterion requires a deal to be "accretive to earnings and cash flow year 1" and to "earn [the] cost of capital by year 3." First-year accretion is the bar, with a short payback close behind. Centene states its entire forward opportunity in per-share terms. The slide in Figure D(9) shows how the "embedded earnings power" of specific projects can produce EPS gains of \$3.10 to \$4.10/sh.

Charter Communications is the exception that proves the rule. Its capital-allocation framework in Figure D(10) is a decision tree whose first box asks "Are positive-NPV investment opportunities available?" This is the only Investor Day slide deck that invokes the positive-NPV rule by name. But look at how the company defines the term. Directly below in the same box, it says that a positive-NPV investment has a "return on investment greater than cost of capital." This is the accretive investment rule in yield-spread form.

Read together, the 215 Investor Day slide decks speak a strikingly uniform language. Executives quote EPS growth, return on investment, payback, acquisition multiples, and share-count reduction. The positive-NPV rule is the workhorse of every corporate-finance textbook. Yet, the rule is functionally absent from Investor Day presentations. This is simply not how CEOs tell their shareholders that they make investment decisions.

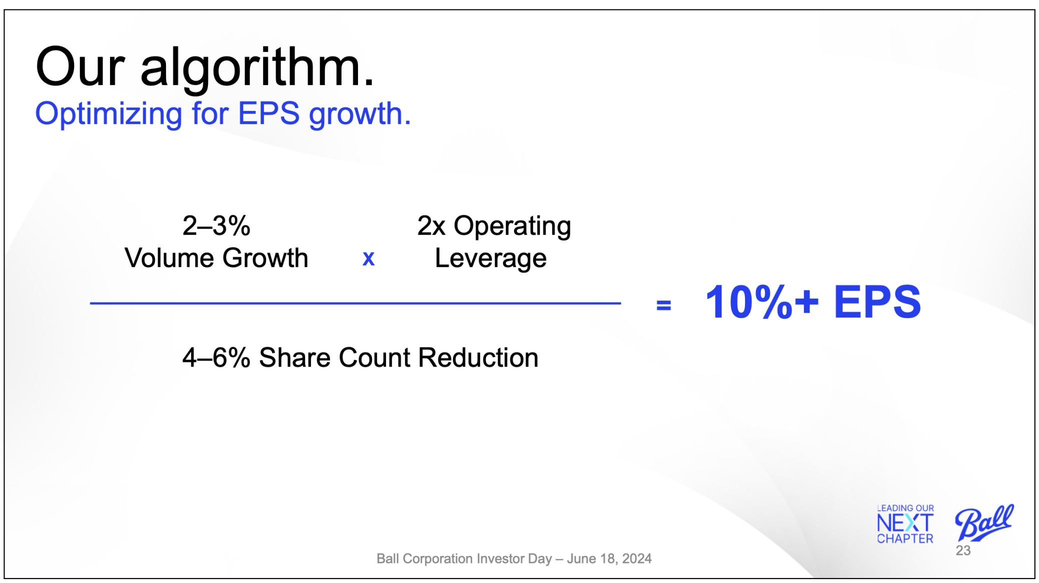


Figure D(1). Ball Corporation's (BALL) 2024 Investor Day presentation. [source]

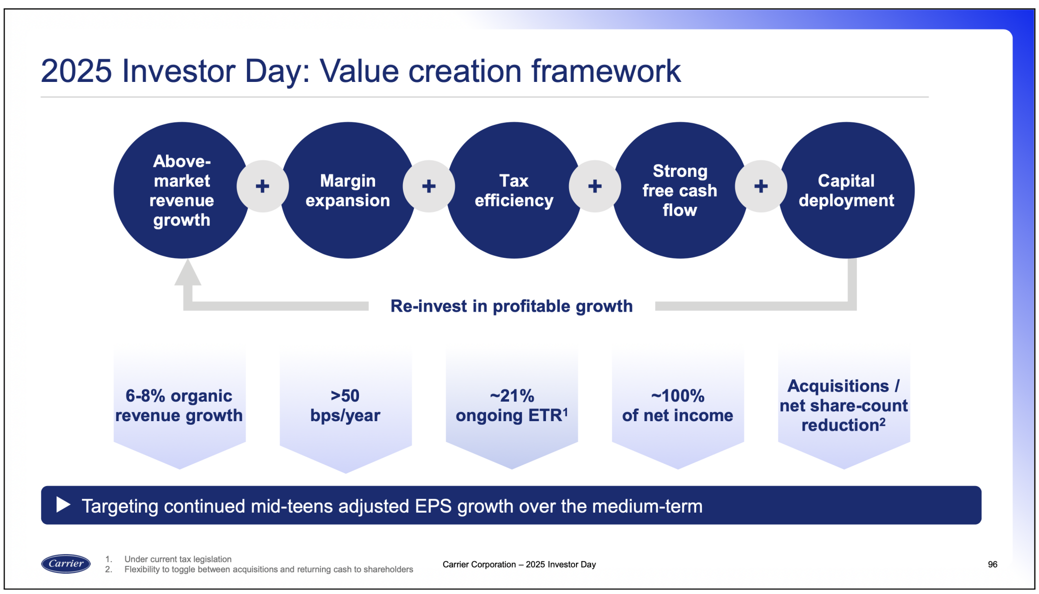
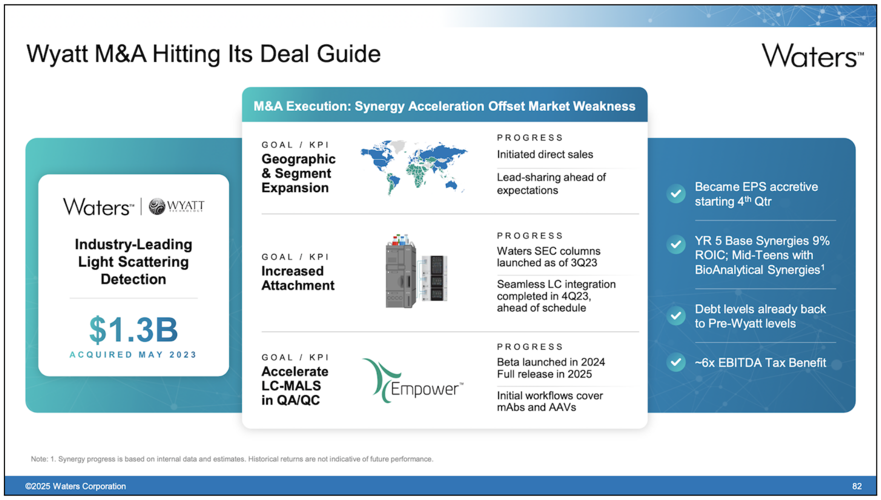


Figure D(2). Carrier's (CARR) 2025 Investor Day presentation. [source]



