Overstated Cash Flows and Ownership Shrinkage: Accounting Treatment of Stock-Based Compensation Needs to Change

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How employees are paid at publicly traded U.S. technology companies has changed dramatically over the past 30 years, but the accounting rules associated with paying employees with stock rather than cash have not kept up with those changes. In 2022, stock-based compensation (SBC) as a percentage of sales was nearly five times what it was in 2006.[1] Current accounting rules are dramatically overstating cash flows from operations and free cash flows used to value companies.

This article looks at companies that have shaped Maryland's economy during the COVID-19 pandemic and suggests investor and Financial Accounting Standards Board (FASB)[2] adjustments to accurately record compensation costs. Without adjustments, the operating cash flows are systematically overstated. This overstatement affects all public company valuation multiples based on free cash flow. Overstated cash flows from operations cause investors to overvalue technology companies and cause managers to misallocate capital.

Historical Perspective

The statement of cash flows is a relatively recent development. Starting in 1987, FASB required all U.S. private sector businesses and accounting firms to include a statement of cash flows in their financial statements. FASB approved two formulation methodologies for creating a statement of cash flows: 1) the direct method, which FASB preferred in 1987, in which only cash transactions were used in calculating cash generated by operations; 2) the indirect method, which permits noncash changes to be added back to net income for arriving at cash generated by operations. The primary difference between these two methods of creating a statement of cash flows is that the indirect method necessitates the add-back of depreciation, amortization, and SBC, along with working capital changes.

The FASB statement of cash flows rule was issued in 1987 before the introduction of the Windows operating systems in the 1990s enabled more complex accounting at smaller companies. At that time, FASB and public comments expressed concern that the new accounting standard would be too demanding for smaller companies, so FASB's less-preferred indirect method was permitted. During the 36 years since FASB required the creation of a statement of cash flows, the direct method has become extinct. The easier method is currently the only method used to create a statement of cash flows.

The problem with the indirect method is that the noncash add-backs like SBC have become enormous and misrepresent the cash flows from operations and the valuation measures for technology companies. Free cash flow from operations measures the amount of cash a company has left over after covering costs associated with operating expenses after taxes minus the investment for future growth, which is an important measure of financial condition.

The accounting treatment of SBC has been contentious because SBC is a key incentive used by technology companies to attract and incentivize talent. SBC creates shareholder value as long as the rate of business growth is greater than the rate at which share dilution occurs. In 1993, FASB proposed closing an accounting loophole that allowed companies to avoid expensing SBC on their income statement. A Merrill Lynch study indicated that expensing SBC would cut the profits of technology companies by 60% on average. In 1994, technology companies went to extreme lengths to lobby against the FASB rule change proposal. They successfully had a nonbinding resolution passed in the U.S. Senate, 88 to 9, against the expensing of SBC. SEC Commissioner Arthur Levitt initially supported the FASB proposal for expensing SBC but was forced to back down because members of Congress threatened to remove FASB's independent rule-making authority.

After 2001's internet dot-com bubble collapse and the Enron scandal, the use of SBC declined. In 2006, FASB changed the generally accepted accounting principles (GAAP) rules for the recognition of SBC. Before 2006, stock options were a popular form of employee compensation because it was possible to record the cost of compensation as zero so long as the exercise price was equal to the fair market value (FMV) of the stock at the time of

[1] Page 17 Michael Mauboussin and Dan Callahan, "Stock-Based Compensation" Morgan Stanley Investment Management's Counterpoint Global (April 18, 2023), https://www.morganstanley.com/im/publication/insights/articles/article_stockbasedcompensation.pdf

[2] FASB is the current single source of U.S. generally accepted accounting principles (GAAP). FASB is a private standard-setting body that maintains the Accounting Standards Codification (ASC). The Securities and Exchange Commission (SEC) designated FASB as the organization responsible for setting accounting standards for public companies in the U.S.

