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ACCOUNTING FOR EMISSIONS TRADING: HOW ALLOWANCES APPEAR ON FINANCIAL STATEMENTS COULD INFLUENCE THE EFFECTIVENESS OF PROGRAMS TO CURB POLLUTION

LAURA E. SOUCHIK*

Abstract: Cap-and-trade programs to curb carbon emissions frequently rely on the use of tradable emissions credits known as “allowances.” To date, companies’ presentations of their usage of these allowances on their financial statements has not been uniform. Cap-and-trade programs will be most effective when presentation of allowances on financial statements is standardized, since all companies will be forced to be transparent about their methods of compliance with carbon emissions trading systems. Therefore, the Financial Accounting Standards Board and the International Accounting Standards Board should implement standards for the presentation of allowances on companies’ financial statements.

Introduction

Cap-and-trade programs, proposed as a means to regulate air quality,1 reduce emissions by limiting the total amount of pollution that can be emitted in a given area at a given time.2 The government issues entitlements for a certain quantity of pollution, which companies can then trade as needed.3 To be successful, cap-and-trade programs must work efficiently over the long-term with industry and business,4 and will only

* Articles Editor, Boston College Environmental Affairs Law Review, 2011–12.


3 See id.

be effective if they change the way businesses account for their impacts on the environment. To date, major accounting standards-setting bodies have not passed concrete guidance on cap-and-trade accounting, giving businesses the ability to only seemingly comply with emissions trading laws by manipulating their financial statements.

In response to this lack of uniform reporting across financial statements, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) placed accounting for cap-and-trade programs on their regulatory agendas. After a series of preliminary hearings, the two bodies delayed further decision making until opportunities for public comment conclude in the second quarter of 2012. Despite this delay, uniform guidance from these authorities is necessary.

With the rise in awareness of global warming and increased sensitivity to reducing greenhouse gas (GHG) emissions, accounting for carbon cap-and-trade programs is an increasingly relevant issue. Although GHG emissions trading is neither required nor facilitated by federal law in the United States, a future transition to this system is possible. In addition, U.S. companies operating abroad may be required to follow foreign cap-and-trade regulations of GHGs. Since limitations on GHG emissions will potentially impact many U.S. companies, this Note focuses on accounting for cap-and-trade with specific regard to carbon emissions. This Note draws on U.S. accounting standards and

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10 See CONG. BUDGET OFFICE, supra note 2, at 1.
12 See CONG. BUDGET OFFICE, supra note 2, at 1.
14 See infra notes 21–113, 160–265 and accompanying text.
considers international implications of current foreign legislation as well as current and potential U.S. regulations.\textsuperscript{15}

This Note presents a solution to the issue of ambiguity in accounting practices for cap-and-trade.\textsuperscript{16} Part I addresses the structure of cap-and-trade programs, and discusses emissions trading in the United States and abroad.\textsuperscript{17} Part II describes the structure of financial statements and addresses the FASB and the IASB rulemaking process.\textsuperscript{18} Part III describes current guidance from the Securities and Exchange Commission (SEC) on GHG accounting and discusses voluntary reporting programs.\textsuperscript{19} Part IV presents a solution for the lack of uniformity in allowance accounting, and discusses the benefits of such a solution.\textsuperscript{20}

I. CAP-AND-TRADE PROGRAMS AS SOLUTIONS FOR ENVIRONMENTAL PROBLEMS

In the past decade, the world has grown more interested in cap-and-trade initiatives.\textsuperscript{21} Cap-and-trade programs control and limit levels of pollution emitted into the environment,\textsuperscript{22} thus encouraging businesses to change their operations to reduce pollution.\textsuperscript{23} Cap-and-trade legislation holds businesses more accountable for their negative impacts on the environment.\textsuperscript{24}

Both shareholder calls for environmental reform and cap-and-trade regulations force corporations to internalize the costs of pollution.\textsuperscript{25} Shareholders apply pressure to business leaders of publically

\textsuperscript{15} See infra notes 52–178, 192–265 and accompanying text.
\textsuperscript{16} See infra notes 192–265 and accompanying text.
\textsuperscript{17} See infra notes 21–113 and accompanying text.
\textsuperscript{18} See infra notes 114–159 and accompanying text.
\textsuperscript{19} See infra notes 160–191 and accompanying text.
\textsuperscript{20} See infra notes 192–265 and accompanying text.
\textsuperscript{21} See Donald N. Dewees, Emissions Trading: ERCs or Allowances?, 77 LAND ECON. 513, 513 (2001). Cap-and-trade schemes are one of several different types of programs that can fall under the rubric of emissions trading, including baseline and credit systems, project-based certificates, and renewable energy certificates. See Project Updates, supra note 7. Although all such schemes are considered by the FASB, this Note will focus solely on cap-and-trade allowances. See id.
\textsuperscript{23} See Dewees, supra note 21, at 525 (discussing how emissions limitations may motivate businesses to reduce levels of pollutant-producing activities).
\textsuperscript{24} See Janet Peace & Robert N. Stavins, PEW CTR. ON GLOBAL CLIMATE CHANGE, MEANINGFUL AND COST EFFECTIVE CLIMATE POLICY: THE CASE FOR CAP AND TRADE 1–2 (2010).
\textsuperscript{25} See Bartels, supra note 5, at 304.
held companies to take environmental reform measures. Additionally, given courts’ increased consideration of environmental harms, corporate managers may increase their responsiveness to shareholder environmental concerns. Thus, due to the possibility of federal cap-and-trade legislation and shareholder influence, corporations may be on the cusp of major environmental reform.

A. The Structure of Cap-and-Trade

Cap-and-trade programs center on government distributions of emissions authorizations to regulated entities, and cap total emissions across all entities within a given area. Generally, the government then distributes a set level of emissions authorizations to regulated entities. These allowances are authorizations to emit fixed quantities of pollution. Companies may trade allowances, thus ultimately performing a cost-benefit analysis of emitting additional pollution. The government may issue emissions allowances for many different types of pollution. Governments have notably used the allowance system to curb carbon emissions and reduce acid rain. Although there are different designs of cap-and-trade systems, this Note focuses on the allowance methodology.