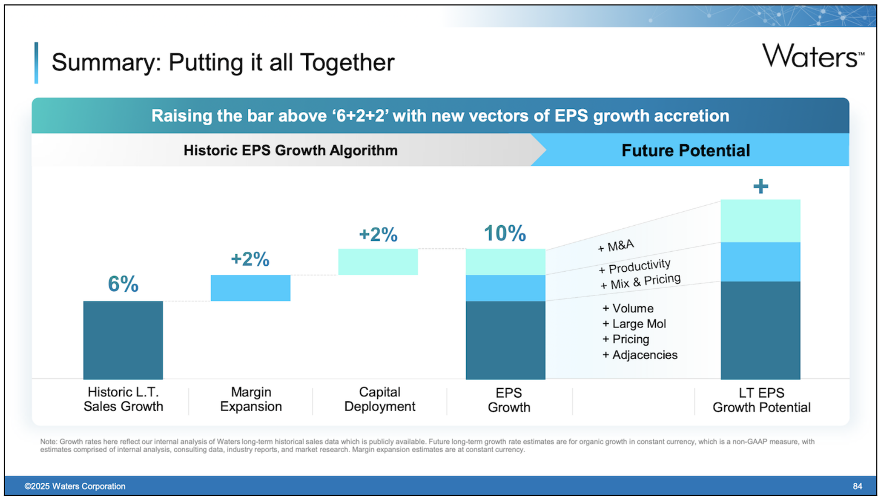


Figure D(3). Waters Corp's (WAT) 2025 Investor Day presentation. [source]

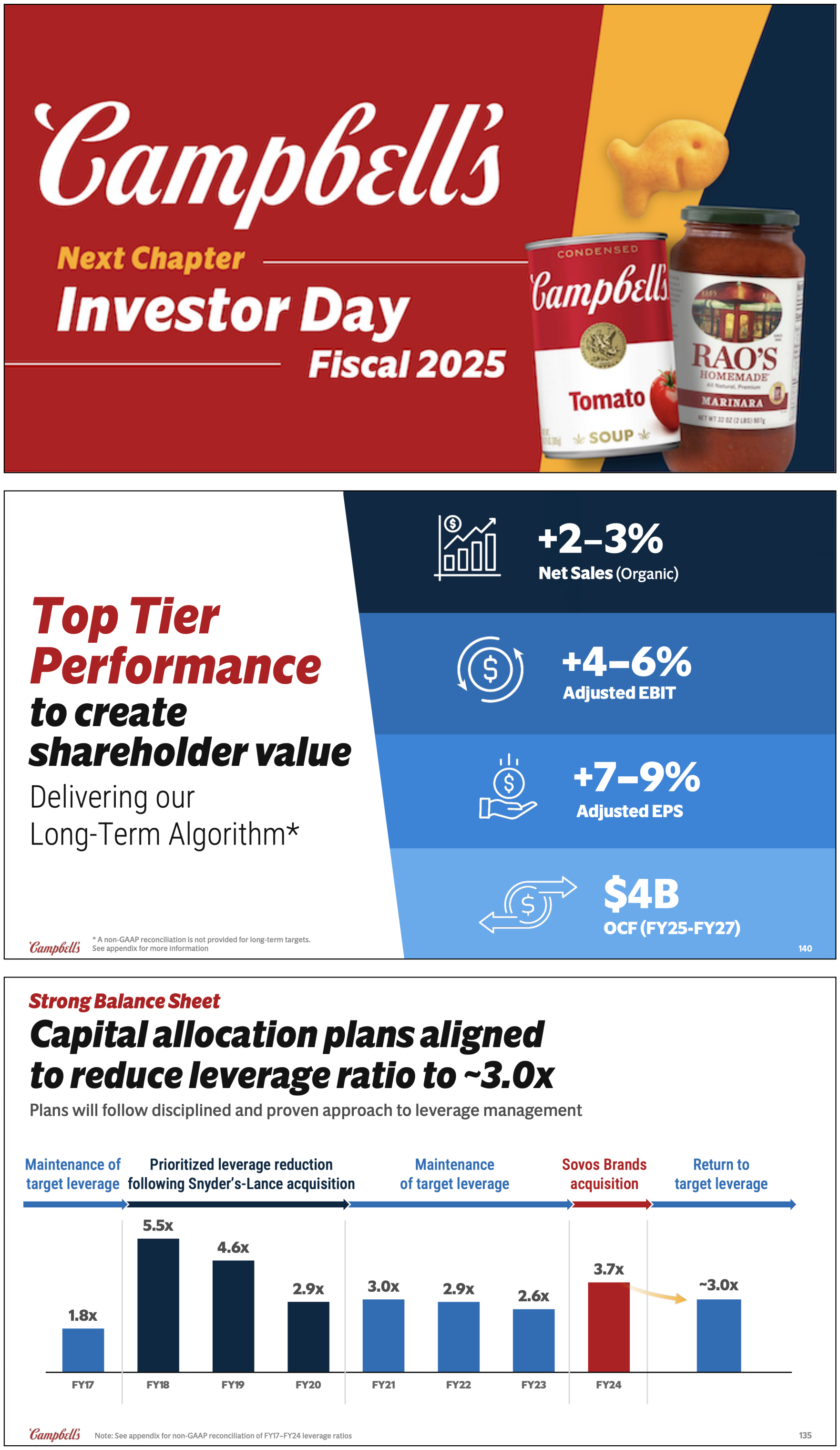


Figure D(4). Campbell's (CPB) 2025 Investor Day presentation. [source]

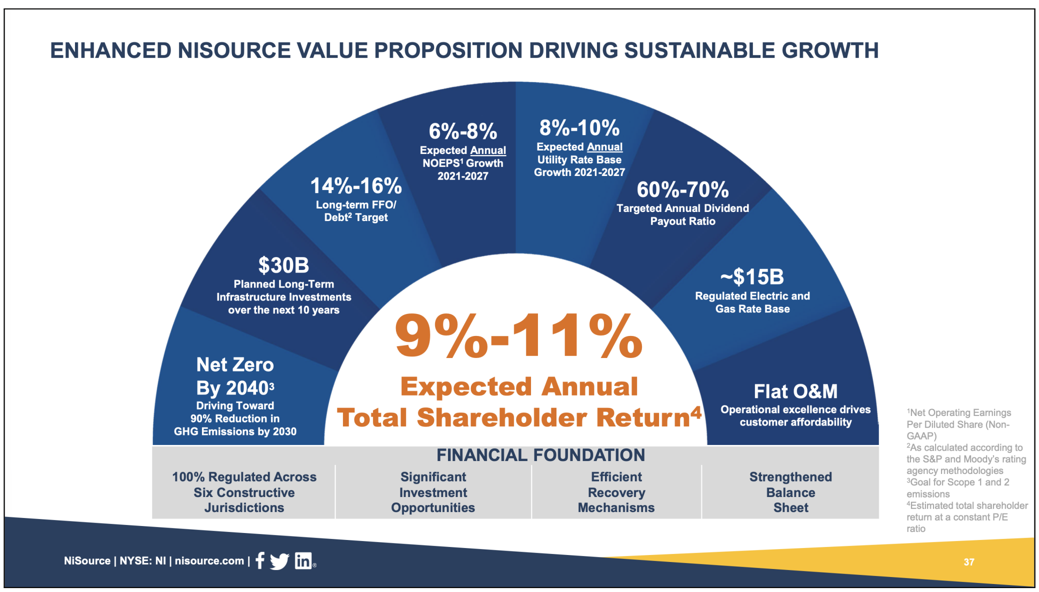
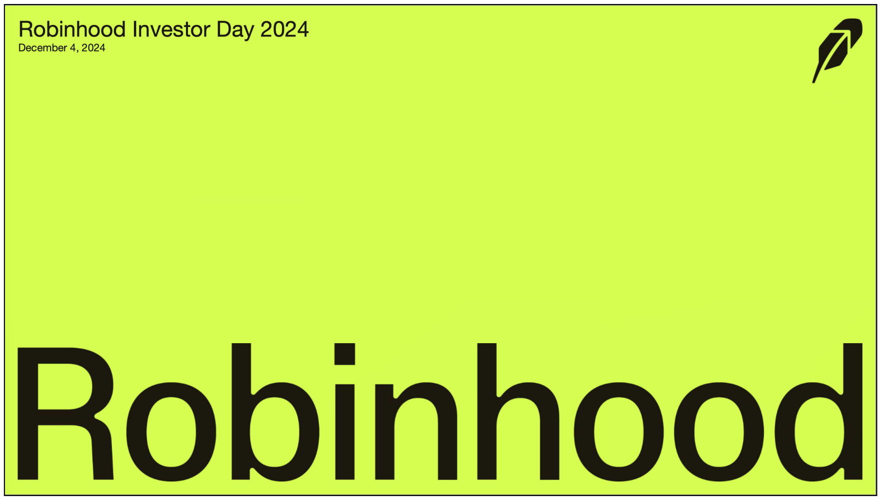
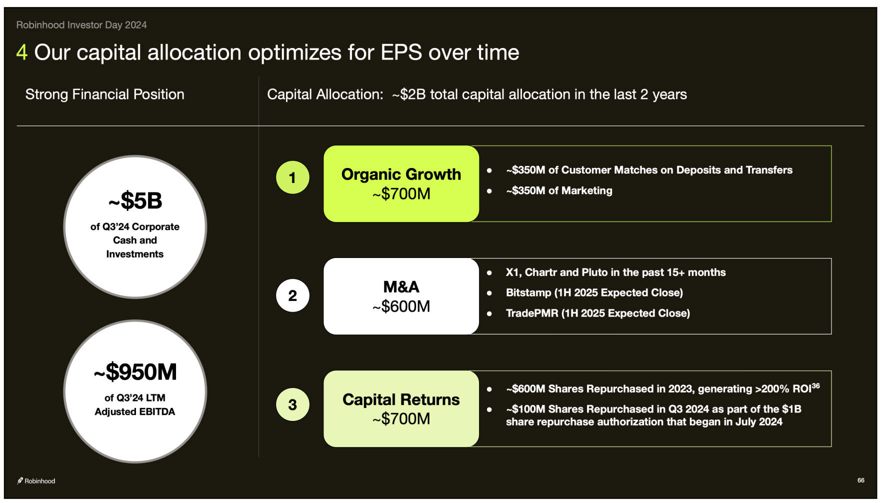