Table 1: Example of Statement of Cash Flows Indirect Method

Cash Flows from Operating Activities	
Net income (from income statement)	$100,000
Add back depreciation and amortization	$5,000
Add back stock-based compensation	$20,000
Add back loss on sale of equipment	$2,000
Changes in current assets and current liabilities (working capital)	
Accounts receivable increase (use of cash)	($7,000)
Prepaid expenses decrease (source of cash)	$2,000
Accounts payable decrease (use of cash)	($2,000)
Net cash provided by operating activities	*$120,000*
Cash Flows from Investing Activities	
Capital expenditures (future depreciation)	($10,000)
Proceeds from sale of equipment	$3,000
Net cash used in investing activities	*($7,000)*
Cash Flows from Financing Activities	
Payment of finance leases	$2,500
Proceeds from issuing stock	$4,000
Purchase of treasury stock (buying back stock)	($1,000)
Payment of dividends	($2,000)
Net cash used in financing activities	*$3,500*
Net increase in cash during the year	$116,500
Cash at the beginning of the year	$50,000
Cash at the end of the year	$166,500

granting. Under the new GAAP rules in 2006, companies were required to recognize awards of restricted stock as a compensation expense on the income statement equal to the FMV of the stock award. The recognition of restricted stock awards as an expense on the income statement became a popular way for companies to reduce corporate taxes.

The Half-Step Recognition of Stock-Based Compensation

Recognizing the FMV of restricted stock awards on the income statement in 2006 was a half-step improvement in corporate reporting, but the practice of adding back SBC to the operating cash flow remained unchanged and flawed. SBC represents an ongoing and increasing wage expense. Research indicates that nearly all of the increase in SBC has replaced cash wages.[3]

FASB's indirect method for creating a statement of cash flows needs to be changed. Issuing equity securities is a financing activity, not an operating activity, which means SBC should be recognized in a company's cash flows from financing activities.

In 2022, executives at publicly traded technology companies receive most of their pay from SBC. Also recently, there has been a shift, with over 80% of SBC paid to

[3] Page 1 Michael Mauboussin and Dan Callahan, "Stock-Based Compensation," *Morgan Stanley Investment Management's Counterpoint Global* (April 18, 2023), https://www.morganstanley.com/im/publication/insights/articles/article_stockbasedcompensation.pdf

Table 2: Examples of Overstated Cash Flows for Zoom, DocuSign, Amazon and Workday

As reported under Generally Accepted Accounting Principles (GAAP)	**Zoom Video Communications 10-K (Ticker ZM)** *Shaded values as reported*			**Docusign 10-K (Ticker DOCU)** *Shaded values as reported*		
	2022	**2021**	**2020**	**2022**	**2021**	**2020**
Revenues in thousands	$4,392,960	$4,099,864	$2,651,368	$2,442,177	$2,037,272	$1,381,397
Cash Flows from Operating Activities:						
Net Income	$103,711	$1,375,639	$672,316	($97,454)	($69,976)	($243,267)
Net Income as a % of Revenue	2.4%	33.6%	25.4%	-4.0%	-3.4%	-17.6%
Stock Based Compensation - Add Back	$1,285,752	$477,287	$275,818	$538,726	$408,542	$286,877
Stock Compensation as a % of Revenue	29.3%	11.6%	10.4%	22.1%	20.1%	20.8%
Other Cash Flows from Operating Activities - Net	($99,201)	($247,660)	$523,043	$65,487	$167,901	$253,344
Net cash provided by operating activities	$1,290,262	$1,605,266	$1,471,177	$506,759	$506,467	$296,954
Stock Based Compensation Expense Recognized	($1,285,752)	($477,287)	($275,818)	($538,726)	($408,542)	($286,877)
Adjusted net cash provided by operating activities	$4,510	$1,127,979	$1,195,359	($31,967)	$97,925	$10,077
% Overstated Cash Flows from Operations & FCF	*28509%*	*42%*	*23%*	*1585%*	*417%*	*2847%*
	Fiscal year-end January 31st			*Fiscal year-end January 31st*		

