

University of Arkansas, Fayetteville

ScholarWorks@UARK

Accounting Undergraduate Honors Theses

Accounting

12-2018

Potential Consequences of U.S. Securities and Exchange Commission's Replacement of the Quarterly Reporting Requirement for Semi-annual Reporting

Mengchen Zhou

University of Arkansas, Fayetteville

Follow this and additional works at: <https://scholarworks.uark.edu/acctuht>



Part of the [Accounting Commons](#), and the [Finance and Financial Management Commons](#)

Citation

Zhou, M. (2018). Potential Consequences of U.S. Securities and Exchange Commission's Replacement of the Quarterly Reporting Requirement for Semi-annual Reporting. *Accounting Undergraduate Honors Theses* Retrieved from <https://scholarworks.uark.edu/acctuht/37>

This Thesis is brought to you for free and open access by the Accounting at ScholarWorks@UARK. It has been accepted for inclusion in Accounting Undergraduate Honors Theses by an authorized administrator of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, uarepos@uark.edu.

**Potential Consequences of U.S. Securities and Exchange Commission's Replacement of the
Quarterly Reporting Requirement for Semi-annual Reporting**

By

Mengchen Zhou

Advisor: Dr. Michael J. Crawley

**An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of
Science in Business Administration in Finance and Accounting**

**Sam M. Walton College of Business
University of Arkansas
Fayetteville, Arkansas**

December 14, 2018

Abstract

This study extends the discussion of potential consequences of U.S. Securities and Exchange Commission's replacement of the quarterly reporting requirement for semi-annual reporting. This research summarizes the perspectives about quarterly and semi-annual reporting from reporters, critics, business executives and academic researchers, analyzes the influential parties from changing reporting regulation, and provides detailed explanation about potential impacts. Five parties are related to the replacement of the quarterly reporting requirement, including corporations, investors, analysts, auditors and Trump Administration. This research concludes that the auditor will be the least influential party and corporations will be the most impacted party.

Acknowledgements

I would first like to thank my thesis advisor, Dr. Michael J. Crawley from the Department of Accounting, for his mentorship and guidance throughout this research. I would also like to acknowledge Dr. Tim Riley from the Department of Finance as the second reader of this thesis, and I am gratefully indebted to his valuable comments on this thesis.

Introduction

For decades, financial reporting has been the basis of U.S government security regulation. Publicly-traded companies are required to file both annual reports and quarterly reports to disclose financial information and business performance to the public and shareholders. Even though quarterly reporting has been in effects for decades, U.S President Trump proposed a different opinion to the current reporting regulation. On August 17, President Trump tweeted “In speaking with some of the world’s top business leaders I asked what it is that would make business (job) even better in the U.S. ‘Stop quarterly reporting & go to a six month system,’ said one. That would allow greater flexibility & save money. I have asked SEC to study!” Trump also claimed he had asked security regulators to consider replacing quarterly reporting requirements with semi-annual filings. And his proposal was advocated by some business leaders including PepsiCo Chief Executive, Indra Nooyi; Tesla Chief Executive, Elon Musk; and Parsley Energy Inc. Chief Executive, Bryan Sheffield (“Trump backs CEOs,” 2018). Trump’s proposal also initiated a debate about the advantages and disadvantages of stopping quarterly reporting.

The purpose of this paper is to expand the discussion about the consequences of stopping quarterly reporting. The paper is divided into four separate sections: background information, a literature review, analysis about influential parties, and conclusion. The background information contains information related to the formulation and perfection of financial reporting, including the creation of U.S Securities and Exchange Commission and the origin of financial reporting, Sarbanes-Oxley Act, the development of financial reporting and current financial reporting filing. The literature review includes an overview of the research conducted regarding quarterly reporting. The analysis section presents opinions about involved parties and potential results of replacing quarterly reporting for semi-annual reporting. The conclusion indicates a summary of research and findings, with a feasible research method of improvement and future research opportunities.