Figure D(5). NiSource's (NI) 2022 Investor Day presentation. [source]





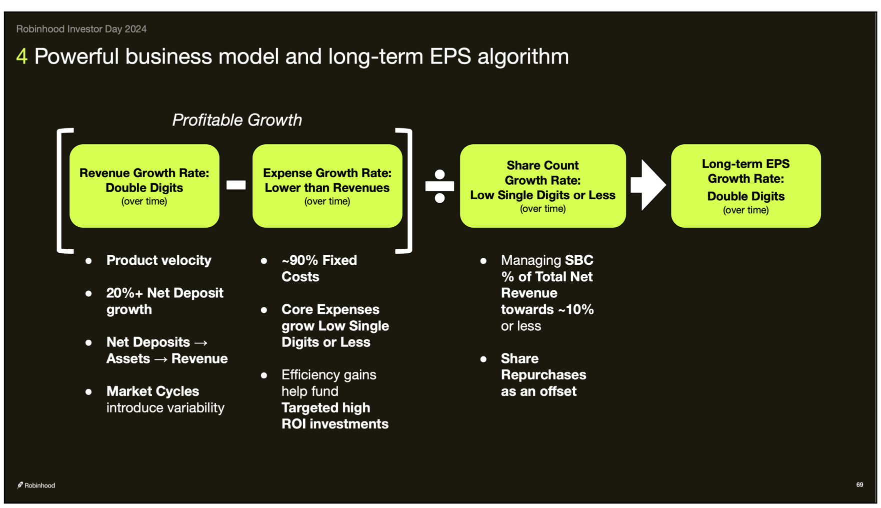


Figure D(6). Robinhood's (HOOD) 2024 Investor Day presentation. [source]

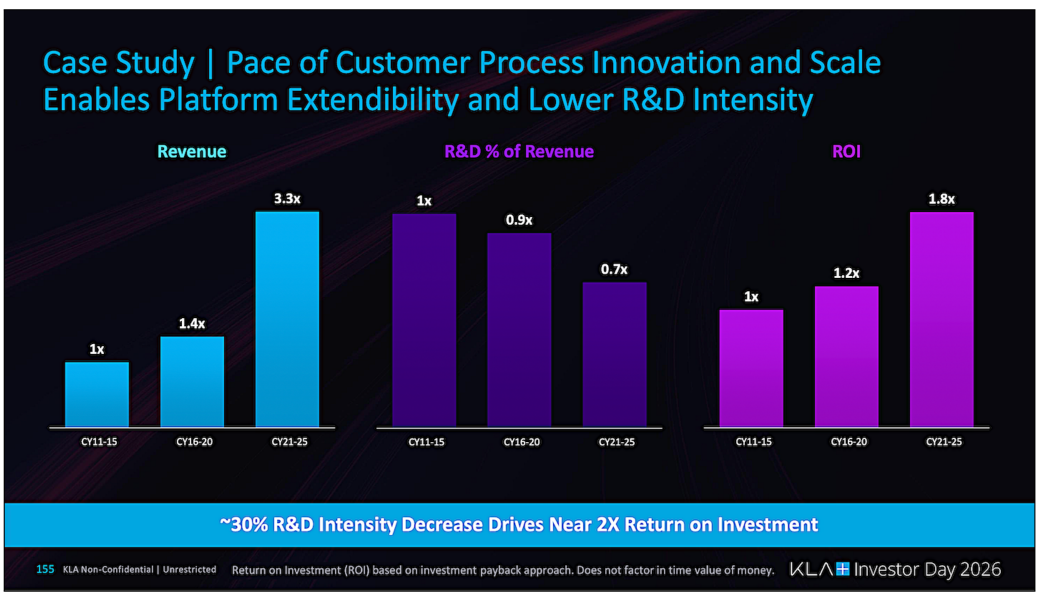
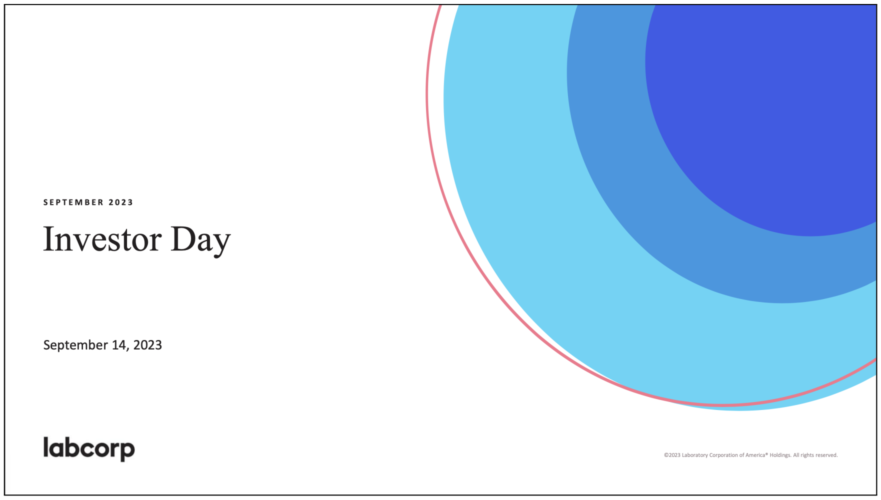
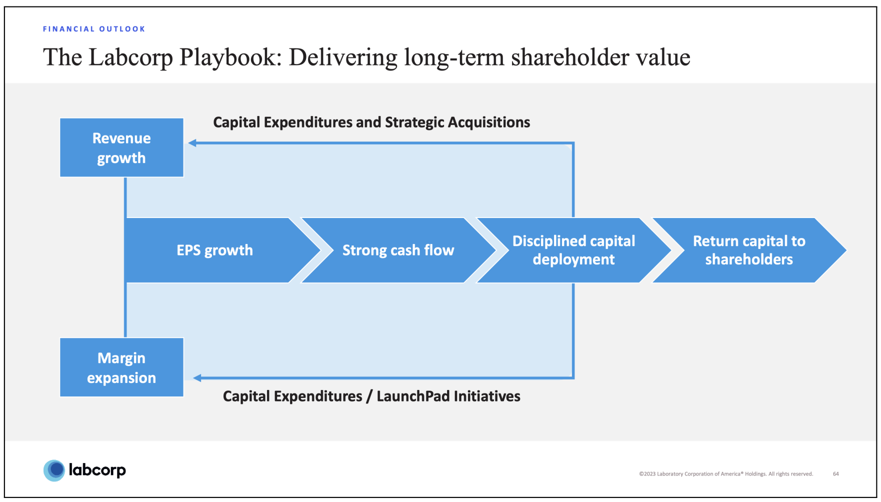


