Morgan Stanley

INVESTMENT MANAGEMENT

Counterpoint Global Insights

Good Losses, Bad Losses

All Losses Are Not Created Equal

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Introduction

Aphasia is a condition that breaks the link between thought and language. It is the result of damage to specific regions in the brain and is usually caused by a stroke. Patients who suffer from aphasia understand images, ideas, or concepts but cannot convey them in words. The term comes from the Greek *aphatos*, or "speechless."[1]

Accounting is commonly called the language of business.[2] It is how a company communicates its economic results and financial position to current and prospective stakeholders, including shareholders, creditors, suppliers, and employees. These stakeholders want to know whether the company has a good business. Core considerations include the company's growth, profitability, return on investment, and financial strength.

Accounting can be aphasic. In many cases, the bottom-line figures that are consistent with generally accepted accounting principles (GAAP) fail to communicate the essence of a company's economics. For example, there has been a steady rise in the use and utility of non-GAAP figures, calculations that deviate from the accounting rules and regulations.[3] More than 95 percent of companies in the S&P 500 report non-GAAP numbers, and there is evidence that investors find them useful.[4] Overall, understanding whether a company's business is fundamentally sound requires going deeper than superficial sums or ratios.[5]

Investors often demarcate between profitable and unprofitable companies, as measured by net income. Net income is the profit after subtracting all costs, expenses, and taxes from sales. Exhibit 1 shows that one-third of the companies in the Russell 3000, which tracks the largest stocks by market capitalization in the United States, reported negative net income in 2021. This ratio has been climbing in recent decades. Non-GAAP results swing about a fifth of them into positive territory. Some adjustments make sense, including adding back truly one-time or non-economic expenses, whereas others, such as adding back the expense for stock-based compensation, do not.[6] What we want to investigate is how much information is contained in simple profits or losses.

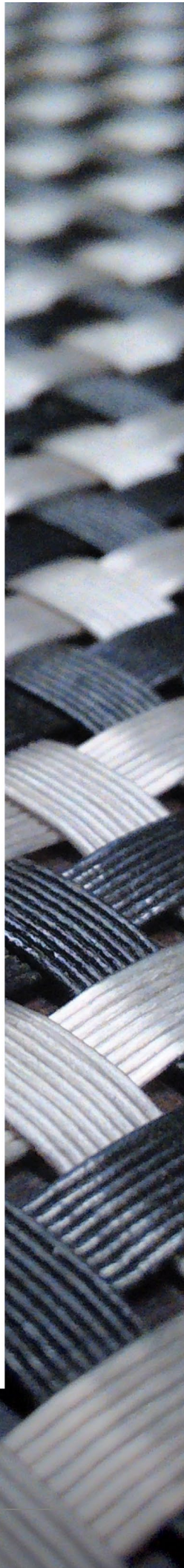
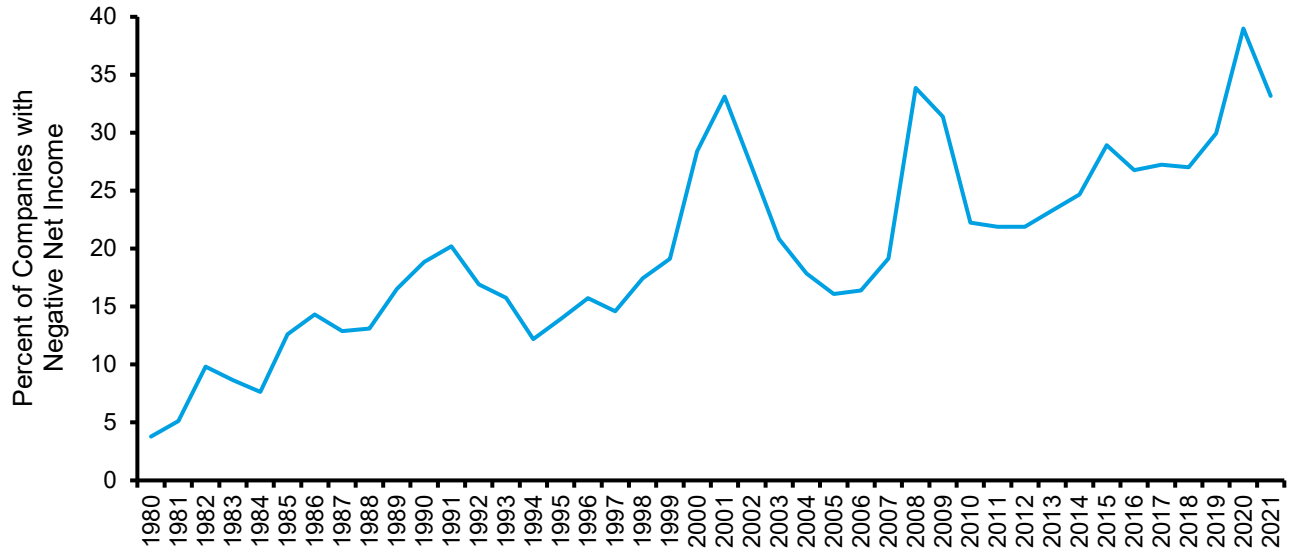