26 See id. at 332.
27 See id. at 333.
28 Cong. Budget Office, supra note 2, at 1 (describing the possibility of federal carbon cap-and-trade legislation in the United States and discussing shareholder proposals as “important supplement[s]” to environmental legislation).
29 Id.
30 Id.
31 Id.
32 See Ass’n of Wash. Ctties, supra note 22, at 3.
33 See id. at 2 (describing a company’s process for determining the number of allowances it needs); see also Cong. Budget Office, supra note 2, at 2 (describing an allowance trading market).
34 Colby, supra note 1, at 638 (describing the use of market mechanisms to control “lead in gasoline, ozone depleting chemicals, nitrogen oxide and sulfur emissions, new vehicle fuel efficiency, urban land development, and retirement of older, heavily polluting vehicles”).
36 See Dewees, supra note 21, at 513 (noting differences between systems based on emission reduction credits and allowances, as well as open and closed trading markets).
In an allowance trading system, a government regulator distributes allowances according to the design of the particular cap-and-trade program. The regulator may sell allowances directly to companies through an auction, or may initially allocate allowances to companies at no cost. Companies use their allowances when they emit pollution. Under some cap-and-trade program designs, if a company has unused allowances during the regulatory period, it may carry them over to future years—a practice referred to as banking. In addition to banking allowances, regulated entities can also trade unneeded allowances. Following each regulatory period, the regulator determines whether the polluter has an allowance to satisfy all units of pollution emitted. If the entity has released too much pollution, the regulator may impose fines.

Importantly, emissions trading markets may impact the industrial sector on the whole, as companies can profit from the sale of unused credits. The initial allocation of allowances by governments to companies, followed by secondary trading in the market, impacts the prices of goods and services to consumers. For example, companies not impacted directly by allowances may see competitors’ prices altered by expenses or profits resulting from allowance trading. Thus, properly accounting for allowances affects a company’s ability to remain competitive in its primary market.

Cap-and-trade programs for GHG emissions impact many different industries. Within each industry, the effects of cap-and-trade on business are not limited to profits and losses from the sale and purchase of allowances, but may also have consequences for large-scale business

37 See Ass’n of Wash. Cities, supra note 22, at 2.
38 Id.
40 See, e.g., id. at 2.
42 See, e.g., Cong. Budget Office, supra note 2, at 1–2.
44 See Ass’n of Wash. Cities, supra note 22, at 2. See generally Colby, supra note 1 (discussing the wide-ranging impacts that environmental market mechanisms can have on industry).
45 Ass’n of Wash. Cities, supra note 22, at 2.
46 Id. For instance, under the Acid Rain Program, only larger coal-burning electric utilities in certain locations were initially regulated, leaving smaller non-coal burning plants exempt from complying with the allowance system. See SO2 Reductions, supra note 35.
47 See Ass’n of Wash. Cities, supra note 22, at 2; Ernst & Young, supra note 11, at 5.
decisions.\textsuperscript{48} Directly affecting business decision making as it relates to the environment is an important aspect of cap-and-trade.\textsuperscript{49} For example, businesses may increase capital expenditures on technology to reduce emissions, thereby requiring fewer allowances.\textsuperscript{50} By changing the way companies operate in the long-term, emissions trading programs seek a steady reduction in carbon in a cost-conscious and effective manner.\textsuperscript{51}

B. Greenhouse Gas Cap-and-Trade in the United States

1. A Recent History of Federal Cap-and-Trade Programs in the United States

In the last decade, cap-and-trade programs have risen to the forefront of U.S. politics.\textsuperscript{52} Many debate the possibility of using cap-and-trade to combat global warming.\textsuperscript{53} Global warming occurs when GHGs—most notably carbon dioxide—remain in the atmosphere trapping sunlight, which causes the Earth’s temperature to increase.\textsuperscript{54} In recent years, Congress has considered legislation that would establish a trading system to limit U.S. carbon emissions.\textsuperscript{55} Although Congress has not passed such legislation, these proposals and other state laws ensure that carbon cap-and-trade will continue to be an issue for American companies.\textsuperscript{56}


\textsuperscript{50} See id. at 24 (indicating that a company may purchase allowances rather than invest in greener technology).


\textsuperscript{52} See Dewees, supra note 21, at 513.

\textsuperscript{53} See World Res. Inst., supra note 49, at 1.


The proposed cap-and-trade bills are useful for predicting the structure of a future U.S. carbon emissions trading system. The House of Representatives passed the American Clean Energy and Security Act of 2009 (also known as the Waxman-Markey Bill), marking the first time a house of Congress supported a firm carbon emissions limitation. The bill proposed a cap-and-trade system that reduced GHG emissions to 83% of 2005 levels by the year 2050. The bill recognized market effects of cap-and-trade legislation by giving companies in the energy sector free allowances to maintain a lower cost of energy. To preserve the ability to compete worldwide, the bill also called for government rebates to companies that interact frequently in the global market. The bill would have created distributions to other companies through the use of government grants or auctions, proceeds of which would be used to fund industry-specific subsidies. Despite its merits, the Senate did not pass the proposed legislation.

Prior to the Waxman-Markey Bill, the Lieberman-Warner Climate Security Act of 2007 proposed a cap-and-trade system that also relied on the use of allowances. The Lieberman-Warner Bill would have reduced GHG emissions to 42% of 2000 levels by the year 2050. This bill rewarded companies that previously reduced emissions by granting substantial amounts of free allowances. Industry supported this proposed legislation because companies would receive rather than purchase allowances from the government. Nevertheless, neither the House nor Senate voted on the bill due to a lack of popular support.

60 Id. at 362–63.
61 Id. at 363.
62 Id.
63 See Tutwiler, supra note 58.
64 Waxman-Markey Climate Change Bill, GovTrack.us, http://www.govtrack.us/congress/bill.xpd?bill=h111-2454 (last visited May 9, 2012). A major concern was that the plan would disadvantage U.S. companies in competition with businesses from developing countries that do not have climate change legislation. See Etienne, supra note 59, at 365.
66 See Richards & Richards, supra note 55, at 11.
67 See id. at 37.
68 See Tutwiler, supra note 58.
Although the federal government has not imposed a cap-and-trade system for carbon emissions, however, it has implemented a cap-and-trade system for acid rain.\textsuperscript{70} Created under Title IV of the 1990 Clean Air Act Amendments, the acid rain cap-and-trade program targets sulfur dioxide, one of the primary causes of acid rain.\textsuperscript{71} In this system, the EPA allocates allowances to companies, which can then freely trade the allowances with other businesses.\textsuperscript{72} The Acid Rain Program uses allowances as the primary regulatory methodology, and the EPA implements the program in two phases.\textsuperscript{73} During the first phase, the EPA distributes allowances to companies—information about the distributions is publicly available.\textsuperscript{74} In phase two, the EPA adopts a broader approach, expanding the group of sources required to use allowances and placing a hard cap on total annual sulfur dioxide emissions.\textsuperscript{75} Thus, acid rain cap-and-trade is a system whose regulatory impacts increase over time.

2. State Regulation of Greenhouse Gases

In lieu of federal action, state and local governments developed laws and regulations regarding GHG emissions—California is the primary example.\textsuperscript{76} In addition to creating a statewide cap on emissions, the California legislature passed the Global Warming Solutions Act of 2006 requiring the California Air Resources Board to pass regulations that mandate the reporting of total emissions from individual sources within the state.\textsuperscript{77} Following California’s lead, several other states re-

\textsuperscript{71} Id.
\textsuperscript{72} See SO\textsubscript{2} Reductions, supra note 35.
\textsuperscript{73} Id.