Figure D(7). KLA's (KLAC) 2026 Investor Day presentation. [source]





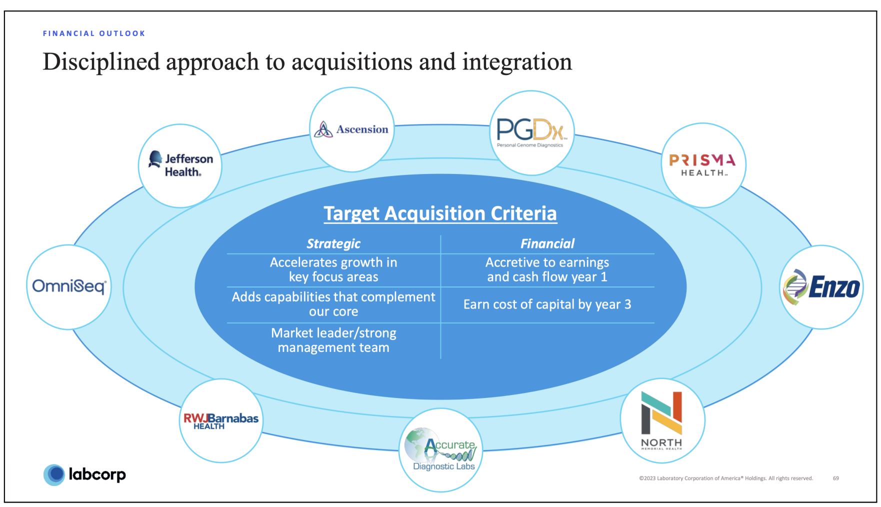


Figure D(8). Labcorp's (LH) 2023 Investor Day presentation. [source]

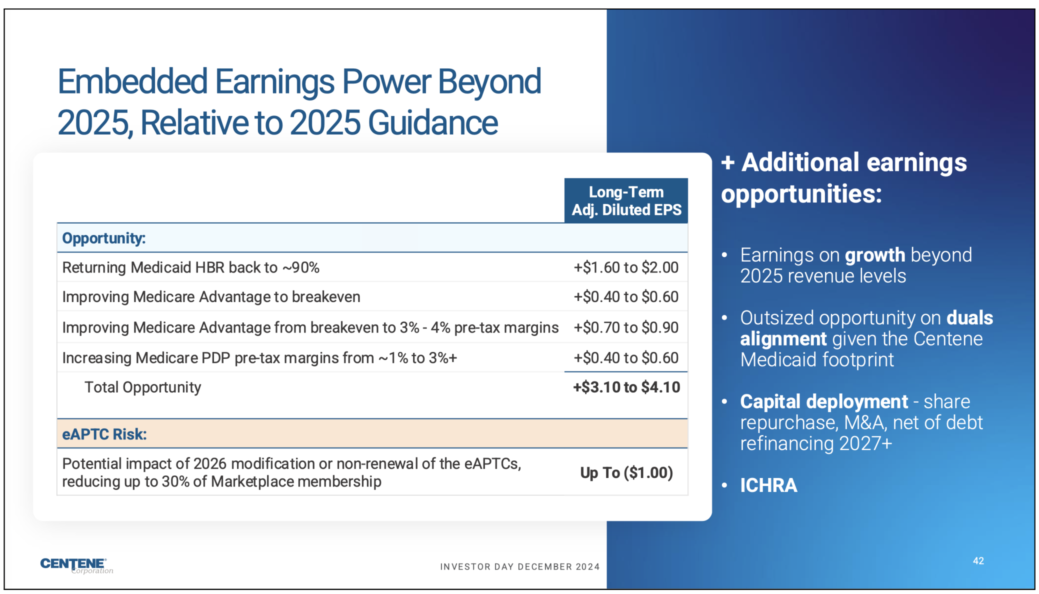


Figure D(9). Centene's (CNC) 2024 Investor Day presentation. [source]

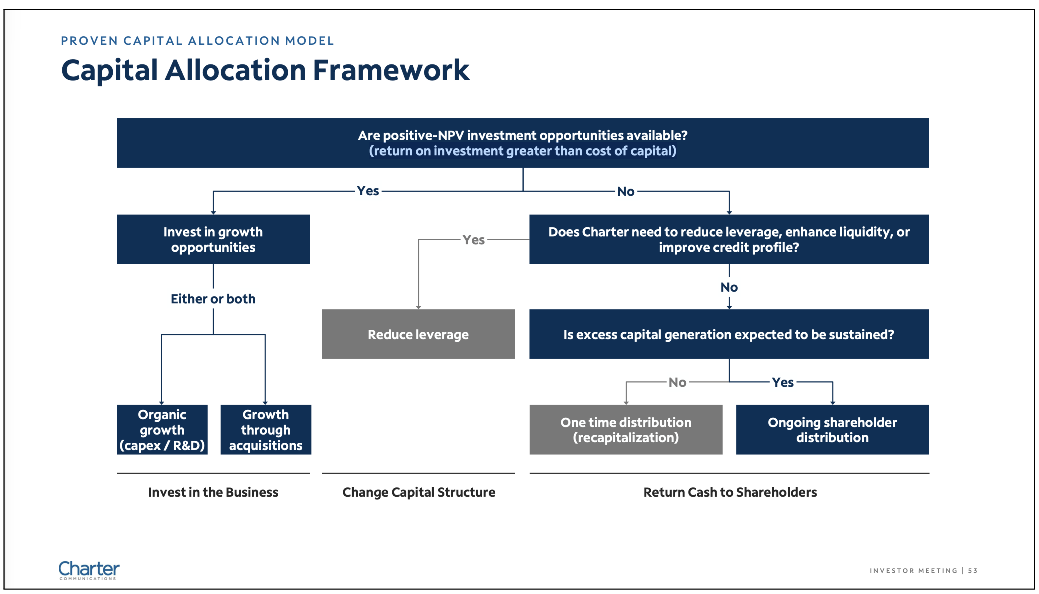


Figure D(10). Charter's (CHTR) 2022 Investor Day presentation. [source]

E Regressions and Data

This appendix gives further detail on the data behind the regressions in Subsection 4.2 and provides additional robustness checks.