As reported under Generally Accepted Accounting Principles (GAAP)	**Amazon 10-K (Ticker AMZN)** *Shaded values as reported*			**Workday 10-K (Ticker WDAY)** *Shaded values as reported*		
	2022	**2021**	**2020**	**2022**	**2021**	**2020**
Revenues in thousands	$242,901,000	$241,787,000	$215,915,000	$6,215,818	$5,138,798	$4,317,966
Cash Flows from Operating Activities						
Net Income	($2,722,000)	$33,364,000	$21,331,000	($366,749)	$29,373	($282,431)
Net Income as a % of Revenue	-1.1%	13.8%	9.9%	-5.9%	0.6%	-6.5%
Stock Based Compensation - Add Back	$19,621,000	$12,757,000	$9,208,000	$1,294,622	$1,100,584	$1,004,853
Stock Compensation as a % of Revenue	8.1%	5.3%	4.3%	20.8%	21.4%	23.3%
Other Cash Flows from Operating Activities - Net	$29,853,000	$206,000	$35,525,000	$729,322	$520,747	$546,019
Net cash provided by operating activities	$46,752,000	$46,327,000	$66,064,000	$1,657,195	$1,650,704	$1,268,441
Stock Based Compensation Recognized	($19,621,000)	($12,757,000)	($9,208,000)	($1,294,622)	($1,100,584)	($1,004,853)
Adjusted net cash provided by operating activities	$27,131,000	$33,570,000	$56,856,000	$362,573	$550,120	$263,588
% Overstated Cash Flows from Operations & FCF	*72%*	*38%*	*16%*	*357%*	*200%*	*381%*
	Fiscal year-end December 31st			*Fiscal year-end January 31st*		

employees who are not high-ranking executives.[4] The aggressive use of SBC at technology companies overstates their operating cash flows and the free cash flows used to value the companies. Berkshire Hathaway Chairman Warren Buffett, who is against unrecorded SBC, has said, "Shareholders should understand that companies incur costs when they deliver something to another party and not just when cash changes hands."[5]

[4] Page 2 Michael Mauboussin and Dan Callahan, "Stock-Based Compensation," *Morgan Stanley Investment Management's Counterpoint Global* (April 18, 2023), https://www.morganstanley.com/im/publication/insights/articles/article_stockbasedcompensation.pdf

[5] "Buffett on Using Options as Compensation," *GuruFocus.com* (July 29,2019), *https://www.gurufocus.com/news/917402/buffett-on-using-options-as-compensation*

Purpose and Structure of the Statement of Cash Flows

The statement of cash flows should provide insights into a company's liquidity, solvency, financial condition, and borrowing needs. FASB's indirect method for recording cash flows from operating activities adds back noncash charges such as depreciation and amortization, SBC, and losses on equipment sales. The cash changes in current assets and liabilities provide insight into changes in a company's working capital. The cash flows from operating activities, investing activities, and financing activities provide investors and managers with insight into the cash generation and financing needs of a company.

The example statement of cash flows in Table 1 summarizes how, for example, increased accounts receivables are a use of cash, which is also true if accounts payable are paid. For the purposes of this article, the cash impacts of SBC on taxes are not included.

Technology Companies Touched Every Part of Maryland during COVID-19

The COVID-19 lockdowns and interaction restrictions created enormous demand for technology services. For extended periods, there was no access to brick-and-mortar stores across Maryland. Daily interactions in Maryland and around the world were Zoom calls, and the signing of transaction documents was done through DocuSign. Groceries and other items were ordered through Amazon. The distribution centers supporting Amazon's operations have become one of Maryland's biggest employers. Employees, whether for the City of Baltimore or Northrop Grumman, used Workday human resource and finance software to complete business functions. Seemingly limitless demand for technology company services was a hallmark of the COVID-19 period. In the post-lockdown period, demand for many technology services and products is falling. This shift makes understanding valuation, free cash flow, and capital intensity even more important because the growth rates of many technology companies are declining as consumers and businesses re-engage in in-person transactions.

There is growing evidence that technology companies are overvalued.[6] As interest rates increase, the value of future earnings falls because the earnings have to be discounted back to the present value using higher interest rates.

The Discontinuation of FASB's Add-Back of SBC to Operating Cash Flows Is Needed

The cost of SBC rose to $270 billion for U.S. companies in 2022, according to research by Morgan Stanley Investment Management's Counterpoint Global.[7] Informed investor decisions require that SBC costs be factored in. As corporate finance professor Aswath Damodaran states, "There are no free lunches and if a company chooses to pay $5 million to an employee, that will affect the value of my equity, no matter what the form of that payment is in (cash, restricted stock, options, or goods)."[8] Cornell University business school professor Sanjeev Bhojraj agrees, saying, "Following the current FASB rules, companies are systematically overstating cash flows and free cash flows."[9] The time for FASB to act is now. Not including the cost of SBC as a cost in operating cash flows is creating dangerous levels of overvaluation, which, if not changed, will likely lead to an accounting crisis.

The U.S. financial markets are built on trust. To maintain investor trust and help managers effectively allocate capital, the FASB needs to recognize SBC as an operating expense—not as a misleading add-back in the operating cash flow statement.

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