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An Analysis of Key Financial Accounting Topics

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FINANCIAL ACCOUNTING CASE STUDIES

By

Alec White

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of
the requirements of the Sally McDonnell Barksdale Honors College.

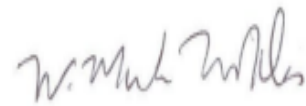
Oxford

May 2023

Approved by



Advisor: Dr. Victoria Dickinson



Reader: Dean W. Mark Wilder

Abstract

The Accounting Capstone Project is designed to help accounting students consider problems throughout the accounting industry. To accomplish this, students will complete several case studies dealing with areas of financial reporting. My group and I decided to present on potential tax saving strategies for Apple Inc.

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CASE STUDY ONE

On the 20th anniversary of 9/11, it is important to remember that day and the impact it has had. The documentary film *102 Minutes that Changed America* shows the reactions of New Yorkers as the events of that day unfolded. Beginning after the first plane crashed into the North Tower at 8:46 AM that day, these interviews with people on the ground show their shock, fear, anger, and sadness. As the second plane crashed into the South Tower at 9:03 AM, much of the emotion of the first crash was drowned out in pure shock, as the interviews showed people struggling to process what was happening. These interviews encapsulate the flow of emotions as people realize the first plane crash was not an accident, that it was a staged attack on not just New York but America in general. From there, the interviews show how angry people became, going from sadness when they believed the crash was an accident to rage as they realized it was a coordinated attack. These interviews also foreshadow the emotional turmoil that has dominated the discourse around not just 9/11 but also politics in America over the last two decades.

Because the interviews come from raw footage taken by amateurs, the documentary feels very genuine and authentic. Many of the details revealed by these interviews were aspects of that day I had never known. Part of that might come from some reluctance to dig too deeply into the events of that day. It is painful to go back to 9/11 and read and watch a lot of these interviews because of how emotional and difficult that is. But this documentary captures all of those emotions in real-time, and it is difficult to look away from what is captured. The first observation I had coming out of it was how quickly some of these emotions are processed. When the first plane hits, it is so shocking to most that they believe it was an accident. It does not seem possible that someone would purposefully crash a plane into a skyscraper, and they are unable to process what they are witnessing. But when the second plane crashes minutes later, the reaction very

quickly changes to anger and a desire for revenge. As soon as it became clear that this was a terrorist attack, people have already moved on to anger. It is like they were going through the five stages of grief, but they went from denial to anger almost immediately, and it feels like a lot of people never left the anger stage after that day. This country has still not come to accept what happened that day, and it is hard to blame us. As far as large-scale terrorist attacks go, there are few events to compare to 9/11.

I was not aware of all of the events that transpired that day, and how decisions were made. When the first tower was hit, the smoke was unbearable. The smell of burning wire and metal was overwhelming, as most people had not ever experienced anything like it. It did not take long for the smoke to swarm over the entire city, and that was before the second tower was hit. The South Tower was hit second but collapsed first because it was struck closer to the middle of the building. After the first tower was hit, decisions had to be made about evacuations and whether fire fighters would go into either tower. Police had to decide whether to evacuate the second tower after the first was hit, but because they were still under the assumption that it was an accident, they believed it would be safer to keep people in the second tower while the chaos around the first tower was dealt with. Once the second tower was hit, another debate was whether fire fighters should attempt to go in and rescue anyone. Many fire fighters had gone into the first tower, and they died when that tower collapsed. These were impossible decisions that had to be made, and because the two towers were hit so quickly, there was almost no time to make those decisions. Looking back, there are probably things that decision makers would have done differently, but it is very hard to criticize any decisions that were made under the shock and stress of that day.

Reflecting over the twenty years since 9/11, it is shocking but completely understandable how much has changed. In the immediate aftermath, political and social decisions had to be made in response to the event. Among the first things to happen was George W. Bush's declaration of a war on terror, which ultimately led to the occupation of both Afghanistan and Iraq. The effects of both of these military decisions continue to resonate to this day. In a more vague sense, 9/11 was also a breaking point for the American political system, causing a slow descent into identity politics and divisiveness that has made compromises between Democrats and Republicans seemingly impossible. While 9/11 is not the only reason for these divisions, there was a sense of fear that permeated throughout the country. The main fear was of another terrorist attack, and no one knew where or when it would happen, but for several years, Americans waited for something like 9/11 to occur again. That fear also caused a greater mistrust in the government altogether. This fear was applied to both parties from people on both sides of the political divide. Conspiracies about 9/11 have existed since that day, and while some are more believable than others, the conversation surrounding this event has always been surrounded by conspiracies, unresolved fears, and political tension. There has simply never been an event in American history that was as direct in its attack on America as 9/11 was, including events like Pearl Harbor.

The events of 9/11 were also felt on a more personal level. Smaller changes like the heightened security in airports has been felt ever since 9/11. In the immediate aftermath, there was also a major rise in patriotism. For several years, the swell of American pride was felt by all, and everyone who was old enough to understand the event at that time has moments that came afterward that were inspirational. Especially in New York, there were several moments that stand

out as a community banding together. I have seen clips of the Saturday Night Live that took place after 9/11 or Mike Piazza hitting a walk-off home run in the first game back in New York for the Mets. Even though I wasn't old enough to experience or understand these events as they happened, it is still interesting to go back and watch a country that was actually unified for a moment rally together in response to this horrifying event. Looking at the country now, it seems that the period following 9/11 might have been the last time the country was unified, and the events of 9/11 are to blame for that as well.

The impact of 9/11 is still being felt today. As COVID rages on and people are not trusting in their government, it begs the question, did 9/11 cause this long-lasting mistrust? For many people, the fact that 9/11 happened at all took away the air of invulnerability that America had since World War II. The idea that we could be attacked in such an aggressive way on our own soil forced many people to see the country as vulnerable for the first time. And once it became clear that we could be hurt, it was hard to go back to feeling secure in our place in the world. COVID is just the latest example of how this country does not respond well to adversity. Instead, we place blame and point fingers at one another instead of working together on common solutions. There has always been some division within the country, going back to our earliest arguments over slavery. But now it seems that every problem splits the country in half.

Recently, President Joe Biden decided to finally remove troops from Afghanistan after nearly two decades. This decision has also been divisive, but most agree that it was a rash decision with not enough thought about the consequences. As soon as troops vacated, the Taliban immediately took over the country, and every piece of news that has come out of Afghanistan since has been horrible. It was a decision that lacked forethought and did not take into consideration what would happen to innocent people who are now under the rule of a group of

terrorists. At the same time, it is clear that, even after two decades of occupying that country, we did not accomplish much while over there. The reality is that whenever we decided to withdraw our troops, whether that would be ten years ago or ten years from now, the results would have been the same. We could not leave our troops there forever. But it also feels like another loss so close to the twentieth anniversary of 9/11.

The effects of 9/11 are still being felt on a daily basis in America. It was so much more than a terrorist attack, as it has caused damage not just to the buildings in New York but to the general psyche of this country. The events of that day are still shocking and disturbing, and to see them from the perspectives of New Yorkers present in the city that day gives me even more sympathy for the people who suffered that day. But as much as that day hurt our country, the results from it still being felt are just as damaging. 9/11 took away the sense of security this country had as a world superpower. It put fear into the hearts of many, and that has not gone away over time. In fact, it has only gotten worse, to the point that we can't even trust one another, or our government, in the middle of a global pandemic. I was barely eight months old when 9/11 happened, so the events of that day did not affect me at the time, but I have grown up in the shadow of 9/11, and just from conversations with my parents, family members, and older friends, I know the damage it has caused. It was a psychological wound that has not properly healed, and it is hard to see how it will. The divisions it has created continue to grow. However, watching this documentary has put certain things in perspective. I especially look back at the months following 9/11 as a hopeful sign that we could come back together at some point in the future.

CASE STUDY TWO

Nashville is a city on the rise. From 2010 to 2020, the population has grown nearly 20%. With that growth, Nashville has taken its place as one of the most exciting and prosperous cities in the South, attracting young people from around the country because of its growing industries, booming nightlife and entertainment, and comforting culture. Nashville is not just an enjoyable place to live, but it is a relatively easy place to live, centrally located in the country and affordable compared to other cities its size.

What has made Nashville such an attractive destination over the last decade? The biggest factor is the industries that have thrived in the city. The healthcare industry in particular has been a driving force in the influx of young professionals. Healthcare is the fastest growing industry in Nashville, and the nature of that industry leads to a healthier, family friendly environment to live. Nashville offers an affordable cost of living for these young people as they start families, and it also provides a good public and private school system with a number of options in both categories.

Another major reason that Nashville has seen such an explosion in population is its entertainment industry. Nashville has been home to country music for decades, and that reputation has only been enhanced in recent years. Broadway Strip has only become more synonymous with country music as Nashville's reputation grows. Now, Broadway has even become a destination for bachelor and bachelorette parties for that reason. In addition to the country music scene, Nashville has two professional sports teams in the Tennessee Titans and Nashville Predators, both of which are successful organizations in their respective leagues

and regularly provide playoff games and general excitement for the city. Nashville also has its own cuisine it is known for, hot chicken in particular.

Nashville is skewing young, wealthy, and professional over the last decade, and that trend does not seem like it will stop. As the city grows, it becomes a more desirable destination for anyone looking for a new home. Because of its combination of entertainment, healthy industries, and affordability, Nashville can be considered one of the rising cities in America and a happy new home for any transplants.

CASE STUDY THREE



801-750 West Pender Street Vancouver BC V6C 2T8

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Alec White

who has pursued studies and completed all
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Handwritten signature of Tim Vipond in blue ink.

Chair of the Board

Handwritten signature of Scott Powell in blue ink.

Director

Handwritten signature of Lynn Dalton in blue ink.

Director

Oct 13, 2021

CASE STUDY FOUR

My primary takeaways from this case has been the difference in search results depending on which search engine you decide to use. As a group, we used Google, DuckDuckGo, and Brave search engines. I (Jake) used Google, and chose my articles based upon the order they appeared in my search (unless the article was blatantly irrelevant). Compared to the search results of my partners, my results were almost exclusively from government agencies' websites, well-funded news companies' websites (such as Fox, CNN, Forbes, NY Times, etc.) and, most frequently, from the Pfizer website itself.

For this case study my partners and I researched Pfizer and their handling of the coronavirus pandemic. I used the brave search engine for most of my research and I found several articles and sites that I would not have found on Google. During this case I (Alec) learned about Pfizer's lobbying and how they tried to prevent competitors from eating into their profits. During my research, I was able to find how Pfizer suppressed drugs like hydroxychloroquine and Ivermectin to help increase their revenues. Pfizer also significantly raised lobbying efforts over the past couple years to strike down doubts about their vaccines and to lessen talk about drug pricing.

In this case study, we researched the various topics regarding the financial implications of the COVID-19 pandemic and the development of a vaccine on pharmaceutical companies, focusing on Pfizer. We researched several different angles to this topic, including first party analysis, third-party analysis, lobbying, competing treatment and more. We also took this time to look at the effect of different search engines on research results. That effect was something that I(Trey) took special notice of and affected much of the research I found. I used

DuckDuckGo.com and many of the websites and articles came from un reputable sources. These sources often speculated or drew conclusions that did not seem to have much evidence no matter where they stood on an issue.