Allowances are the currency with which compliance with the SO\textsubscript{2} emissions requirements is achieved. Through the market-based allowance trading system, utilities regulated under the Acid Rain Program decide the most cost-effective way to use available resources to comply with the requirements of the Clean Air Act. Utilities can reduce emissions by employing energy conservation measures, increasing reliance on renewable energy, reducing usage, employing pollution control technologies, switching to lower sulfur fuel, or developing other alternate strategies.

\textsuperscript{74} See Acid Rain Program SO\textsubscript{2} Allowance Fact Sheet, ENVTL. PROT. AGENCY, http://www.epa.gov/airmarkt/trading/factsheet.html#how (last updated Apr. 14, 2009).
\textsuperscript{75} See id.
\textsuperscript{77} See id. at 174–75.
cently created programs to curb GHG emissions. Although imple-
mplementation of these programs proved difficult, they serve as reminders that more serious federal regulations on global warming should be considered.

Various state lawmakers created the Regional Greenhouse Gas Initiative (RGGI) in 2005 in an effort to curb climate change. As a result of RGGI, ten states in the Northeast and Mid-Atlantic participated in a regional carbon cap-and-trade program. Targeted at companies in the energy industry, the program caps carbon emissions at a declining rate. Although states have historically refused to collectively address environmental concerns, regional climate change initiatives such as RGGI show that increased cooperation between states is possible.

The Western Climate Initiative is another regional program that focuses on preventing climate change. The initiative is a coalition of seven U.S. states and four Canadian provinces committed to reducing GHG emissions. During the signing of the Initiative, Governor Janet Napolitano of Arizona remarked that “[i]n the absence of meaningful federal action, it is up to the states to take action to address climate change and reduce greenhouse gas emissions in this country.” Thus, many regional and state programs are perhaps only temporary solutions to the problem, and should be replaced by more permanent federal regulations.

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78 See id. at 173–74.
79 See id. at 168, 174.
80 See Lesley K. McAllister, Regional Climate Regulation: From State Competition to State Collaboration, 1 SAN DIEGO J. CLIMATE & ENERGY 81, 89 (2009).
82 See id. (stating that “these states have capped and will reduce power sector CO2 emissions 10 percent by 2018”).
83 See McAllister, supra note 80, at 92–93 (identifying and discussing “three reasons for the high degree of state collaboration: to facilitate policy diffusion, to achieve efficiencies in cap-and-trade, and to engage in a regional race to national influence”).
87 See Howland, supra note 56, at 414.
The Midwest Greenhouse Gas Reduction Accord (MGGRA) is another regional program aimed at reducing GHG emissions.\textsuperscript{88} Notable to MGGRA’s design is the program’s creation of and reliance upon the Greenhouse Gas Advisory Group—a coalition of public, corporate, and non-profit representatives that makes recommendations to state legislators.\textsuperscript{89} Despite the benefits of regional cap-and-trade programs, some debate the value of individual states’ participation.\textsuperscript{90} The struggles experienced with implementing regional cap-and-trade programs highlight the need for federal climate change intervention.\textsuperscript{91}

C. \textit{Greenhouse Gas Cap-and-Trade Abroad}

1. The European Union’s Emissions Trading System

Although the United States does not currently require participation in a carbon cap-and-trade program, emissions trading abroad still impacts U.S. businesses.\textsuperscript{92} In 2005, the European Union (EU) imposed a cap-and-trade system named the Emissions Trading System (ETS).\textsuperscript{93} Implemented in thirty countries, the system regulates carbon dioxide and nitrous oxide emissions.\textsuperscript{94} The program caps the total amount of the emissions, and program administrators then issue allowances to companies that can buy and sell them on the open market.\textsuperscript{95} By limiting the total number of allowances available, the regulators ensure that each allowance has a value.\textsuperscript{96} As allowances are traded on the emissions market, their values may fluctuate according to bid and offer prices.\textsuperscript{97} Further, the ETS program reduces the number of allowances available


\textsuperscript{89} See Keenan, \textit{supra} note 76, at 171.

\textsuperscript{90} See, \textit{e.g.}, Russ Harding, \textit{Time to Abandon Midwest Greenhouse Gas Reduction Accord}, \textit{Mackinac Ctr. for Pub. Pol’y} (May 6, 2010), http://www.mackinac.org/12692 (arguing that Michigan should withdraw from MGGRA because participation in the program harms the state’s economy).

\textsuperscript{91} See McAllister, \textit{supra} note 80, at 82.

\textsuperscript{92} See Deatherage, \textit{supra} note 13, at 35.

\textsuperscript{93} See \textit{EU ETS}, \textit{supra} note 35.

\textsuperscript{94} Id.

\textsuperscript{95} See id.


yearly, with a goal of reducing emissions in 2020 to 79% of 2005 levels.\textsuperscript{98}

Some commentators claim that the program is a “complete failure.”\textsuperscript{99} They argue that the cap-and-trade system has not resulted in increased investment in green technology, but has shifted attention away from more effective methods of decreasing carbon emissions.\textsuperscript{100} Complying with the ETS, however, remains an important consideration for U.S. companies doing business abroad,\textsuperscript{101} and any future U.S. emissions trading regulatory regime should contemplate the European experience.\textsuperscript{102}

2. The Kyoto Protocol

Although not law in the United States,\textsuperscript{103} the Kyoto Protocol represents a significant attempt at reducing global emissions of GHGs.\textsuperscript{104} The Protocol sets emissions targets for thirty-seven countries to reduce GHGs to 1990 levels.\textsuperscript{105} The Protocol allows countries to meet their individual targets through a variety of primary market-based mechanisms.\textsuperscript{106} Article 17 of the Protocol creates markets for emissions trading.\textsuperscript{107} In addition to carbon permits, other regulated substances within the program can be traded as well.\textsuperscript{108} Furthermore, the Kyoto Protocol

\begin{itemize}
\item \textsuperscript{98} See EU ETS, supra note 35.
\item \textsuperscript{99} Sarah-Jayne Clifton, Friends of the Earth, A Dangerous Obsession: The Evidence Against Carbon Trading and for Real Solutions to Avoid a Climate Crunch 20 (2009), available at http://www.foe.co.uk/resource/reports/dangerous_obsession.pdf (arguing that the ETS has failed in the industrial sector).
\item \textsuperscript{100} See id. at 5.
\item \textsuperscript{101} See Deatherage, supra note 13, at 35.
\item \textsuperscript{102} See Richards & Richards, supra note 55, at 22.
\item \textsuperscript{105} See id.
\item \textsuperscript{106} See id.
\item \textsuperscript{108} See id. Other instruments that may be traded under the Kyoto Protocol include removal units based on land use, land use change and forestry activities like reforestation, emission reduction units from joint implementation projects, and certified emission reduction from clean development mechanism project activity. Id.
\end{itemize}
sets out registry systems to track all sales of traded emissions units.\textsuperscript{109} The registry ensures that traded emissions units can be tracked to the current owner of the units.\textsuperscript{110}

