Dark Accounting Matter

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Physicists calculate that approximately 85% of the matter in the universe is composed of "dark matter" that "does not absorb, reflect, or emit electromagnetic radiation and is therefore difficult to detect." The S&P 500 currently trades at a price to book value of 4.2, suggesting that book value accounts for less than 20% of the S&P 500's market value. The remaining 80%, appears nowhere in these firms' balance sheets—it is invisible to contemporary accounting techniques and constitutes "dark accounting matter."

Some "dark accounting matter" is composed of factors commonly described as components of "ESG." Human capital, for example, is an intangible asset omitted from balance sheets, and is commonly categorized under the S in ESG. Other intangible assets do, however, appear on the balance sheet. This asymmetric treatment is increasingly difficult to defend as the divergence between book and market value increases, especially as some intangible assets, such as intellectual property, may or may not appear on the balance sheet depending on how they were financed.

This Article seeks to stimulate discussion about how accounting and disclosure rules apply to ESG and other intangibles. I highlight the increasing irrelevance of traditional Generally Accepted Accounting Principles and urge that accounting practice and policy expand to capture at least some factors contributing to dark accounting matter. More precisely, issuers can be asked to describe and discuss factors that contribute to the difference between their market and book values, and to provide tailored disclosures that seek to shed light on that difference.

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1. Introduction

Just as much matter is difficult to see, so is the value now attributed to modern corporations.[1] The past decades have seen significant growth in (internally-developed) intangible assets that are omitted from the balance sheet—assets that I call "dark accounting matter." By some estimates, 90% of the value of S&P 500 firms in 2020 was derived from intangible assets—a far cry from the estimated 17% that was derived from intangibles in 1975.[2] This estimate is generally consistent with the S&P 500's current price to book ratio of 4.2, which suggests that roughly 80% of the value of the firms in that index is not captured by book value.[3]

In this Article, I explain that dark accounting matter has become a significant limitation on the relevance of financials reported under Generally Accepted Accounting Principles (GAAP). Indeed, despite the longstanding and highly significant relationship between stock prices and GAAP financials—and the underlying theory explaining this finding—recent research shows that this relationship has begun to fade.[4] This Article identifies dark accounting matter as one reason for the increasing irrelevance of GAAP financials for investors, managers, and regulators—and provides a path forward for policymakers interested in ensuring that financial statements remain useful to the constituents they were designed to serve.

Dark accounting matter arises because internally-developed intangibles (e.g., an internally developed patent) are typically valued at zero under GAAP. This means that these intangibles are omitted from the balance sheet, causing the value of assets on the balance sheet to be systematically underrepresented. Further, because these intangibles are not included on the balance sheet, they are not subject to the same type of ongoing disclosure and audit scrutiny that is provided for assets on the balance sheet.[5] Further, this accounting treatment leads to differences in the accounting rules for investment as well, as investments in internally-

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[1] *See, e.g.*, Virginia Trimble, *Existence and Nature of Dark Matter in the Universe*, 25 ANN. REV. ASTRON. & ASTROPHYSICS 425 (1987).
[2] See *infra* Section 2.b.
[3] YCHARTS, S&P 500 PRICE TO BOOK RATIO (I:SP500PBR): 4.191 FOR Q2 2023, https://ycharts.com/indicators/sp_500_price_to_book_ratio (last visited Feb. 6, 2024). (Showing a price to book ratio of 4.191 for the S&P 500 in Q2 2023.)
[4] See *infra* Section 2.b.
[5] See *infra* Section 2.

developed intangibles are typically expensed while investments in physical property are capitalized.[6]

This paper explains how these accounting standards reduce the relevance of GAAP financials in a market increasingly made up of dark accounting matter. I also highlight four key trends showing the declining value of GAAP financials. First, off-balance sheet intangible assets have grown considerably over the past decades, in line with changing patterns in the economy and growth in high-intangible industries such as healthcare and information technology. Second, consistent with the growth in intangibles, the difference between market value and book value has also grown considerably. Third, the number of firms that report a net loss under GAAP has greatly increased; nearly 50% of listed firms report negative net income. Fourth, there has been an explosion in reporting of "non-GAAP" measures, and many investors rely on these non-GAAP measures more than GAAP measures.

The growing obsolescence of GAAP financials leads to challenges for investors, managers, and market participants who rely on quantitative measures of materiality. Investors do not have the information they need for fundamental analysis. Managers must reconsider how to communicate with the market and arguably face poor incentives created by inconsistencies in accounting rules. And market participants who attempt to rely on quantitative measures of materiality, such as auditors, will find themselves stymied. How, for example, can one assess materiality on the commonly used standard of 5% of pretax GAAP income if pretax income is negative?

I argue that the growth in dark accounting matter provides a helpful lens through which to view the recent emergence of disclosures related to ESG. As the value of off-balance sheet assets has increased, investors have understandably demanded more information about those assets. After all, they must attempt to understand and value these off-balance sheet assets. And some of these off-balance sheet intangible assets fall under what is commonly considered to be ESG.

Perhaps the best example is information about a company's human capital. Managers commonly proclaim that their employees are their most valuable asset, and research provides much reason to believe that human capital contributes to firm value. However, there is no "human

[6] If a firm invests in physical property, the spending will reduce net income only as the value of the property declines (i.e., the asset purchased is capitalized). By contrast, if a firm invests in internally-developed intangibles through research & development, the spending typically reduces net income as it is incurred. *Id.*

capital" asset on the balance sheet, and accounting rules require very little disclosure about a firm's workforce. Viewed this way, it is not surprising that investors have become increasingly vocal in their demands for information about human capital. A growing number of investment firms now incorporate human capital strategies in their investment criteria, and research finds that human-capital focused investment strategies generate abnormal returns. Thus, the question may be not why investors want this type of information, but rather why it should be treated differently than the other intangible assets that currently comprise accounting dark matter.

I propose new disclosures that will provide information on intangible assets more generally, whether those intangibles are traditional internally-developed intangible assets (e.g., patents) or ESG-related intangibles (e.g., human capital). My proposal would negate the need for a separate ESG disclosure regime and would capture many of the intangibles that have been omitted under GAAP. Moreover, it would be tailored to each firm, accommodating the wide variation in intangibles across firms and industries.

Specifically, I propose that managers be required to disclose what they believe drives the difference between market value and book value, and to report information on the key intangible assets driving that differential using standardized templates. For example, if a firm has a book value of $200 million and a market value of $1 billion, the firm's managers would be asked to disclose what they believe drives that $800 million difference. If the firm stated that it believes its human capital and patent portfolio drive the difference, it would need to report standardized disclosures on its human capital and patent portfolio. To ensure consistency with existing disclosures and minimize the cost of new ones to issuers, I suggest these disclosures be subject to a materiality threshold.

There are two key features of my proposal. First, the proposal results in tailored but comparable disclosures. The types of intangibles will be tailored to each company, as each company will identify the specific intangibles that drive the difference between their market and book values. However, to allow for comparable disclosures, the proposal requires that firms disclose standardized information about each intangible they identify. Given that peer companies often have similar assets, this should allow for comparability across peer companies.

Second, I advocate for a "disclosure-only" approach. In other words, I do not suggest capitalizing intangibles that are currently off-balance sheet. Instead, I propose giving investors key information on those assets—and allowing them to incorporate the information into financial analyses as each investor sees fit. For example, a standardized template for human capital could include information such as headcount (broken into full-time, part-time, and contingent), total labor costs (broken down by type of compensation), and turnover. These disclosures would allow investors to incorporate human capital into their own valuation through, for example, adjusting the cost of capital or capitalizing a portion of compensation.

This paper proceeds as follows. Section 2 describes the traditional role of accounting in securities markets and identifies key trends highlighting the growing irrelevance of GAAP financials. Section 2 also explains the challenges posed by the information loss associated with GAAP financials—and explanations for why accounting standard-setters have failed to modernize accounting principles. Section 3 uses human capital as a case study to argue that some of what we consider ESG can be viewed as akin to traditional intangible assets. Section 4 describes this Article's disclosure proposal, its key features, and notable criticisms policymakers should consider carefully. Section 5 concludes.

2. The Role of Accounting in Securities Markets

Securities law requires that issuers provide financial statements that adhere to Generally Accepted Accounting Standards (GAAP).[7] These statements have long been considered the key to asset pricing, as they form the basis of valuation. As I describe below, however, more recent evidence indicates GAAP financials explain less of stock pricing than in prior decades. As described by two academics, "the ubiquitous financial reports have become useless in capital market decisions."[8]

In this section, I begin with a brief description of the traditional role of GAAP financials in securities markets. Thereafter, I highlight four key trends identifying the growing obsolescence of GAAP financial reporting: (1) the growth of off-balance sheet intangible assets, (2) the growing disconnect between market value and book value, (3) the increasing number of lossmaking firms, and (4) the increasing use of non-GAAP metrics.

These trends create problems for investors, managers, and participants in securities litigation. Without adequate information, investors face difficulty in performing fundamental analysis. Managers,

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[7] Application of Regulation S-X, 17 C.F.R. § 210.1-01-210.1.02 (2024).

[8] BARUCH LEV & FENG GU, THE END OF ACCOUNTING AND THE PATH FORWARD FOR INVESTORS AND MANAGERS, abstract (2016), https://www.wiley.com/en-us/The+End+of+Accounting+and+the+Path+Forward+for+Investors+and+Managers-p-9781119191094.

too, need this information—and its omission from accounting arguably creates poor incentives. The disconnect between book and market value further poses issues for market participants, such as auditors, who use objective measures of materiality.

Of course, accounting standard-setters are aware of the trends highlighted and the resulting difficulties they pose. This leads to questions as to why these standard-setters have not taken action to counteract the trends. I conclude this section with a brief discussion as to possible explanations.

a. Importance of financial reporting in securities markets.

Under standard financial theory, the value of a company's equity is equal to the present value of expected cash flows that will be available to the equity-holders.[9] Therefore, a common valuation approach is to estimate the free cash flows that will accrue to the company in each year until it enters its terminal state, and to then discount all future free cash flows, including those in the terminal state, to today's present value. From there, analysts can determine the value of equity by subtracting the market value of the company's debt.[10] The financial statements are key to this analysis. The estimation of free cash flows in each year relies heavily on the income statement, and inputs from additional GAAP disclosures help to round out those estimates.[11]

The importance of valuation—and its heavy reliance on financials reported under GAAP—help to explain the significant value of accounting information, as evidenced by its wide dissemination. Paid services such as CapIQ, Bloomberg, and Compustat disseminate financial data in machine-readable format, allowing for easier analysis.[12] By contrast, even if these

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[9] CFI Team, *DCF Model Training Free Guide*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/financial-modeling/dcf-model-training-free-guide/ (last visited Feb. 6, 2024).

[10] *Id.*

[11] TIM Vipond & Jeff Schmidt, *Free Cash Flow (FCF) Formula*, CORP. FIN. INST. (CFI), https://corporatefinanceinstitute.com/resources/valuation/fcf-formula-free-cash-flow/ (last visited Feb. 6, 2024).