Exhibit 1: Percent of Russell 3000 Companies with Negative Net Income, 1980-2021



Source: FactSet and Counterpoint Global.
Note: Constituents of the Russell 3000® Index as of year-end; Data reflects calendar years.

Would You Rather?

Exhibit 2 shows the financial forecasts for three companies. Assume that the results in the subsequent years are consistent with the numbers you see here. Your task is to rank the three businesses in terms of value, from highest to lowest. There are enough data for those with sharp eyes and pencils to have an informed view, even though the statements are not complete. Take a moment to examine the figures.

Exhibit 2: The Financials for Three Companies

	Company A			Company B			Company C		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Sales	1,150.0	1,322.5	1,520.9	1,150.0	1,322.5	1,520.9	1,150.0	1,322.5	1,520.9
Cost of goods sold	690.0	793.5	912.5	287.5	330.6	380.2	690.0	793.5	912.5
Gross profit	460.0	529.0	608.4	862.5	991.9	1,140.7	460.0	529.0	608.4
Gross margin	40.0%	40.0%	40.0%	75.0%	75.0%	75.0%	40.0%	40.0%	40.0%
Maintenance SG&A	230.0	264.5	304.2	632.5	727.4	836.5	230.0	264.5	304.2
Investment SG&A				248.4	269.8	182.5			
Operating income	230.0	264.5	304.2	(18.4)	(5.3)	121.7	230.0	264.5	304.2
Operating margin	20%	20%	20%	-1.6%	-0.4%	8.0%	20%	20%	20%
Taxes	46.0	52.9	60.8	46.0	52.9	60.8	46.0	52.9	60.8
NOPAT	184.0	211.6	243.3	(64.4)	(58.2)	60.8	184.0	211.6	243.3
Invested capital	1,276.0	1,593.4	1,836.7	527.6	575.2	636.0	1,276.0	1,672.8	2,129.0
ROIC	16.2%	14.7%	14.2%	-12.5%	-10.6%	10.0%	16.2%	14.4%	12.8%

Source: Counterpoint Global.
Note: SG&A=selling, general, and administrative expense; NOPAT=net operating profit after taxes; ROIC=return on invested capital (invested capital=average of current and prior year).

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The answer is that Company A and Company B have the exact same value, and Company C is worth considerably less. Take a look at the appendix if you want more complete numbers. The key is to calculate free cash flow, defined as net operating profit after taxes (NOPAT) minus the investment in future growth. Free cash flow is the lifeblood of corporate value as it measures the cash that a firm can distribute to its creditors and shareholders. Note that negative free cash flow is not only fine, but desirable, in cases when the return on investment comfortably exceeds the cost of capital and the company has access to capital.

Company A and Company B have identical free cash flows. What is different is where the investments show up in the financial statements according to the rules of accounting. For Company A, investments are captured on the balance sheet, which is revealed by examining the change in invested capital from one year to the next.