Background Information

Financial Reporting Regulation:

1. The Creation of U.S Securities and Exchange Commission and the origin of financial reporting.

There was no strong support for federal regulation of the stock market in 1920s. In October 1929, the security market experienced a massive crash, and one of reasons led to the crash was that publicly-traded companies hid their financial information and business performance to investors for accumulating capital. Later, the public confidence about the stock market shrunk, and it expected the government to strengthen the supervision and regulation towards the stock market. In order to reform the confidence of the public and to protect rights of investors, Congress passed the Securities Act of 1933. This law, combined with the Securities Exchange Act of 1934, created the U.S Securities and Exchange Commission (SEC). These two laws required publicly-traded companies to tell the public about their business performance, the securities they sell, and the potential risks of investment. And they also required that the people who trade securities (brokers, dealers and, exchanges) must consider investor’s right as the first priority and treat investors fairly and honestly (“The Laws That Govern the Securities Industry,” 2013). Securities Exchange Act of 1934 also regulated that the companies which have \$10 million in total assets and are held by more than 500 shareholders must fill annual and other periodic reports (“The Laws That Govern the Securities Industry,” 2013). Overall, the SEC is a government agency whose objective is to “protect investors, maintain fair, orderly, and efficient market, and facilitate capital formation” (“*What We Do*,” 2013).

2. Turning point: Sarbanes-Oxley Act

After a series of accounting scandals involving Enron Corp and WorldCom, the reaction of Congress was excellent and unexpected (Perino, 2002). It passed the “Sarbanes-Oxley Act of 2002” (SOX), a United States Federal Law that established new or expanded requirements for boards of public-traded companies, management, and public accounting firms. Under the Section 302, SOX regulated the corporate responsibility for financial report: the signed officers must review the report; the report should not contain any unreal statement of a material fact; the financial information that is included in the report should “fairly present” the condition and operation of companies; the signed officers are responsible for maintaining internal controls; they must disclose the ineffectiveness from internal controls and frauds that involve management or employees who had roles in the internal controls; the report must contain information that whether there were “significant changes” in internal control or some other factors effectively influence internal controls (“PUBLIC LAW 107–204”, 2002, p.33).

3. Financial Reporting: Development

As directed by Section 302 of the Sarbanes-Oxley Act of 2002, the SEC adapted the rules to require that issuer’s financial officers and executives should verify the financial information that is contained in the quarterly and annual reports. These officers are also responsible for maintaining and evaluating internal controls, disclosing the consequences about internal controls to auditors, and presenting the information on the reports about whether significant changes in internal controls or other factors that affect the effectiveness of internal controls and evaluation. In addition, issuers are also required to “maintain and regularly evaluate” the performance of the disclosure controls and measurements that ensure that information presented on financial reports filled under the Securities Exchange Act of 1934 is “recorded, processed, summarized, and reported on a timely basis” (“Securities and Exchange Commission”, 2002).

4. Current Financial Reporting Filing

Under SEC regulation, most of U.S public companies are required to file “Annual Reports on Form 10-K” which include corporations’ audited annual financial statements and summary of the corporations’ business performance (“Public Companies,” n.d.). In addition to filling annual reports, publicly reporting companies must submit “Quarterly Reports on Form 10-Q” which included unaudited financial statements and business information for each of the first three quarters in a year. Companies also fill “Current Report on Form 8-K” in order to notify investors about companies’ major events such as changes in management or leaderships and earning release (“Public Companies,” n.d.).

Literature review

U.S publicly-traded companies have been required to file quarterly reports since last century, and this policy has never changed. The United Kingdom, however, stopped the mandatory quarterly reporting in 2014. In “Consequences of Mandatory Quarterly Reporting: The U.K Experience,” Nallareddy, Pozen, and Rajgopal (2017) presents and compares the results of initiating mandatory quarterly reporting to that of terminating it. Initiating mandatory quarterly reporting declines the number of firms that issued quantitative quarterly reports, but dramatically increases the number of companies that release annual earning or sales guidance since companies

revised that guidance and consider it as a part of quarterly reports. Increased analysts' coverage and lower forecast error were also advantages of starting mandatory quarterly reporting (Nallareddy, Pozen, Shivaram Rajgopal, 2017).

In addition, by utilizing different-in-different (D-i-D) analysis, Nallareddy, Pozen, and Rajgopal (2017) find that stopping mandatory quarterly reporting is irrelevant to increased companies' capital from investors and changes in analysts' forecast accuracy. Even though the Financial Conduct Authority (FCA) terminated the mandatory quarterly reporting on Nov. 7th 2014, only 4 of 45 sample companies stopped quarterly reporting which indicated that most sample firm voluntarily released their quarterly reports. In summary, the researchers conclude that extending reporting term from three months to half a year "may not have significant effects on the time horizons of U.S. company executives, absent other major changes such as those proposed by the Kay Report" (Nallareddy, Pozen, Rajgopal, 2017).