[12] DST Systems, Inc., *Introduction to Standard & Poor's Compustat*, FIDELITY, https://www.fidelity.com/learning-center/trading-investing/fundamental-analysis/introduction-to-compustat (last visited Feb. 6, 2024); Tim Vipond, *CapIQ: Guide to using Capital IQ,* CORP. FIN. INST. (CFI),https://corporatefinanceinstitute.com/resources/valuation/capiq/ (last visited Feb. 6, 2024); BLOOMBERG PROFESSIONAL SERVICES, REGULATORY AND

same services provide access to other parts of the 10-K or 10-Q, those parts are more difficult to access—presumably because investors rely less heavily on these other areas and do not demand the information.[13]

Given the importance of accounting numbers in valuation, it is no surprise that decades of empirical research in accounting and finance have shown the connection between financial reporting and stock pricing.[14] However, more recent research finds that this connection has declined. These studies show that the usefulness of earnings, cash flows, and book equity values has deteriorated in the past two decades.[15] For example, in 1950, reported earnings and book value explained over 90% of market value, but this same accounting information explained only around 50% of market value in 2013.[16] As discussed in the next section, one explanation for this finding is the growth of internally-developed intangibles.

b. Growing obsolescence of GAAP.

Despite its prominence, recent years have witnessed a decline in the value-relevance of GAAP financials. As explained below, the growth

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ACCOUNTING DATA: CONTENT AND DATA, https://www.bloomberg.com/professional/product/regulatory-accounting-data/ (last visited Feb. 6, 2024).

[13] For example, CapIQ makes the financial numbers more easily available than it does other parts of the 10-K. Financial numbers are on the first page when you access a company's profile. Other disclosures are not as prominent. For example, the full 10-K is buried within a section on SEC documents, where the section of SEC documents is contained within a very large menu of items.

[14] This literature often traces its origin to 1968. Ray Ball & Philip Brown, *An Empirical Evaluation of Accounting Income Numbers*, 6 J. ACCT. RES. 159-78 (1968); *see also* William H. Beaver, *The Information Content of Annual Earnings Announcements*, 6 J. ACCT. RES., 67-92 (1968); Ross Watts & Jerold L. Zimmerman, *Positive Accounting Theory*, 68 ACCT. REV. 131-56 (1990).

[15] Baruch Lev & Paul Zarowin, *The Boundaries of Financial Reporting and How to Extend Them,* 37 J. ACCT. RES. 353, 358 (1999), https://www.jstor.org/stable/2491413. Although we focus here on the problems caused to investors, it is worth noting that the omission of internally developed intangibles also poses difficulties to managers and arguably creates poor incentives. *See e.g.*, Anup Srivastava, et. al., *Hiding in Plain Sight, or Sticking Out Like a Sore Thumb? The Wealth of Intangibles,* CAL. REV. MGMT. (CMR), (Oct. 13, 2023), https://cmr.berkeley.edu/2023/10/hiding-in-plain-sight-or-sticking-like-sore-thumb-the-wealth-of-intangibles/.

[16] *See* LEV & GU, *supra* note 8.

of internally developed intangibles—so-called "dark accounting matter"—has led to a series of complications. I begin with key trends highlighting this phenomenon. I then explain the resulting complications and provide potential explanations for why accounting standard-setters have yet to address dark accounting matter.

I. Key trends.

This section describes four key trends that reflect the growing gap in accounting information. First, I highlight the growth of off-balance sheet intangible assets. Second, I explain how these intangible assets have caused a growing disconnect between market value and book value. Third, I highlight the increasing number of net loss firms, and explain that this could be caused by the inconsistencies in how accounting rules treat investments. Finally, I highlight the increasing use and reliance of non-GAAP measures.

i. Growth of intangible assets.

Over the past decades, the value of intangible assets has grown significantly. Intangible assets are those that lack physical form. Common intangible assets include goodwill, knowledge-based assets, and intellectual property. [17] By contrast, tangible assets have physical form and typically depreciate over time. Common examples include inventory, property, plant, & equipment (PPE), and land.[18]

The distinction between tangible and intangible assets is critical because the accounting treatment for tangible assets differs significantly from that for internally-developed intangible assets. Under GAAP, tangible assts are capitalized—meaning that they are recorded as an asset on the balance sheet. When those assets decline in value (e.g., when they are used), the decline in value is recognized as an expense on the income statement.[19] By contrast, internally-developed intangible assets are oft valued at zero on the balance sheet, and the funds used to finance the

[17] PETER D. EASTON ET AL., FINANCIAL ACCOUNTING FOR MBAS at 2-5–2-6 (8TH ED. 2021).

[18] *Id*. See also CFI Team, *Tangible Assets*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/accounting/what-are-tangible-assets/ (last visited Feb. 6, 2024).

[19] EASTON ET AL., FINANCIAL ACCOUNTING FOR MBAS at 6-3.

development of those intangible assets are expensed on the income statement as incurred rather than when the asset is used.[20]

The intuition for treating tangible assets differently than internally-developed intangible assets is that tangible assets, which are typically purchased from an external source, have a known market value: the purchase price.[21] Therefore, these assets are valued initially at the purchase price and depreciated over their useful life. By contrast, the market value of an internally-developed intangible asset is uncertain. For example, imagine that a company developed its own patented technology. The value of that technology would be unclear because there is no observable market price. As such, these assets are typically valued at substantially below their market value; often at zero.

The practical effect of valuing internally-developed intangible assets at zero is that the balance sheet substantially understates the total value of a company's assets. It also leads to inconsistencies when comparing across companies; a company that has acquired its assets will have a greater asset value than a company that develops its assets internally.[22] Further, assets missing from the balance sheet are more likely to be deemed immaterial by auditors and regulators, meaning that disclosures related to these assets will be minimal.[23]

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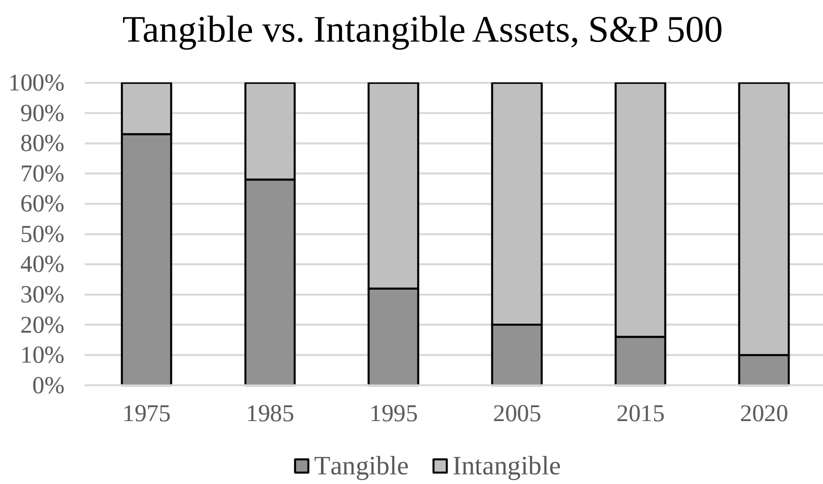
[20] Antonella Puca & Mark Zyla, *The Intangible Valuation Renaissance: Five Methods*, CHARTERED FIN. ANALYST (CFA) INST., (Jan. 11, 2019), https://blogs.cfainstitute.org/investor/2019/01/11/a-renaissance-in-intangible-valuation-five-methods/. ("Under GAAP, internally developed intangible assets tend not to appear on the balance sheet and related costs are expensed as incurred.") Although companies can often capitalize a small amount of the total costs spent to develop an intangible asset, most costs are expensed as incurred. EASTON ET AL., FINANCIAL ACCOUNTING FOR MBAS at 2-5–2-6. *See also* Thomas Canace et al., *Accounting for R&D: Evidence and Implications*, 39 CONTEMP. ACCT. RES., 2212-33 (2022) (surveying 184 experienced financial officers and finding that 22% of annual R&D expenses are capitalized in any year).

[21] *See* EASTON ET AL., *supra* note 17, at 2-6. Although internally-developed tangible assets would also be omitted from the balance sheet, internally-developed assets are very disproportionately intangible rather than tangible. *See* Shivaram Rajgopal, *What's In SGA?*, FORBES (Aug. 2, 2021, 2:00 PM), https://www.forbes.com/sites/shivaramrajgopal/2021/08/02/whats-in-sga/?sh=66978a75237d.

[22] Puca & Zyla, *The Intangible Valuation Renaissance: Five Methods*, https://blogs.cfainstitute.org/investor/2019/01/11/a-renaissance-in-intangible-valuation-five-methods/

[23] *See* George S. Georgiev, *Too Big to Disclose: Firm Size and Materiality Blindspots in Securities Regulation*, 64 UCLA L. REV. 602, 617, 637–39 (2017).

By some estimates, 90% of today's S&P 500 market value reflects intangible assets. For example, a 2021 study by Ocean Tomo study shows that the percentage of intangible assets increased from 17% in 1975 to 90% in 2020.[24] This study is illustrated visually in Figure 1 below. To understand the transition from tangible to intangible assets, consider that historically assets of big public companies were tangible assets. This has changed over time, however, as recent decades have seen the growth of intangibles-heavy industries such as information technology and healthcare.[25] The largest companies traded on the NYSE and Nasdaq (by market value) are all technology companies: Apple, Microsoft, Alphabet, Amazon, and NVIDIA.[26]



SOURCE: OCEAN TOMO INTANGIBLE ASSET MARKET VALUE STUDY (2021)

Shivaram Rajgopal, *Amazon Spends $42 Billion on R&D But The 10K Discusses R&D In 300 Words*, FORBES (Mar. 8, 2021, 8:40 AM), https://www.forbes.com/sites/shivaramrajgopal/2021/03/08/amazon-spends-42-billion-on-rd-but-devotes-less-than-300-words-of-disclosure-in-its-10k.

[24] INTANGIBLE ASSET MARKET VALUE STUDY, OCEAN TOMO (A PART OF J.S. HELD) (2020), https://oceantomo.com/intangible-asset-market-value-study/.

[25] Colleen Honigsberg & Shivaram Rajgopal, *Wage Wars: The Battle Over Human Capital Accounting*, 12 HARV. BUS. L. REV. 275-314 (2022).

[26] *Biggest Companies by Market Cap*, STOCK ANALYSIS, https://stockanalysis.com/list/biggest-companies/ (last visited Feb. 6, 2024).

ii. Ratio of market value to book value.

The growth in internally-developed intangibles—which, as mentioned previously, are typically not reported on the balance sheet—is thought to drive the disconnect between market value and book value. Whereas market value represents the market's estimate of equity value (i.e., the present value of all cash flows that will be available to the equity-holders), book value under GAAP equals total assets minus total liabilities.[27] In theory, it represents the value that shareholders would receive if the firm were to be liquidated.

Book value and market value reflect theoretically different measures of value, so they are unlikely to equal one another. Nonetheless, it is notable how much they have diverged over the past few decades. For example, one analysis found that "in 1978 a company's book value was typically 95% of market value, whereas by 1998 its book value was typically 28% of market value."[28] In essence, this means that, in the late 1970s, the price per share was slightly higher than the book value per share under GAAP. Since that point, however, these values have separated. Although the increase in market value to book value has not been monotonic, there has been a consistent trend that the market price per share has risen more rapidly than book value per share.[29]

This is consistent with the trend in the growth of intangibles noted above. Even if valued at zero for accounting purposes, internally-developed intangible assets are valuable—and the market can (and does) incorporate that value.[30] As such, market value rises far faster than book

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[27] EASTON ET AL., *supra* note 17, at 2-11.

[28] Andy Neely, et al., *Measuring Corporate Management and Leadership Capability*, CTR. FOR BUS. PERF. AT CRANFIELD SCH. OF MGMT. (2002), https://dspace.lib.cranfield.ac.uk/bitstream/handle/1826/1223/CEML%20Report.pdf?sequence=1&isAllowed=y.