Like the global experience, the U.S. debate over the implementation of a carbon cap-and-trade program highlights different views on how to make carbon cap-and-trade programs effective.\textsuperscript{111} A successful program must involve a scheme that is workable for businesses and incentivizes true compliance with pollution-reduction goals.\textsuperscript{112} Accounting regulations are one way to influence businesses operations.\textsuperscript{113}

II. HOW ACCOUNTING INTERACTS WITH CAP-AND-TRADE

A. Accurate Accounting Is Necessary to Provide Markets with a True Understanding of Financial Position

Financial statements are the primary means by which outsiders evaluate a company.\textsuperscript{114} A company’s financial statements impact how others will value the company, which can ultimately affect the price of stock, the ability of the company to receive loans, or its ability to engage in a variety of business transactions.\textsuperscript{115} With respect to allowances, two financial documents of interest are the balance sheet and income statement.\textsuperscript{116} The balance sheet values assets, liabilities, and equity, while the income statement presents revenues and expenses.\textsuperscript{117} The information presented in financial statements should accurately depict a company’s financial position in part because stakeholders rely on these documents to make value determinations.\textsuperscript{118}


\textsuperscript{110} Id.

\textsuperscript{111} See Keenan, supra note 76, at 171.

\textsuperscript{112} Cf. McAllister, supra note 80, at 95 (discussing the effect of state climate policy on in-state businesses).

\textsuperscript{113} See, e.g., Ranjani Krishnan, The Effect of Changes in Regulation and Competition on Firms’ Demand for Accounting Information, 80 ACCT. REV. 269, 269 (2005).

\textsuperscript{114} See THOMAS R. DYCKMAN ET AL., INTERMEDIATE ACCOUNTING 5 (3d ed. 1995). Annual financial statements include the balance sheet, income statement, statement of cash flows, and statement of retained earnings. Id. at 5–6.

\textsuperscript{115} See CLYDE P. STICKNEY & ROMAN L. WEIL, FINANCIAL ACCOUNTING: AN INTRODUCTION TO CONCEPTS, METHODS, AND USES 19 (9th ed. 2000).

\textsuperscript{116} See ERNST & YOUNG, supra note 11, at 6 (discussing the possibility of accounting for cap-and-trade impacting obligations on the balance sheet and also affecting gains on the income statement).

\textsuperscript{117} STICKNEY & WEIL, supra note 115, at 11.

\textsuperscript{118} See DYCKMAN ET AL., supra note 114, at 5.
The balance sheet displays the assets, liabilities, and equity of a company.\textsuperscript{119} Assets are “economic resources with the ability or potential to provide future benefits to a firm.”\textsuperscript{120} Liabilities represent a company’s future obligations, and equity is the owners’ investment in the firm.\textsuperscript{121} Revenues and expenses impact retained earnings, which is part of equity.\textsuperscript{122} As a general rule, the sum of liabilities and equity must equal assets—for every increase or decrease to assets, there must be a corresponding increase or decrease to liabilities or equity.\textsuperscript{123} Individual assets, liabilities, revenues, and expenses are listed in separate accounts on the balance sheet.\textsuperscript{124}

Cap-and-trade programs could also affect the income statement.\textsuperscript{125} The income statement lists revenues and expenses, and the difference between the two is recorded as net income.\textsuperscript{126} Since revenues increase net income, and expenses decrease net income, company managers generally seek to maximize revenue while minimizing expenses.\textsuperscript{127}

The income statement must accurately reflect business transactions for the period in which they occur.\textsuperscript{128} When a company’s business operations incur an expense, the company should record the expense on both the balance sheet and the income statement, regardless of whether there was a cash expenditure during the period.\textsuperscript{129} This method of accounting is known as an accrual, and requires both a debit to “Accrued Expenses” and a credit to “Expenses Payable” in the equity and liability sections of the balance sheet, respectively.\textsuperscript{130}

\textsuperscript{119} Stickney & Weil, supra note 115, at 9.

\textsuperscript{120} Id.

\textsuperscript{121} Id. at 9–10.

\textsuperscript{122} See id. at 10–11.

\textsuperscript{123} See id. at 44. Assets are increased through debits and decreased through credits, while liabilities and equity are increased through credits and decreased through debits. Id. at 75.

\textsuperscript{124} Id. at 64–67.

\textsuperscript{125} See Ernst & Young, supra note 11, at 6 (noting that cap-and-trade could impact gains on the income statement).

\textsuperscript{126} Stickney & Weil, supra note 115, at 11.

\textsuperscript{127} See id. at 12.

\textsuperscript{128} See Dyckman et al., supra note 114, at 35.


\textsuperscript{130} See Dyckman et al., supra note 114, at 73–74.
The income statement may also impact management’s incentives when executives are paid using incentive-based compensation. Under this compensation structure, when the company is performing well in the stock market, managers’ compensation will be higher than when the company is performing poorly. Incentive-based compensation structures can therefore provide managers with a direct personal incentive to increase profitability.

Financial statements include both quantitative disclosures, such as the income statement and the balance sheet, and qualitative disclosures, such as written discussions of financial performance in the financial statement footnotes. Various methods may be used to measure the value of assets, liabilities, equity, revenues, and expenses in these documents. For example, an asset may be valued at its purchase price or at fair market value. When the value of an asset is measured at fair market value, companies must make year-end adjustments to increase or decrease the value of the asset based on fluctuations in the market price. To increase the value of an asset, an asset account is debited and an equity account—“Unrealized Gain on Asset”—credited. Unrealized gain and loss accounts are listed in a special section of the income statement called “Other Comprehensive Income,” and do not impact net income. Gains and losses do not impact net income until they are realized—meaning that the asset has actually been sold and the company has received cash.


132 See id.


134 See Stickney & Weil, supra note 115, at 11.

135 See William E. Shafer, Qualitative Financial Statement Disclosures: Legal and Ethical Considerations, 14 BUS. ETHICS Q. 433, 434 (2004).

136 See Dyckman et al., supra note 114, at 37.

137 See id.


139 See Dyckman et al., supra note 114, at 659. To decrease the value of an asset, an asset account is credited and the equity account “Unrealized Loss on Asset” is debited. See id.