“How Pfizer has been affected by the pandemic in their 2020 10K”

- Page 1: “In 2020, our business, operations and financial condition and results were impacted by the COVID-19 pandemic. To confront the public health challenge posed by the pandemic, we have made some important advances, including, among others, the development of a vaccine to help prevent COVID-19. For additional information, see the Overview of Our Performance, Operating Environment, Strategy and Outlook—COVID-19 Pandemic section within MD&A and the Item 1A. Risk Factors—Development, Regulatory Approval and Marketing of Products and —COVID-19 Pandemic sections in this Form 10-K.”
- Page 1: “Our significant recent business development activities in 2020 include: (i) the April 2020 agreement with BioNTech to develop, manufacture and commercialize an mRNA-based coronavirus vaccine program, BNT162, aimed at preventing COVID-19,”
- Page 2: Pfizer-BioNTech COVID-19 Vaccine (BNT162b2) is an mRNA-based coronavirus vaccine to help prevent COVID-19 which is being jointly developed and commercialized with BioNTech. Pfizer and BioNTech will equally share the costs of development for the BNT162 program... We will also share gross profits equally from commercialization of BNT162b2 and are working jointly with BioNTech in our respective territories to commercialize the vaccine worldwide (excluding China, Hong Kong, Macau and Taiwan), subject to regulatory authorizations or approvals market by market.
- **Page 11:** During 2020, our COVID-19 pandemic preparedness and response was a primary focus. Our comprehensive pandemic response plan incorporates guidance issued by external health authorities and is designed to keep onsite workers at our manufacturing and research sites safe and healthy. A global employee assistance program provides stress management, mental health, emotional, resiliency and pandemic guidance and support to our colleagues.
- Page 15: we participate in a tender process for selection in national immunization programs. Failure to secure participation in national immunization programs or to obtain acceptable pricing in the tender process could adversely affect our business. We also anticipate pricing pressures will be amplified by COVID-19 induced budget deficits and focus on pricing for new COVID-19 therapies and vaccines.
- “General risks- COVID-19 Pandemic section”
- Most of Pfizer’s workers who do not work in their facilities were able to continue working remotely.
- They have not seen a significant disruption to their supply chain, and all of their manufacturing sites continue to operate at or near normal levels.

During 2020, pandemic preparedness was the key focus of Pfizer. Pfizer was forced to adapt to the pandemic by implementing new guidelines issued by health authorities. Thinking prospectively, Pfizer created a vaccine to be able to mitigate the effects of the virus. Analysis of the data indicated a vaccine efficacy rate against COVID-19 of 95% in participants without prior SARS-CoV-2 infection and also in participants with and without prior SARS-CoV-2 infection, in each case measured from seven days after the second dose. R&D expenses increased 1 billion dollars. In 2020, percentage of revenues increased within the United States, while percentage of revenues outside the U.S. decreased. Pfizer had to adapt to several environmental laws, “We incurred capital and operational expenditures in 2020 for environmental compliance purposes and for the clean-up of certain past industrial activity as follows: \$42 million in environment-related capital expenditures and \$120 million in other environment-related expenses.” (Page 17)

In 2020, BNT162b2, the vaccine for individuals 16 and older made Pfizer 154 million dollars in revenues.

“In connection with the April 2020 agreement, we paid BioNTech an upfront cash payment of \$72 million, which was recorded in Research and development expenses in our second quarter of 2020, and we made an additional equity investment of \$113 million in common stock of BioNTech. BioNTech became eligible to receive potential milestone payments of up to \$563 million for a total consideration of \$748 million. Under the terms of this agreement, we and BioNTech will share gross profits and development costs equally after the vaccine is approved and successfully commercialized, and we were responsible for all of the development costs until commercialization of the vaccine. Thereafter, BioNTech was to repay us its 50 percent share of these development costs through reductions in gross profit sharing and milestone payments to BioNTech over time. On January 29, 2021, we and BioNTech signed an amended version of the April 2020 agreement. Under the January 2021 agreement, BioNTech will pay us their 50 percent share of prior development costs in a lump sum payment during the first quarter of 2021. Further R&D costs will be shared equally.” (Page 69)

COVID-19 hurt revenue for products like Prevnar 13 and Chantix due to mobility and other restrictions.

“What do people on the web say about Pfizer’s financial performance”

DuckDuckGo.com

In the third quarter of 2021, Pfizer had favorable statistics in the stock market, with analysts overwhelmingly recommending HOLD with a few BUY recommendations (<https://investchronicle.com/2021/10/18/pfizer-inc-pfe-is-on-the-roll-with-an-average-volume-of-32-80m-in-the-recent-3-months/>). Experts found it to have good long term potential despite changes surrounding the Covid-19 pandemic including large populations becoming vaccinated and other competitors entering the scene (<https://www.nasdaq.com/articles/a-year-since-pfizers-big-breakthrough-are-vaccine-stocks-still-worth-investing-in-2021-10>). Fitch Ratings gave the company an “A” ranking and considered it to have a “Stable Outlook.” “The revision to a Stable Outlook reflects the company's reduction of leverage (total debt/EBITDA) to 2.2x at July 4, 2021 from 3.3x at June 28, 2020 and the expectation that it will sustain at or below these levels through the rating horizon even as coronavirus vaccine benefits moderate over time (Fitchratings.com).”

Google: “Pfizer Reaps Hundreds of Millions in Profits From Covid Vaccine” by nytimes.com. Excerpt: “The vaccine brought in \$3.5 billion in revenue in the first three months of this year (2021), nearly a quarter of its total revenue, [Pfizer reported](#). The vaccine was, far and away, Pfizer’s biggest source of revenue. The company did not disclose the profits it derived from the vaccine, but it reiterated its [previous prediction](#) that its profit margins on the vaccine would be in the high 20 percent range. That would translate into roughly \$900 million in pretax vaccine profits in the first quarter.”

“Pfizer sells \$7.8 billion in Covid shots in the second quarter, raises 2021 guidance on vaccine sales” by CNBC.com. Excerpt: “Pfizer said Wednesday it sold \$7.8 billion in Covid-19 shots in the second quarter and raised its 2021 sales forecast for the vaccine to \$33.5 billion from \$26 billion, as the delta variant spreads and scientists debate whether people will need booster shots.

Adjusted earnings per share: \$1.07 per share vs. 97 cents per share expected

Revenue: \$18.98 billion vs. \$18.74 billion forecast

Pfizer expects an adjusted pretax profit in the high 20% range of revenue for the vaccine.

As the pharmaceutical company’s income and reputation have skyrocketed from bringing the first COVID-19 vaccine to market, the company’s lobbying efforts have increased as well. In 2020, Pfizer spent \$13.2 million on its lobbying efforts — that’s up from \$11 million in 2019 and the most the company has spent on lobbying since 2009 during the debate over the Affordable Care Act.”

“Pfizer Expects \$33.5 Billion In Vaccine Revenue In 2021” by forbes.com. Excerpt: “Biotech giant Pfizer expects to generate \$33.5 billion in Covid-19 vaccine sales in 2021, up from previous estimates of \$26 billion, according to its second quarter earnings reports. These projections are based on the 2.1 billion doses of the Pfizer/BioNTech vaccine which the company expects to manufacture and deliver by the end of the year.”

- <https://www.nytimes.com/2021/05/04/business/pfizer-covid-vaccine-profits.html>
- <https://www.cnbc.com/2021/07/28/covid-pfizer-pfe-earnings-q2-2021.html>
- <https://www.forbes.com/sites/aayushipratap/2021/07/28/pfizer-expects-335-billion-in-vaccine-revenue-in-2021/?sh=4791438d217d>

Brave.com

Pfizer now expects that their coronavirus vaccine will generate \$33.5 billion this year in revenue. The company had earnings of \$5.56 billion, or 98 cents per share, in the second quarter of 2021, compared to \$3.49 billion, or 62 cents per share, in the same quarter a year ago. Adjusted EPS was \$1.07, against a FactSet consensus of 97 cents. Pfizer's revenue jumped to \$18.97 billion for the quarter, compared with the \$9.86 billion in revenue generated in the second quarter of 2020.

- The trailing twelve-month earnings per share (EPS) of the company stands at Rs 108.8, a decline from the EPS of Rs 111.3 recorded last year.
- The price to earnings (P/E) ratio, at the current price of Rs 4,986.0, stands at 39.8 times its trailing twelve months earnings.
- The price to book value (P/BV) ratio at current price levels stands at 9.3 times, while the price to sales ratio stands at 9.9 times.
- The company's price to cash flow (P/CF) ratio stood at 37.6 times its end-of-year operating cash flow earnings.

By the end of 2020 Pfizer sold \$15 billion in coronavirus vaccine doses and to net a profit in the high 20% range of revenue for the inoculations. Revenue rose 12% to \$11.68 billion from \$10.44 billion during the last quarter last year — better than analysts expected.

<https://www.marketwatch.com/story/pfizers-covid-19-vaccine-generated-78-billion-in-revenue-in-the-second-quarter-2021-07-28>

<https://www.equitymaster.com/research-it/annual-results-analysis/PFIZ/PFIZER-2020-21-Annual-Report-Analysis/1309/>

<https://www.cnbc.com/2021/02/02/covid-vaccine-pfizer-expects-about-15-billion-in-2021-sales-from-shots.html>

“Are hydroxychloroquine and ivermectin effective and available”

DuckDuckGo.com

Hydroxychloroquine has not been shown to be effective for treating COVID-19. Several studies have been conducted finding this to be the case. It has become such a consensus that the FDA removed its emergency use authorization for the drug (<https://www.drugs.com/medical-answers/hydroxychloroquine-effective-covid-19-3536024/>). At least on DuckDuckGo, the shopping tabs does allow you to find results for the drug and most of the online stores that pop up on web results give either a warning or have several pop-up ads and strange links. It can be purchased on healthwarehouse.com for \$42.00 for thirty 200mg tablets. While Ivermectin has not been approved to treat COVID-19, the research that suggests use of the drug in treatment has been considered “poor quality” and possibly counterfeit. Despite this, some medical professionals are still recommending it to patients. Rumors of side effects after taking the drug have spread and some researchers believe this could undermine it’s true use in treating Neglected Tropical Diseases (<https://www.dailyexcelsior.com/ivermectin-misuse-against-covid-risks-undermining-its-use-for-other-diseases/>).

Google: “Why You Should Not Use Ivermectin to Treat or Prevent COVID-19” by fda.gov
<https://www.fda.gov/consumers/consumer-updates/why-you-should-not-use-ivermectin-treat-or-prevent-covid-19>

According to the FDA ivermectin is primarily used to rid animals of parasitic infections, but is occasionally prescribed to humans in very small doses in tablet form to get rid of parasitic infections. COVID-19 is not a parasite, and ivermectin in larger doses is dangerous. One can overdose on ivermectin, especially when using other prescribed or abused drugs.

“Is chloroquine or hydroxychloroquine useful in treating people with COVID-19, or in preventing infection in people who have been exposed to the virus?” by cochrane.org.
<https://www.cochrane.org/news/chloroquine-or-hydroxychloroquine-useful-treating-people-covid-19-or-preventing-infection>

Hydroxychloroquine does not reduce deaths from COVID-19 or reduce the number of people needing mechanical ventilation. In trials, it caused more unwanted effects than a placebo treatment (but no serious side effects).

“Hydroxychloroquine does not benefit adults hospitalized with COVID-19” by nih.gov.
<https://www.nih.gov/news-events/news-releases/hydroxychloroquine-does-not-benefit-adults-hospitalized-covid-19>.

A National Institutes of Health clinical trial evaluating the safety and effectiveness of hydroxychloroquine for the treatment of adults with coronavirus disease 2019 (COVID-19) has formally concluded that the drug provides no clinical benefit to hospitalized patients. Though found not to cause harm, early findings in June when the trial was stopped indicated that the drug was not improving outcomes in COVID-19 patients.

Brave.com

Multiple studies provide data that hydroxychloroquine (brand name: Plaquenil) does not provide a medical benefit for hospitalized patients with COVID-19. In addition, the risk for serious side effects with hydroxychloroquine and chloroquine phosphate are a concern. This includes the possibility of adverse cardiovascular (heart) events such as an abnormal heart rhythm which could be fatal. The Recovery Trial from the University of Oxford is a large study evaluating potential treatments for the coronavirus. They discovered that there is no beneficial effect or reduction of death in hospitalized patients receiving hydroxychloroquine.

Ivermectin is intended to treat some parasitic worms that can be in humans. Most experts say that there is no high-quality research that would lead them to recommend using Ivermectin to prevent or treat coronavirus. Interest in Ivermectin to treat covid surged during the summer, when the delta variant infection numbers were high.

<https://www.drugs.com/medical-answers/hydroxychloroquine-effective-covid-19-3536024/>
<https://www.washingtonpost.com/lifestyle/2021/09/10/ivermectin-covid-humans/>

“Pfizer’s opinions on alternative treatments. Would they have an incentive to promote them or refute them. Is it strategic or based on science?”