[29] Bruce H. Nearon, *Intangible Assets: Framing the Debate*, THE CPA J., http://archives.cpajournal.com/2004/104/text/p34.htm (last visited Feb. 6, 2024). *See also*, David Trainer, *How Price to Book Misleads Investors*, FORBES, (Dec. 17, 2018), https://www.forbes.com/sites/greatspeculations/2018/12/17/how-price-to-book-misleads-investors/?sh=74baedfc4b65.

[30] EASTON ET AL., *supra* note 17, at 2-11. Stephen Diorio & Thought Leaders, *Professor Neil Bendle: Why Investors need Better Measures and Reporting of Marketing Performance*, FORBES, (June 26, 2018), https://www.forbes.com/sites/forbesinsights/2018/06/26/professor-neil-bendle-why-investors-need-better-measures-and-reporting-of-marketing-

value. However, if such a significant portion of market value is not captured under book value, it begs the question as to the relevance of the underlying financials today relative to prior eras. For example, the ratio of market value to book value today is roughly 4.2, indicating that 80% of firm value is not captured by GAAP—a far cry from the roughly 5% value in the 1970s.[31]

iii. Increasing number of net-loss firms.

The very substantial asset value missing from the balance sheet likely explains a significant part of the growing disconnect between stock price and GAAP financials. However, that explanation alone is incomplete. Another factor, and a consequence of the accounting treatment for internally-developed assets versus acquired assets, is that different types of investment are treated differently under GAAP.

Consider the accounting treatment if a company invests in the purchase of new manufacturing equipment. This company will capitalize the value of that equipment—meaning that it will create an asset on its balance sheet equal to the value it paid for the equipment.[32] As noted above, the initial purchase will not affect the income statement. Instead, the company incurs the expense for that equipment when the equipment declines in value—e.g., through depreciation expense, where the amount of the depreciation expense is meant to capture the reduced value of the equipment as the company uses it.[33] In other words, the expense of the equipment is matched to the period in which the company uses the equipment. Further, the equipment will be described in a note to the financial statements, providing ongoing information about its value.[34]

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performance/?sh=a7e357c1a43e. ("Many business assets aren't treated as such in accounting leaving financial reports seemingly unconnected to business reality. At year end the accounting book value of Apple was about a sixth of its market value. This is not atypical – Starbucks' book value was around a fourteenth of its market value.")

[31] YCHARTS, *supra* note 3 (showing a price to book ratio of 4.191 for the S&P500 in Q2 2023).

[32] *See* EASTON ET AL., *supra* note 17, at 2-5.

[33] *See id.* at 6-11.

[34] *See* FINANCIAL ACCOUNTING STANDARDS BOARD, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 360-10 (1993), https://asc.fasb.org/viewpage?ovcmd=goto&codification_text=360-10&codification_submit=GO+TO.

By contrast, consider the accounting treatment for a company that invests in research and development (R&D). The accounting expense associated with that R&D will be closely tied to when the cash outflow occurs.[35] Moreover, the R&D expense will not create a corresponding asset because, as mentioned previously, internally-developed intangibles are generally valued at zero. As such, a company that invests heavily in R&D may appear to have minimal assets and negative net income—but may actually have substantial intangible assets that are omitted under GAAP.[36]

This inconsistency in accounting for investment is likely a factor in the nearly 50% of listed companies that report negative net income but have a positive market capitalization.[37] As shown below in Figure 2, the percentage of companies that are listed for sale in the US[38] but report negative net income has grown significantly over time.[39] Although it has declined slightly since then, the percentage of net-loss firms topped 50% for the first time in 2020.

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[35] *See id.*; *Capitalizing R&D Expenses*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/knowledge/accounting/capitalizing-rd-expenses/ (last visited Feb. 6, 2024). R&D expenses are typically expensed because it is unclear whether they will be successful. However, this approach can be contrasted with accounting rules for inventory, which allow for the capitalization of input costs such as labor.

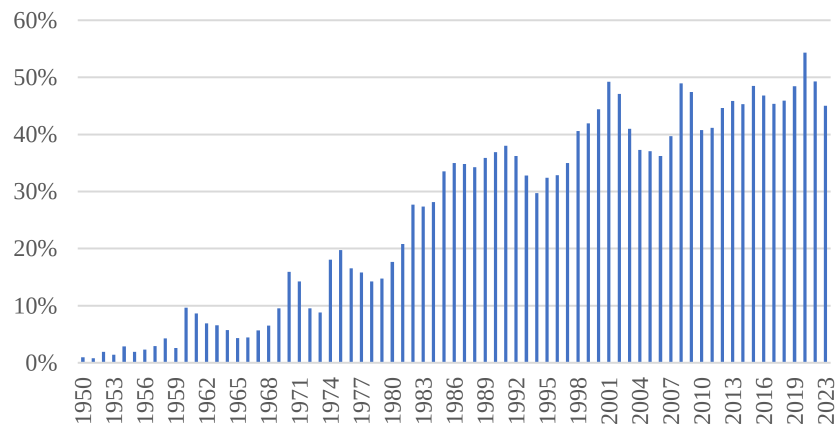
[36] *See* EASTON ET AL., *supra* note 17, *at* 5-23.

[37] A common explanation for the growth in net-loss companies is that these are likely younger companies that hope to become profitable as they grow and scale, and that companies at this stage of life would not have gone public in the past. Although we do not disagree with this explanation, we note that historical firms likely would have invested in tangible assets that they could capitalize, thus allowing them to show earlier profitability under GAAP even holding constant future expectations of cash flows.

[38] This figure includes firms that can be purchased on the NYSE, American SE, OTC Bulletin Board, NASDAQ-NMS, NASDAQ OMX, Midwest Exchange, NYSE Arca, Philadelphia Exchange, or other OTC markets.

[39] For more information on the database, see *Compustat Fundamentals*, S&P GLOB., https://www.marketplace.spglobal.com/en/datasets/compustat-fundamentals-(8) (last visited Feb. 6, 2024).

Percentage of Net-loss Firms by Year



These net-loss firms generally have smaller market capitalization than their profitable peers (and are more frequently traded on secondary exchanges), but lossmaking firms represent 5-17% of total market capitalization in each year from 1998 to 2022.[40] And several of these firms are common household names. Uber, Amazon, Slack, and Tesla, for example, were all valued by investors at billions of dollars before turning a profit under GAAP.[41] Presumably, investors hope that these firms will

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[40] This figure was calculated annually for all firms listed for sale in the US. It is based on Compustat data. Although the data have been updated, this analysis was originally included in Honigsberg & Rajgopal, *Wage Wars*, *supra* note 25.

[41] Dave Royse, *Here's How Long It Took Amazon to Reach a $100B Market Cap*, BENZINGA (Mar. 10, 2020), https://www.benzinga.com/general/education/20/03/15517613/heres-how-long-it-took-amazon-to-reach-a-100b-market-cap; Juan Carlos Perez, *Amazon Records First Profitable Year in Its History*, COMPUTERWORLD (Jan. 28, 2004), https://www.computerworld.com/article/2575106/amazon-records-first-profitable-year-in-its-history.html; Matthew DeBord, *Tesla Stock Is Up over 3,000% Since the Company's 2010 IPO. Here's How That Remarkable Level Was Achieved, Year-By-Year.*, BUS. INSIDER (June 16, 2020, 4:45 AM), https://www.businessinsider.com/how-tesla-stock-went-up-since-ipo-timeline-2020-6; Michael Wayland & Lora Kolodny, *Tesla's Market Cap Tops the 9 Largest Automakers Combined – Experts Disagree about If That Can Last*, CNBC (Dec. 14, 2020, 3:08 PM), https://www.cnbc.com/2020/12/14/tesla-valuation-more-than-nine-largest-carmakers-combined-why; Neal E. Boudette, *Tesla Has First Profitable Year, but Competition Is Growing*, N.Y. TIMES (Jan. 27, 2021), https://www.nytimes.com/2021/01/27/business/tesla-earnings.html; Preetika Rana, *Uber's Business is Finally Making Money After Years of Losses*, WALL ST. J. (Aug. 1, 2023, 11:40 PM EST), https://www.wsj.com/articles/uber-q2-

improve their margins and become profitable as they scale.[42] However, the disconnect between GAAP income and market value raises questions about GAAP's ability to distinguish between expenses that reduce the value of the firm and investments that create future value.[43] More generally, that such a large portion of firms report negative net income again raises questions about GAAP financials.

iv. Use and reliance on non-GAAP financials.

Given the aforementioned limitations of GAAP, it is unsurprising that companies commonly report so-called "non-GAAP" financial metrics. Non-GAAP financial measures are defined as those that include or exclude amounts from the most directly comparable GAAP measure.[44] Businesses commonly use these non-GAAP metrics to communicate with investors, as they say that these non-GAAP metrics allow them to supplement the GAAP financials—or even to communicate information that better reflect the company's reality than standard GAAP metrics.[45]

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earnings-report-2023-453c335a; *Slack Announces Strong Fourth Quarter and Fiscal Year 2021 Results*, BUSINESSWIRE (Mar. 4, 2021, 4:05 PM), https://www.businesswire.com/news/home/20210304005983/en/Slack-Announces-Strong-Fourth-Quarter-and-Fiscal-Year-2021-Results; *Market capitalization of Slack (WORK)*, COMPANIESMARKETCAP, https://companiesmarketcap.com/slack/marketcap/#:~:text=Market%20cap%3A%20%2426.51%20Billion,cap%20according%20to%20our%20data (last visited Feb. 6, 2024).

[42] Aytekin Ertan et al., *Do Profit Margins Expand for High Growth Firms?*, 32 J. MGMT. ACCT. RSCH. 118 (2020) ("To illustrate how frequently scale efficiencies are invoked for IPOs, we search for the term 'scale' in the registration filings and sell-side analyst reports initiating coverage for the 20 largest IPOs in 2018 . . . [F]or all but two firms we find numerous references to margins improving with scale in both sets of documents.").

[43] *See* Honigsberg & Rajgopal, *Wage Wars*, *supra* note 25, at 292 ("Uber tends to characterize its accounting losses as "investment losses"—that is, fixed costs incurred and expensed today, but that will build market share and yield future revenues.").

[44] TOPIC 8 – NON-GAAP MEASURES OF FINANCIAL PERFORMANCE, LIQUIDITY, AND NET WORTH, U.S. SEC (Sept. 30, 2008), https://www.sec.gov/corpfin/cf-manual/topic-8#:~:text=8120Definition%20of%20a%20Non%2DGAAP%20Financial%20Measure&text=includes%20amounts%2C%20or%20is%20subject,measure%20so%20calculated%20and%20presented.

[45] CFI Team, *Non-GAAP Earnings*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/accounting/non-gaap-

Common non-GAAP metrics include EBITDA (Earnings Before Interest, Taxes, Depreciation & Amortization) and Free Cash Flow.[46] For many companies, the market relies more heavily on non-GAAP earnings than GAAP earnings in valuation.[47]

Reporting of non-GAAP metrics has skyrocketed over the past two decades. Audit Analytics collects non-GAAP disclosures reported in issuers' 8-K and 10-K filings, and it finds a significant increase in the usage of non-GAAP for S&P 500 firms. First, using data from 1996, 2006, and 2016, Audit Analytics shows the percentage of filers using non-GAAP increased from 59% to 76% to 96%, respectively. Second, using these same years, the number of metrics reported per filing increased from 2.35 to 3.47 to 7.45, respectively.[48]

The increased use of non-GAAP is not without controversy. On the one hand, the growing use of non-GAAP may allow companies to better communicate with their investors.[49] For example, one study observes that investors find non-GAAP earnings to be more informative than GAAP earnings.[50] On the other hand, some commentators argue that

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earnings/#:~:text=Why%20are%20Non%2DGAAP%20Earnings,that%20expense%20under%20GAAP%20rules (last visited Feb. 6, 2024).