For Company B, most of the investments are expensed on the income statement. The figures for Company A are typical of a firm that invests primarily in tangible assets, including capital expenditures for machines and factories. Those for Company B are common for a company that invests mostly in intangible assets, non-physical items such as software code and marketing to build a brand.

Let's do the calculations to show the equivalence. We'll focus on year two. Company A has NOPAT of $211.6 and an investment of $317.4 for total free cash flow of -$105.8. You can compute the investment by looking at the change in invested capital ($317.4 = $1,593.4 - $1,276.0).

Company B has NOPAT of -$58.2, investment of $47.6, and free cash flow of -$105.8. But note that Company B reflects $269.8 of selling, general, and administrative (SG&A) expense on the income statement even though it is really an investment. Were the company to record that investment on the balance sheet instead of the income statement, NOPAT would go from -$58.2 to $211.6, investment would rise from $47.6 to $317.4, and free cash flow would stay the same.

Company B would in fact be more valuable in the real world because the investments it expenses create a valuable tax shield. That means that Company B would pay less in taxes than Company A.

We can also do a back of the envelope calculation of the return on investment, which we define here as the change in this year's NOPAT divided by last year's investment. In other words, how much did earnings grow this year as a result of last year's investment? Again, we'll start with Company A and look at years 2 and 3. In this case, the return on investment is 10 percent, or a change in NOPAT of $31.7 ($243.3 - $211.6) divided by the investment of $317.4.

The unadjusted figures for Company B appear nonsensical. But if you make the adjustments, the figures for Company B align exactly with those of Company A. Here again, you have to think about investment and return on investment clearly to see these businesses are indeed the same.

Company C has the same NOPAT as Company A but its investment of $396.8 is much higher. As a result, its free cash flow is -$185.1 and its return is 8 percent ($31.7 ÷ $396.8). Company C's investments yield a lower return than that of companies A and B.

We designed this example so that the level of investment, return on investment, and growth are identical for companies A and B. But the accounting differs because one invests in tangible assets and the other in intangible assets. The concepts are the same, but the communication is different. This is accounting aphasia.

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Real versus GAAP-Driven Losses

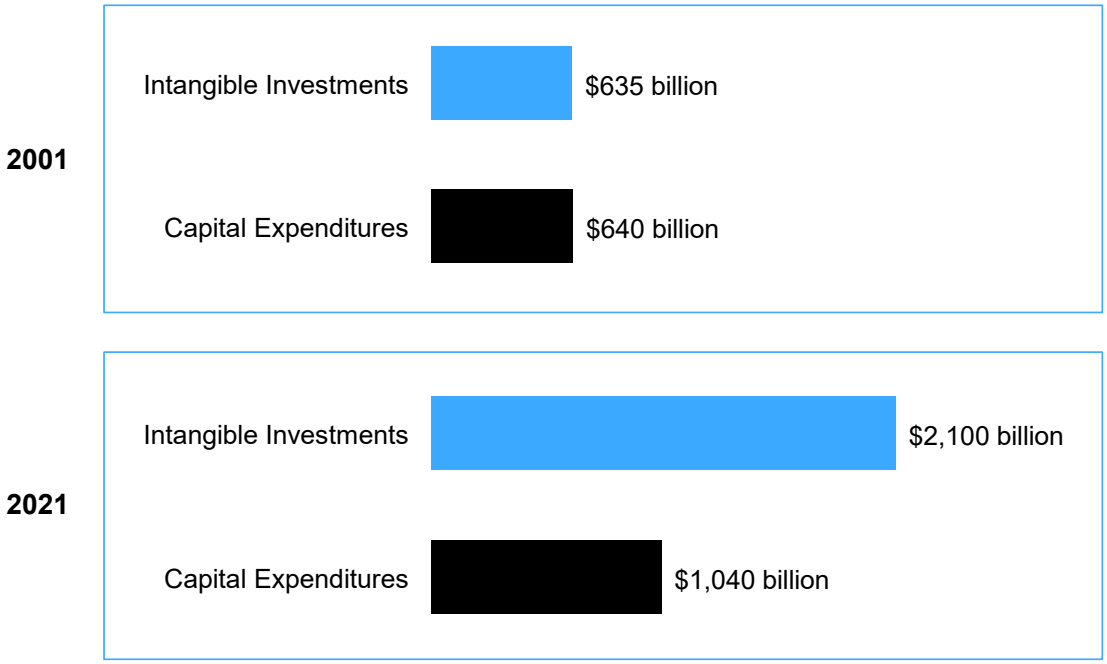
The central point of this report is to distinguish between "GAAP-losers" and "real losers." These categories were introduced by the accounting professors Feng Gu, Baruch Lev, and Chenqi Zhu.[7] GAAP losers are companies that have expenses that exceed sales, but the essential insight is that some percentage of those expenses are intangible investments. Real losers also have expenses that exceed sales. Gu, Lev, and Zhu focus on how the valuation and stock price performance of these categories differ.