DuckDuckGo:

In March of 2020, during the development of its COVID-19 vaccine, Pfizer published an article discussing a recently released study that indicated hydroxychloroquine was less effective than

some of the company's own treatments and implied it may not be safe at all (<https://cdn.pfizer.com/pfizercom/news/ZithroComboStatement.pdf>). With the development of its vaccine and their new in-development pill, Pfizer has a vested interest in hurting the reliability of these alternative treatments. Whether these treatments actually work or are pseudoscience, Pfizer has money invested in their own treatments. If there are competitors that claim to be a better alternative to their vaccine or vaccines in general, their profits from the COVID-19 vaccine, and possibly even future vaccines and treatments they develop, could take a hit as potential customers move to these alternatives. Some claim that Pfizer's new COVID treating pill, PF-07321332, is similar to ivermectin (<https://newsrescue.com/pfizermectin-pfizer-starts-final-study-for-covid-drug-thats-suspiciously-similar-to-horse-paste/>). If that is the case, they would have an even stronger reason to want these alternatives to be scrutinized while their own treatments are found to be effective.

Google:

Using google, I've been having a harder time finding articles relating or comparing pfizer/a vaccine and any other alternative treatments. Most of the search results that appear are Pfizer talking about its own alternative treatments that are in development, or articles saying that any alternative treatments aren't effective and not mentioning Pfizer.

Brave.com Former Pfizer VP Yeadon Exposes How Early Treatment with Ivermectin and Hydroxychloroquine Were Squashed to Get Vaccines to Market

Former VP of Pfizer talks about Pfizer's approach to help their vaccine and conquer competitors, "I don't know, I think it's part of a fraud. I was on last week and I told you that all the main narrative points about the virus are shall we say, adjacent to the truth, lies, frankly, designed to make people fearful, and I think suppressing the drugs, the treatment, has had two benefits for whoever is doing this: one is it makes people willing to take the vaccine, and it makes vaccines available much earlier than they otherwise would and should have been so that's probably the motivation." He went on to say that promotion of the Ivermectin drug was purposely suppressed to hurt competing companies.

<https://www.palmerfoundation.com.au/former-pfizer-vp-yeadon-exposes-how-early-treatment-with-ivermectin-and-hydroxychloroquine-were-squashed-to-get-vaccines-to-market/>

Pfizer's lobbying efforts:

DuckDuckGo:

According to opensecrets.org, in 2017, Pfizer had 63 lobbyists employed across several firms; this cost them \$10,470,000. Fifty-one of these lobbyists were former government employees. Their spending increased by a million dollars the following year and they added one lobbyist who used to be a former government employee. In 2019, during the pandemic they spent half a million dollars less than the previous year but had increased their lobbyists to 77. In 2020, they spent two million dollars more on lobbying, increasing their lobbyist team to 102. So far, in 2021, they have only spent \$6,670,000 and decreased their lobbyists to 92

<https://www.opensecrets.org/federal-lobbying/clients/lobbyists?cycle=2021&id=D000000138>).

As Congress tries to pass a new economic plan, Pfizer joins many other corporations in lobbying against the bill, as “the pharmaceutical industry has embarked on its own wide-ranging campaign to combat Democrats’ drug pricing proposals, another potential revenue source in the bill.”

(<https://www.washingtonpost.com/us-policy/2021/08/31/business-lobbying-democrats-reconciliation/>).

Google: This is from an article I found earlier named “Pfizer’s full FDA approval could lead to even greater profits” by opensecrets.org. It says: “As the pharmaceutical company’s income and reputation have skyrocketed from bringing the first COVID-19 vaccine to market, the company’s lobbying efforts have increased as well. In 2020, Pfizer spent \$13.2 million on its lobbying efforts — that’s up from \$11 million in 2019 and the most the company has spent on lobbying since 2009 during the debate over the Affordable Care Act.”

The first article that comes up on Google is from pfizer.com named “PFIZER PUBLIC POLICY ENGAGEMENT FOR GLOBAL PUBLIC HEALTH,” which gives the impression that Pfizer either genuinely believes or wants us to believe that their donations and lobbying efforts is intended to work towards “global public health.” The article goes on to say that it is illegal to use funds to contribute to candidates for federal office, but legal to do so for state and local office, and Pfizer says that their company’s policy does not allow them to do that either. In terms of lobbying specifically, Pfizer says, “Pfizer’s U.S. Government Relations leaders are responsible for managing the company’s lobbying activities and informing the Governance & Sustainability Committee of the Board of the company’s lobbying priorities and activities through periodic reports. In addition, all colleague communications with government and regulatory officials are governed by Pfizer’s internal policies and procedures, which include anti-bribery and anti-corruption guidelines that are available on our website.” Pfizer then lists major trade associations that they are a part of and lists the portion of dues indicated that were used for federal lobbying activity (in 2020), with the most expensive of which being \$2,245,613 to “PhRMA” which stands for Pharmaceutical Research and Manufacturers of America.

Brave.com

Pre covid Pfizer started ramping up their lobbying efforts along with many other pharmaceutical companies, “Pharmaceutical Research and Manufacturers of America (PhRMA) surpassed its 2009 lobbying record, shelling out \$28 million in 2018. The trade association spends heavily, but so do its members, including Pfizer (\$11.3 million) Johnson & Johnson (\$6.6 million) and AbbVie (\$6.1 million).” Pharmaceutical companies were really trying to influence public opinion in 2018 to help fight against drug prices becoming a common talking point among individuals.

Earlier this month, Pfizer added two new outside lobbying firms to help with negotiations over drug pricing. Newly filed lobbying disclosures show Pfizer also retained Federal Health Policy Strategies at the start of September to lobby on drug pricing, a major proposed source of revenue

for Democrats' \$3.5 trillion reconciliation bill. Pfizer had started to ramp up lobbying efforts pre covid, and that has only seemed to increase after the creation of their coronavirus vaccine.

<https://www.opensecrets.org/news/2019/01/lobbying-spending-reaches-3-4-billion-in-18/>

<https://www.politico.com/newsletters/politico-influence/2021/10/01/pfizer-adds-more-lobbying-help-797991>

September 9th Mandate

The September 9th, 2021 executive order released by President Biden mandated that all federal agencies and contractors as well as certain large employers have their employees comply with adequate safety precautions for COVID-19 (<https://www.whitehouse.gov/briefing-room/presidential-actions/2021/09/09/executive-order-on-ensuring-adequate-covid-safety-protocols-for-federal-contractors/>). These include masks, vaccinations mandates and incentives, and other accommodations (<https://www.adp.com/spark/articles/2021/09/president-biden-issues-covid-19-executive-order-vaccine-mandate.aspx>).

CASE STUDY FIVE

For this case I decided to interview Zane Haykal, owner of the Tutors in Memphis, Tennessee. Ever since ninth grade I have been going to Zane for help with course work in high school and help with the ACT. Zane is a very intelligent and hardworking businessperson that helped me strive for my best while I was working with him. He was often tough and expected hard work out of me, which I did not always appreciate at the time, but I am thankful for now.

During this interview I got to learn more about Zane's personal life than I knew before and learned how he ran his business. He showed me how he approached each client and how he and his brother would try to attract new clients. Zane is a person that has had a lot of influence on my life and I knew immediately when this case was assigned who I was going to interview. The following is the responses I received while conducting the interview.

I am interviewing Zane Haykal, owner of The Tutors in Memphis, TN. He has been my tutor since I was in ninth grade. He grew up in Memphis and went to Memphis University School, a private school in the city. I asked him what his teenage years were like, and he said that while he was a good student, he didn't take school very seriously yet. He was an A's and B's type of student, but he still had an interest in academics at a young age. He mentioned that he always wanted to be a teacher, but he found himself gravitating toward tutoring as he thought about his career.

Zane said his college years were not very typical of the college experience. He went to Rollins College in Orlando, FL, as a freshman but transferred back home to finish up at the University of Memphis. He mentioned that during that freshman year, he found himself aimless

in terms of what he wanted to get out of the experience, and since his parents were paying more than \$40k per year for him to waste time, he decided to go home. At Memphis, he found that he had a passion for telling stories and decided to major in Creative Writing. While he did not end up pursuing writing as a career, it did help him think creatively and apply those schools to other types of writing that fit within a lot of different fields.

Zane had a talent for writing in high school, and one workshop class during his sophomore year in college opened his eyes to how much fun creative writing could be. He talked a lot about his creative writing classes at Memphis, where he heard a lot of interesting stories from classmates. That only made him want to write more. The response that he got from classmates during those workshops, whether it be about his own stories or the editing process with others, made him want to continue that pursuit until he graduated. It also instilled in him an interest in helping others improve their own work. He talked about how excited he would be to discuss other people's work and help them improve as writers, and that helped lead him toward tutoring after college.

Zane talked about how every job he had before opening his own business taught him things not to do when he had his own. His first job was set up for him by his dad where he sold antiques for a family friend. It was completely disorganized, but he learned that he could dive into a work setting where he did not have any experience or expertise and be able to figure things out. From there, he worked for a hybrid bike company called Aerobic Cruisers, which was created by Charles McVean, a local entrepreneur who owned a national trading company. While there, Zane was made warehouse manager and learned how to streamline the process of building bikes. More importantly, he learned how to delegate to others. While he did not get along with his boss, he appreciated the work ethic of all those involved in that company. After Aerobic

Cruiser, he spent six months working at Garden District, a local florist and event planning company. Zane said that he did not value the work he did, but his bosses acted like it was the most important job in the world. That disconnect meant it was never going to work out, but again, he saw how hard people worked and learned from the experience. From there, he helped a classmate open a tutoring company called The Study. While the partnership didn't last, Zane built his reputation as a tutor and was given the platform to open his own business a few years later.

The most difficult hurdle for him has been learning how to manage a business and the people he employs. He said that the tutoring side of things has always come naturally to him, but since he was not a business major, there were some major hurdles catching up to the business side of it, like hiring, billing, pricing, scheduling, and budgeting. For a few years, Zane and his brother and co-owner Faris were the only people in charge of both oversight of the business and its daily operations. He said that wearing so many hats at the beginning of the process taught him so much about managing a business. If he had more help (for example, my dad offered to be a silent partner with them), it may have taken longer for him to learn how to do things on his own. He said it wasn't always perfect and he made a lot of mistakes, but those mistakes just made him better in the long run.

Zane said that his work-life balance has been difficult to manage. There is always work to be done, and he thinks of himself as a people-pleaser. That is not always the best way to run a business. As their business has grown, so have their number of clients and responsibilities. He said that recently, they've hired a new office manager and several employees to help him and his brother shoulder the workload, but he still finds himself working more than 50 hours per week between tutoring and managing the business. He said it has been hard to maintain relationships

and even friendships, and he realized that if not for those things, what is he working so hard for? That realization has helped him prioritize things a little better. He mentioned that he has been dating a girl for nearly a year now and hopes to start a family soon. With those changes, he will have to reshuffle his priorities again and find new ways to continue to manage his business.

He would have told himself to stop worrying about the future and focus on what was in front of him. Work can be a journey unto itself. He didn't always know how one job might lead to the next, but he learned something every step of the way. He says he was lucky to fall into tutoring as a career, and that it was a natural fit for him, but the circuitous nature of work means that not every step is going to be as important as others.

Zane says he's proud of the mentoring relationships he's had as a tutor. He mentioned me as an example, but he says he enjoys knowing that he had some small influence on a lot of people over the last decade that he has been tutoring. He enjoys being able to go out and have someone come up to him years after working with them and just talk. The relationships don't always mean as much to one student as another, but for the ones who he was really able to help, he likes to keep in touch and continue to mentor them for as long as needed. He believes he has been a good influence on a lot of people, helping them figure out sooner what took him a long time to realize.

It may not be the best vacation he's ever had, but Zane said that over the past summer, he went to Vail, CO, to officiate his best friend's wedding. The entire weekend was a blast, and he wishes he could live in that moment for just a little longer.

His generation is coming into a position where they are taking over from Boomers and Gen X as leaders in a number of fields. He has always felt that there is some arrested development among people in his generation, even those that are successful in their careers. He

said that his generation still has some growing up to do, and there are a lot of areas where their idealism does not match their actions. He questions whether they will be able to enact the change that they are capable of, or if they will fall into the same habits that have put the country into the situation it currently finds itself.