[46] *Id.*

[47] Jian Zhang, *Learning From the Current Research on Non-GAAP Financial Measures*, THE CPA J., (July 2019), https://www.cpajournal.com/2019/07/31/learning-from-the-current-research-on-non-gaap-financial-measures/ (last visited Feb. 6, 2024). ("Several studies have documented that investors respond more to non-GAAP earnings than to GAAP earnings.")

[48] Jessica McKeon, *Long-Term Trends in Non-GAAP Disclosures: A Three-Year Overview*, AUDITANALYTICS (Oct. 10, 2018), https://blog.auditanalytics.com/long-term-trends-in-non-gaap-disclosures-a-three-year-overview/.

[49] Proponents of non-GAAP reporting assert that, by focusing on core operating earnings and adjusting income statement items which are non-recurring or extraordinary, non-GAAP measures provide investors with more accurate indicators of performance. Vijay Govindarajan et al., *Mind the GAAP*, HARV. BUS. REV. (May 4, 2021), https://hbr.org/2021/05/mind-the-gaap. Non-GAAP reporting also allows executives to convert historical performance metrics into forward-looking information. Claudia Arena et al. *The Unusual Debate on Non-GAAP Reporting in the Current Standard Practice. The Lens of Corporate Governance*, 25 J. MANAG. GOV., 655–684 at 656 (2021).

[50] Nilabhra Bhattacharya et al., *Assessing the Relative Informativeness and Permanence of pro forma Earnings and GAAP Operating Earnings*. 36 J. ACCT. & ECON. 285–319 (2003); see also Mark T. Bradshaw & Richard G. Sloan, *GAAP*

non-GAAP enhances managerial discretion, allowing managers to obscure poor company performance and project higher profitability.[51] For example, adjusted net income (a popular non-GAAP metric) was higher than net income (its most comparable GAAP metric) by an average of $1.095 billion in 2022. This $1.095 billion figure represents 38% of reported GAAP income.[52] To reduce the risk of investor harm, the SEC has mandated updated disclosure and compliance obligations for companies that report non-GAAP financials.[53]

It is notable, however, that many market participants acknowledge that non-GAAP provides additional information to investors.[54] With so much information omitted or reported inconsistently under GAAP, it is no

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versus The Street: An Empirical Assessment of Two Alternative Definitions of Earnings. 40 J. ACCT. RES. 41-66 (Dec. 2002), https://doi.org/10.1111/1475-679X.00038 (last visited Feb. 6, 2024) (finding that that the stock market responds more to "street" earnings than to GAAP earnings, indicating that investors find the information highly relevant and informative).

[51] Dirk E. Black et al., *Non-GAAP Reporting: Evidence From Academia and Current Practice*, 45 J. BUS. FIN. & ACCT. 259-294 (2018), https://doi.org/10.1111/jbfa.12298 (last visited Feb. 6, 2024). ("Critics in the financial press from this time period expressed skepticism about the new phenomenon of disclosing non-GAAP performance metrics to investors, arguing that these numbers were self-serving on the part of managers and misleading to investors (e.g., Derby, 2001; Dreman, 2001; Elstein, 2001; Liesman & Weil, 2001a, 2001b).")

[52] *Special Report: Non-GAAP Adjustments Keep Growing*, CALCBENCH (June 1, 2023), https://www.calcbench.com/blog/post/718897238517088256/special-report-non-gaap-adjustments-keep-growing. Stephen V. Brown et al., *Financial Statement Adequacy and Firms' MD&A Disclosures,* CONTEMP. ACCT. RES. (forthcoming Oct. 28, 2023), Available at SSRN: http://dx.doi.org/10.2139/ssrn.3891572 (finding that issuers are more likely to use non-GAAP figures in the 10-K when the firm has weaker financials). Another striking statistic is that almost one-fifth of firms with negative net income report a positive non-GAAP number. Govindarajan et al., *supra* note 49.

[53] *SEC Provides Updated Guidelines on Use of Non-GAAP Financial* Measures, CLIFFORD CHANCE (June 2016), https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2016/06/sec-provides-updated-guidance-on-use-of-nongaap-financial-measures.pdf.

[54] *What CFOs should know when using non-GAAP measures*, DELOITTE (last visited Feb. 24, 2024), https://www2.deloitte.com/us/en/pages/audit/articles/benefits-sec-non-gaap-measures.html ("Non-GAAP measures can be a meaningful way to supplement GAAP numbers for a complete picture of business operations and liquidity.")

wonder that managers have tried to communicate using additional metrics and that investors find this information to be useful.

II. Problems caused by growing disconnect.

The increasing obsolescence of GAAP reporting creates several challenges. Here I highlight difficulties faced by three key constituencies that use accounting information. First, investors have difficulty performing fundamental analysis without crucial information such as detail on intangibles. Second, managers lack full information for decision-making, and arguably face poor incentives due to the disconnect between real value and accounting value. Finally, those who attempt to rely on objective measures of materiality, such as auditors or securities market participants, face difficulty reliably identifying the proper measure.

i. Difficulties with fundamental analysis.

Scholars such as Zohar Goshen and Gideon Parchomovsky have argued that "the essential role of securities regulation is to create a competitive market for sophisticated professional investors and analysts (information traders)."[55] And much prior work has demonstrated benefits of market efficiency and accurate pricing, where such benefits include the optimal allocation of capital and investor protection.[56] However, a key question today is whether investors have sufficient information to accurately value companies.

As noted above, recent empirical research has noted a "widening chasm between financial information and stock prices"[57] and questioned whether investors have the information they need for to accurately value

[55] Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711-782 (2006), https://scholarship.law.duke.edu/dlj/vol55/iss4/1/. More generally, the SEC's mission is to "protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation." U.S. Sec. & Exch. Comm'n, *About the SEC*, SEC, https://www.sec.gov/about.shtml (last modified Nov. 22, 2016).

[56] Holger Spamann, *Indirect Investor Protection: The Investment Ecosystem and Its Legal Underpinnings*, 14 J.L. ANAL. 16-78 (2022), https://doi.org/10.1093/jla/laac003. Romano Roberta. *Empowering Investors: A Market Approach to Securities Regulation*, YALE L.J. 107 2359–2430 (1998), https://doi.org/10.2307/797346. See Goshen & Parchomovsky, *supra* note 55.

[57] *See* LEV & GU, *supra* note 8.

companies. For example, research by Professor Baruch Lev illustrates the difficulties posed to investors by current accounting rules, as he explains that investors misprice intangibles, necessitating additional disclosure that is not provided:

> [E]xtensive research indicates that investors systematically misprice the shares of intangibles-intensive enterprises. Sometimes the market overvalues intangibles—wildly, for some dot-coms—and wastes capital. For companies in established sectors, the reverse is more often the case: Investors undervalue intangibles. … Such an uninformative environment naturally calls for enhanced public disclosure about the amounts of and, insofar as possible, outcomes produced by investments in intangibles. But generally accepted accounting principles perpetuate the information deficiency.[58]

Although some narrative disclosure is required for certain intangibles, Professor Shiva Rajgopal highlights the limitations of existing narrative disclosure. For example, he shows that Amazon spent $42.7 billion on "technology & content" research & development but provided less than 300 words in its 10-K to explain the value of that spending.[59] One cannot even distinguish what is spent on "technology" versus "content."[60]

Home Depot provides another example.[61] Home Depot roughly doubled its revenue from 2008 to 2021 despite adding virtually no physical square footage. Home Depot explains that it managed this feat by improving its technology (e.g., it now allows customers to place orders and pick them up at the store). However, Home Depot provides virtually no information on the spending that fueled this new infrastructure, where that spending is reflected in the financials, or the future direction of its

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[58] Baruch Lev, *Sharpening the Intangibles Edge*, HARV. BUS. REV. (June 2004), https://hbr.org/2004/06/sharpening-the-intangibles-edge#:~:text=Research%20that%20I%20and%20others,information%20to%20the%20capital%20markets.

[59] *See* Rajgopal, *supra* note 23 ("the extent of opacity is reaching distortionary levels. Absence of data breeds speculation and fantasy-based valuations"); Shivaram Rajgopal, *Why Do Non-R&D Companies Tell Us Next To Nothing About Technology Spending?,* FORBES (Oct. 4, 2022 5:01 PM EST), https://www.forbes.com/sites/shivaramrajgopal/2022/10/04/why-do-non-rd-companies-tell-us-next-to-nothing-about-technology-spending/?sh=341836eb7078.

[60] *Id.*

[61] *Id.*

technological investments.[62] Without this type of information, it is unclear how an investor can reliably perform fundamental analysis or even project revenues.

In sum, current accounting rules create difficulties for investors attempting to value companies. Given the gap in accounting rules that has caused the growth of "dark accounting matter," it is unsurprising that intangible assets are not accurately priced in the market.[63]

ii. Challenges for managers.

Although not as commonly recognized, limitations in accounting rules pose challenges for managers as well. First, managers must consider how best to tell their "story" if that story is not captured by GAAP. This creates a burden for managers, who must now disclose additional information such as non-GAAP metrics and ensure that those metrics comply with regulatory guidance.

Second, the accounting rules arguably create poor incentives for managers. Indeed, commentators have long criticized the accounting rules for R&D.[64] Consider the following illustration. A manager realizes that she needs to cut costs by $15M next quarter if she wants to hit earnings targets. She realizes that she can hit that target by cutting R&D, but suspects that cutting R&D will be harmful to the firm over the long-term. Nonetheless, she cuts R&D. In essence, the accounting rules (paired with market expectations) incentivized short-term behavior at the expense of long-term value. Notably, the manager had no comparable incentive to cut some other forms of investment (e.g., capital expenditures) because those cuts would not have impacted net income in the short-term. Thus, the accounting rules arguably incentivize some forms of investment over others—a point long criticized by politicians.[65]

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[62] *Id.*

[63] *See* Lev, *supra* note 58; *see also* Matthias Regier & Ethan Rouen, *The Stock Market Valuation of Human Capital Creation*, 79 J. CORP. FIN. (2023), https://www.sciencedirect.com/science/article/pii/S0929119923000330.

[64] *See* John R. Graham et al., *The Economic Implications of Corporate Financial Reporting*, 40 J. ACCT. & ECON. 3, 32–36 (2005); Dennis Oswald et al., *Capitalization vs Expensing and the Behavior of R&D Expenditures* (Jan. 2021), https://www.stern.nyu.edu/sites/default/files/assets/documents/cap%20vs%20exp%20January%202021.docx.

[65] *Id*. *See also Warner, Brown Urge SEC To Implement Improvements to Their Human Capital Disclosure Rules*, MARK R. WARNER (Jun. 16, 2022), https://www.warner.senate.gov/public/index.cfm/2022/6/warner-brown-urge-

Finally, by omitting key information from GAAP, managers may lack this information for their own purposes. Although managerial accounting differs from financial accounting, allowing firms to create their own internal accounting systems, value-relevant information that is not required by financial reporting may not be tracked internally. For example, comment letters filed in response to a proposed SEC disclosure indicated that many managers could not gather total compensation expense for their company or identify the total compensation for individual employees,[66] despite that much research shows the value of human capital.[67]

iii. Materiality assessments in securities litigation.