Exhibit 1 shows that the percentage of companies reporting losses has increased in recent decades. We want to understand whether that rise reflects GAAP-driven or real losses. There are spikes in losses that coincide with periods of economic decline, but the underlying driver of the trend is the rise of intangible investment.

Exhibit 3 illustrates the point. In 2001, intangible investments were on par with capital expenditures for companies in the Russell 3000. Twenty years later, intangible investments were roughly double capital expenditures.

To cast all companies in a similar light, the professors adjusted the GAAP accounting by recording the intangible investment on the balance sheet and replacing the expense on the income statement with the amortization of the capitalized intangibles.[8] This treats capital expenditures and intangible investments in the same way.[9] The researchers found that this modification flipped about 40 percent of the reported losses to profits and improved the relevance of earnings.[10]

Exhibit 3: Intangible Investments Are on the Rise



Source: Based on Luminita Enache and Anup Srivastava, "Should Intangible Investments Be Reported Separately or Commingled with Operating Expenses? New Evidence," Management Science*, Vol. 64, No. 7, July 2018, 3446-3468; Includes estimates by Counterpoint Global.*

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The main message is that an investor should focus on understanding a business's investments, return on investments, and opportunities for investment. Taken together, these are the value drivers that determine long-term free cash flow.

Accountants have to adhere to generally accepted accounting principles that are well established and conservative. The problem is that these principles can obscure the value drivers that investors and other stakeholders seek to comprehend and forecast.

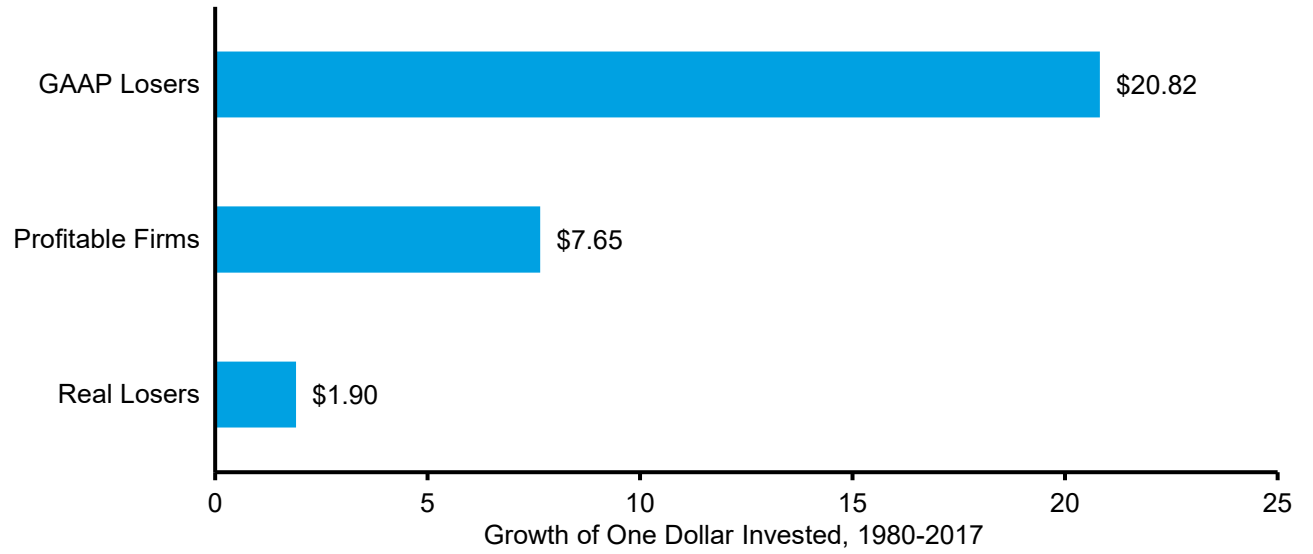
Stock prices reflect a company's current financial position plus a set of expectations about its future financial results.[11] We want to know if investors sort good and bad losses effectively when they value businesses.