140 Stickney & Weil, supra note 115, at 674–75.

141 See id.

an asset, “Unrealized Income” is debited and “Realized Gain” or “Realized Loss” is credited, thereby impacting net income.

To illustrate the need for uniformity in accounting methods, consider two identical companies that have excess allowances to sell. If the first company recognizes the allowances as assets while the second company merely mentions the extra allowances in the footnotes to its financial statements, the first company may appear financially stronger when compared to the second. This discrepancy would result in inefficient valuation by the market. Uniformity in accounting standards could prevent such an outcome.

B. Uniform Accounting Standards Are Promulgated by the FASB and the IASB

To prevent misleading financial statements, all publicly-traded U.S. companies must follow Generally Accepted Accounting Principles (GAAP), a set of rules promulgated with help from the Financial Accounting Standards Board (FASB) under the regulatory authority of the SEC. Due to the need for a common global conceptual accounting framework, efforts to align GAAP with the international accounting standards known as International Financial Reporting Standards (IFRS) have increased in recent years. The International Accounting Standards Board (IASB) promulgates IFRS, which companies throughout the world follow.

Neither IFRS nor GAAP provides clear guidance on accounting for cap-and-trade allowances. As a result, companies disclose greenhouse
gas emissions in varying manners, highlighting the need for an accounting framework companies can apply consistently. Even when commentators agree that allowances should be presented in financial statements, determining how to measure allowances still remains open to debate. Not only do companies vary in whether they display allowances quantitatively or qualitatively, but they also differ in their methods for listing and quantifying disclosures. In a study of 125 financial statements filed between 2000 and 2004, 61 companies (or 49%) did not disclose allowances at all, while 47 (or 37%) qualitatively disclosed allowances, and only 17 (or 14%) had some form of quantitative disclosure.

Because methods of accounting for allowances are diverse both internationally and in the United States, the IASB and the FASB recognize the need to set concrete regulations for allowance accounting. The FASB and the IASB are currently in the process of developing these standards.

III. Authoritative and Voluntary Regulations for Allowances Accounting

A. Current Authoritative Regulations on Accounting for Greenhouse Gas Emissions

During debate over accounting for allowances at the Financial Accounting Standards Board (FASB), the SEC issued an interpretive release titled Commission Guidance Regarding Disclosure Related to Climate Change in response to increased public discussion of the topic. The release clarifies the SEC’s views on proper accounting for climate change under existing law, and provides qualitative guidance, sug-

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153 See Ragan & Stagliano, supra note 4, at 55 tbl.4.
154 See Ernst & Young, supra note 11, at 5.
155 See Lugo, supra note 6 (discussing differences between the IASB’s and FASB’s approach to allowance accounting).
156 See Ragan & Stagliano, supra note 4, at 52–55.
157 Id.
158 See Project Updates, supra note 7.
159 See Lugo, supra note 6; Project Updates, supra note 7.
160 See Lugo, supra note 6.
162 See id. Accounting standards are generally governed by Regulation S-K, Regulation S-X, the Securities Act Rule 408, and Exchange Act Rule 12b-20. Id. The SEC guidance considers how non-financial statement disclosure rules should be applied to climate change issues. Id.
suggesting reporting locations, descriptions, and methods for describing assessments of risks.\textsuperscript{163}

In its release, the SEC suggests that companies include environmental considerations in the description of their business.\textsuperscript{164} For example, companies should note the costs of compliance with environmental laws, and report costs related to capital expenditures required to bring them into compliance with regulations.\textsuperscript{165} In addition, the SEC encourages companies to describe legal proceedings related to non-compliance with environmental laws, unless the proceedings are considered “ordinary routine litigation incidental to . . . business.”\textsuperscript{166}

Further, the SEC discusses the relevance of the “Management Discussion and Analysis” section of financial statements, stating that companies should disclose known trends likely to have a material impact on financial position.\textsuperscript{167} In this section, management must disclose information about the quality and variability of the company’s earnings so external users can evaluate the degree to which current financial statements predict future financial position.\textsuperscript{168} Management may need to reveal potential impacts of a cap-and-trade system on future financial position.\textsuperscript{169}

In its release, the SEC also notes that financial statements should present potential risks related to climate change.\textsuperscript{170} In the footnotes to the financial statements, a section titled “Risk Factors” should discuss significant issues that could put the company’s financial position at

\textsuperscript{163} See \textit{id.} at 6293–94 (noting a list of non-quantitative disclosures).

\textsuperscript{164} See \textit{id.} at 6293.

\textsuperscript{165} See \textit{id.}

\textsuperscript{166} \textit{Id.} The legal proceedings may or may not need to be disclosed in the financial statements. See \textit{id.} The SEC states that litigation is not to be considered ordinary or incidental, and hence must be disclosed, when: 1) the proceeding is material to the business’ financial position; 2) the potential amount of liability exceeds ten percent of current assets; or 3) the government is a party to the litigation and monetary sanctions will likely exceed $100,000. See \textit{id.} at 6293–94.


\textsuperscript{168} See \textit{id.}, at 6293. The SEC acknowledges that a company may be uncertain about how environmental issues will affect the business in the future. See \textit{id.} Management need only report environmental concerns in the “Management Discussion and Analysis” section if the issue is considered material to financial position. See \textit{id.} In evaluating the materiality of a future environmental concern, management must first consider whether the event is reasonably likely to occur. See \textit{id.} at 6295. Second, if management cannot come to a conclusion about the likelihood of occurrence, it must consider the consequences of the event assuming that it will occur and whether or not those consequences will be material to the company’s financial position. See \textit{id.}

\textsuperscript{169} See \textit{id.} at 6290–91.

\textsuperscript{170} See \textit{id.} at 6290–94.
risk. The risk of a potential impact of future environmental legislation or regulation on the company’s financial position should be disclosed if it is reasonably likely to be enacted, or assuming it is enacted, is reasonably likely to materially affect the company’s financial position. Possible consequences of cap-and-trade regulation include expenses or profits related to sales of allowances, costs to improve facilities for compliance with emissions limitations, and changes in demand resulting from alterations in prices for goods and services. The SEC even suggests that the physical effects of climate change, if particularly significant to a business, should be noted in the financial statements. These physical effects include “the severity of weather . . . sea levels, the arability of farmland, and water availability and quality.” The SEC’s interpretive release serves as valuable guidance on federal securities laws and regulations to the business community.