Finally, the decreasing utility of GAAP financials poses challenges for those who attempt to rely on so-called quantitative materiality, such as securities litigants and auditors. To determine whether a misstatement is material, courts and auditors commonly rely on

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sec-to-implement-improvements-to-their-human-capital-disclosure-rules. Of course, however, if one believes that markets are fully efficient, the accounting treatment should be irrelevant if the information is disclosed.

[66] Letter from Raymond A. Link, CFO, FEI Co., *File No. S7-07-13*, SEC.GOV (Oct. 16, 2013), https://www.sec.gov/comments/s7-07-13/s70713-220.htm. ("In many cases, our international employees have benefits that greatly exceed those of our CEO, including leased cars, more generous paid time off regimes, enhanced medical benefits as well as defined benefit pension plans. … We do not track these elements on an individual level and doing so would be very burdensome."); Letter from Cara Woodson Welch, Esq., WorldatWork, to Securities and Exchange Commission (Dec. 2, 2013), https://www.sec.gov/comments/s7-07-13/s70713-515.pdf. ("WorldatWork would like to stress that compensation professionals do not necessarily have readily accessible compensation data available for the company's entire workforce."); Letter from John A. Hayes, Chairman, President, and CEO of Ball Corporation, to Securities and Exchange Commission (Jul. 21, 2015), https://www.sec.gov/comments/s7-07-13/s70713-1573.pdf. ("[T]he vast majority of private-sector companies lack an easy and efficient way to gather compensation data from operating divisions around the world, since they use a wide range of different and often incompatible payroll systems.")

[67] *See, e.g.*, Andres Donangelo et al., *The Cross-Section of Labor Leverage and Equity Returns*, 132 J. FIN. ECON. 497, 499 (2019); Rouen & Regier, *supra* note 63; Alex Edmans, *Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices*, 101 J. FIN. ECON. 621, 638 (2011); Lynn Rees & David M. Stott, *The Value-Relevance of Stock-Based Employee Compensation Disclosures*, 17 J. APPLIED BUS. RES. 105, 114 (2001); Eli Amir & Gilad Livne, *Accounting for Human Capital When Labor Mobility is Restricted* 26-27 (Cass Bus. Sch. Res. Paper, 2000), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=202328.

quantitative (or objective) measurements. For example, auditors must determine a materiality threshold to serve as the benchmark to obtain reasonable assurance that an audit does not detect any material misstatement.[68]

Under US GAAP, auditors are not required to publicly disclose their materiality threshold. However, research using data obtained by the Public Company Accounting Oversight Board finds that almost 60% of audits inspected use pre-tax GAAP income as the denominator for a materiality threshold.[69] To identify the numerator, audit firms commonly determine that the materiality threshold should be 5% of pretax income, but there is substantial variation (although most audits that use pre-tax income as a denominator select a numerator that results in a ratio of close to 5%).[70]

Similarly, courts commonly use quantitative assessments of materiality based on financial values such as pretax income or net

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[68] CFI Team, *Materiality Threshold in Audits*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/accounting/materiality-threshold-in-audits/ (last visited Feb. 6, 2024). To illustrate, imagine that Company A has net income of $1 billion, and the auditor sets a materiality threshold of $50 million (5% of $1 billion). Thereafter, the auditor finds a clerical error that caused revenue to be underreported by $10 million. Barring additional error, this $10 million would be deemed immaterial because it falls below the auditor's materiality threshold of $50 million. In essence, one can consider the materiality threshold of $50 million as the maximum amount that the financials could be misstated but remain free from material misstatement. However, a misstatement of less than $50 million could be deemed material if it met certain qualitative factors (e.g., if the misstatement was due to fraudulent behavior). SEC Staff Accounting Bulletin, NO. 99: MATERIALITY, 17 C.F.R. 211 SUBPART B (Aug. 12, 1999).

[69] Preeti Choudhary et al., *Auditors' Quantitative Materiality Judgments: Properties and Implications for Financial Reporting Reliability*, 28TH ANN. CONF. ON FIN. ECON. & ACCT. (Jun. 28, 2019), https://ssrn.com/abstract=2958405

[70] *Id.*

income.[71] In cases where a misstatement exceeds five percent, market participants often have a presumption in favor of materiality.[72]

Of course, neither auditors nor courts rely solely on quantitative measures of materiality.[73] Although quantitative thresholds may serve as a starting place,[74] subjective measures and qualitative factors play a role as well.[75] However, the use of such subjective factors is more controversial

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[71] *Fed. Hous. Fin. Agency v. Nomura Holding Am., Inc.*, 104 F. Supp. 3d 441, 535-36 (S.D.N.Y. 2015), *aff'd sub nom. Fed. Hous. Fin. Agency for Fed. Nat'l Mortg. Ass'n v. Nomura Holding Am., Inc.*, 873 F.3d 85 (2d Cir. 2017); *In re Cannavest Corp. Sec. Litig.*, 307 F. Supp. 3d 222, 239 (S.D.N.Y. 2018); *Panther Partners Inc. v. Jianpu Tech. Inc.*, No. 18 CIV. 9848 (PGG), 2020 WL 5757628, *9 (S.D.N.Y. Sept. 27, 2020). *Fed. Hous. Fin. Agency for Fed. Nat'l Mortg. Ass'n v. Nomura Holding Am., Inc.*, 873 F.3d 85, 147 (2d Cir. 2017) (finding that a five-percent threshold "may provide 'a preliminary assumption' of materiality") (citing SEC Staff Accounting Bulletin No. 99, 64 Fed. Reg. 45,150, 45,151 (Aug. 19, 1999)); *Litwin v. Blackstone Grp., L.P.*, 634 F.3d 706, 719 (2d Cir. 2011) (acknowledging the existence of "the presumptive 5% threshold of materiality"); *ECA & Local 134 IBEW Joint Pension Trust v. JP Morgan Chase Co.*, 553 F.3d 187, 204 (2d Cir. 2009) ("While *Ganino* held that bright-line numerical tests for materiality are inappropriate, it did not exclude analysis based on, or even emphasis of, quantitative considerations.")

[72] *Id. See also* SEC Staff Accounting Bulletin, No. 99: MATERIALITY, 17 C.F.R. 211 Subpart B (Aug. 12, 1999) (acknowledging the widespread use of a five percent materiality threshold, but arguing that "the magnitude of a misstatement is only the beginning of an analysis of materiality").

[73] *Ganino v. Citizens Utilities Co*., 228 F.3d 154, 164 (2d Cir. 2000) (rejecting "a bright-line test for materiality"); *ECA & Local 134 IBEW Joint Pension Trust v. JP Morgan Chase Co.,* 553 F.3d 187, 204 (2d Cir. 2009) ("bright-line numerical tests for materiality are inappropriate"); *Litwin v. Blackstone Grp., L.P.*, 634 F.3d 706, 714 (2d Cir. 2011) ("a quantitative analysis is not dispositive of materiality").

[74] *Litwin v. Blackstone Grp., L.P.*, 634 F.3d 706, 713 (2d Cir. 2011) (citing *ECA, Loc. 134 IBEW Joint Pension Tr. of Chicago v. JP Morgan Chase Co.*, 553 F.3d 187, 204 (2d Cir. 2009).

[75] *See supra* notes 71-72. For example, courts have looked to SEC Staff Accounting Bulletin No. 99 to assess qualitative materiality. SEC Staff Accounting Bulletin No. 99, 64 Fed. Reg. 45,150, 45,151 (Aug. 19, 1999). The staff provided a list of considerations that could render a quantitatively small misstatement material, including whether the misstatement masks a change in earnings or other trends, hides a failure to meet analysts' consensus expectations for the enterprise, or conceals an unlawful transaction. In this bulletin, the SEC staff expressed approval of the five-percent rule of thumb as a starting point or "preliminary assumption," but noted that misstatements cannot be deemed automatically immaterial because they fall below a threshold.

than reliance on quantitative measures of materiality alone, as different actors can reach different conclusions on the same facts.[76] Assessing qualitative materiality is subjective and requires a broader consideration of context, so it requires a more difficult and uncertain analysis than objective measures of materiality.

Despite the challenges posed by subjective assessments of materiality, reliance on qualitative factors seems only likely to increase as GAAP becomes less value-relevant. As noted previously, roughly half of listed companies now report negative net income. It is unclear how one would calculate a quantitative measure of materiality based on net income or pretax income for a net loss company. After all, the traditional measure of 5% of pretax income does not make sense when pretax income is negative.

Although courts and auditors can (and do) use other financials as the denominator, other figures can pose problems as well. For example, consider the aforementioned concerns with assets or book value: assets exclude internally-developed intangibles, meaning that the GAAP figure reported will underreport the real value of assets. And, if assets are underreported, book value will be underreported as well. As such, the increasing disconnect between GAAP financials and market value makes traditional measures of quantitative materiality less attractive, potentially causing greater uncertainty in materiality assessments.

III. Explanations for standard-setters failure to update.

Our discussion above focused on two key elements of GAAP that lead to a growing disconnect between stock prices and accounting value. First, internally-developed intangibles are typically valued at zero under GAAP. Second, consistent with the first point, investments are treated differently depending on the type of investment.

Intuitively, one can see that these accounting rules will lead to inconsistencies across industries and omit key information from

[76] *See e.g., Litwin v. Blackstone Grp., L.P.*, 634 F.3d 706, 713 (2d Cir. 2011) (in which the District Court found that only one of SAB No. 99's qualitative factors applied, but the Second Circuit found that several factors applied).

investors.[77] This Article is not the first to note these trends,[78] nor to argue that they pose difficulty to those who rely on accounting information.[79] This begs the question why accounting standard-setters have not modernized GAAP. I provide two potential explanations below.

First, as argued by some market participants, the Financial Accounting Standards Board (FASB) may not be incentivized to prioritize projects such as accounting for intangibles. Undoubtedly, the FASB has a plethora of accounting projects that it could undertake, and there are questions about how it prioritizes among those many options. Some commentators have argued that the FASB selects projects that benefit issuers and accounting firms, such as simplification projects, rather than projects that primarily benefit investors.

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[77] *See supra* Section 2.b. For example, firms that invest primarily in tangible assets are more likely to have those assets captured by accounting rules—thus leading to higher asset values. By contrast, firms that rely more on intangibles assets, as is common in high-growth areas like healthcare and tech, are less likely to have their assets included on the balance sheet.

[78] *See e.g.*, Recommendation of the Investor Advisory Committee Regarding Accounting Modernization, Securities & Exchange Commission's Investor Advisory Committee (Sept. 14, 2022), https://www.sec.gov/spotlight/investor-advisory-committee-2012/20220914-draft-accounting-recommendation.pdf. ("The Investor Advisory Committee ("IAC") recommends that [accounting regulators] implement several measures intended to modernize, strengthen, and increase the transparency of the U.S. accounting infrastructure."); Rana Foroohar, *Big Tech Is Playing a Financial Shell Game*, FIN. TIMES (Dec. 12, 2021), https://www.ft.com/content/99ca12c5-498e-4ee4-8046-a27cd0a1038b.