Why Investors Should Care

Gu, Lev, and Zhu not only make adjustments to more accurately reflect profit, but they also examine the total shareholder returns for the stocks of the GAAP losers relative to profitable firms as well as the real losers. Exhibit 4 shows the results for the period from 1980 to 2017. The companies in each category are matched for size, valuation, industry, and year so as to isolate the profit effect. They found that $1 grew to $20.82 when invested in the GAAP losers, $7.65 in the profitable firms, and just $1.90 in the real losers. The respective compound annual growth rates in total shareholder returns are 11.5, 7.5, and 2.3 percent.

These long-term results obscure an important shift. From 1980 to 1996, just under one-half of the full period, the GAAP losers outperformed real losers but underperformed profitable firms. It was only in the last two decades of the measured period that the GAAP losers delivered higher returns than both the real losers and profitable firms.[12] The message is that the market ultimately recognizes and pays for intangible investments that create value, even if they create losses in the short term.

Exhibit 4: Growth of One Dollar Invested in Matched Companies: GAAP Losers, Profitable Firms, and Real Losers, 1980-2017



Source: Based on Feng Gu, Baruch Lev, and Chenqi Zhu, "All Losses Are Not Alike: Real versus Accounting-Driven Reported Losses," SSRN Working Paper*, May 2022.*
Note: Firms matched by size, price/book, industry, and year; GAAP=Generally Accepted Accounting Principles; The growth of one dollar is hypothetical and based on actual historical information and should not be construed as an indication of future results.

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Conclusion

Accounting is the language of business that allows a company to share its financial results with interested stakeholders. Certain principles guide how accountants reflect the range of business activities on financial statements.

One principle of accounting is conservatism, which says that companies should be prudent when recognizing items that have uncertain future benefits.[13] For example, the Financial Accounting Standards Board issued the Statement of Financial Accounting Standards No. 2 in October 1974 that stipulated that research and development costs, a classic form of intangible investment, should be expensed immediately because of "a high degree of uncertainty about the future benefits of individual research and development projects."[14] Today, most intangible investments are subject to this principle.

The rise of intangibles in recent decades means that more investments than ever are expensed immediately versus capitalized on the balance sheet and amortized on the income statement consistent with the principle that sales and expenses should be matched over time. This makes the income statements and balance sheets of today appear distorted relative to those of the past. In particular, some businesses with high return on investment have losses. Academics call these companies GAAP losers to distinguish them from real losers, businesses that have expenses unrelated to investment that exceed sales.

Capitalizing intangible investments and amortizing them makes the economic picture clearer. It allows investors to sort companies losing money for the right reasons and improves the relevance of earnings. Core concepts are communicated more clearly.

Evidence from recent decades shows that GAAP losers produced attractive total shareholder returns relative to the real losers and profitable companies. Investors must look past simple measures of profits to understand a business's true ability to create value.