Zane said that maybe he is overreacting to the current climate which has been exacerbated by turbulent politics and especially by Covid, but the fractured social and political scene does not seem to be healing anytime soon, and it is something my generation will have to grapple with. He hopes that over time, feelings around the country simmer, and we can get back to a more peaceful coexistence where we can be respectful of each other's differences without having to log on Twitter to yell at each other.

CASE STUDY SIX

This week we were given the task of doing a deep dive into everything and anything Apple, Inc. Last week, the five of us were put into a group and asked to pick a publicly traded company in the United States. We chose Apple because it is a large, popular company with a multitude of information on the Internet. We will eventually be looking into specifics regarding the accounting behind the company and how things could be improved. This week, however, we began by obtaining a general overview of our company, the actions it has taken in the past 12 months, and its financial security. To do this, we read through any reliable news articles or information we could find. We searched through various websites, databases, and blogs to get a picture of what Apple is trying to accomplish as a business and how it is doing so. Specifically, we needed to focus on how the company was structured and what the greatest threats to its operations were. While doing so, we needed to create an organizational chart to display the structure of the company. Although broad, this general overview was a good way to start our research on the company that we will continue to follow for the remainder of the semester.

While looking through a wide variety of different news articles and databases, we found a recurring topic regarding the specific business segments of Apple and how management intends to grow them. Apple has broken up its undertakings into two main categories; Products and Services. Multiple sources, including the 10-K and Mergent Online database, list four items under the Products category. These items include iPhone, MacBook, iPad, and Wearables, Home and Accessories. The first three items are fixed as they only include different upgrades/sizes/versions of that specific product. The item 'Wearables, Home and Accessories' includes a variety of different products, including AirPods, Apple TV, Apple Watch, and even Beats products. Under the Service category, Apple offers five items: Advertising, AppleCare,

Cloud Services, Digital Content, and Payment Services. Apple is known for its innovative and constantly evolving technology which reflects in many recently published news articles. On February 2, 2022, four different news articles were published detailing Apple's issuance of new patents. These four patents include user interfaces for peer-to-peer transfers, capacitive touch panel for sensing mechanical inputs into a divide, camera with image sensor shifting, and displays with direct-lit backlight units and color conversion layers. The fact that one day of news articles covers the development of four new patents created by Apple, exemplifies how the company's brand message "Think Different" is put into play every single day.

Apple's 2021 Management Discussion and Analysis gave our group a lot of insight and clarity surrounding the performance of the company over the past year. Unsurprisingly, Apple had record highs in almost every category mentioned in this section. We found it relevant that for just the fourth quarter, Apple recorded its highest revenue, net income, and earnings per share at \$123.9 billion, \$34.63 billion, and \$2.11 respectively. On a slightly less desirable note, the company also incurred their highest reported expenses. Furthermore, component suppliers and logistical service providers experienced disturbances leading to supply shortages and loss of sales for Apple. Management noted that similar disruptions are contingent to the development of COVID-19 and anticipated going forward. As stated in the 10-K, Ernst & Young has completed the company's audit since 2009, replacing KPMG. Apple's MD&As do not have many instances proclaiming predictions or plans, so it does make it more difficult for users to conclude if Apple's forecast materialized the following year. Regardless, the 10-K clearly presented the company's success in 2021.¹

¹ <https://www.mergentonline-com.umiss.idm.oclc.org/companydetail.php?compnumber=12161&>

As the world continues to deal with COVID-19, Apple faces many challenges of its own. The biggest threat facing Apple today is rising labor prices and issues within its supply chain. Computer chips are one of the main issues within Apple's supply chain problems. Since the beginning of the pandemic, consumer demand for technology has increased drastically and Apple has struggled to keep up with the high demand for computer chips. Due to this ongoing shortage, Apple lost \$6 billion in sales, which leads them to believe that it is necessary to rethink their semiconducting technology. The combination of rising prices and labor shortages makes it difficult for Apple to find employees and manufacture their products in the most efficient way. Another major problem facing Apple is its overreliance on the sales of iPhones. With the increasing number of corporations entering the smartphone industry, Apple's massive control over the market faces the possibility of a decline in sales and daily active users. While COVID-19 has increased humans' reliance on technology, it has also decreased the average consumer's willingness to spend money on Apple's products.

Apple's biggest competition as a smartphone manufacturer is Samsung. While Apple continues to dominate the market within America, Samsung holds a six percent lead in the global market share. Since Samsung is South Korea's biggest company, it makes it easier for them and their Samsung Galaxy and Note series to dominate Apple in foreign countries. As a computer manufacturer, Apple competes mainly with Lenovo, HP, Microsoft, Google, and Dell for a majority share of the market. Apple has struggled as of late because Chromebooks have recently overtaken MacBooks in the market share for the first time. COVID-19 seems to be the driving factor behind Chromebook's increase in popularity, as it is cheaper and easier to mass-produce

during the pandemic.² Chromebook's are more appealing for schools and companies that needed to buy large quantities of computers, which led to a decline in MacBook sales.

Although Apple owns hundreds of subsidiaries, they only list 17 in their 10-K report. In a footnote of the 10-K, Apple states that the other subsidiaries are omitted since "they do not constitute a significant subsidiary as of the end of the year."³ Seen below, the organizational chart of Apple's structure features 10 of the main subsidiaries as well as a few of the minor subsidiaries not listed in the 10-K report. Since many of these subsidiaries are located overseas, Apple is required to pay taxes in the United States and in foreign jurisdictions. However, some of these subsidiaries lack a physical presence and employees, which allows them to avoid taxes. For example, the main subsidiary, Apple Operations International Limited Inc., is incorporated in Ireland and avoids taxes since it has never had employees. The company is used as a holding company which receives dividends from the other subsidiaries.⁴ Many of the other main subsidiaries, such as Apple Distribution Limited, Apple Sales International Limited, and Apple Operations Limited, are also located in Ireland.

As part of Apple's strategy to avoid taxes, Apple Sales International Limited contracted with manufacturers in China to produce Apple's electronic devices before selling them to Apple Distribution International Limited. Also, profits made through sales in Europe were transferred to subsidiaries located in Ireland, resulting in a lower tax rate than the country where the sales occurred.⁵ In doing so, Apple avoids paying taxes on some of its revenue by selling products and distributing dividends between its major subsidiaries.

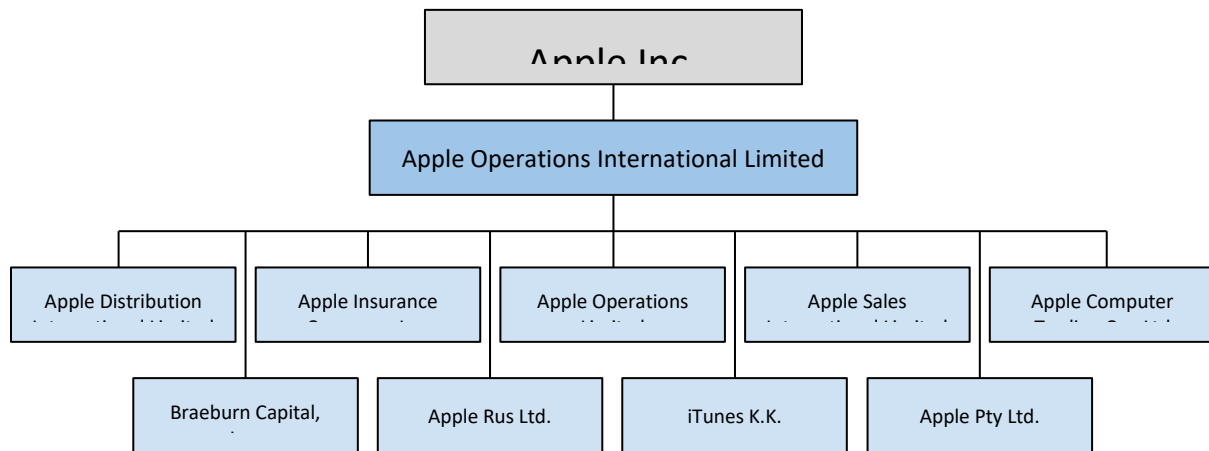
² <https://www.investopedia.com/ask/answers/120314/who-are-apples-aapl-main-competitors.asp>

³ [https://s2.q4cdn.com/470004039/files/doc_financials/2021/q4/10-K-2021-\(As-Filed\).pdf](https://s2.q4cdn.com/470004039/files/doc_financials/2021/q4/10-K-2021-(As-Filed).pdf)

⁴ <https://archive.nytimes.com/www.nytimes.com/interactive/2013/05/21/business/apples-internat>

⁵ <https://www.fairobserver.com/economics/hans-georg-betz-apple-tax-avoidance-verdict-ireland>

In addition to the foreign subsidiaries, Apple also controls many subsidiaries in the United States that do not make up a large portion of the company’s revenues. Therefore, a few small subsidiaries are listed beneath the organizational chart. Many of these companies were acquired to research and develop new applications or improve existing features. For example, Apple acquired Beddit in 2017, which sold sleep-tracking devices and a sleep-tracking app to monitor a user’s sleep patterns. Apple has used the acquisition to improve its sleep-tracking technology and plans to implement the feature into Apple Watches.⁶ Another popular subsidiary of Apple, Beats Electronics, is a company that produces a range of audio products sold within Apple stores. The company produces headphones and speakers, but also developed a music subscription-based streaming service called Beats Music before Apple acquired the company. Shortly after its acquisition, Apple discontinued Beats Music and introduced its own service, Apple Music. Although these smaller subsidiaries do not account for a large portion of Apple’s total revenue, they are crucial to the success of their parent company.⁶



*List of Non-Significant Subsidiaries

- Shazam Entertainment
- Beats Electronics
- AuthenTec
- PrimeSense
- Dark Sky

⁶ <https://theorg.com/insights/5-apple-subsiaries-that-are-crucial-to-the-tech-titans-success>

Over the course of the last week, we gathered a wealth of information about Apple, Inc. and its subsidiaries. It was fascinating to learn about the complex structure of a multibillion-dollar company. Apple continues to be one of the most well recognized brands in the national and global market, and future projections indicate that its financial success will continue. The COVID-19 pandemic took a toll on every company in the world, but Apple rebounded and posted record numbers in the fourth quarter of 2021. However, continued supply chain and labor issues that linger from the height of the pandemic are causing problems with sustaining high levels of output. There may be a silver lining to this cloud, as Apple is attempting to cut back its overreliance on iPhone sales. Additionally, the corporation is increasing its presence in the wearables and health industry. The Apple Watch is growing in popularity and acquisitions of subsidiaries, like Beddit, have improved its technology.

Every corporation has one main goal: to make the most amount of money. Apple is no different. Through the use of holding companies and subsidiaries, Apple can share dividends and avoid taxes that a single company would face. They also take advantage of lenient tax laws in foreign countries like Ireland, where many of their subsidiaries are based. While this is a controversial subject, Apple shareholders seem to be happy with these higher profits. Overall, Apple is a sophisticated, multinational behemoth that has dominated the electronics market for more than a decade. Its past success can be expected to continue.

CASE STUDY SEVEN

This week, our group was tasked with choosing three accounts from either the balance sheet or income statement that could be considered as potentially risky accounts. While reading through Apple, Inc.'s financial statements in the 10-K, we determined that the accounts revenue, inventory, and research and development expenses were three of the riskiest accounts for our company.⁷ After choosing the accounts, we had to dictate why each of the accounts were a risk to Apple and how misstatements of these accounts could affect other aspects of the company's finances. Additionally, we established some internal controls for each account to mitigate the risk of misstatement and brainstormed some specific substantive tests that could be performed during an audit to confirm that the accounts were accurately recorded. Lastly, we were told to consider some ways that data analytics could be used to make the substantive tests more accurate and quicker to perform. Altogether, we were essentially tasked to create an audit plan that would help lessen the risk for three of Apple's most speculative accounts.

It is crucial that revenue is not overstated on Apple's financial statements. The revenue account needs to be accurately reflected so that investors are not misled about Apple's true earnings per share. It can be beneficial for a company to overinflate its revenue because it will increase its net income, which can make their company's stock more attractive to current and future investors. As an auditor, it is necessary to verify that revenues are correct because of all the potential risks that can come from this error. The biggest risk associated with misstating revenue is the potential for fraud. One example of inflating the company's earnings was Enron, which resulted in losing shareholders over \$74 billion and the bankruptcy of Enron in 2001.⁸ Therefore, the potential risk of fraud can lead to the possible downfall of a company.