[79] Letter from Sandra J. Peters, Senior Head of Glob. Fin. Reporting Pol'y Advoc., CFA Inst., to The Hon. Gary Gensler, Chair, U.S. Sec. & Exch. Comm'n (Jul. 31, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-9104674-246948.pdf. ("Investors are working with a 19th century manufacturing accounting model in a 21st century service-oriented, global, intangibles-based economy…. Our view is that the accounting model does not provide a suitable framework for the information investors need.") The first US accounting standard setter was created in the 1930s. See Stephen Zeff, *Evolution of US Generally Accepted Accounting Principles (GAAP)*, https://www.iasplus.com/en/binary/resource/0407zeffusgaap.pdf (last visited Dec. 28, 2021). As argued by one of us previously, accounting standards were developed in this prior era and have yet to adopt to the new reality. *See* Honigsberg & Rajgopal, *Wage Wars*, *supra* note 25; Investor Advisory Committee Recommendation, *supra* note 78.

Second, the FASB undergoes a very lengthy process before adopting new accounting standards. Certainly, due diligence and some degree of risk-aversion is warranted. However, critics have argued that the FASB's process is unnecessarily lethargic. For example, it took nearly twenty years for the FASB to update its standard on revenue recognition.

i. FASB's prioritization of its projects.

The FASB's purpose is to create accounting standards for investors and other financial statement users.[80] However, critics have argued that the FASB has become captured by the accounting firms, causing FASB to prioritize accounting standards that primarily benefit the accounting firms (and their clients) rather than investors. [81] For example, the CFA Institute noted that of the 30 projects that the FASB completed from March 2019 through July 2021, 53% concerned "simplifications" of existing standards,[82] 20% concerned deferrals of previously issued standards, and the remaining 27% were removed without FASB action.

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[80] *About the FASB*, FIN. ACCT. STANDARDS BD., https://www.fasb.org/facts (last visited Feb. 6, 2024). The FASB's purpose is to "[e]stablish and improve financial accounting and reporting standards to provide useful information to investors and other users of financial reports and educate stakeholders on how to most effectively understand and implement those standards."

[81] S*ee* Letter from Jane B. Adams, Former SEC Deputy Chief Accountant and Former Acting Chief Accountant Member, Alliance of Concerned Investors, et al., to Gary Gensler, SEC Chairman 1–2 (June 7, 2021), https://ourfinancialsecurity.org/wp-content/uploads/2021/06/Repair-the-Financial-Reporting-Infrastructure-Sign-on-Letter.pdf (explaining that the accounting scandals at Enron and WorldCom revealed how FASB was "both glacially slow to update accounting standards and dominated by industry interests when it did act" and noting that "today, FASB remains both glacially slow and unresponsive to investor concerns"). Governance conflicts are common throughout the history of accounting standard-setters. The FASB is the third such US standard-setter, as the first two collapsed due to conflicts. *See* Stephen A. Zeff, *Evolution of US Generally Accepted Accounting Principles (GAAP)* 3–7, https://www.iasplus.com/en/binary/resource/0407zeffusgaap.pdf (last visited Nov. 16, 2021).

[82] More generally, 30% of the Accounting Standards Updates proposed from mid-2013 to 2021 were "simplification" projects that fine-tuned existing standards. Jack T. Ciesielski, *Can the FASB Regain Its Mojo*, 36 ACCT. HORIZONS 1 (2022), https://doi.org/10.2308/HORIZONS-2021-133.

None of these projects addressed issues such as accounting for intangibles that investors have requested.[83]

The Alliance of Concerned Investors, a group that is composed primarily of former members of the Investors Technical Advisory Committee of the FASB, has been particularly vocal about its view that the FASB and its parent foundation, the Financial Accounting Foundation (FAF), have been captured. As the Alliance noted in 2021, the "FAF and FASB see their first priority as serving preparers and auditors, not investors."[84] To the degree that concerns of capture are correct, it helps to explain why the FASB has failed to undertake many of the major accounting projects that investors have argued would help them evaluate firm value, but that would cause significant short-term inconveniences (even if arguably long-term benefits) for managers.

ii. The FASB's time-consuming process.

Another explanation for why the FASB has yet to modernize accounting rules is simple: major updates take the FASB a very long time.[85] The FASB's pace of standard-setting has been described as

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[83] *See* Letter from Lynn E. Turner, Former Chief Accountant at U.S. Sec. & Exch. Comm'n, Alliance of Concerned Investors, et al., to U.S. Sec. & Exch. Comm'n (Nov. 17, 2020), https://corpgov.law.harvard.edu/2020/11/17/financial-reporting-and-the-financial-reporting-regulators/. ("The FASB agenda has focused significant time and resources on "simplification" projects that appear to benefit and provide relief to preparers and their auditors rather than investors"). Letter from Sandra J. Peters, Senior Head of Glob. Fin. Reporting Pol'y Advoc., CFA Inst., to Richard R. Jones, Chair, Fin. Accounting Standards Board (Oct. 7, 2021), https://www.cfainstitute.org/-/media/documents/comment-letter/2020-2024/20211007.pdf **(**"absence of most intangibles from financial statements and footnotes can result in a large gap between the book value of the company and its market capitalization. Given the significance of intangibles to the valuation of public companies, we believe the FASB should prioritize this project."). More generally, it does not appear that intangibles are a significant area of interest for FASB. Although "Unrecognized intangibles" was included in the FASB's 2001 agenda, it remains in the "research" section twenty years later. Typically, low-priority items are housed in the research section.

[84] *Id.* To mitigate this issue, the Alliance suggested greater investor representation on both the FASB and the FAF. *Id.* Governance conflicts are common throughout the history of accounting standard-setters. The FASB is the third such US standard-setter, as the first two collapsed due to conflicts. *See* Zeff, *supra* note 80.

[85] Honigsberg & Rajgopal, *Wage Wars, supra* note 25. ("A contributing factor to the lengthy process is that the FASB undergoes a significant deliberative process, including a cost-benefit analysis. After identifying a financial reporting issue

"glacially slow".[86] For example, the FASB's three major projects over the past two decades (revenue recognition, leases, and credit loss accounting) took more than a decade each to complete.[87] In some cases, closer to two decades.[88]

Certainly, a cautious approach is justified. The FASB is understandably risk-averse when it comes to changing accounting rules,

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based on requests or recommendations, the FASB staff prepares an analysis and the Board deliberates on the issue at one or more public meetings. If the Board decides to add a project to the technical agenda, the Board will undergo a series of due process procedures to solicit broad shareholder input. After examining comment letters and perhaps holding public roundtable discussions, the Board revisits the proposed provisions. Only then do they issue an Accounting Standards Update.")

[86] *See* Letter from Jane B. Adams, Former SEC Deputy Chief Accountant and Former Acting Chief Accountant Member, Alliance of Concerned Investors, et al., The Hon. Gary Gensler, Chair, U.S. Sec. & Exch. Comm'n (June 7, 2021), Repair-the-Financial-Reporting-Infrastructure-Sign-on-Letter.pdf (ourfinancialsecurity.org) (explaining that the accounting scandals at Enron and WorldCom revealed how FASB was "both glacially slow to update accounting standards and dominated by industry interests when it did act" and noting that "today, FASB remains both glacially slow and unresponsive to investor concerns").

[87] See Letter from Lynn E. Turner, Former Chief Accountant at U.S. Sec. & Exch. Comm'n, Alliance of Concerned Investors, et al., to U.S. Sec. & Exch. Comm'n (Nov. 17, 2020) ("During the past two decades, the FASB worked on and completed three major projects on the subjects of revenue recognition, leases, and credit loss accounting. These projects, completed in the past five years, were carryovers from the efforts of nearly 20 years ago to converge US and international accounting standards and the financial crisis of 2007-2010.")

[88] Honigsberg & Rajgopal, *Wage Wars, supra* note 25. The proposal for a new agenda item on revenue recognition was filed in 2002, and the FASB issued the primary updated standard for accounting for revenue recognition in 2014. However, firms did not have to comply with the new standard until 2018 at the earliest. *Id. See* Fin. Acct. Standards Bd., *Online Comment Letters*, https://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1218220137090 (last visited Nov. 17, 2021) (showing that a "Proposal for a New Agenda Project on Issues Related to the Recognition of Revenues and Liabilities" was issued in 2002); Fin. Acct. Standards Bd., *Revenue Recognition: ASU 2014-09 Revenue from Contracts with Customers (Topic 606)*, https://fasb.org/page/PageContent?pageId=/projects/recentlycompleted/revenue-recognition-summary.html (last visited Feb. 6, 2024) (announcing new standards on revenue recognition in 2014).

and many elements of the FASB's process are laudable. For each project, the FASB's undergoes a ten-part deliberative process that includes a cost-benefit analysis,[89] as well as evaluation and comment periods.[90] Further, the FASB gives issuers time to adapt to the new standards after they are finalized. However, although the lengthy process for promulgating new standards is understandable, the number of novel accounting issues that have arisen in the past decade is greater than three. This time-consuming process makes it difficult for the FASB to fulfill an ambitious agenda.

3. Overlap between ESG Factors and Intangible Assets

Given the challenges that "dark accounting matter" poses in valuation, one would expect investors to request additional information that helps to shed light on these off-balance sheet assets. This is one lens through which to view the growth of ESG investing[91]—and it helps explain the striking investor demand for ESG disclosures. In essence, as intangible assets have created a growing black hole on firms' financial statements, investors have requested additional sources of information that could give them insight on those intangibles.

Perhaps human capital management fits best with this paradigm. Commonly classified under the S in ESG, interest in workforce is sometimes viewed from a humanist perspective that expresses concern for the rights of those who provide labor to the company (i.e., employees and independent contractors). However, human capital (defined as the

[89] Fin. Acct. Standards Bd., *Cost-Benefit Analysis*, FASB, https://www.fasb.org/page/PageContent?PageId=/about-us/About-the-FASB/standard-setting-process/cost-benefit-analysis.html (last visited Feb. 6, 2024). The multi-pronged process includes resource groups, project-specific working groups, academic research, conversations with regulators, field tests, comment letters, roundtables and hearings, industry liaisons, outreach efforts, and staff analysis.

[90] FASB has developed an extensive ten-part process to update its standards. Fin. Acct. Standards Bd., *Standard-Setting Process*, https://www.fasb.org/about-us/about-the-fasb/standard-setting-process (last visited Feb. 6, 2024).

[91] Iris H-Y Chiu et al., *Law and Regulation for Sustainable Finance*, 23 EUR. BUS. ORG. L. REV. , 1, (2022) ("There is a marked global trend of investment assets moving into 'ESG' (environmental, social and governance) or 'sustainable' investing strategies. It is reported in the US, at the end of 2020, that 33% of assets under management were allocated to ESG strategies"). Globally, an estimated $30.3 trillion is invested in sustainable assets. Global Sustainable Investment Review 2022, 5, https://www.gsi-alliance.org/wp-content/uploads/2023/12/GSIA-Report-2022.pdf.

knowledge, skills, competencies, and attributes of the workforce that enable the firm to earn higher operating and stock-based returns)[92] is commonly viewed from a financial perspective, where it represents an intangible asset that firms must manage and develop.[93]

Many of the loudest voices in this debate describe their interest in human capital in financial terms.[94] For example, Senator Mark Warner has been particularly vocal about the need to disclose information about human capital, and his arguments express his view that human capital is an intangible asset that is omitted from the financial statements.

> Unlike significant physical investments, which are often capitalized, investments in human capital (and R&D investments) are expensed, as if increased worker capability were less useful to a company in successive quarters than a new building.[95]

The Working Group on Human Capital Accounting Disclosure, of which I am the co-Chair, made a similar argument when petitioning the SEC for rulemaking in this area. Arguing that human capital is likely the

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[92] Shivaram Rajgopal, *How to Measure Corporate Human Capital?*, FORBES (Oct. 9, 2021, 9:26 AM), https://www.forbes.com/sites/shivaramrajgopal/2021/10/09/how-to-measure-corporate-human-capital.