Stopping quarterly reporting for semi-annual reporting became a popular topic that led to discussion. The positive influences from changing quarterly reporting to semi-annual reporting are feasible. Matthew Abenante (2018) from Forbes Agency Council believes that stopping quarterly reporting will reduce the costs of filling reports in terms of money and time (Abenante, 2018). Cydney S. Posner (2018) from Cooley LLP also mentions that changing quarterly reporting to semi-annual reporting would not only save corporations' time and money, but also restrain "short-termism" which companies only make efforts in attaining analysts' quarterly expectation "at the expense of long-term thinking." (p.1). It also presents that some groups believe the pressure of quarterly reporting actually limited private companies to go public and public-traded companies to maintain the status quo, so they agree with changing the periodic reporting system (Posner, 2018). Tensie Whelan, a professor from NYU's Stern School of Business, elaborates that concentrating on quarterly results has led to some negative effects: "unprecedented share buybacks, which artificially boost stock prices, non-strategic cost-cutting, less investment in longer-term basic and applied research (versus product development), as well as an unhealthy pressure on labor costs" (Whelan, 2018).

However, there are some proponents for quarterly reporting. Abenante also mentions companies which voluntarily filed quarterly reports would benefit from getting investors' attention if many companies shift to reporting semiannually. And quarterly conference calls also provide investors a valuable opportunity to know companies' insights about financial and business performance (Abenante, 2018). Host Analytics' CFO, Ian Charles (2018) underlines the importance of quarterly reports to investors and analysts. Quarterly earning reports are "the bread and butter of information for shareholders and analysts" who are willing to receive up-to-date information, and are considered as a method to "maintain transparency with companies they invest in." (Charles, 2018, p.1). Ian Charles also cited the study of Kelley School of Business Research which indicates that lacking information from semi-annual reports and transparency would cause investors to over-react to the news of target companies' competitors and industry (Charles, 2018). Some experts at Wharton and Georgetown University claim that switching to semi-annual reporting will have tremendous disadvantages, including an incentive for the company to hide mistakes and an increased possibility of inside trading. Wharton Professor David Zaring also believes quarterly reporting is important to investors and built investors' confidence because quarterly reports provide more detailed information quickly, especially when companies change their business strategies, release new products, and hire new executives (Business Radio, Podcast, 2018).

Jamie Dimon, chairman and CEO of JP Morgan Chase & Co, and Warren Buffett, chairman of Berkshire Hathaway Inc have different opinions compared to other researchers about quarterly reporting. They advocated eliminating quarterly earnings-per-share guidance instead of quarterly reporting. “In our experience, quarterly earnings guidance often leads to an unhealthy focus on short-term profits at the expense of long-term strategy, growth and sustainability” (Rapoport, 2018).

Influential parties and potential consequences of replacing quarterly reporting for semi-annual reporting

1. Corporations

The objectives of corporations are producing products or providing services to customers that can develop business and generate profits. To managements of corporations, their basic responsibilities are to maintain the daily operation and efficiently utilize the limited resources for business process. Since publicly traded companies currently have to file quarterly reports, switching to semi-annual reporting will make a huge impact on corporations.

Some corporations will keep filing quarterly reports even though the SEC requires less frequent reporting. In the article “Consequences of Mandatory Quarterly Reporting: The U.K Experience,” one phenomenon that researchers discovered was that only 9% of sample companies (45 companies) stopped reporting quarterly when quarterly reporting was not required, indicating that most sample companies would keep reporting their financials quarterly (Nallareddy, Pozen, Rajgopal, 2017). These stoppers have two characteristics in common: they were small companies by market capitalization, and they did not release managerial guidance when they were required to file quarterly reports (Pozen, Nallareddy, Rajgopal, 2017). There are a few reasons that companies voluntarily still release their quarterly reports. First, since quarterly reporting has been required so many years, preparing it becomes a “tradition” to corporations. Second, if corporations on the expansion state that earned higher sales revenue and profits than previous time periods, they would like to reveal their financials to the public for not only showing their growth potentials but also strengthening their stockholders’ confidence.