⁷ <https://www.sec.gov/Archives/edgar/data/320193/000032019318000145/a10-k20189292018.htm>

⁸ <https://www.britannica.com/event/Enron-scandal/Downfall-and-bankruptcy>

Since there can be several incentives for overstating revenue, such as management compensation for reaching a certain sales goal, it is important to implement strong internal controls. In addition to incentives for management, overstating revenue leads to an overstatement of net income, making the company look more profitable than it is. To prevent this, Apple can segregate duties to ensure accurate entries. Segregating duties would require at least two people to complete different parts of the same task. For example, when Apple's warehouse receives inventory, one employee should count and document the shipping quantities and products received while another person enters that data into the computer system. By doing this, the employee that counted the shipping quantities cannot manipulate the numbers received in the system. If the internal control were not in place, an employee might understate the quantities received and steal the products. For the revenue process, Apple can utilize this internal control by separating the sales department from the billing department. Therefore, Apple employees or managers would not be able to create fictitious sales to reach a sales goal. Another important internal control for the revenue account is documentation. This requires a paper trail which is useful for verifying proper data entries. In addition, documentation specifies what information needs to be included in reports and who is responsible for preparing the reports. Segregation of duties and documentation work together as internal controls to prevent fraud and other misstatements to the revenue account.

Although strong internal controls should prevent most errors, it is an auditor's job to run a test of transactions to verify the correct numbers. For an account like revenue, auditors would likely review contracts, trace transactions through processing, and recalculate numbers. By selecting transactions and tracing them through processing, auditors review random transactions starting with the initial sales order and verifying the journal entry. In doing so, they will also

recalculate numbers to verify correct calculations. When reviewing contracts, auditors look for appropriate documentation for recording the receipts as well as to verify the segregation of duties for filling, shipping, and recording sales orders.

Data analytics can simplify the auditing process for Apple's revenue account. The use of data analytics can discover and analyze patterns as well as alert possible inconsistencies in the reporting. With Apple being a Fortune 500 company, it is extremely beneficial for auditors to be able to streamline the process of calculating revenues for the large number of transactions that occur. Documentation from analytics can provide the auditors with past transactions, which can help them determine if the numbers being reported are accurate and help discover any potential foul play from people involved in the process. Also, to help streamline this process, analytics can match purchase orders to payments to help auditors in verifying each transaction. Data analytics should be used by auditors looking to simplify the process of auditing risky accounts.⁹

Inventory is also an important account because a manufacturer like Apple relies on maintaining efficient levels to sustain sales volume. However, misstatement of the inventory account harms current and potential shareholders because it can inflate total assets and cost of goods sold. Therefore, certain ratios will be overstated. Additionally, having higher expenses allows a company to avoid a certain amount of income tax which results in higher net income. Understating inventory, on the other hand, will lead to understated assets which in turn would impact the company in its market evaluation and overstate its liquidity.

Because inventory is such an important account to verify for accuracy, there are various internal controls and substantive tests that could be performed to prevent and check for

⁹ <https://www.accaglobal.com/in/en/student/exam-support-resources/professional-exams-study-resources/p7/technical-articles/data-analytics.html>

misstatement of the asset. A range of internal controls, such as physical controls to safeguard inventory, could be used to prevent fraud or misstatement. Physical controls, like using locked doors, prevent unauthorized employees from accessing inventory. Other internal controls include documenting orders and using field checks in systems like SAP to prevent fictitious sales.

For substantive testing, the most obvious test would be to take a physical count of the inventory and compare the results to the numbers previously recorded. It would also be important to take a physical count like this at multiple stores that are holding Apple products on consignment. One of the easiest ways for inventory numbers to be incorrect is if products out on consignment are not properly accounted for. This type of situation would also fall under the substantive test ‘confirmation of balances with outside parties.’ Whether this be an actual physical count or just reaching out to stores that sell Apple products to compare how their inventory numbers are reflected in Apple’s accounts, this is a simple test that would effectively check the inventory account. Another test would be to review cash receipts related to the purchase and sale of inventory and to compare this to the journal entries made throughout the year. As data analytics becomes more and more popular in the accounting world, this would be a perfect circumstance to use its advantages for efficiency. While reading each individual receipt and comparing it to journal entries by hand would be extremely tedious, data analytics could be used instead to streamline this audit process. A program could be made to automatically compare receipts to journal entries as well as check for other potentially important information, such as any unusual transactions, numerical outliers, and missing documentation. While a physical count must be done by hand, many other substantive tests regarding inventory could be done faster and more efficiently with the help of data analytics.

For a technology company like Apple, research and development (R&D) costs are bound to be large. Apple focuses much of its business and reputation on creating innovative products and improvements to existing inventory lines. The accounting standards mandate that R&D costs should be expensed as they are incurred. This firm rule does not show in the reports how likely the money spent under this umbrella is to provide returns. Money put into a project that will most likely provide the company with high returns are not differentiated from money put into research that does not provide returns. This gives the company room to manipulate the appearance of costs by making R&D expenditures seem more valuable than they may be. Additionally, Apple has the incentive to bulk up this line item on their statements because users may view the company in a more impressive light when they see how much they are investing into future innovations. To the same point, Apple would not want to report an R&D cost lower than their competitors. To prevent any speculation around this figure, the company should use internal controls and ensure they have proper documentation to show how much they spent on each project. Another control that would be beneficial to implement is proper authorization. Only researchers involved with projects should oversee purchasing, rather than a manager who may try to inflate the number to make the company look better.

There are a few ways that auditors can ensure R&D is reported faithfully through substantive testing. First, auditor should look through the records to search for any unusual transactions. Purchases that seem to add no value to research or additional purchases taking place near year end may be the company's attempt to inflate the R&D expense. Then, auditors should review the budget variance to see if the company deviated from their expectations. Finally, if a transaction looks odd, the auditor should review payments to vendors to verify that transactions were not distorted. Another red flag would be if the purchase were shipped to a location that does

not conduct research or testing. On the data analytics side, Apple could create a program that would connect every expense with a project to see if the money invested into R&D materializes into economic benefit. This would be mutually beneficial to the audit team and the company because the auditors would be able to view how every dollar of R&D is being used, and the company would see exactly when ideas flourish and which purchases were integral to the success or failure of a research project. Overall, a company as revolutionary as Apple carries inherent risk surrounding a broad account like research and development.

Overall, it is important for companies to prevent the misstatement of account balances to give future and current stockholders an accurate picture of the company's financials. For a manufacturer and retailer like Apple, the inventory, revenue, and research and development expense accounts have the highest risk for misstatement. To prevent this, Apple should implement internal controls and auditors should use substantive testing to verify the accuracy of the account balances. Furthermore, auditors should use data analytics to streamline the audit process for those accounts. If a company were to report incorrect balances on their financial statements, it could lead to the overstatement of net income. This may lead to an increase in investors since the company looks more profitable than it really is. Ultimately, Apple needs to verify its risky accounts to provide users with accurate financial statements.

CASE STUDY EIGHT

For this week's case study, we switched perspectives regarding our company, Apple Co., and looked at it from a tax standpoint. Our job was to research corporate tax credits and strategies regarding its industry. From here, we used this information to prepare two tax strategies that would help minimize our company's legal cash tax payments. After doing extensive research on this topic, our group decided on restructuring the way that research & development costs are accounted for in financial statements and relocating a foreign subsidiary to a different country to fall under a lower tax rate. The following case study will outline how the strategies we chose could affect Apple's tax payments in the future and includes some numerical examples to give a visual representation of the strategies' savings.

One tax strategy recommendation for Apple is to restructure its operations by relocating one of its foreign subsidiaries to a country with a lower corporate tax rate. Apple has already located many of its major subsidiaries in Ireland, where it avoids paying millions of dollars in taxes per year. Based on this, we would recommend that Apple relocates its subsidiary, Apple Europe Limited, from the United Kingdom to Ireland. Since the two countries are close in location, the change would not be as difficult as relocating across the globe. By relocating to Ireland, Apple Europe Limited would reduce its corporate tax rate from 19 percent in the UK, to 12.5 percent in Ireland.¹⁰ Therefore, it will help minimize Apple's corporate tax liabilities by six and a half percent. In addition, it makes sense for Apple to consolidate many of its foreign subsidiaries to the same country for logistical reasons.

This relocation would not be difficult and potential tax savings would heavily outweigh the costs to implement. This recommendation would provide Apple with a long-term solution to

¹⁰ <https://tradingeconomics.com/country-list/corporate-tax-rate?continent=europe>

lower its yearly tax payments and keep a larger portion of revenues. Even though Ireland is planning to raise its corporate tax rate, it would still be lower than the tax rate in the United Kingdom. Recent news articles suggest that Ireland may raise its corporate tax rate to 15 percent in 2023.¹¹ In comparison, the UK will raise its corporate rate to 25 percent in 2023. Therefore, relocating to Ireland would save Apple Europe Limited six and a half to 10 percent on taxes per year. To put this in perspective, Apple Europe Limited reported roughly \$11.12 million in corporate tax charges for the year ending September 2020. This amount could be reduced to \$7.31 million by relocating the subsidiary to Ireland. These figures are based on Apple UK's reported profit on ordinary activities for 2020.¹²

Potential issues that could arise are inquiries into the legality of tax breaks received by corporations in so-called "tax havens" like Ireland. In 2016, Apple was ordered to pay \$15.44 billion in back taxes to the Irish government.¹³ While this ruling was eventually overturned in 2020, there has been an increased effort from groups like the Organization for Economic Cooperation and Development (OECD) to ensure multinational corporations are paying their fair share of taxes. The OECD has been working since 2013 to combat an issue called Base Erosion and Profit Sharing (BEPS), which occurs when corporations like Apple shift earnings to tax havens where they pay little to no taxes on profits.¹⁴ Almost 150 countries nationwide, including Ireland and the US, have collaborated to implement the OECDs framework to combat BEPS.

Conversely, there are ways for Apple to receive tax benefits by increasing their presence in the United Kingdom. Last year, the UK introduced the Finance Act of 2021 which included a

¹¹ <https://www.bbc.com/news/world-europe-58832429>

¹² <https://find-and-update.company-information.service.gov.uk/company/01591116>

¹³ <https://www.bbc.com/news/business-53416206>

¹⁴ <https://www.oecd.org/tax/beps/about/>

so-called “super deduction” for companies investing in plants and machinery within the country. According to the act, corporations can deduct up to 130 percent of their investments from their taxes. The United Kingdom’s official website states that “most tangible assets used in the course of a business are considered plant and machinery for the purposes of claiming capital allowances...There is not an exhaustive list of plant and machinery assets.”¹⁵

However, there is a drawback to this option. The last day to take advantage of the deduction is March 31, 2023. That same day, the corporate tax rate in the UK will increase to 25 percent. However, companies can take advantage of a loss carryforward or three-year carryback. Corporations can move their tax losses to future years to offset profits, thus lowering taxes after the corporate rate increases.

According to Business Insider, it costs Apple between \$8.5 and \$10 million to build a new facility.¹⁶ This means that they would receive a tax saving of up to \$2.5 million if they invested in a new location. This number was reached by multiplying the cost of the new building times 130 percent and multiplying that number by 19 percent.

Since Apple specializes in consumer electronics, software, and online services, it spends a lot of money each year on research and development (R&D) expenses. To lower its overall tax liability, Apple can take advantage of a R&D tax credit that is a percentage of the excess of qualified spending over a base amount.¹⁷ This gives Apple the incentive to increase R&D expenses to claim a credit on a certain percentage of those expenses. Apple’s investment in R&D increased from \$18 billion in 2020 to \$21 billion in 2021.¹⁸ The year-over-year growth in R&D

¹⁵ <https://assets.publishing.service.gov.uk>

¹⁶ <https://www.businessinsider.com/guess-how-much-each-apple-store-costs-2011-10>

¹⁷ <https://www.bdo.com/insights/tax/r-d-tax/r-d-tax-credit-faqs-for-large-and-small-businesses>

¹⁸ [https://s2.q4cdn.com/470004039/files/doc_financials/2021/q4/10-K-2021-\(As-Filed\).pdf](https://s2.q4cdn.com/470004039/files/doc_financials/2021/q4/10-K-2021-(As-Filed).pdf)

expense in 2021 was driven primarily by increases in headcount-related expenses, R&D related professional services, and infrastructure-related costs. The company believes that focused investments in R&D are critical to its future growth, competitive position in the marketplace, and the development of new products and services.