B. Voluntary Reporting Regimes

In addition to authoritative guidance, companies may also look for accounting guidance from independent bodies that support voluntary environmental reporting standards. Optional compliance may be in the best interests of a company that wishes to avoid a reputation for causing environmental harm. One such program is The Climate Registry, which implements standards in North America “to calculate, verify and publicly report . . . [businesses’] carbon footprints in a single, unified registry.” The Registry’s goal is to provide transparency to the public regarding greenhouse gas (GHG) emissions. Public reports on each participating company include information about direct and

171 See id. at 6294.
172 See id. at 6296.
174 See id. at 3.
175 See Ass’n of Wash. Cities, supra note 22, at 2.
177 See id.
179 See Deatherage, supra note 13, at 39.
180 See id.
182 See id.
indirect emissions, geographic area impacted, and presentation of emissions over multiple years.183

A similar institution, the Carbon Disclosure Project, works with more than 650 institutional investors to gather GHG emissions data.184 The Project seeks to curb global warming by making information about emissions available to large investors, potentially impacting investment decisions.185 Reporting to the Project can help companies gain a reputation as leaders in GHG emissions reductions.186

A third voluntary regulatory body, the Global Reporting Initiative, publishes sustainability reports on participating companies.187 The Initiative establishes metrics by which participating entities can compare and measure their “economic, environmental, social, and governance performance.”188 It focuses on reporting information relating to environmental practices of companies throughout the world.189 Voluntary reporting regimes can be an important source of public information on environmental compliance.190 True transparency, however, only comes with nondiscretionary disclosures.191

IV. ACCOUNTING FOR ALLOWANCES: AN ANALYSIS

Although the United States does not have a federal climate change program,192 recent proposals for regulations that would limit greenhouse gas (GHG) emissions show that such federal legislation may be forthcoming.193 One can make predictions about the potential features of a future federal carbon cap-and-trade program based on analogous

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185 See id.
188 See id.
189 See id.
190 See Deatherage, supra note 13, at 39.
192 See Howland, supra note 56, at 414.
state and regional programs. Potential cap-and-trade systems are likely to revolve around both allowance requirements for emissions and an emissions trading market with ready buyers.

Despite the lack of a federal emissions trading system, foreign cap-and-trade regulations will continue to apply to U.S. companies operating abroad. The European Union Emissions Trading System demonstrates that such programs can be implemented successfully on a large scale, while the Kyoto Protocol highlights a global trend towards using permits and other market mechanisms to regulate pollution. Even if Congress does not pass GHG cap-and-trade legislation, accounting for allowances within an emissions trading framework will still be a relevant issue for U.S. companies facing existing foreign and state cap-and-trade regulations.

The underlying policy goals of cap-and-trade legislation are to control pollution and incentivize businesses to implement greener, more environmentally friendly methods of operation. Generally, the government reduces emissions limits over time until emission targets are met. When the government reaches its target, it has achieved its ultimate goal of creating a more sustainable environment. The current system of accounting for allowances does not facilitate accomplishment of this goal.

Currently, no system exists for accounting for, and reporting on, cap-and-trade programs. Additionally, there are no comprehensive regulations imposing uniform accounting standards for cap-and-trade

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194 See Keenan, supra note 76, at 169 (describing states as laboratories for experimenting with new ideas for emissions reduction programs).
195 See id. at 187–88.
196 See Deatherage, supra note 13, at 35.
197 See EUETS, supra note 35.
198 See Emissions Trading, supra note 107.
199 See Deatherage, supra note 13, at 35.
200 See Ass’n of Wash. Cities, supra note 22, at 1–2.
201 Keeler, supra note 48, at 24 (indicating that a company may purchase allowances rather than invest in greener technology). For example, businesses may take meaningful steps towards reducing GHGs in the environment by investing in cleaner technologies or by redesigning distribution systems to reduce the need for transportation. E.g., id. (discussing the decision to buy allowances or develop green technology).
202 See Ctr. for Am. Progress, supra note 51, at 1.
204 See Ragan & Stagliano, supra note 4, at 56 (stating that the current accounting model may simply be “inadequate to deal with the matter of cap-and-trade permits”).
205 See Ernst & Young, supra note 11, at 5.
related issues. Accordingly, businesses use a variety of accounting methods and reporting techniques. When companies do not use the same accounting methods, businesses’ cap-and-trade compliance levels may be difficult to compare, and thus police.

Furthermore, market participants may not realize which businesses consistently purchase large quantities of allowances or pay fines for noncompliance. Although companies that pay fines or purchase large numbers of allowances comply with cap-and-trade laws, such behavior is not consistent with the purpose behind the legislation—to promote a greener and more sustainable environment. Because businesses do not provide clear and uniform disclosures of cap-and-trade impacts to the market, market participants will not be able to police such companies. Changes in business behavior will not occur unless shareholders understand the business’s attitude toward pollution.

Ultimately, the lack of information available to market participants results in a lost opportunity for increasing the effectiveness of cap-and-trade regulation in relation to its underlying policy goals. Market participants may be helpful in pressuring companies to develop operations that reduce emissions, consistent with the spirit of cap-and-trade legislation. Although cap-and-trade regulators can ensure compliance with the law, market participants may help to promote the internalization of the cost of pollution to companies. Such market pushback against

206 See id.
207 See Ragan & Stagliano, supra note 4, at 54–55.
208 See id. at 56.
209 See id. at 55 (indicating that forty-nine percent of firms fail to account for cap-and-trade allowances); Robert Freehling, Carbon Markets: Buying and Selling the Right to Pollute, Iowa Sierran (Sierra Club Iowa Chapter, Des Moines, Iowa), Summer 2009, at 1, available at http://iowa.sierrachub.org/Summer09IaSierran.pdf (discussing a company’s ability to “buy their way out of reducing emissions” by purchasing many allowances).
210 See, e.g., Ernst & Young, supra note 11, at 2 (noting that entities emitting more than allowed limits must buy permits or pay a penalty).
212 See STICKEY & WEIL, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to provide clarity to financial statements).
213 See Bartels, supra note 5, at 333 (describing shareholders’ ability to influence environmental reform).
214 See id.
215 See id.
216 See CONG. BUDGET OFFICE, supra note 2, at vii.
217 See Bartels, supra note 5, at 333.
excessively polluting corporations could have a real impact on decreasing emissions.\(^{218}\)

For markets to police companies, however, there must be uniform and transparent disclosure of cap-and-trade’s impact on businesses’ financial statements.\(^{219}\) The Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) initiative will hopefully provide a solution to this issue.\(^{220}\) In evaluating any system of allowance accounting, one must keep the ultimate goals of GHG cap-and-trade in mind.\(^{221}\)

The next section presents a proposal for balance sheet disclosure of cap-and-trade allowances, illustrating a method of transparent disclosure that would accomplish this goal. The proposal involves classifying allowances as assets, measured at fair market value.\(^{222}\) It also suggests classifying emissions that exceed currently-held allowance thresholds as “Accrued Expenses” until fines are paid or allowances are purchased.\(^{223}\)

A. A Transparent System: Allowances as Assets, and Pollution over Allowance Amounts as Accrued Expenses

Companies should classify currently held allowances as assets on the balance sheet.\(^{224}\) A company will derive future benefits from holding an allowance because the allowance will enable it to produce a certain amount of GHGs in the production of goods and services.\(^{225}\) When the production process necessarily involves the emission of GHGs, the allowance benefits the company by letting it bring products to the market.\(^{226}\) Such an allowance can be categorized as an asset. Further, many cap-and-trade programs let companies freely trade allowances, such that a company could gain from selling an allowance at a different price from when it was purchased.\(^{227}\) Therefore, allowances not only

\(^{218}\) See id.