Changing quarterly reporting to semi-annual reporting could benefit corporations if companies want to hide their poor business performance. Investors are sensitive to information. When companies disclose weak quarterly reports, investors may lose confidence about companies and respond to the situation by selling their shares, making corporations’ stock prices drop immediately. Therefore, corporations are able to mask their weak performance in specific quarters when they are required to report semi-annually. However, if a corporation’s competitors in the same industry continued to voluntarily report their quarterly earnings, the corporation which does not release quarterly report would be suspected by investors for performing worse than its competitors.

If corporations stopped disclosing quarterly reports, they may also miss chances to accumulate more capital in the short-term when they beat earnings estimates. Analysts from Wall Street estimate companies’ financial information such as earnings per share (EPS), revenue, net income, earnings before income tax (EBIT), gross margin, as etc. In general, stock prices will increase when a company beats the estimate and vice versa. The table below shows the earnings history and price reaction of Apple Inc in last two years. The chart indicates that when Apple reported earnings that beat estimates, its stock prices usually increase after earning release. On average, in 2017 and 2018, Apple’s stock price will grow 3.65% and 5.1% respectively one week

and one month after the announcement of quarterly earnings reports. Filing and releasing strong earnings reports will help corporations have higher liquidity, generate cash inflow from stock trading, and increase market capital.

Announcement date	Fiscal period	Reported EPS	Estimated EPS	Surprise percentage	Change in price (one week after)	Change in price (one month after)
11/1/2018	Q4 18	2.915	2.776	4.97%	-6.18%	-19.64%
7/31/2018	Q3 18	2.307	2.18	5.52%	8.84%	15.46%
5/1/2018	Q2 18	2.736	2.635	3.49%	10.02%	10.88%
2/1/2018	Q1 18	3.875	3.841	1.28%	-7.53%	5.02%
11/2/2017	Q4 17	1.982	1.87	10.53%	4.62%	1.75%
8/1/2017	Q3 17	1.664	1.572	5.96%	6.68%	8.57%
5/2/2017	Q2 17	2.098	2.022	3.66%	4.39%	3.56%
1/3/2017	Q1 17	3.364	3.218	4.35%	8.39%	15.20%
				Average	3.65%	5.10%

Table 1 Apple Inc Earning History & Price Reaction

Less frequent financial reporting will eliminate the stress, time and money of quarterly reporting preparation. Bryan Sheffield, chief executive of Parsley Energy, believes removing quarter reporting will help upper management: “We start preparing three weeks in advance every quarter, essentially taking almost a third of executive’s time each quarter” (“Trump backs CEOs,” 2018). Preparing a quarterly report requires a series of procedures and collaboration between companies’ employees. For example, accountants spend time gathering data from accounting journals to make quarterly reports; and top management ensure the establishment of internal controls and review of financial statements. In addition, in the article “World semiannual reporting really have a major effect on costs”, Cydney Posner (2018) mentions that review of three quarterly reports occupies 15%-20% of overall costs (Posner, 2018) Therefore, if the SEC does not require corporations to fill quarterly reports, the internal costs associated with quarterly reporting will be reduced or eliminated. Moreover, Posner refers to the analysis from consulting firm Audit Analytics, which indicates that large companies (accelerated and large accelerated filers) paid audit fees of \$541 per \$1 million of revenue to their independent auditors, while smaller companies paid \$3,345 per \$1 million in revenue (Posner, 2018). Although auditors do not audit quarterly reports, the data reflects the phenomenon that small companies will benefit more than large companies from reducing fixed costs.

2. Investors/shareholders

In the equity markets, when investors purchase stocks of a corporation, they become shareholders of it. To investors, earning return on investment has always been regarded as the most important as well as their ultimate objective. Investors usually utilize fundamental analysis and technical analysis to evaluate a security. Technical analysis is a trading method that identifies trading opportunities by analyzing statistical data and price trends of a security. In short, technical analysis “tells” investors when they should buy a stock. However, ordinary investors usually use fundamental analysis which is reviewing and analyzing objective companies’ financial statements in order to reveal their business performance. The focus of fundamental analysis is on comparing the current market price to the value suggested by the analysis, answering the question “What stocks should investors buy?”. Since analyzing financial statements is a fundamental method for investors to make investment decisions, changing reporting frequency will impact investors.