E.1 Data Construction

We build an annual panel of firm characteristics measured at each company's fiscal year-end. Firm fundamentals come from Compustat. Financial ratios come from the WRDS Financial Ratios Suite. We take end-of-day stock prices from CRSP. A firm's next-twelve-month EPS forecast comes from the IBES unadjusted summary file. The forward earnings yield is the ratio of this consensus forecast to the firm's closing share price on the previous trading day. Our riskfree rate is the 10-year Treasury yield. Acquisition and bond-issuance data come from SDC. The acquisition records give us each deal's total value and the fraction of that value paid to target shareholders in equity.

We include public companies traded on NYSE, Nasdaq, or AmEx that have a share code of 10 or 11 (common stocks) and a price above \$5/sh. We exclude firms below the 30th percentile of the NYSE market capitalization in the month of their fiscal year-end. Following the existing literature, we remove utility firms and financials (SIC codes 4900-4999 and 6000-6999). We winsorize ΔCash/Assets, CapEx/Sales, Profitability, BookToMarket, and Tangibility at the 1st and 99th percentile within each year. To be included in our sample for year t, a firm must have at least one next-twelve-month EPS forecast in IBES at some point during the period from 11 months to 13 months prior to the end of fiscal year $(t{+}1)$. Less than 0.5% of firm-years have very negative earnings yields, $\text{EY} < -10\%$. These data points are often associated with extraordinary events, such as bankruptcy filings. We exclude them from our main analysis.

Our final dataset contains 43,513 firm-year observations over the period from 1976 to 2025. Since we use the PERMNO of a company's primary issuance as a unique identifier for that firm, we will talk about "firm" and "PERMNO" interchangeably. We double-cluster all standard errors by both firm and year. Table E(1) reports summary statistics at the firm-year level. Roughly 33% of firm-year observations are growth stocks, and about 20% of firms make an acquisition the following year. Among the acquirers, the average firm funds about 26% of deal value with equity.

E.2 Robustness Checks

The key right-hand-side variable in the regressions is a growth-stock indicator, $\text{IsGrowthStock} = 1[\text{EY} < \text{rf}]$. The model predicts a qualitative change in investment behavior at the threshold $\text{EY} = \text{rf}$. This is the point where a

	# Obs	Avg	Sd	Min	Max
IsGrowthStock	43,513	33.4%			
WillMakeAcquisition	37,460	20.1%			
%EquityFinanced	7,532	26.4%	37.2%	0.0%	100.0%
ΔCash/Assets	42,546	1.0%	12.0%	−67.7%	232.2%
CapEx/Sales	40,648	9.7%	18.2%	0.0%	261.6%
$\log_2$(MarketCap)	43,513	31.2	2.3	23.4	41.7
Profitability	42,562	14.8%	9.3%	−45.0%	62.8%
BookToMarket	41,457	49.7%	35.7%	1.1%	298.5%
Tangibility	43,490	29.2%	22.4%	0.4%	93.2%

Table E(1). Data sample includes firm-year observations from 1976 to 2025. IsGrowthStock: Firm-year observation has a forward earnings yield below the 10-year Treasury rate, $\text{EY} < \text{rf}$. WillMakeAcquisition: Firm acquires at least one other firm in fiscal year $(t{+}1)$. %EquityFinanced: Sum up the value of all the acquisitions a firm makes in fiscal year $(t{+}1)$. What percent of the total value was delivered to target shareholders in equity? ΔCash/Assets: Change in cash and equivalents from fiscal year t to $(t{+}1)$ as a percent of total assets in year t. CapEx/Sales: Capital expenditures in fiscal year $(t{+}1)$ as a percent of total sales in year t. $\log_2$(MarketCap): Base-2 log of market cap in fiscal year t. Profitability: Operating income before depreciation as a percent of total assets in fiscal year t. BookToMarket: Book value of equity as a percent of market cap in fiscal year t. Tangibility: Net PP&E as a percent of total assets in fiscal year t.

firm's cheapest funding source switches from equity to cash reserves or debt. A natural worry is that the indicator just stands in for the continuous gap between a firm's earnings yield and the riskfree rate, $\text{ExcessEY} = \text{EY} - \text{rf}$. If financing varied smoothly with this gap, then the indicator would be picking up a trend rather than a threshold.

The main tables already speak to this worry. Column (4) of Tables 5 and 6 adds PE-ratio fixed effects. A firm's PE ratio is the reciprocal of its earnings yield, $\text{PE} = \left(\frac{1}{\text{EY}}\right)$, so these fixed effects compare firms that have the same earnings yield. Within a PE bin, the only thing that moves a firm across the $\text{EY} = \text{rf}$ threshold is the riskfree rate. Those columns show that the growth-stock indicator still predicts financing behavior even when the earnings yield is held fixed.

Table E(2) makes the same point with a continuous control. We add ExcessEY as a linear term alongside the indicator. The indicator captures the discontinuity

Dependent Variable:	%Equity Financed	$\frac{\Delta\text{Cash}}{\text{Assets}}$	
Sample:	Acquirers	Acquirers	Hi CapEx
	(1)	(2)	(3)
IsGrowthStock EY < rf; PE > 1/rf	12.5*** (2.0)	1.3*** (0.6)	2.0*** (0.4)
ExcessEY	−1.2** (0.4)	−0.3 (0.2)	−0.1 (0.1)
Year FE	*Y*	*Y*	*Y*
# Obs	7,532	7,508	25,254
Adj. R^2	19.4%	3.6%	3.9%

Table E(2). This table reproduces main results from Tables 5 and 6 when controlling for the level of ExcessEY = EY − rf in year t. IsGrowthStock: indicator that equals one for observations with a forward earnings yield below the 10-year Treasury rate, EY < rf, and zero otherwise. Numbers in parentheses are standard errors double-clustered by firm and year. ⋆, ⋆⋆, and ⋆⋆⋆ denote significance at 10%, 5%, and 1%. We do not report fixed effects.

at EY = rf. The ExcessEY term captures any smooth relationship between financing and the level of the gap. Column (1) reproduces the M&A-payment regression from Table 5. Columns (2) and (3) reproduce the cash-accumulation regressions from Table 6 for acquirers and for high-capex firms.

The growth-stock indicator stays positive and significant at the 1% level in all three columns: 12.5%pt in column (1) for the equity share of M&A payment; 1.3%pt and 2.0%pt in columns (2) and (3) for the change in cash accumulation rate. The ExcessEY control is only significant in column (1). The jump at EY = rf is a genuine threshold, not an artifact of a smooth trend in the earnings-yield gap. Figure 6 shows the same shift graphically. None of this is a surprise once you have seen column (4) of the main tables, which control for a company's PE ratio using fixed effects. This is why Table E(2) is located here.

F Zero-Coupon Convertibles

A convertible bond lets the issuer borrow at a coupon rate below the riskfree rate, $\tilde{\imath} \leq \text{rf}$. Bondholders are willing to accept a lower interest rate in exchange for the option to convert the bond into an equity position at a later date. In the limit, a company with enough perceived upside can issue a zero-coupon convertible, $\tilde{\imath} = 0\%$. To an EPS maximizer, this instrument is free money. The CEO would be able to raise capital without paying interest next year or issuing any new shares today.

Consider the \$100M project from our running example, which is expected to generate \$4M of income each year going forward, $\text{IY} = 4\%$. If the CEO can fund the project by issuing a zero-coupon convertible bond, then she can claim all \$4M generated by the project next year without needing to pay any financing expense. The accretive investment rule requires the project's income yield to exceed its financing yield. With a zero-coupon convertible, the hurdle rate is zero, $\text{IY} > \tilde{\imath} = 0\%$. Any project that generates positive income is accretive. The CEO does not even need to check the numbers.