Taking full advantage of claiming R&D tax credit would be beneficial for Apple as a technology powerhouse because they easily meet the requirements and would incur many expected returns. The benefits of this tax credit include increased cash flow, earnings per share and return on investment paired with reduced tax liability and effective tax rate. Utilizing this credit provides the company with dollar-for-dollar cash savings that can be reinvested into operations through additional expansion throughout the business. Since there is no limit on the R&D tax credit, Apple would benefit by using the money saved to reinvest in more research and development.

Considering that Apple has continually increased R&D expenditures in recent years, it is safe to assume that the trend will continue in the future. Therefore, as Apple continues to increase its R&D expenditures, it will be able to claim more tax credits each year. This plan would be a long-term solution to lowering their tax liability as they would continue to claim credits every year from their R&D expenditures. While it is difficult to gauge exactly how much they would save each year from the tax credits, it should be in the hundreds of millions of dollars and will increase each year as Apple increases R&D expenses.

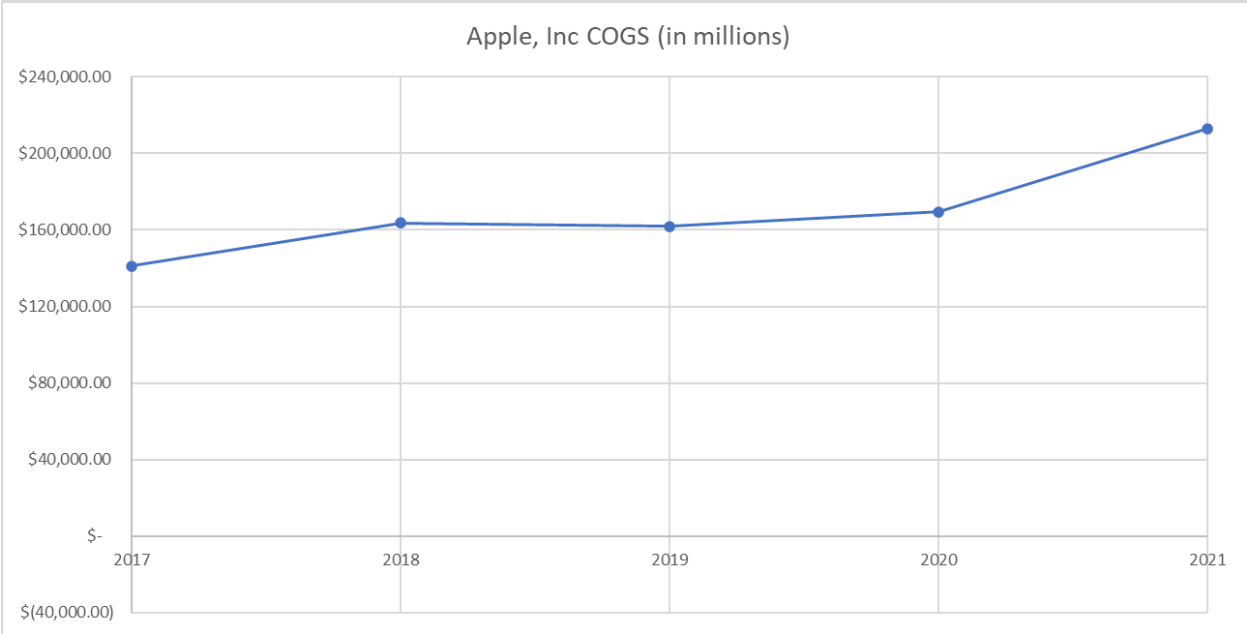
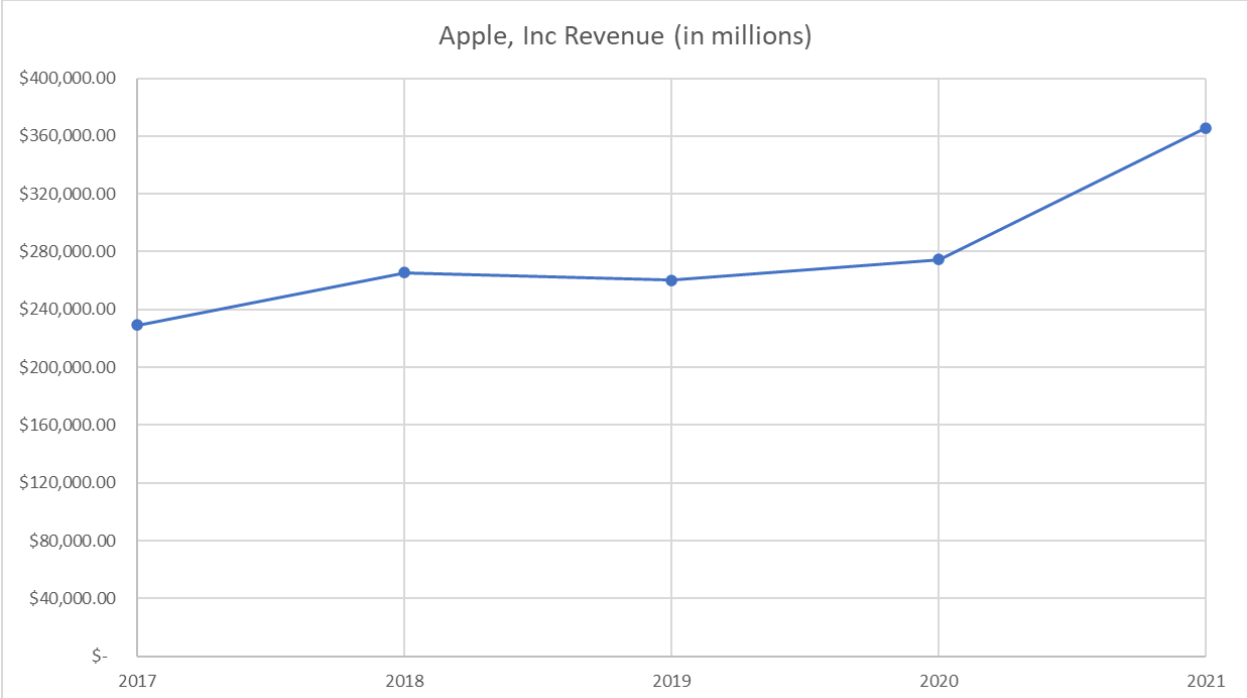
Overall, this case study gave us the opportunity to dive deeper into tax accounting than we ever have before. Although this case study was one of the most challenging thus far, it was the one that allowed us to learn the most. Not only did the research for this case study give us the knowledge to apply tax strategy advice to a real-world scenario, but it also gave us the resources

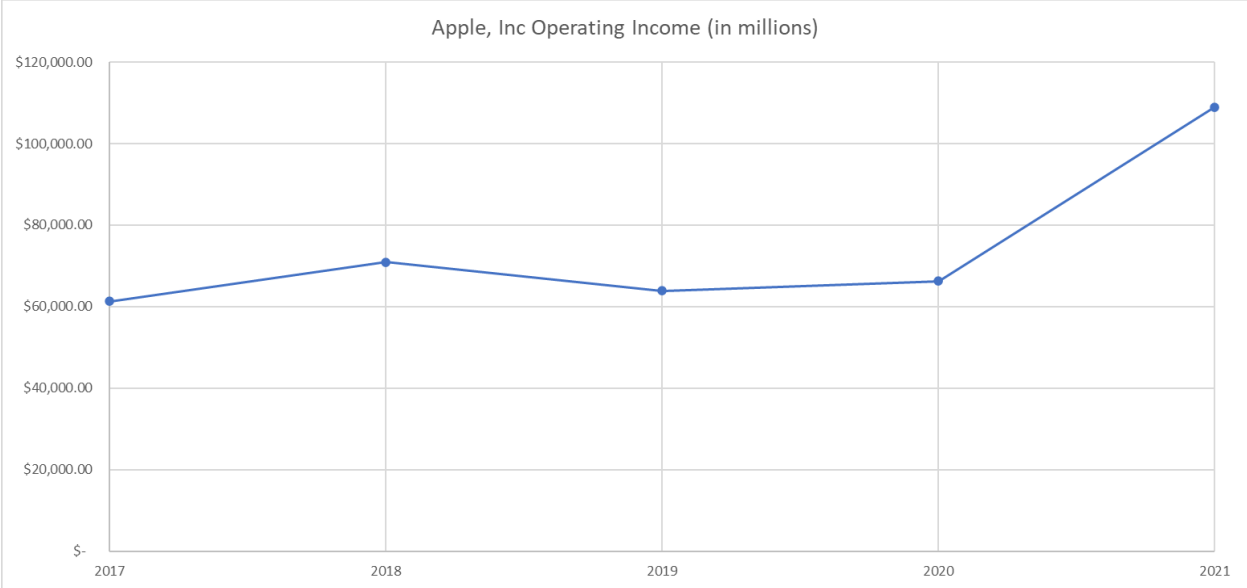
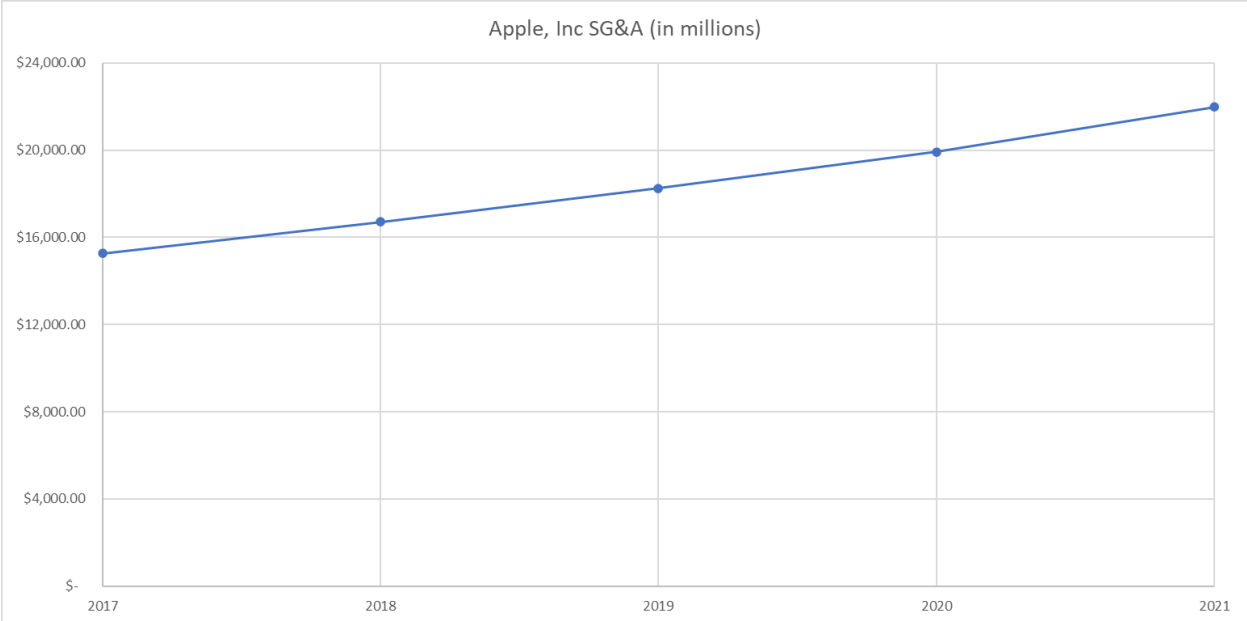
to learn about the different strategies public accounting firms use to advise their clients as new legislation is passed regarding tax laws. All in all, this week's case study gave us our first real look into tax accounting and its importance to our potential future clients.