[93] Proponents of this view ask managers to think of labor like how they would view any asset. For example, if a company needs to build a distribution facility in a physical location, that company needs to think how it will staff that facility years into the future—particularly if the company has a business model that involves churning through employees. As with other assets, the supply of available employees is not infinite.

[94] See, e.g., Recommendation of the Investor Advisory Committee, Human Capital Management Disclosure (March 28, 2019), https://www.sec.gov/spotlight/investor-advisory-committee-2012/human-capital-disclosure-recommendation.pdf. ("In contrast to the financial markets' view of human capital as a source of value, the Securities and Exchange Commission's historical approach to the workforce has been to view human capital as a cost. The Commission's disclosure frameworks – both quantitative and qualitative – have not kept pace with the shift towards human capital management (HCM) as a primary source of value.") See also Ethan Rouen, *The Problem with Accounting for Employees as Costs Instead of Assets*, HARV. BUS. REV. (Oct. 17, 2019), https://hbr.org/2019/10/the-problem-with-accounting-for-employees-as-costs-instead-of-assets.

[95] Letter from Sen. Mark Warner to Hon. Jay Clayton, Chairman, Sec. & Exch. Comm'n 3 (July 19, 2018).

largest intangible asset omitted from firms' balance sheets,[96] the Group noted that CEOs commonly refer to their employees as their greatest asset,[97] but that there is no "human capital" asset on the balance sheet. The Group further noted that the supply of labor is increasingly costly, necessitating disclosure of labor costs to understand operating costs.[98]

Market evidence further shows the value-relevance of human capital—again highlighting its role as an important intangible asset. As noted by a recent recommendation from the SEC's Investor Advisory Committee,[99] as of Q3 of 2022, asset managers had launched at least 20 funds with a human capital focus, and another 34 asset managers had incorporated workforce-related criteria.[100]

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[96] In making this argument, the Working Group highlighted two trends. First, the growth of the so-called "human capital firm"—that is, firms that rely on attributes of the workforce to earn higher operating and stock-based returns. Second, the Working Group highlighted the growth of lossmaking firms. As noted above, current accounting rules obscure investors' ability to differentiate whether a firm had a loss on its core product(s) or whether it had a loss because it invested in its future through, for example, human capital.

[97] Consider, for example, the following quote by Anne M. Mulcahy, the former CEO and chairwoman of Xerox Corporation: "Employees are a company's greatest asset – they're your competitive advantage." Ms. Mulcahy's quote is commonplace; the internet is rife with examples of executives who say their employees are their greatest asset. *See, e.g.*, Keith Boyd, *Reinventing Microsoft's Employee Experience for a Hybrid World*, MICROSOFT (Feb. 3, 2022), https://www.microsoft.com/en-us/insidetrack/reinventing-the-employee-experience-at-microsoft.

[98] *Id. See also* Regier & Rouen, *supra* note 63 (using firms that report under IFRS, Figure 1 shows that personnel expense as a percentage of sales increased from 26% to 38% from 1992 to 2018, but that capital expenditures on physical assets remained flat at roughly 10% of sales during this same time period).

[99] Recommendation of the SEC Investor Advisory Committee, Human Capital Management Disclosure (Sep. 14 2023), https://www.sec.gov/files/20230914-draft-recommendation-regarding-hcm.pdf.

[100] *Id.* CalPERS, Schroders, and Oxford University released a framework to quantify financial returns from human capital. Hannah Zhang, *Companies That Take Care of Their Employees Perform Better. Schroders and CalPERS Want to Capitalize on That*, INSTITUTIONAL INVESTOR (Jul. 12, 2023), https://www.institutionalinvestor.com/article/2bwv3pmbyt4tb69o4fim8/portfolio/companies-that-take-care-of-their-employees-perform-better-schroders-and-calpers-want-to-capitalize-on-that.

Despite this growing interest in human capital, it seems unlikely that its value is fully priced into the market.[101] For example, recent work found that an investment strategy built on firms' human capital investments yields abnormal returns from 3.5 to 7.8%.[102] Given the value of this "ESG" information, it is no surprise that investors increasingly demand that issuers provide them with human capital disclosure.[103]

In sum, accounting rules neglect to include many valuable assets in financial statements, including many assets that fall under ESG strategies. It is unclear why we should treat ESG intangible assets differently than non-ESG intangible assets.[104] Instead, below I describe a cohesive approach that captures all intangible assets, whether intellectual property, brand, or an asset that more commonly falls under ESG such as sustainability or human capital.

4. Implications

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[101] Regier & Rouen, *supra* note 63.

[102] *Id.*

[103] Current disclosures on human capital are very limited. Only 15% of the S&P 500 disclose compensation or labor costs. Shivaram Rajgopal, *Labor Costs Are the Most Pressing Human Capital Disclosure the SEC Should Consider Mandating*, FORBES (May 17, 2021, 12:40 PM), https://www.forbes.com/sites/shivaramrajgopal/2021/05/17/labor-costs-are-the-most-pressing-human-capital-disclosure-the-sec-should-consider-mandating/?sh=15634f3d5192. The only labor-related metric that firms must disclose is headcount. SEC, Modernization of Regulation S-K Items 101, 103, and 105, https://www.sec.gov/files/rules/final/2020/33-10825.pdf (last visited Feb. 6, 2024). As such, investors commonly rely on third-party data such as that from LinkedIn or Glassdoor. See Council of Institutional Investors, *The Voice of Corporate Governance*, https://www.cii.org/podcasts/ (last visited Feb. 6, 2024). See also John Streur, Calvert Research & Management, Letter to Chairman Gary Gensler, Sec. & Exch. Comm'n (Aug. 31, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-9190246-249462.pdf.

[104] Some advocates of sustainability disclosures make a similar argument. "Market value typically differs from book value, in part, because traditional financial statements do not necessarily capture all of the factors that contribute to a company's long-term ability to create value. Much of this 'value gap' is attributable to, or can be significantly impaired by the management or mismanagement of, environmental, social, and human capitals as well as corporate governance." *SASB Conceptual Framework*, SUSTAINABILITY ACCT. STANDARDS BD. (Feb. 2017), https://www.sasb.org/wp-content/uploads/2019/05/SASB-Conceptual-Framework.pdf?source=post_page.

From a policy perspective, the challenge of mandating disclosure is to balance the value provided by the disclosure with the cost imposed by the disclosure. Investors typically want more information than issuers want to provide.[105] By contrast, issuers bear the burden of compiling and possibly assuring the information—requiring both the direct costs of disclosure and potentially incurring indirect (or social) costs as well.

As described below, this approach balances these different priorities. I aim to ensure that investors obtain consistent and comparable information on firm-specific intangible assets, including those assets that fall under ESG. However, to avoid unnecessary disclosure costs for issuers, I limit the disclosures to only those intangible assets that firms use to create value.

a. Proposed disclosure.

As discussed above, equity-holders commonly consider two measures of firm value: equity value and book value.[106] Equity value (or market capitalization) represents the value of the firm's equity, as determined by the market, and is calculated by multiplying the number of shares outstanding by the share price. Book value (or net asset value) represents the difference between a firm's assets and liabilities, as reported on the balance sheet. Equity value has increased relative to book value over the past decades, indicating that the market believes firms are typically worth significantly more than their reported book value.[107]

I suggest that managers be required to disclose what they believe drives the difference between book value and market value. For example, consider a firm with a book value of $100 billion but a market value of $400 billion. My proposal would require managers to disclose what drives that $300 billion differential. Should the managers believe that differential is driven by the firm's patent portfolio, human capital, and brand value, the managers would be required to disclose information on those intangibles using standardized disclosure templates. In short, my proposal

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[105] But see Troy A. Paredes, *Blinded by the Light: Information Overload and its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 417–21 (2003) (arguing that investors are provided with too much information, leading them to become confused and ignore valuable disclosures).

[106] Of course, there are additional measures of firm value. However, I limit our discussion to these two measures as they are most pertinent for our proposal.

[107] *See supra* Section 2.b.

would create a disclosure-only regime in which firms disclose drivers of value but do not quantify them.

To avoid bland and boilerplate disclosures, I suggest that regulators mandate the use of off-the-shelf disclosure templates for common intangibles. This approach would provide investors with standardized, comparable, and consistent disclosures for major intangible assets at each issuer. For example, the standardized disclosure template for a patent portfolio could include information such as the number of patents, remaining life expectancy, material pending litigation, and annual licensing fees per patent. And the standardized disclosure template for human capital could include labor costs (broken into types of compensation), the number of laborers (full-time, part-time and independent contractors), and turnover metrics.

This proposal balances the needs of investors and issuers. Investors would get far more information than they currently receive on intangible assets—and that information would be high-quality—but issuers would save costs by limiting disclosure to areas that are material to that issuer. Furthermore, this approach negates the need for an entirely separate ESG disclosure regime.

b. Similar disclosure regimes.

As described above, there are two key features of the proposal. First, although the disclosures are tailored to each company, they are standardized to allow for comparability. Second, this would be a disclosure-only regime. In other words, I do not suggest that companies attempt to capitalize their intangible assets on the balance sheet—only that they provide investors with information (such as remaining life) that help investors to understand the value created by the intangible.

I. Tailored but comparable disclosures.

The first key feature of my proposal is that the set of disclosures will be tailored to each company. I am not the first to suggest this type of disclosure regime. For example, the Sustainability Accounting Standards Board (SASB) requires different disclosures by industry precisely because there is so much variation in what drives value across different industries:

> “SASB Standards are industry-based. The issues that are most likely to affect an entity’s cash flows, access to finance and cost of capital vary by industry. Industry-based disclosure reduces

> costs and minimises noise by surfacing the most relevant information."[108]

GAAP too has required specific accounting disclosures by industry. For example, Statement No. 69 requires specific accounting disclosures that apply only to publicly traded enterprises with significant oil and gas activities.[109] And the SEC itself provides industry guides for various disclosures.[110]

Key for investors, however, is that the proposed disclosures be sufficiently standardized to allow for comparability. Investors have noted time and again that such comparability is necessary.[111] To this end, I anticipate that peer companies will have similar intangibles and thus provide similar disclosures, allowing for cross-company comparability. Further, to allow for within-company comparability, I suggest that issuers be required to disclose a minimum of three years of data for each intangible.[112] This will permit time-series analysis, and the requirement for three years of data is consistent with the current requirement that the income statement provide three years of data for each issuer.

II. Disclosure-only accounting rules.

The second key feature of my proposal is to rely on a disclosure-only approach. In other words, I suggest that investors receive select information that can allow them to better understand the value of an asset,

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[108] *Why companies use SASB Standards,* SASB STANDARDS, https://sasb.org/company-use/ (last visited Feb. 6, 2024).

[109] *Summary of Statement No.* 69, FIN. ACCT. STANDARDS BD., https://www.fasb.org/page/PageContent?pageId=/reference-library/superseded-standards/summary-of-statement-no-69.html&bcpath=tff (last visited Feb. 6, 2024).

[110] United States Securities and Exchange Commission, Industry Guides, https://www.sec.gov/files/industryguides.pdf.

[111] *See, e.g.*, Letter from Cynthia A. Williams, Osler Chair in Business Law, Osgoode Hall L. Sch. et al., to Brent J. Fields, Secretary, Sec. & Exch. Comm'n 9-12 (Oct. 1, 2018), https://www.sec.gov/rules/petitions/2018/petn4-730.pdf.