The investors who buy convertible debt expect to be able to exercise the conversion option. When this happens, the firm has to issue new shares. Under pre-2020 accounting rules, the dilution caused by these anticipated future shares was handled using the treasury stock method. If the conversion option was out of the money when the bond was sold, no additional shares needed to be added in the denominator of the company's EPS calculation.

Prior to 2020, few companies had enough perceived upside for creditors to accept a zero-coupon offering. Then COVID happened. The pandemic initially crushed equity prices. But many investors began expecting (hoping for?) a sharp rebound once the virus passed. High volatility plus high expected upside is exactly what makes conversion options valuable to bondholders.

Convertible-bond issuance exploded. Many of these deals had coupons that were technically above zero. But dozens of offerings went all the way down to bedrock. Across 2020 and 2021, companies issued roughly \$60B in zero-coupon convertible bonds.[32] Peloton issued \$1B of 0% convertible senior notes in February 2021.[33] That same month, Spotify priced \$1.3B of 0% exchangeable senior notes.[34] In March, Airbnb issued \$2B of 0% convertible senior notes[35] and

[32] C. Driebusch. "Record Run for Zero-Interest Convertible Bonds Hits a Wall." *The Wall Street Journal.* Feb 4 2022. [link]

[33] Peleton Press Release. "Peloton Interactive, Inc. Announces Closing of \$1.0 Billion of 0% Convertible Senior Notes Due 2026." *PR Newswire.* Feb 11 2021. [link]

[34] Spotify Technology S.A. Form 6-K. *SEC.* Feb 25 2021. [link]

[35] Airbnb Press Release. "Airbnb, Inc. Prices \$2 Billion Convertible Senior Notes Offering." *PR Newswire.* Mar 4 2021. [link]

Twitter issued $1.44B at the same rate.[36] These companies borrowed billions of dollars without promising any additional interest the following year.

On August 5, 2020, FASB issued Accounting Standards Update (ASU) 2020-06.[37] The update eliminated the treasury stock method for convertible instruments and required the "if-converted" method instead.[38] Under the if-converted method, all potentially converted shares must be included in the EPS denominator even if the option is out of the money. That change meant that issuing a zero-coupon convertible would be just as dilutive as issuing equity.

FASB was explicit about why the change was needed. The Basis for Conclusions accompanying ASU 2020-06 pointed to "concerns about an entity being able to classify an instrument in equity because it contractually may be share settled but then exclude the shares from diluted EPS because of an assertion that the instrument would be cash settled."[39] The old rules let companies have it both ways. A firm could promise equity conversion to attract bondholders while asserting cash settlement to keep the extra shares out of the EPS denominator. The zero-coupon convertible was the limiting case. A company could borrow billions, pay no interest, add no shares to diluted EPS, and claim the full income from whatever projects it funded.

The ASU was issued in August 2020, but compliance was not immediately mandatory for all firms.[40] For calendar-year filers, the old rules remained in effect through the end of 2021. Rather than pulling back after the announcement, these companies leaned in to exploit the loophole while it still existed. Zero-coupon convertible volume more than doubled from 2020 to 2021.[41] Once the new rules took effect, the structure vanished. Overall convertible origination plummeted by more than 70% in 2022.[42] The average coupon on new global convertible deals rose from 1% in 2021 to 3.3% by the first quarter of 2023.[43] "After the deluge of issuance in 2020 and 2021, there have only been a few convertible-bond offerings so far this year," the *Wall Street Journal* reported in February 2022. "None have had a zero coupon."[32]

---

[36] Twitter, Inc. Form 8-K. *SEC.* Mar 2021. [link]

[37] FASB. *Accounting Standards Update 2020-06: Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging (Subtopic 815-40).* Aug 5 2020. [link]

[38] J. Schaeffer and N. Guruji. "Recent FASB Simplifications to Convertible Bond Accounting." *Equity Methods.* Oct 4 2020. [link]

[39] FASB. ASU 2020-06, Basis for Conclusions, BC113. [link]

[40] FASB. ASU 2020-06, "Effective Date," para. 3. [link]

[41] A. Ramnarayan. "Tech Firms are Buying Back Their Busted Convertible Bonds." *Bloomberg.* Mar 22, 2024. [link]

[42] Y. Zou. "Convertible bonds make a comeback." *LSEG.* Apr 25 2024. [link]

[43] N. Crémieux. "Higher coupons make the future brighter for convertible bonds." *Mirabaud Asset Management.* Apr 14 2023. [link]

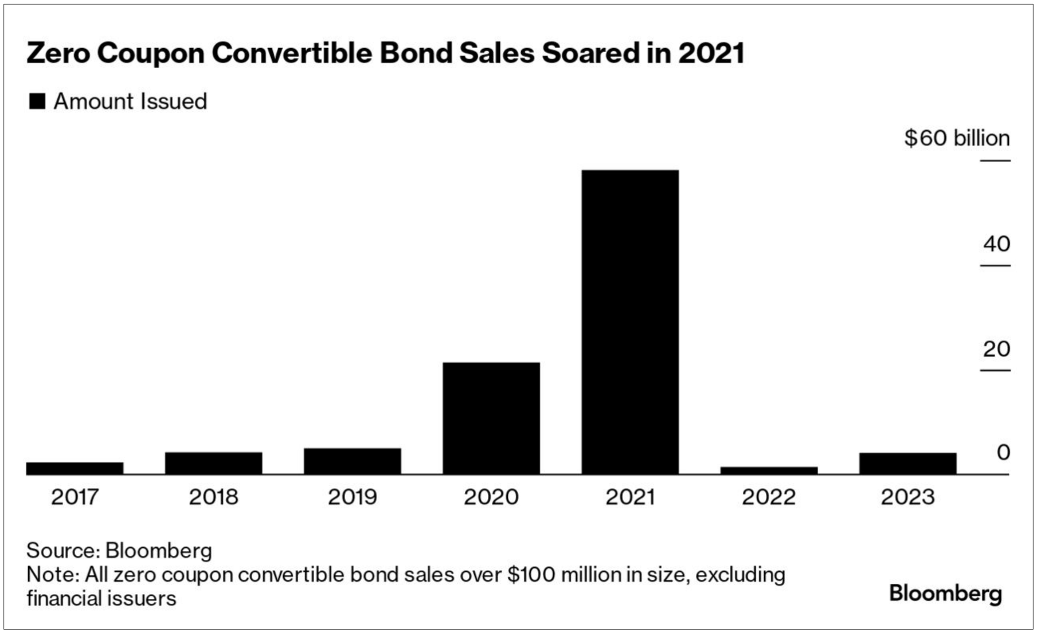


Figure F(1). Zero-coupon convertible bond issuance by year. ASU 2020-06 was announced in August 2020 but did not become mandatory for large public companies until fiscal years beginning after December 15, 2021. Issuance surged as companies rushed to exploit the loophole before it closed, then collapsed once the new rules took effect. [Source]

A common ivory-tower objection to EPS maximization is that it would produce absurd outcomes. If CEOs were really chasing EPS, the argument goes, they would stop investing entirely or engineer reverse stock splits. Shareholders would revolt. Since we do not observe these pathologies, academics conclude that the premise must be wrong. This is wrong twice over. First, the above claims are not predictions of a max EPS model. Second, when we look at a genuine pathology, such as zero-coupon convertibles, we do see extreme responses in the data. Our framework says this instrument was free money. Real-world CEOs clearly agreed. When regulators announced the loophole would close, companies rushed to issue before the deadline. When the rule took effect, issuance collapsed.