Please see important disclosures on pages 11-13

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Appendix: Financial Statements for Companies A, B, and C

Company A

Year		1	2	3	4	5	6	7	8	9	10	11	12
Sales	1,000.0	1,150.0	1,322.5	1,520.9	1,749.0	2,011.4	2,313.1	2,660.0	3,059.0	3,517.9	4,045.6	4,652.4	5,350.3
Cost of goods sold	600.0	690.0	793.5	912.5	1,049.4	1,206.8	1,387.8	1,596.0	1,835.4	2,110.7	2,427.3	2,791.4	3,210.2
Gross profit	400.0	460.0	529.0	608.4	699.6	804.5	925.2	1,064.0	1,223.6	1,407.2	1,618.2	1,861.0	2,140.1
Gross margin	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Maintenance SG&A	200.0	230.0	264.5	304.2	349.8	402.3	462.6	532.0	611.8	703.6	809.1	930.5	1,070.1
Investment SG&A													
Operating income	200.0	230.0	264.5	304.2	349.8	402.3	462.6	532.0	611.8	703.6	809.1	930.5	1,070.1
Operating margin	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Taxes	40.0	46.0	52.9	60.8	70.0	80.5	92.5	106.4	122.4	140.7	161.8	186.1	214.0
NOPAT	160.0	184.0	211.6	243.3	279.8	321.8	370.1	425.6	489.4	562.9	647.3	744.4	856.0
Investment	240.0	276.0	317.4	243.3	279.8	321.8	277.6	319.2	367.1	422.1	388.4	446.6	535.0
Free cash flow	(80.0)	(92.0)	(105.8)	(0.0)	0.0	(0.0)	92.5	106.4	122.4	140.7	258.9	297.8	321.0
PV of FCF		(85.2)	(90.7)	(0.0)	0.0	(0.0)	58.3	62.1	66.1	70.4	119.9	127.7	127.5
Sum of PV of FCF													456.1
Continuing value													10,700.5
PV of CV													4,249.3
Corporate value													4,705.4
Invested capital	1,000.0	1,276.0	1,593.4	1,836.7	2,116.6	2,438.4	2,716.0	3,035.2	3,402.3	3,824.4	4,212.8	4,659.4	5,194.4
ROIC		16.2%	14.7%	14.2%	14.2%	14.1%	14.4%	14.8%	15.2%	15.6%	16.1%	16.8%	17.4%

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Company B

Year		1	2	3	4	5	6	7	8	9	10	11	12
Sales	1,000.0	1,150.0	1,322.5	1,520.9	1,749.0	2,011.4	2,313.1	2,660.0	3,059.0	3,517.9	4,045.6	4,652.4	5,350.3
Cost of goods sold	250.0	287.5	330.6	380.2	437.3	502.8	578.3	665.0	764.8	879.5	1,011.4	1,163.1	1,337.6
Gross profit	750.0	862.5	991.9	1,140.7	1,311.8	1,508.5	1,734.8	1,995.0	2,294.3	2,638.4	3,034.2	3,489.3	4,012.7
Gross margin	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Maintenance SG&A	550.0	632.5	727.4	836.5	962.0	1,106.2	1,272.2	1,463.0	1,682.5	1,934.8	2,225.1	2,558.8	2,942.6
Investment SG&A	228.0	248.4	269.8	182.5	181.9	209.2	166.5	175.6	183.5	211.1	194.2	223.3	267.5
Operating income	(28.0)	(18.4)	(5.3)	121.7	167.9	193.1	296.1	356.4	428.3	492.5	614.9	707.2	802.5
Operating margin	-2.8%	-1.6%	-0.4%	8.0%	9.6%	9.6%	12.8%	13.4%	14.0%	14.0%	15.2%	15.2%	15.0%
Taxes	40.0	46.0	52.9	60.8	70.0	80.5	92.5	106.4	122.4	140.7	161.8	186.1	214.0
NOPAT	(68.0)	(64.4)	(58.2)	60.8	97.9	112.6	203.5	250.0	305.9	351.8	453.1	521.1	588.5
Investment	12.0	27.6	47.6	60.8	97.9	112.6	111.0	143.6	183.5	211.1	194.2	223.3	267.5
Free cash flow	(80.0)	(92.0)	(105.8)	(0.0)	0.0	(0.0)	92.5	106.4	122.4	140.7	258.9	297.8	321.0
PV of FCF		(85.2)	(90.7)	(0.0)	0.0	(0.0)	58.3	62.1	66.1	70.4	119.9	127.7	127.5
Sum of PV of FCF													456.1
Continuing value													10,700.5
PV of CV													4,249.3
Corporate value													4,705.4
Invested capital	500.0	527.6	575.2	636.0	734.0	846.6	957.7	1,101.3	1,284.8	1,495.9	1,690.1	1,913.4	2,180.9
ROIC		-12.5%	-10.6%	10.0%	14.3%	14.3%	22.6%	24.3%	25.6%	25.3%	28.4%	28.9%	28.7%