[112] Further illustrating the importance of time-series analysis, the SEC requires that non-GAAP metrics be calculated on a consistent basis from year to year. *See* U.S. SECURITIES & EXCHANGE COMMISSION, CONDITIONS FOR USE OF NON-GAAP FINANCIAL MEASURES, EXCHANGE ACT RELEASE No. 33-8176, 68 FED. REG. 4819 (Jan. 30, 2003).

but I do not ask managers to attempt to quantify the value of inherently subjective assets. This approach allows investors to better incorporate the value of intangible assets in their own valuation—and to ask better questions—but will not affect the reliability of the reported financials under GAAP.

A disclosure-only approach is not inconsistent with accounting standards, nor does it violate the principle of conservatism.[113] Accounting standard setters have previously relied on disclosure-only solutions in areas such as accounting for stock options, leasing, and pensions, and evidence shows that investors use the information provided through these disclosure-only regimes in their own analysis.[114] For example, operating leases were not reported on the balance sheet until relatively recently,[115] but it was very common for investors to capitalize these leases in their own

[113] In accordance with conservatism, accounting policymakers make a deliberate choice to understate value rather than risk overstating. This is why, for example, accounting rules mandate that companies recognize a decrease in asset value as soon as it occurs, but do not recognize an increase in asset value. The current accounting rules for internally-developed intangibles are consistent with the principle of conservatism because assigning a value to these inherently hard-to-quantify assets would risk overstating that value. With this principle in mind, our proposal below takes a disclosure-only approach. We propose that investors receive additional information that can help them understand the value of intangibles, but we do not recommend that intangibles be quantified and included on the balance sheet.

[114] PricewaterhouseCoopers, one of the so-called "Big 4" accounting firms, also recently suggested that the Financial Accounting Foundation consider a disclosure-only approach for intangibles in the "near term". *See* Letter from PwC, to Kathleen Casey, Chair, Board of Trustees, Financial Accounting Foundation, *Re: Strategic Plan*, (July 28, 2022). In this letter, PwC suggests "[e]valuating the role of disclosure as an interim reporting approach when there is lack of consensus on recognition and measurement; for example, this could be a near term path to improve reporting related to intangibles and human capital." https://viewpoint.pwc.com/dt/us/en/pwc/response_letters/response_letters_fas/assets/fafcommentletter.pdf.

[115] ACCT. STANDARDS CODIFICATION, LEASES NO. 842 (FIN. ACCT. STANDARDS BD.) ASC 842 went into effect on January 1st, 2019, for public companies with December year ends. Under the prior standard, operating leases were not recorded on the balance sheet and were recorded only as rental expense on the income statement (i.e., they were not depreciated). John Briggs et al., *Variable Lease Payments: Implications under the New Lease Standard*, CPA J. (Feb. 2017), https://www.cpajournal.com/2017/02/13/variable-lease-payments-implications-under-the-new-lease-standard/.

models.[116] Research & Development costs, too, are often capitalized by investors.

Long-term, perhaps the best approach will be to capitalize these intangible assets and report them on the balance sheet. However, that approach is not best in the short-term. We lack consensus on how to value many intangibles, and prior research shows that attempting to value inherently subjective assets allows for earnings management.[117] Rather than opening the door for such shenanigans, I propose to give investors key information on intangibles that they can use for their own analysis.

c. Objections.

This proposal is not without criticism. Below I address three potential criticisms. First, I discuss the cost to issuers and corresponding need for a materiality threshold. Second, I discuss the wide range of intangibles that could arise, thus necessitating different "off-the-shelf" disclosures that could impede investors' ability to compare disclosures across companies. Third, I discuss the concern that "off-the-shelf" disclosures could be too restrictive for issuers to communicate key information.

I. Cost to issuers.

New disclosures are always costly to issuers. Broadly stated, these costs can be split into direct costs and social costs. Direct costs include the time needed to prepare the disclosure and the costs of assurance. Social

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[116] *See, e.g.*, David Trainer, *Impact of Operating Leases Moving to Balance Sheet*, FORBES (May 1, 2018, 3:32 PM), https://www.forbes.com/sites/greatspeculations/2018/05/01/impact-of-operating-leases-moving-to-balance-sheet/?sh=2ddc9bda2c55; MOODY'S INV. SERV., MOODY'S APPROACH TO GLOBAL STANDARD ADJUSTMENTS IN THE ANALYSIS OF FINANCIAL STATEMENTS FOR NON-FINANCIAL CORPORATIONS: PART I 2 (2006), https://care-mendoza.nd.edu/assets/152332/analytical_adjustments_part_i_updated.pdf.

[117] *See e.g.*, Slavko Šodan, *The impact of fair value accounting on earnings quality in eastern European countries*, 32 PROCEDIA ECON. & FIN. 1769-1786 (2015), https://www.sciencedirect.com/science/article/pii/S2212567115014811/pdf?md5=a2223da344523705f1538633b716a3fd&pid=1-s2.0-S2212567115014811-main.pdf ("Preliminary empirical findings suggest that both firms and banks with increased exposure to fair value accounting in financial reporting have lower level of aggregate earnings quality.").

costs include the costs associated with providing the information publicly.[118]

To minimize the burden on issuers, I suggest the inclusion of a materiality threshold. The materiality threshold could be based on a minimum dollar value or a minimum percentage of the difference between market and book value. For example, disclosure of an intangible asset could be required only for those intangibles that create more than $100M in market value or that represent an estimated 5% or more of the difference between book value and market value.

Such a rule would benefit issuers, particularly small issuers for which the costs of disclosure are most expensive. Furthermore, it would cause limited harm to investors. If an intangible represents less than $100M or 5% of the difference between market value and book value, its value is sufficiently small that investors are unlikely to be greatly harmed by its omission. Indeed, imagine a company for which book value and market value are equal. There would be no need for my proposed disclosure. Of course, regulators would need to ensure that companies did

[118] Increased competition is a classic social cost, but social costs also include unintended consequences of the disclosure. Much prior work shows that the effects of increased transparency are not always straightforward. Aneesh Raghunandan & Shivaram Rajgopal, *Mandatory Gender Pay Gap Disclosure in the UK: Did Inequity Fall and Do These Disclosures Affect Firm Value?* 30 (Columbia Bus. Sch., Working Paper, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3865689 (finding that, after being required to disclose gender pay equity, firms appeared to try to close the gap through selective dismissals); Murphy & Michael C. Jensen, *The Politics of Pay: The Unintended Consequences of Regulating Executive Compensation* (Ctr. for L. & Soc. Sci., Working Paper No. CLASS18-8, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3153147 (finding that disclosures intended to decrease executive compensation appeared to instead cause an increase in pay); David Card et al., *Inequality at Work: The Effect of Peer Salaries on Job Satisfaction* 28–29 (Nat'l Bureau of Econ. Res., Working Paper No. 16396, 2011), https://www.nber.org/system/files/working_papers/w16396/w16396.pdf (finding that mandating public disclosure of employee compensation decreased job satisfaction for lower-wage employees). Of course, it is possible that there may be broader social benefits rather than merely costs. For example, proponents of human capital disclosures have argued that more disclosure would incentivize firms to invest more in their employees. *See* Letter from Mark Warner, Senator, to Jay Clayton, Chairman, Sec. & Exch. Comm'n 3 (July 19, 2018), https://www.scribd.com/document/384237385/2018-07-19-Letter-to-the-SEC-2018-Regulation-S-K.

not flout the intent of the rule by claiming that no intangible represents more than 5% of the difference in value.

II. Variation in types of intangibles that precludes comparability.

From an investor's perspective, perhaps the biggest concern is that investors will lack consistent disclosures across companies because intangibles are so varied. If so, investors will be unable to compare one issuer to another, reducing the value of the disclosure. Investors routinely state that a single disclosure from a single issuer is less valuable than that same disclosure from every issuer.[119]

To allow for comparability, I propose standardized templates for major categories of intangible assets. However, the utility of those disclosures depends on the number of intangible assets—and thus whether there will be enough companies with the same disclosure template to allow for comparability. Unfortunately, I am unable to identify the full set of intangible assets, but I note that a starting point exists in Accounting Standards Codification 805, which lists out types of identifiable intangible assets that commonly arise in business combinations. This list includes 30 different intangible assets across five different categories.[120] This list is not exhaustive, but it suggests a reasonably narrow range of intangible assets to assume that each disclosure template will be used by multiple firms, thus ensuring investors will have some degree of comparability.

[119] *See* Letter from Sandra Boss, Senior Managing Director of Global Head of Invest. Steward., et al., to Secretary Vanessa A. Countryman, U.S. Sec. & Exch. Comm'n (June 11, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8906794-244146.pdf ("Comparable and consistent climate-related disclosure by corporate issuers is essential to accurately integrating climate into investment decision-making processes"); *See* Letter from Gail C. Bernstein, General Counsel, Investment Adviser Assoc., et al., to The Hon. Gary Gensler, Chair, U.S. Sec. & Exch. Comm'n (June 11, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8906799-244130.pdf ("more consistent, comparable, and reliable ESG disclosures of material information by corporate issuers will allow investment advisers to better serve their clients by improving transparency for investors and facilitating apples-to-apples analysis and comparison of issuers. This will in turn lead to better and more accurate pricing of risks").

[120] Viewpoint, *4.3 Types of identifiable intangible assets*, PwC (Jun. 15, 2023), https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/business_combination/business_combination__28_US/chapter_4_intangible_US/43_types_of_identifi_US.html#pwc-topic.dita_1302041904212840.

III. One-size-fits-all standardization.

Finally, issuers may criticize the use of standardized disclosure templates. What one issuer considers material about its human capital, for example, others may view as immaterial. Or, even if an issuer agrees that a metric is material, that issuer may calculate it differently than how the template mandates it be calculated. To take a concrete example, consider turnover. Undoubtedly turnover is material for some companies, but it may not be for others. And, turnover can be calculated in many different ways. For example, one could track all turnover for all employees, only voluntary turnover, or only turnover for full-time employees.

There is no perfect solution. If the disclosure is not standardized, it will be less helpful for investors. But, standardized disclosure is more difficult for issuers to provide. Recognizing these competing priorities, I suggest that only a subset of key metrics be standardized, and that issuers be allowed to supplement those standardized disclosures. This will allow for comparability across key criteria, but will allow issuers to supplement those disclosures with information that is easier for them to supply.

5. Conclusion

This Article highlights the growth of "dark accounting matter"—the internally-developed intangible assets that represent an increasingly large portion of firm value. These intangible assets are not reported on the balance sheet, creating an growing hole in financial reporting that is most severe for high-growth industries. Recent estimates suggest that this dark accounting matter accounts for upwards of 80% of firm equity value.

I argue that the growth of dark accounting matter is a useful context through which to view the growth in demand for ESG information. As the value of intangibles has grown and an increasingly large amount of value is omitted from the balance sheet, investors have understandably asked for additional information that will help them to value this information. Perhaps human capital best fits with this paradigm. Although commonly categorized under the S in ESG, human capital has been referenced as perhaps the largest intangible asset omitted from the balance sheet, and much research shows that strong human capital improves firm outcomes.

Building off this intuition, I propose a new disclosure regime that better captures off-balance sheet intangible assets, whether or not those intangibles are categorized under ESG. Specifically, I propose that firm managers be required to disclose what intangibles they believe drive the difference between market and book value at their firm—and to provide standardized disclosures for each of those intangibles. In this way, the proposed disclosure is tailored to the intangibles at each firm but allows for comparability across firms.