G Capitalized Interest

The \$100M project in our running example starts generating \$4M of income immediately in year $t = 1$. Many real-world projects do not. It can take years to finish building a factory or a pipeline. During this time, the project generates no income whatsoever. It might seem like an EPS maximizer would never fund such projects. However, accounting guidelines exist to circumvent this problem. GAAP ASC 835-20 allows firms to capitalize the interest expense incurred during construction on certain kinds of projects. Subsection G.1 explains how the exemption works. The financing expense gets rolled into the project's cost basis instead of appearing on the income statement. Subsection G.2 derives the modified hurdle that a delayed project must clear. Each year of capitalized interest inflates the cost basis, so the project needs a higher steady-state income yield than an otherwise identical project with no build time. Subsection G.3 shows that the resulting formula resembles discounting, but the economics is totally different. Only interest expense can be capitalized under current rules, not the earnings cost of new equity. Subsection G.4 points out that there is no theoretical justification for this asymmetry.

G.1 How Capitalization Works

For qualifying T2B > 0 projects that generate no income while under construction, GAAP ASC 835-20 allows the firm to capitalize interest expense incurred during the first T2B years. The firm still makes the interest payments. The expense just does not appear on the income statement. It gets rolled into the project's cost basis instead.

To see why this matters, consider a version of the project in our running example with a 1-year of construction delay, T2B $= 1$. The project still costs Cost $=$ \$100M today and is expected to generate \$4M each year once operational. But it produces zero income in year $t = 1$ while under construction:

	$\mathbb{E}[\Delta \text{NOI}_t]$	
t	Baseline (T2B=0)	Delayed (T2B=1)
1	\$4M	\$0M
2	\$4M	\$4M
3	\$4M	\$4M
⋮	⋮	⋮

(G.1)

The delayed project generates zero income while the base-case project generates \$4M. This gap makes the delayed project dilutive on arrival no matter how the CEO finances it. If she issues equity at EY $= 2\%$, the year-1 earnings cost is 2% × \$100M = \$2M with no income to offset it. If she borrows at rf = 3%, the year-1 interest expense is 3% × \$100M = \$3M with no income to offset it. Every available funding source has a positive short-term expense.

The capitalization exemption changes the accounting treatment of debt financing. Suppose the EPS-maximizing CEO in our example finances the project with a riskfree loan at rf = 3%. She will owe 3%×\$100M = \$3M in interest to her creditors next year. The firm must write this check regardless of whether or not the interest gets capitalized. The cash leaves the firm either way. What changes is where the \$3M expense shows up on the company's financial statements.

If the company capitalizes the interest expense associated with funding the project, then in year $t = 1$ the firm will pay \$3M to its creditors. But this \$3M does not appear as an expense on the income statement as shown below:

		Interest	
t	$\mathbb{E}[\Delta \mathrm{NOI}_t]$	Paid	Expensed
1	\$0M	\$3M	\$0M
2	\$4M	\$3M	\$3M
3	\$4M	\$3M	\$3M
⋮	⋮	⋮	⋮

(G.2)

Instead, the first \$3M interest payment gets added to the project's cost basis, making the new number slightly higher for accounting purposes

$$\widetilde{\mathrm{Cost}} = \$100\mathrm{M} + \$3\mathrm{M} = \$103\mathrm{M} \tag{G.3}$$

From year $t = 2$ onward, the project is operational. Nothing gets capitalized. The full \$3M interest payment flows through the income statement as an ordinary expense. The project generates \$4M of income against \$3M of reported interest, contributing +\$1M per year to the firm's earnings.

The benefit of capitalizing interest is the delayed hit to earnings. The cost is a lower effective income yield. On a \$103M cost basis, the project's \$4M income stream from year $t = 2$ onward translates to a yield of $\left(\frac{\$4\mathrm{M}}{\$103\mathrm{M}}\right) \approx 3.88\%$. This adjusted value is slightly lower than the original IY = 4% calculated using the true upfront cost of \$100M. Capitalized interest does not eliminate the cost of delay. It embeds the cost in a higher price tag.

More generally, when a company capitalizes T2B > 0 years of interest expense at its marginal interest rate i, the project's new cost basis becomes

$$\widetilde{\mathrm{Cost}} = \mathrm{Cost} + \mathrm{T2B} \times \mathrm{i} \cdot \mathrm{Cost} \tag{G.4a}$$

$$= \mathrm{Cost} \times \{1 + \mathrm{i} \cdot \mathrm{T2B}\} \tag{G.4b}$$

Each year of capitalized interest grows the cost basis by i × Cost, making the project's adjusted income yield proportionally lower once operational.

G.2 Accretive In Spite Of Delay

EPS-maximizing CEO require projects with long build times to have correspondingly higher steady-state income yields. When a company capitalizes the interest expense incurred while a project is still under construction, it effectively lowers the venture's income yield once operational. To be accretive, a project with $\mathrm{T2B} > 0$ must clear the same financing-yield hurdle as a normal project. We now characterize precisely how this alters an EPS maximizer's investment calculus. Projects with long construction delays can still be accretive, but the delay puts them at a disadvantage.

When a company capitalizes $\mathrm{T2B} \geq 0$ years of interest payments, a project's cost basis increases to $\widetilde{\mathrm{Cost}} = \mathrm{Cost} \times \{1 + \mathrm{i} \cdot \mathrm{T2B}\}$. The project's adjusted income yield once operational is then

$$\frac{\mathbb{E}[\Delta \mathrm{NOI}]}{\widetilde{\mathrm{Cost}}} = \frac{\mathbb{E}[\Delta \mathrm{NOI}]}{\mathrm{Cost}} \times \left(\frac{\mathrm{Cost}}{\widetilde{\mathrm{Cost}}} \right) \tag{G.5a}$$

$$= \frac{\mathrm{IY}}{1 + \mathrm{i} \cdot \mathrm{T2B}} \tag{G.5b}$$

For the project's adjusted income yield to cover its own financing expense once operational, $\mathrm{i} \times \mathrm{Cost}$, the original income yield must satisfy

$$\mathrm{IY} \ > \ \mathrm{i} \cdot \{1 + \mathrm{i} \cdot \mathrm{T2B}\} \tag{G.6}$$

When $\mathrm{T2B} = 0$, the hurdle reduces to $\mathrm{IY} > \mathrm{i}$. This is the standard accretive investment rule from Proposition 1.

It is instructive to write the new hurdle in yield-spread form

$$\mathrm{IY} - \mathrm{i} \ > \ \mathrm{i}^2 \cdot \mathrm{T2B} \tag{G.7}$$

The left side is the yield spread $\{\mathrm{IY} - \mathrm{i}\}$ from Proposition 2. A project with no construction delay is accretive whenever this yield spread is positive. When $\mathrm{T2B} > 0$, the spread must be large enough to absorb the $\mathrm{i}^2 \cdot \mathrm{T2B}$ penalty from capitalizing the initial interest expense. Each additional year of construction delay adds i^2 to the right-hand side. The penalty is quadratic in the interest rate. Firms that borrow at high rates face a double disadvantage. The financing expense itself is high, and each year of delay adds even more drag.

Return to the running example. The \$100M project has $\mathrm{IY} = 4\%$. For the growth stock, $\mathrm{i} = \mathrm{rf} = 3\%$. With $\mathrm{T2B} = 1$ year, the hurdle is $3\% \times \{1 + 3\% \cdot 1\} = 3.09\%$. Since $4\% > 3.09\%$, the project clears that bar. In yield-spread terms, the base-case spread of $\{\mathrm{IY} - \mathrm{i}\} = \{4\% - 3\%\} = +100\mathrm{bps}$ easily absorbs the $\mathrm{i}^2 \cdot \mathrm{T2B} = 3\%^2 \cdot 1 = -9\mathrm{bps}$ drag created by one year of delay.