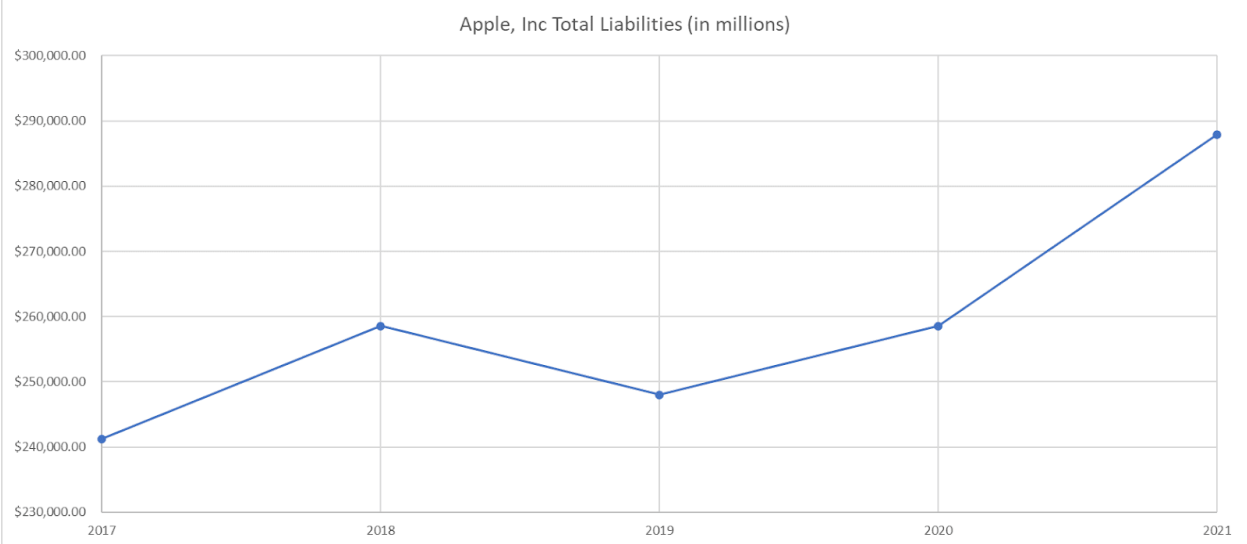
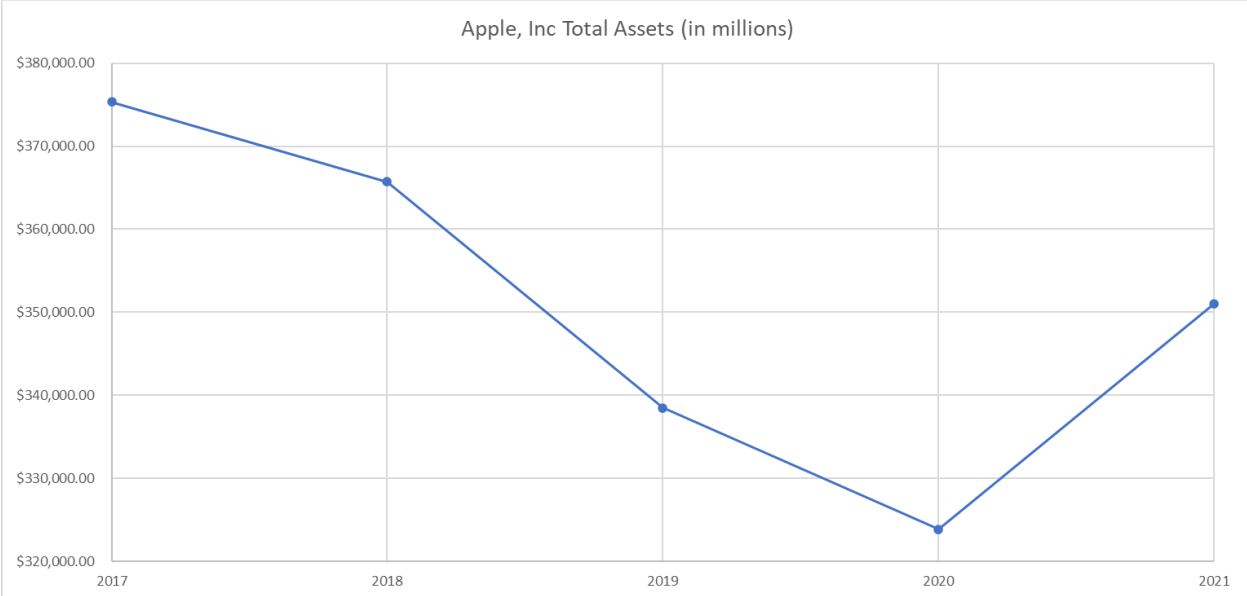
CASE STUDY NINE

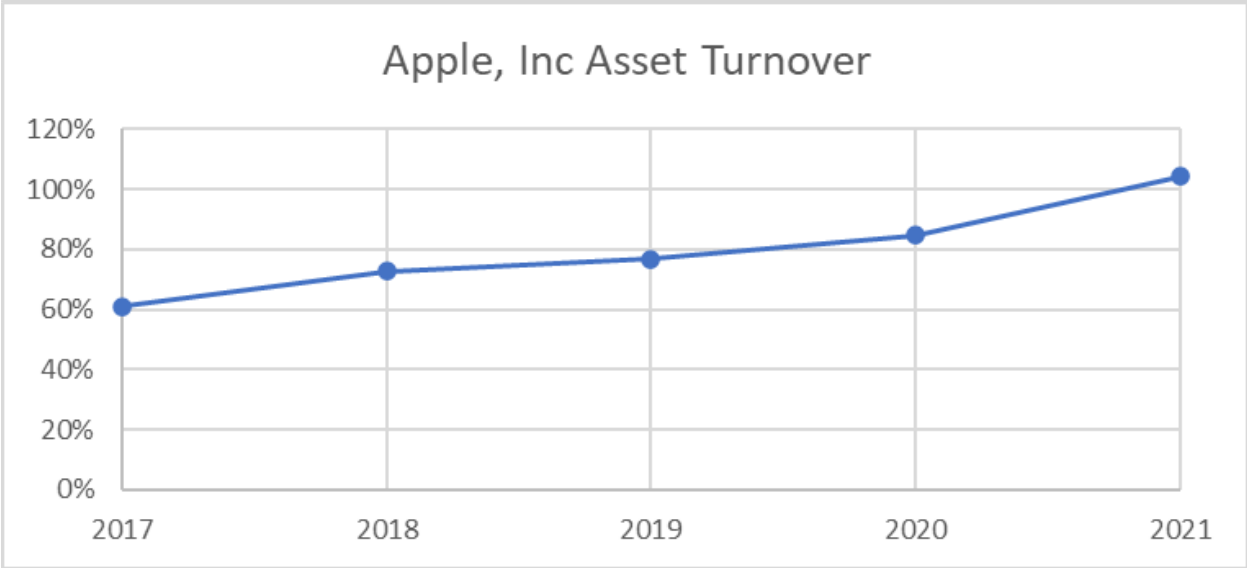
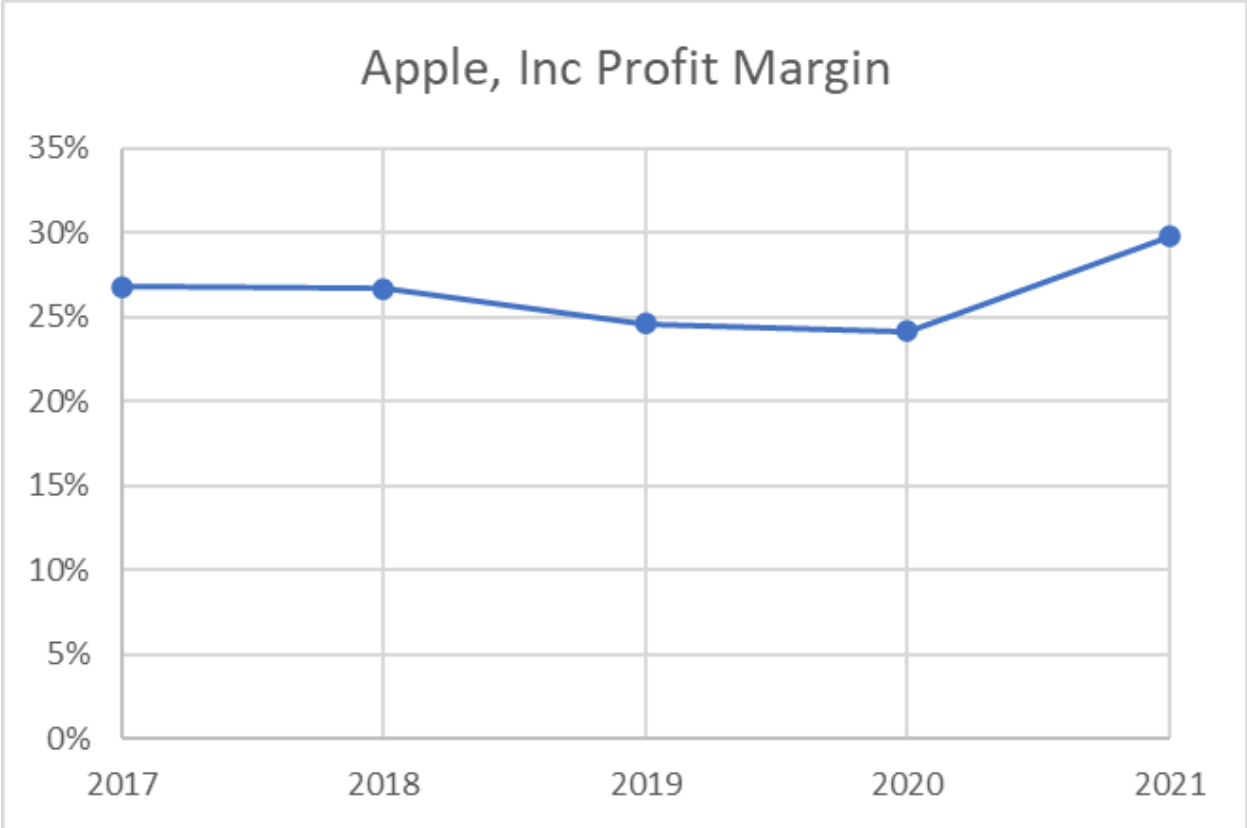
This week we were tasked with identifying Apple's strategy, whether its cost leadership, product differentiation, or something else. We were required to create a chart displaying the changes over the past five years in several of their main account balances, such as revenue, cost of goods sold, operating income, assets, and liabilities. We created these charts to show how their profit margin or asset turnover coincided with the company's strategy. From there, we mentioned two of Apple's largest threats and gave a detailed plan of two strategies to counteract the threats. After formulating the strategies, we then displayed the impact these strategies would have on Apple's financials in future years. The strategies ultimately led to an improvement in Apple's ratios mentioned earlier, proving that they would benefit the company and align with its strategies.

Due to Apple's wide variety of products and prestigious company image, they pursue the product differentiation strategy. We think Apple pursues this strategy since it creates unique products and offerings to set itself apart from the competition to gain a competitive advantage. In fact, this can be proven by looking at Apple's profit margin. As seen in the charts below, Apple has recorded a profit margin between 25 to 30 percent in the past five years. A 20 percent profit margin is considered high in the cell phone and electronics industry, and Apple surpasses it by nearly five to ten percent each year. Since product differentiators promote high profit margins, our assumed strategy matches the analysis of Apple's financials.









Along with most other companies, Apple suffered from supply chain issues caused by the COVID-19 pandemic. The higher demand for electronics and other work-from-home products that require semiconductor chips and a decline in production from lockdowns has been the leading cause of the global chip shortage. Even a company of Apple’s magnitude has felt the

shockwave resulting from the chip shortage. In the fourth quarter of 2021, Apple lost \$6 billion in revenues due to the shortage.¹⁹ Apple's CEO blamed the lost revenue on the supply chain issues and expects the problem to continue into the next quarters. In addition, Russia recently invaded Ukraine, which could pose another threat to Apple's supply chain. With many countries placing sanctions on Russia's exports, Apple could see a disruption to their supply chain since Russia is a major exporter in raw materials often used in the tech industry. One of these raw materials is palladium, which is used in sensors and memory cards. The United States imports more than one third of its palladium supply from Russia, so it would see a major decline in available palladium. In addition, Apple has 10 Russian-based smelters and refiners in its supply chain that produce other materials, such as tungsten, tantalum, and gold.²⁰ Therefore, if the Russia-Ukraine war continues and sanctions prevent Russian imports of the raw materials, Apple would face additional supply change issues.