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Company C

Year		1	2	3	4	5	6	7	8	9	10	11	12
Sales	1,000.0	1,150.0	1,322.5	1,520.9	1,749.0	2,011.4	2,313.1	2,660.0	3,059.0	3,517.9	4,045.6	4,652.4	5,350.3
Cost of goods sold	600.0	690.0	793.5	912.5	1,049.4	1,206.8	1,387.8	1,596.0	1,835.4	2,110.7	2,427.3	2,791.4	3,210.2
Gross profit	400.0	460.0	529.0	608.4	699.6	804.5	925.2	1,064.0	1,223.6	1,407.2	1,618.2	1,861.0	2,140.1
Gross margin	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Maintenance SG&A	200.0	230.0	264.5	304.2	349.8	402.3	462.6	532.0	611.8	703.6	809.1	930.5	1,070.1
Investment SG&A													
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Operating margin	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Taxes	40.0	46.0	52.9	60.8	70.0	80.5	92.5	106.4	122.4	140.7	161.8	186.1	214.0
NOPAT	160.0	184.0	211.6	243.3	279.8	321.8	370.1	425.6	489.4	562.9	647.3	744.4	856.0
Investment	240.0	276.0	396.7	456.3	524.7	804.5	925.2	1,064.0	1,223.6	1,407.2	1,618.2	1,861.0	535.0
Free cash flow	(80.0)	(92.0)	(185.1)	(212.9)	(244.9)	(482.7)	(555.1)	(638.4)	(734.2)	(844.3)	(970.9)	(1,116.6)	321.0
PV of FCF		(85.2)	(158.7)	(169.0)	(180.0)	(328.5)	(349.8)	(372.5)	(396.6)	(422.4)	(449.7)	(478.9)	127.5
Sum of PV of FCF													(3,263.9)
Continuing value													10,700.5
PV of CV													4,249.3
Corporate value													985.4
Invested capital	1,000.0	1,276.0	1,672.8	2,129.0	2,653.7	3,458.3	4,383.5	5,447.5	6,671.1	8,078.2	9,696.5	11,557.4	12,092.5
ROIC		16.2%	14.4%	12.8%	11.7%	10.5%	9.4%	8.7%	8.1%	7.6%	7.3%	7.0%	7.2%

Source: Counterpoint Global.

Note: SG&A=selling, general, and administrative expense; NOPAT=net operating profit after taxes; PV=present value; FCF=free cash flow; CV=continuing value; ROIC=return on invested capital (invested capital=average of current and prior year).