\(^{219}\) See Stickney & Weil, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to provide clarity to financial statements).

\(^{220}\) See Project Updates, supra note 7.

\(^{221}\) See Ass’n of Wash. Cities, supra note 22, at 1–2 (stating that “[c]ap and trade sets the limit for emissions and lets the market work out the costs of hitting that limit”).

\(^{222}\) See infra notes 224–249 and accompanying text.

\(^{223}\) See infra notes 224–249 and accompanying text.

\(^{224}\) See Lugo, supra note 6 (stating that the FASB and the IASB have “tentatively agreed that purchased and allocated allowances . . . should be recognized as assets”).

\(^{225}\) See Cong. Budget Office, supra note 2, at 1; see also id. (stating that “[a]llowances are certificates, similar to a currency, that can be used to settle scheme liabilities”).

\(^{226}\) See Stickney & Weil, supra note 115, at 9 (describing assets as having potential to provide benefit to a firm).

\(^{227}\) See Ernst & Young, supra note 11, at 6.
provide value to a company by enabling it to continue to produce goods and services, but also by serving as quasi-investments which can be traded when not needed.\textsuperscript{228}

When a company purchases an allowance on the emissions trading market, it should increase its “Allowance Asset” account and decrease the “Cash” or “Payable Account.”\textsuperscript{229} The company should value the initial purchase at acquisition cost, fixing the dollar amount of the “Allowance Asset” account at the dollar amount of the cash outlay required to purchase the allowance.\textsuperscript{230} Furthermore, when a company uses an allowance by emitting the quantity of pollution authorized, the “Allowance Asset” must be decreased to reflect the reduction in the asset.\textsuperscript{231} Recording a corresponding allowance expense will decrease net income, forcing companies to list the costs of pollution on the income statement.\textsuperscript{232}

Financial statements are most useful when they present accurate information.\textsuperscript{233} Accordingly, companies should make year-end adjustments to the carrying value of “Allowance Asset” accounts to fair market value.\textsuperscript{234} When the price of an allowance increases in the emissions trading market over the prior year’s value, the “Allowance Asset” should increase by the difference between the prices, with a corresponding increase in the equity account “Unrealized Gain on Allowance.”\textsuperscript{235} Making these adjustments will ensure companies record allowances at fair market value.\textsuperscript{236}

When a company sells an allowance, the “Allowance Asset” account must be decreased by the dollar amount of the sale to reflect the

\begin{footnotesize}
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\item \textsuperscript{228} See id. at 18.
\item \textsuperscript{229} See, e.g., Dyckman ET AL., supra note 114, at 568 (describing accounting procedures for the purchase of an asset).
\item \textsuperscript{230} See Stickney & Weil, supra note 115, at 45.
\item \textsuperscript{231} See Dyckman ET AL., supra note 114, at 550 (indicating that assets can be viewed as “economic service[s] . . . to be consumed over time in the earning of revenues”). This can be accomplished by debiting the “Allowance Expense” account and crediting the “Allowance Asset” account. See id. at 75 (describing the process for reducing the carrying value of an asset and the corresponding expense).
\item \textsuperscript{232} See Stickney & Weil, supra note 115, at 11 (indicating that expenses decrease net income and must be reported on the income statement).
\item \textsuperscript{233} See id. at 790 (discussing the benefits of accurately presenting financial information).
\item \textsuperscript{234} See id. at 600 (describing adjustments of investment assets to market value).
\item \textsuperscript{235} See id. Alternatively, if the price of an allowance has decreased, an “Unrealized Loss on Allowance” account should be debited and the “Allowance Asset” should be credited. See id.
\item \textsuperscript{236} See id.
\end{itemize}
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change in benefits held by the company.\textsuperscript{237} If adjustments have been made to mark the “Allowance Asset” account to fair market value, the “Unrealized Gain on Allowance” account should be decreased and a “Realized Gain on Allowance” recognized instead.\textsuperscript{238} Realized gains and losses on allowance assets will impact net income, whereas unrealized gains and losses will affect other comprehensive income on the income statement.\textsuperscript{239}

A company should recognize an accrued expense in situations where the company emits more carbon than its current allowance holdings will permit.\textsuperscript{240} The financial statements would then accurately present a company’s true financial position at year end because the cap-and-trade regulator will force the company to either pay a fine or purchase more allowances on the market.\textsuperscript{241} Recognition of an accrued expense will enable the company to record this required future cash outlay in the period in which the event causing the need for the expense actually occurred.\textsuperscript{242} The company would recognize in the present that it will need to purchase allowances in the future.\textsuperscript{243}

Accordingly, a company that exceeded emissions levels authorized by its currently held allowances should record an increase to a “Pollution Fine Expense” account and a decrease to a “Pollution Fine Payable” account.\textsuperscript{244} The accounts should be valued at the cost of the fine the company would be required to pay to the regulator should it not be

\textsuperscript{237} \textit{Id.} at 56. In addition to decreasing an asset account, a cash or receivable account should be increased to reflect the money that the firm has received from purchasers. \textit{See id.}

\textsuperscript{238} \textit{See} \textit{Stickney & Weil, supra} note 115, at 600. Alternatively, if the “Allowance Asset” account has been adjusted down to fair market value, a “Loss on Allowance” account should be debited and the “Unrealized Loss on Allowance” account should be credited. \textit{See id.}

\textsuperscript{239} \textit{See id.} at 674–75.

\textsuperscript{240} \textit{See Dyckman et al., supra} note 114, at 72–74 (describing accrued expenses); \textit{cf. Ernst & Young, supra} note 11, at 6 (“[T]he entity generally does not record an obligation to deliver emissions credits to the regulatory agency until the actual level of emissions for a given period exceeds the credits held on the balance sheet.”).

\textsuperscript{241} \textit{See Dyckman et al., supra} note 114, at 72 (describing the importance of accruals to the accuracy of financial statements); \textit{Ernst & Young, supra} note 11, at 2 (describing the company’s need to either purchase allowances or pay a fine, should emissions exceed the limits corresponding to currently held allowances).

\textsuperscript{242} \textit{See Dyckman et al., supra} note 114, at 72–73.

\textsuperscript{243} \textit{See id.} at 73.