Less frequent financial reporting requirements for publicly-traded companies reduce the availability of resources helping investors analyze target companies’ performance and make investment decisions. Quarterly reports not only show the financial information about corporations

in specific periods, but also indicate the “growth” and “decline” of corporations. By comparing the latest quarterly reports to previous ones, investors can clearly see whether their companies expanded their business and made more profits or experienced a recession period with less revenue. After analyzing quarter reports, investors are able to decide whether to buy or short the securities. Under current reporting regulations, investors are able to see three 10-Q quarterly reports that contain unaudited financial statements and operation information, and 10-K annual reports that summarized the last three quarter reports and reports of the fourth quarter. After switching to semi-annual reporting, investors can only view a semi-annual report and 10-K annual report. Therefore, investors will review companies’ financial statements less frequently. In addition, a half-year report does not contain data about each quarter so that investors are not able to realize the quarterly business performance such as sales revenue and gross profits of target companies.

3. Analysts

The daily job of an analyst is to pick up coverage of a company, examine companies’ previous earning statements, and follow up the conference calls of top management of corporations.

If corporations are required to file semi-annual report of quarterly report, the work of analysts will change dramatically. It will be difficult for analysts to gather quarterly data of companies and they will estimate semi-annual financials instead of quarterly financials.

Analysts will also face the same problem with investors since they do not have abundant information to evaluate companies. Not only do analysts estimate companies’ financial factors such as EPS or net income, they also present opinions about the valuation and volatility of stock so-called “analyst ratings”. In general, analysts evaluate whether the stock is a “buy,” “sell,” or “hold”, presenting investment recommendation to investors. However, Jonathan Hwa (2013) conducted a study about correctness of analyst ratings, showing that the rate of correctness for analysts rating on the Dow 30 was only 51% (Huw, 2013). Consequently, if analysts do not have enough information about companies’ financial and business performance, analysts rating will be more inaccurate, potentially misleading investors’ investment decisions.

4. Auditors

The responsibility of an external auditor is to ensure financial statements do not contain any material misstatement. By the end of companies’ fiscal year, auditors are able to review their financial reports and give their opinion. Under SEC regulations, only corporations’ annual financial statements must be audited by external auditors. Therefore, there is no significant change in auditors’ work if SEC substitutes semi-annual reporting for quarterly reporting. Auditors in the United States will not work more hours and extend the busy season unless semi-annual reporting is required to be audited in the future.

5. Trump Administration

Naturally, Trump’s administration does not have strong connection with corporations’ reporting. However, since Trump proposes to change the quarterly reporting to semi-annual reporting after meeting with business leaders, Trump will be influenced by his proposal. As an initiator of a revolution, Trump will be likely to receive both criticism and compliments.

If Trump’s proposal of changing reporting requirements were approved and processed by

SEC, he would receive different treatment. On the one hand, Trump will be complimented and supported by business leaders who intend to save money and time from abandoning quarter reporting requirement. On the other hand, he will also be criticized by reporters, researchers and some business executives who believe the advantages of utilizing quarterly reporting outweigh that of using semi-annual reporting. In addition, if Trump's proposal was accepted, that would strengthen his leadership in the government administration, meanwhile that would also prove his capability of managing the country and "making American great again" to the public, potentially increasing his public approval rating.

Conclusion

In summary, five parties will be influenced if SEC replaced quarterly reporting requirement for semi-annual reporting: corporations, investors, analysts, auditors and the Trump administration. The auditor will be the least influential party since quarterly reports are not required to be audited, and corporations will be the most impacted party.

Some corporations will voluntarily report quarterly. Corporations need time to get used to filing semi-annual reports and also they would like to reveal their financials to show their growth potential and strengthen the confidence of stockholders. Corporations are able to hide their quarterly business performance and avoid negative effects when they experience recession if they are required to file semi-annual reports rather than quarterly reports. However, investors may figure out the real reason that a corporation refused to release quarterly reports if its competitors in the industry release quarterly reports and show strong business performance. Companies may also lose opportunities to generate more capital in short term. On the contrary, companies will no longer worry about the cost of preparing quarterly reports. Especially, small companies will benefit more than large companies from reducing fixed costs.

Analyzing financial statements and corporations' reports is a basic method for investor to evaluate companies' business. If corporations report semi-annually, investors will have fewer open resources to analyze companies' performance, increasing the difficulty for them to make investment decisions. Analysts can face the same problems that they do not have abundant information to evaluate companies, leading to inaccurate estimate.