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Endnotes

[1] Antonio R. Damasio, M.D., "Aphasia," *New England Journal of Medicine*, Vol. 326, No. 8, February 20, 1992, 531-539.
[2] For example, Warren Buffett, Chairman and Chief Executive Officer of Berkshire Hathaway and a renowned investor, has said, "Accounting is the language of business, and you have to be as comfortable with that as you are with your own native language to really evaluate businesses." See "CNBC Excerpts: Billionaire Investor Warren Buffett on CNBC's 'Squawk Box' Today," *CNBC.com*, March 2, 2015.
[3] Nilabhra Bhattacharya, Ervin L. Black, Theodore E. Christensen, and Chad R. Larson, "Assessing the Relative Informativeness and Permanence of Pro Forma Earnings and GAAP Operating Earnings, *Journal of Accounting and Economics*, Vol. 36, Nos. 1-3, December 2003, 285-319 and Dirk E. Black, Theodore E. Christensen, Jack T. Ciesielski, and Benjamin C. Whipple, "Non-GAAP Reporting: Evidence from Academia and Current Practice," *Journal of Business Finance & Accounting*, Vol. 45, No. 3-4, March/April 2018, 259-294.
[4] Vijay Govindarajan, Anup Srivastava, and Rong Zhao, "Mind the GAAP," *Harvard Business Review*, May 4, 2021; Asher B. Curtis, Sarah E. McVay and Benjamin C. Whipple, "The Disclosure of Non-GAAP Earnings Information in the Presence of Transitory Gains," *Accounting Review*, Vol. 89, No. 3, May 2014, 933-958; Patricia M. Dechow, Richard G. Sloan, and Jenny Zha, "Stock Prices and Earnings: A History of Research," *Annual Review of Financial Economics*, Vol. 6, 2014, 343-363; and Ethan Rouen, Eric C. So, Charles C.Y. Wang, "Core Earnings: New Data and Evidence," *Journal of Financial Economics*, Vol. 142, No. 3, December 2021, 1068-1091. The S&P 500® Index measures the performance of the large cap segment of the U.S. equities market, covering approximately 80% of the U.S. equities market. The Index includes 500 leading companies in leading industries of the U.S. economy.
[5] Richard G. Sloan, "Fundamental Analysis Redux," *Accounting Review*, Vol. 94, No. 2, March 2019, 363-377.
[6] Michael J. Mauboussin and Dan Callahan, "Categorizing for Clarity: Cash Flow Statement Adjustments to Improve Insights," *Consilient Observer: Counterpoint Global Insights*, October 6, 2021.
[7] Feng Gu, Baruch Lev, and Chenqi Zhu, "All Losses Are Not Alike: Real versus Accounting-Driven Reported Losses," *SSRN Working Paper*, May 2022.
[8] The researchers capitalize research and development (R&D) "using industry-specific R&D capitalization and amortization rates" and "capitalize one-third of the current year's SG&A expenses." See Gu, Lev, and Zhu, "All Losses Are Not Alike." For a recent paper that estimates the percentage of SG&A and R&D that are investment, along with asset lives, by industry see Aneel Iqbal, Shivaram Rajgopal, Anup Srivastava, and Rong Zhao, "Value of Internally Generated Intangible Capital," *Working Paper*, February 2022.
[9] Tangible assets are depreciated, and intangible assets are amortized.
[10] The 40 percent figure is from Gu, Lev, and Zhu. For a discussion on the impact of capitalizing intangible investments, see Michael J. Mauboussin and Dan Callahan, "Intangibles and Earnings: Improving the Usefulness of Financial Statements," *Consilient Observer: Counterpoint Global Insights*, April 12, 2022.
[11] Michael J. Mauboussin and Alfred Rappaport, *Expectations Investing: Reading Stock Prices for Better Returns—Revised and Updated* (New York: Columbia Business School Publishing, 2021).
[12] Gu, Lev, and Zhu, "All Losses Are Not Alike," Figure 4A.
[13] Feng Gu and Weimin Wang, "The Effect of R&D Investment on Future Earnings Uncertainty: New Evidence," *SSRN Working Paper*, January 12, 2012.
[14] "Statement of Financial Accounting Standards No. 2: Accounting for Research and Development Costs," *Financial Accounting Standards Board*, October 1974. For a more detailed history of accounting for R&D, see Paul E. Nix and David E. Nix, "A Historical Review of the Accounting Treatment of Research and Development Costs," *Accounting Historians Journal*, Vol. 19, No. 1, June 1992, 51-78.

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