\textsuperscript{244} \textit{See id.} at 72–74 (describing accrued expenses); \textit{Ernst & Young, supra} note 11, at 6. The “Pollution Fine Payable” account is a liability, because it represents the company’s future obligation to pay the fine resulting from its current excess pollution. \textit{See Stickney & Weil, supra} note 115, at 66 (indicating that payable accounts are liabilities).
able to secure needed allowances.\textsuperscript{245} If the company purchases allowances to cover its excessive pollution, it can reverse its original accounting entry by decreasing “Pollution Fine Payable” and increasing “Pollution Fine Expense.”\textsuperscript{246} If the company ultimately decides to pay the fine instead of securing more allowances, it may record that loss as a decrease in “Pollution Fine Payable” and “Cash” to represent payment of the fine.\textsuperscript{247} Pollution fine expenses will immediately decrease net income,\textsuperscript{248} while cash outlays related to purchasing allowances will not impact the income statement until the allowances are used.\textsuperscript{249}

B. A Solution to the Problem: The Transparent System

The proposed transparent accounting system will increase the effectiveness of cap-and-trade legislation. Providing a uniform method of accounting that brings transparency to cap-and-trade financial information\textsuperscript{250} gives market participants increased ability to evaluate a company, potentially increasing the private policing of polluting businesses.\textsuperscript{251} With this information, analysts may easily compare usage of allowances between companies,\textsuperscript{252} and will be able to identify companies that must pay fines for violations of cap-and-trade laws.\textsuperscript{253} Market actors will be able to hold polluting companies accountable for their actions and will have a concrete basis to demand change.\textsuperscript{254}

\textsuperscript{245} See Ernst & Young, supra note 11, at 6. I posit that valuing the expense at the cost of a future fine, as opposed to the cost of purchasing allowances, is most in keeping with accounting’s commitment to conservatism, since companies cannot guarantee that they will be able to purchase allowances from either the government or a private seller in the future. See Dyckman et al., supra note 114, at 45 (describing conservatism).

\textsuperscript{246} See Stickney & Weil, supra note 115, at 66 (indicating that payable accounts are liabilities).

\textsuperscript{247} See id. at 52 (indicating that most liabilities require payment of cash).

\textsuperscript{248} See id. at 11 (indicating that expenses decrease net income).

\textsuperscript{249} See supra notes 240–241 and accompanying text. When allowances are used, the allowance asset is decreased and an allowance expense is recognized on the income statement. See supra notes 240–241 and accompanying text.

\textsuperscript{250} See Stickney & Weil, supra note 115, at 20 (describing the need for uniformity in selecting accounting methods to improve clarity in financial statements).

\textsuperscript{251} See Bartels, supra note 5, at 333 (describing shareholders’ ability to push for environmental reform).

\textsuperscript{252} Cf. Ragan & Stagliano, supra note 4, at 56 (describing problems with the adequacy of financial statements when identical companies make different disclosures).

\textsuperscript{253} See supra notes 244–249 and accompanying text (describing the impact of fines on the income statement).

\textsuperscript{254} See Bartels, supra note 5, at 333 (describing shareholders’ ability to push for environmental reform).
In addition to facilitating market access to information, the accounting system itself may impact the company because it may change its operations to appear financially sound.\footnote{255} Foremost, forcing companies to recognize and separately disclose pollution fine and allowance expenses will have a direct impact on net income.\footnote{256} While a decrease in net income itself is likely to draw the attention of shareholders,\footnote{257} incentive-based compensation to executives will also decrease.\footnote{258} Thus, when corporate decision makers stand to lose significant portions of their compensation, they may be more likely to ensure compliance with the spirit of cap-and-trade laws.\footnote{259} Management response may include investment to reduce the amount of allowances necessary, thus avoiding fines and related expenses on their income statement.\footnote{260}

Moreover, because this accounting methodology calls for quantitatively displaying allowances on financial statements,\footnote{261} it forces companies to internalize the costs of GHG emissions.\footnote{262} By assigning a dollar amount to the emitted pollution, even companies that pollute within their allowance range may be forced to recognize the extent to which they harm the environment.\footnote{263} If allowance expenses substantially decrease a company’s profits, then the company may be polluting more than the total social utility of its goods.\footnote{264} Companies that must purchase large quantities of allowances may be unable to remain competitive as a result.\footnote{265} In this way, allowance accounting can help market actors take into account the social utility of an enterprise and its impact on the environment.

\footnote{255}{See Stickney & Weil, supra note 115, at 21 (describing efficient capital markets as reacting quickly to financial information when valuing stocks).}
\footnote{256}{See supra notes 233–255 and accompanying text.}
\footnote{257}{See generally Stickney & Weil, supra note 115, at 12 (discussing net income as indicating a firm’s accomplishments relative to expenses).}
\footnote{258}{See supra notes 131–147 and accompanying text.}
\footnote{259}{See supra notes 131–147 and accompanying text.}
\footnote{260}{See supra notes 131–147 and accompanying text.}
\footnote{261}{See supra notes 224–249 and accompanying text.}
\footnote{262}{See Bartels, supra note 5, at 304 (discussing the goal of holding “management accountable for their actions”).}
\footnote{263}{See supra notes 233–262 and accompanying text.}
\footnote{264}{See Cong. Budget Office, supra note 2, at 6 (noting that “higher allowance prices could lead to greater-than-expected reductions in profits”).}
\footnote{265}{See Ass’n of Wash. Cities, supra note 22, at 2.}
Conclusion

As cap-and-trade programs increase in popularity around the world, pressure on the U.S. government to pass federal greenhouse gas emissions trading legislation continues to build. Whether the United States implements such a system, emissions trading abroad has become an accepted part of international business. With several recent proposals for a federal cap-and-trade program and new regional emissions trading initiatives, it appears that wide-scale emissions trading regimes may be law in the United States in the near future. Furthermore, the interdependent nature of the global economy ensures that U.S. businesses will face accounting for emissions in foreign emissions trading regimes.

The accuracy of accounting information is essential to uphold the integrity of global financial systems, and therefore non-voluntary, non-discretionary accounting standards must be established. Although current SEC regulations describe procedures for reporting locations, descriptions, and assessments of risk, they do not specify a standard measurement methodology. Voluntary reporting regimes provide some guidance on accounting methods, but ultimately do not create the uniform, authoritative standards needed.

Cap-and-trade regulations will be most effective when allowances appear as assets on the balance sheet, and pollution in excess of allowances appears as accrued expenses. Presenting a company’s financial position according to this method will hold companies most accountable to the investing public. Under this proposal, allowance trading may impact net income, potentially incentivizing increased manager responsiveness to the goals of cap-and-trade programs. This method would also cause companies to internalize the costs of pollution. Requiring companies to accurately account for emissions trading is one of the best ways to ensure true compliance with any cap-and-trade system.