For the Trump Administration, Trump can get benefits such as potential supports from business leaders, and reputation to the public; he can also be criticized by opponents of semi-annual reporting. Even though Trump asked the SEC to study about switching to semi-annual reporting, SEC chairman Jay Clayton said "I don't think quarterly reporting is going to change for our top names anytime soon."

Reference

- Trump backs CEOs, proposes easing corporate reporting rules.* (2018, August 17). Retrieved from <https://www.reuters.com/article/us-usa-sec-trump/trump-backs-ceos-proposes-easing-corporate-reporting-rules-idUSKBN1L217G>
- The Laws That Govern the Securities Industry.* (2013, October 01). Retrieved from <https://www.sec.gov/answers/about-lawsshtml.html>
- What We Do.* (2013, June 10). Retrieved from <https://www.sec.gov/Article/whatwedo.html>
- Perino, M. A. (2002). Symposium enron and its aftermath: Enron's legislative aftermath: Some reflections on the deterrence aspects of the sarbanes-oxley act of 2002. *St.John's Law Review*, 76(4), 671-698. Retrieved from <http://0-search.proquest.com/library.uark.edu/docview/216772184?accountid=8361>
- PUBLIC LAW 107-204—JULY 30, 2002.* (2012). Retrieved from <https://www.gpo.gov/fdsys/pkg/PLAW-107publ204/pdf/PLAW-107publ204.pdf>
- Securities and Exchange Commission 17 CFR PARTS 228, 229, 232, 240, 249, 270 and 274.* (2002, August 30). Retrieved from <https://www.sec.gov/rules/final/33-8124.htm>
- Public Companies.* (n.d.). Retrieved from <https://www.investor.gov/introduction-investing/basics/how-market-works/public-companies>
- Nallareddy, S., Pozen, R., & Rajgopal, S. (2017, March 29). Consequences of Mandatory Quarterly Reporting: The U.K. Experience. Retrieved from <https://www.law.ox.ac.uk/business-law-blog/blog/2017/03/consequences-mandatory-quarterly-reporting-uk-experience>
- Abenante, M. (2018, October 12). The Pros and Cons Of Switching from Quarterly To Semiannual Reporting. Retrieved from <https://www.forbes.com/sites/forbesagencycouncil/2018/10/12/the-pros-and-cons-of-switching-from-quarterly-to-semiannual-reporting/#503b4e5b227f>
- Posner, C. S. (2018, August 17). Is semiannual reporting on the horizon? | Lexology. Retrieved from <https://www.lexology.com/library/detail.aspx?g=7b939916-fa12-46e3-bca5-12ff5a0ad571>
- Whelan, T. (2018, August 23). Trump is right: Quarterly earnings reports should go. Retrieved from <https://money.cnn.com/2018/08/23/news/trump-quarterly-reporting/index.html?iid=EL>
- Charles, I. (2018, August 20). Why Semi-Annual Financial Reporting isn't Going to Work. Retrieved from <https://hostanalytics.com/blog/why-semi-annual-financial-reporting-isnt-going-to-work/>
- Business Radio., Podcast. (2018). Should Companies Abandon Quarterly Earnings Reports? Retrieved from <http://knowledge.wharton.upenn.edu/article/ending-quarterly-reporting/>
- Rapoport, M. (2018, June 07). Buffett, Dimon Team Up to Curb 'Unhealthy Focus' on Quarterly Earnings. Retrieved from <https://www.wsj.com/articles/buffett-dimon-team-up-to-curb-unhealthy-focus-on-quarterly-earnings-1528387431>
- Pozen, R. C., Nallareddy, S., & Rajgopal, S. (2017, May 31). Impact of Reporting Frequency on UK Public Companies. Retrieved from <https://www.cfainstitute.org/en/research/foundation/2017/impact-of-reporting-frequency-on-uk-public-companies>
- Posner, C. (2018, September 07). Would semiannual reporting really have a major effect on costs? Retrieved from <https://cooleypubco.com/2018/09/07/semiannual-reporting-major-effect-on-costs/>

Hwa, J. (2013, April 16). Study: 49% of Analyst Ratings on the Dow 30 Were Incorrect in 2012. Retrieved from <https://www.nerdwallet.com/blog/investing/investing-data/investment-stock-analyst-ratings-stockpicking-research-wrong/>