G.3 Modeling The Cost of Delay

Everyone agrees that a project which starts generating income right away is strictly better than one which takes years to become operational. The standard explanation is discounting. In the max EPS framework, the preference has nothing to do with discounting. It arises because each year of capitalized interest raises a project's cost basis, eroding its income yield once operational. $(1+\text{i}\cdot\text{T2B})$ is not the same thing as $(1+\text{i})^{\text{T2B}}$. Repeated multiplication, $(1+2\%)^{10} = (1+2\%) \times (1+2\%) \times \cdots \times (1+2\%) \approx 121.9\%$, stems from different principles than repeated addition, $2\% \times 10 = 2\% + 2\% + \cdots + 2\% = 20\%$.

NPV-maximizing and EPS-maximizing managers are both put off by long build times, but for different reasons. A textbook NPV maximizer looks at a T2B = 10 project and thinks: "The eventual payoff does not look very big after discounting it 10 times in a row." An EPS maximizer looks at the same project and thinks: "The income yield looks terrible after capitalizing an additional 10 years of interest expense into the cost." When interest rates are low, each additional year of capitalized interest adds a smaller amount to the project's cost basis. Low interest-rate environments encourage EPS maximizers to take on projects with longer build times.

To emphasize the point, replace the ">" in Equation (G.7) with an equals sign and solve for T2B. The result is a formula for the project's maximum viable build time

$$\text{T2B}_{\text{max}} \;=\; \left[\frac{\text{IY}-\text{i}}{\text{i}}\right] \times \left(\frac{1}{\text{i}}\right) \tag{G.8}$$

The expression reads as if the CEO is capitalizing the project's relative yield spread at her firm's marginal interest rate. The first factor, $\left[\frac{\text{IY}-\text{i}}{\text{i}}\right]$, is the yield spread as a fraction of the firm's marginal interest rate. The second factor, $\left(\frac{1}{\text{i}}\right)$, converts this dimensionless quantity into a length of time.

But this reading does not reflect the underlying economics. The CEO is not discounting future cash flows or computing present values. The formula has this form because each year of capitalized interest adds i to the cost basis. The yield cushion, $\{\text{IY}-\text{i}\}$, can only absorb so many i-sized increments before the adjusted income yield falls below the financing cost.

Return to the project in our running numerical example, which costs \$100M and is expected to generate \$4M each year once operational, IY = 4%. For a company facing, i = rf = 3%, the maximum tolerable delay is $\left[\frac{4\%-3\%}{3\%}\right] \times \left(\frac{1}{3\%}\right) \approx$ 11 years. The firm's CEO can wait over a decade for this project to come online. If the firm could somehow borrow at i = 2%, its maximum build time would rise to $\left[\frac{4\%-2\%}{2\%}\right] \times \left(\frac{1}{2\%}\right) \approx 50$ years. Low rates make the denominator tiny. Moving from 3% to 2% more than quadruples the maximum viable build time.

G.4 Capitalizing Equity Issuance

The standard academic critique of EPS-maximizing CEOs is that they under-invest. The main text shows that they do not. But suppose someone were still concerned about EPS maximizers not investing in enough moonshot projects. Instead of complaining about the objective function, our max EPS model suggests a more direct solution. Why not just expand the capitalization exemption to cover the earnings hit from issuing shares and spending cash?

Under current accounting rules, firms can only capitalize interest expense. So, in addition to increasing a project's cost basis, the capitalized-interest exemption can also push companies away from their preferred source of capital. Growth stocks with $\mathrm{EY} < \mathrm{rf}$ see equity as cheap. They would like to finance all projects by issuing shares. However, because only interest expense can be capitalized, they must issue bonds to finance a $\mathrm{T2B} > 0$ project. These practical accounting wrinkles explain why growth stocks occasionally issue bonds.

Theoretically speaking, a firm should also be able to capitalize the earnings hit from issuing shares, $\mathrm{EY} \times \mathrm{Cost}$. Companies frequently report a diluted EPS statistic, which pretends that hypothetical future shares have already been issued. If it is acceptable to include these vapor-shares a little early, it must be acceptable to let firms wait until a project is operational before adding $\left(\frac{\mathrm{Cost}}{\mathrm{Price}}\right)$ to the denominator. In the meantime, capitalize the anticipated dilution into the project's cost, $\mathrm{EY} \times \mathrm{Cost}$, each year until it becomes operational

$$\widetilde{\mathrm{Cost}} \;=\; \mathrm{Cost} \times \{1 + \mathrm{EY} \cdot \mathrm{T2B}\} \tag{G.9}$$

The previous subsection showed that the $\mathrm{EY} = 2\%$ growth stock can tolerate at most $\left[\frac{4\%-3\%}{3\%}\right] \times \left(\frac{1}{3\%}\right) \approx 11$ years of construction delay when forced to borrow at $\mathrm{i} = \mathrm{rf} = 3\%$. If the firm could capitalize the dilutive effects of equity issuance, it would face a financing yield of $\mathrm{EY} = 2\%$. The maximum viable build time would jump to $\left[\frac{4\%-2\%}{2\%}\right] \times \left(\frac{1}{2\%}\right) = 50$ years.

A similar line of reasoning applies to cash. Right now, firms are not allowed to capitalize the earnings hit from spending internal funds. So, for $\mathrm{T2B} > 0$ projects, a company is forced to borrow even when cash is available. Again, there is no theoretical justification for this restriction. Holding cash is like having negative riskfree debt. When a firm has cash on its balance sheet, it is as if the firm is lending at the riskfree rate. The EPS implications are the same either way. Hence, if it is permissible to capitalize interest expense, $\mathrm{i} \times \mathrm{Cost}$, there can be no reason to prevent the firm from capitalizing foregone interest income, $\mathrm{rf} \times \mathrm{Cost}$. Dividends are paid out of retained earnings, and have no contemporaneous earnings impact. Why not treat cash spent on long-term projects the same way?

References

Ben-David, I. and A. Chinco (2026a). EPS-maximizing capital structure. Working paper.

Ben-David, I. and A. Chinco (2026b). Accretive investment. Working paper.

Ben-David, I. and A. Chinco (2026c). max EPS payout policy. Working paper.

Ben-David, I. and A. Chinco (2026d). Expected EPS × Trailing PE: Pricing without discounting. Working paper.

Ben-David, I. and A. Chinco (2026e). The peoples' equity risk premium. Working paper.

Chamberlin, D. (2012). Early history of SQL. *IEEE Annals of the History of Computing 34*(4), 78–82.

Dixit, A. and R. Pindyck (1994). *Investment under uncertainty*. Princeton University Press.

Graham, J. and C. Harvey (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics 60*(2-3), 187–243.

IBM (2006). Letter to shareholders. Technical report, Samuel Palmisano.

Kirk, M. and S. Markov (2016). Come on over: Analyst/investor days as a disclosure medium. *Accounting Review 91*(6), 1725–1750.

Myers, S. (1977). Determinants of corporate borrowing. *Journal of Financial Economics 5*(2), 147–175.

Svigals, J. (2012). The long life and imminent death of the mag-stripe card. *IEEE Spectrum 49*(6), 72–76.

Weightman, G. (2015). *Eureka: How invention happens*. Yale University Press.