To combat these supply chain issues, our plan of action would be to encourage Apple to diversify its suppliers for semiconductor chips and other electronic components. By doing this, it will decrease its reliance on Russia if the sanctions persist. In addition, it would prevent supply chain issues caused by COVID-19 or any other unforeseen circumstance from happening again. Although Apple has more than one supplier of semiconductor chips, it still struggles to acquire enough to keep up with production. While Apple already contracts with TSMC, Qualcomm, Broadcom, and Micron Technology, they should look to expand their pool of suppliers with companies like ASE Technology, NVIDIA Corp., and NXP Semiconductors.²¹ In doing so,

¹⁹ <https://www.businessinsider.in/tech/news/apple-lost-6-billion-to-chip-shortages-expects-bigger-losses-this-quarter/articleshow/87359867.cms>

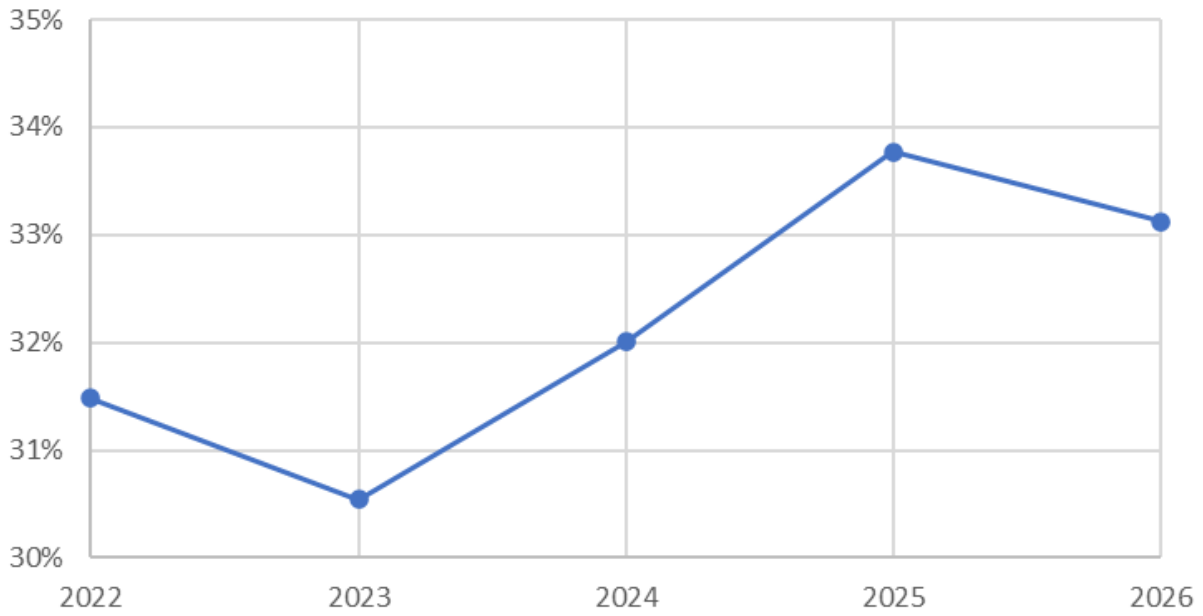
²⁰ <https://www.laptopmag.com/news/russia-and-ukraine-war-will-it-negatively-impact-apples-supply-chain>

²¹ <https://www.investopedia.com/articles/markets/012216/worlds-top-10-semiconductor-companies-tsmintc>

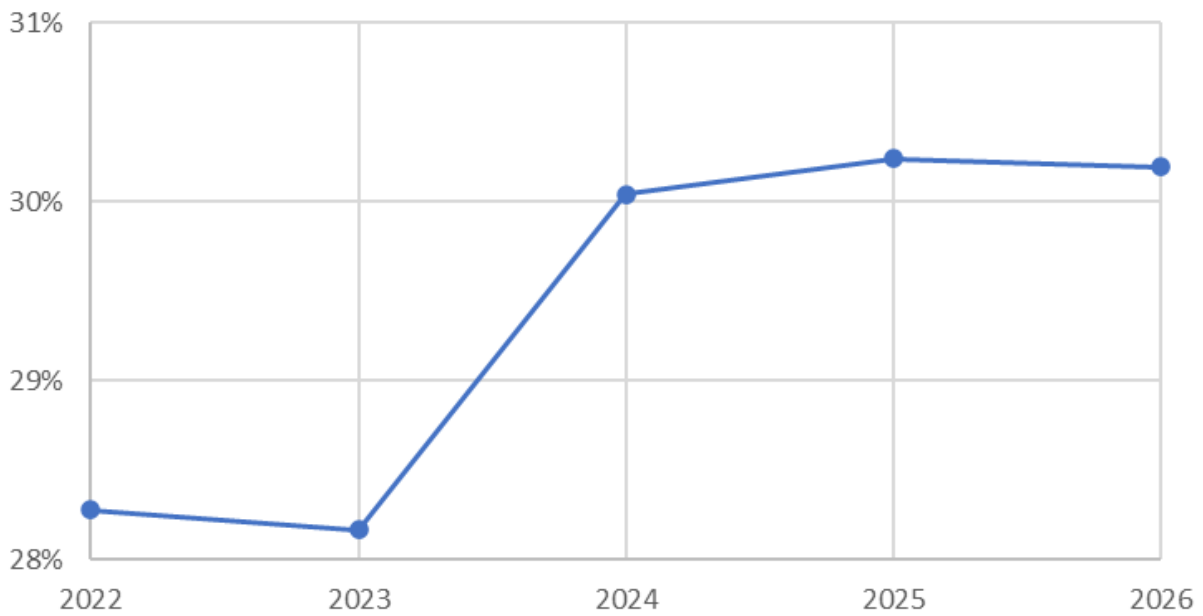
Apple would be able to acquire semiconductors from these new suppliers in addition to their current suppliers. This would lead to an increase in expenses as we recommend Apple to form contracts with the new suppliers while maintaining the contracts and purchases from their current suppliers. Although expenses would go up in future years, Apple would not face another supply chain disruption as we would recommend, they purchase and keep more semiconductors in their safety stock in the future. In addition, one of Apple's current suppliers, TSMC, plans to expand production capacity with a \$100 billion investment over the next three years.²² With the increased capacity of TSMC and Apple's larger supplier pool, they should not face another chip shortage in the future. In fact, they would be able to increase production with the influx of semiconductor chips. This increase in production would then lead to an increase in revenue and ultimately net income. The charts included below show the effects of the plan on a few of Apple's ratios in future years.

²² <https://www.macrumors.com/2021/04/01/apple-supplier-tsmc-invest-100-billion/>

Apple, Inc ROA: Plan 1



Apple, Inc Profit Margin: Plan 1





One of the largest threats that Apple is facing in today's market is competition from a multitude of different competitors. Because Apple prides itself on product differentiation, it faces a greater threat of having its products fall short in comparison to those made by companies that focus on less products at a time. In recent years, Apple has been relying on its iPhone sales specifically to make up most of its revenues. As the younger generations of Millennials and Generation Z begin to take over America's workforce, Apple has the perfect opportunity to revamp certain aspects of its products to attract the business of these new customers and continue to surpass its competitors.

To begin, this age group has grown up on Apple products. Now that these generations have reached the point where they are able to dominate the workforce and earn disposable income, it is a perfect time for Apple to target this demographic. If businesses are built upon a foundation of employees that use and prefer Apple products, they will be much more likely to

invest in Apple products and systems over its competitors. Of course, in the long run, Apple will make a profit off this increased business driven by brand loyalty even though it will have to initially expend some extra costs to recapture the attention of its growing professional target audience. Apple increasing promotional efforts and expenditures necessary to secure contractual agreements would benefit the company for far longer than the initial spike in sales because it would secure future revenues.

Another attractive reason to market to this age group is that they are building independent and financially stable homes. A focus on daily, personal use of Apple devices and services other than the iPhone has the potential to increase other products' revenue streams exponentially. For example, young people will be drawn to the name recognition and simplicity of the Apple TV product over a traditional and outdated satellite or network set up. Getting an assortment of Apple products sold and plugged into as many facets of professional and personal life as possible will strongly encourage consumers to refrain from moving to a competitor's product. The Apple ecosystem casts an expansive net capturing all the features a typical consumer looks for in a technology purchase but with the bonus of an appealing assortment of compatible products. Each Apple purchase innately provides subsequent value added to existing Apple devices owned when introduced and synced to the personalized collection. The product communication fosters further customer commitment to the brand and could be promoted to show the invaluable benefits adding ease and security in today's digital society.

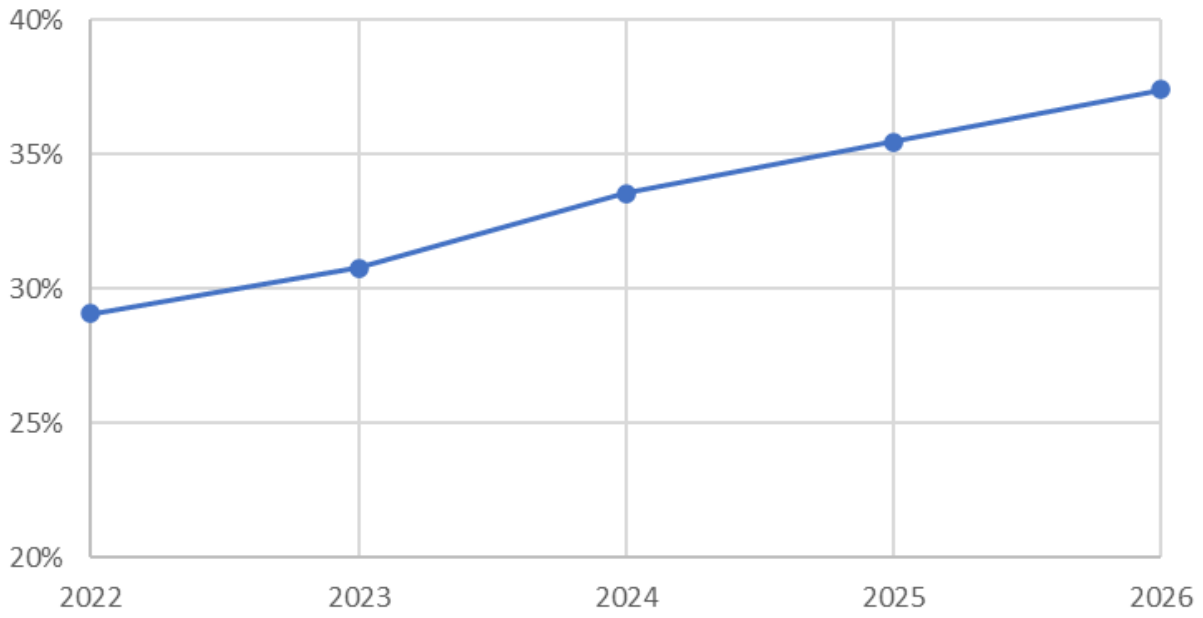
Apple has more than earned its reputation as one of the most influential hardware and software companies in the world but has yet to take off in the content creation industry they entered in 2019. Over the course of the pandemic, nearly every major streaming service has developed a series or movie that has received large amounts of publicity, such as Squid Game

(Netflix) and Euphoria (HBO Max), leading to massive revenues. The Apple TV streaming service, Apple TV+, has not put out original content that even holds a candle to the caliber of what other media powerhouses have released to catch the attention of the masses. If they were to utilize their talent and resources, Apple TV+ could put together a hit that would inspire consumers to subscribe to the streaming service over, or in conjunction, with competing platforms. This would come with associated costs, but because Apple TV+ already only features original content, producing captivating media would be a smooth transition because the groundwork for filmmaking has been in place for years. Allocating additional capital into upscaling this sector of the company would be wise because the initial investments necessary were made years ago, and consumers have proven their willingness to pay for captivating content to an extreme degree over the past few years.

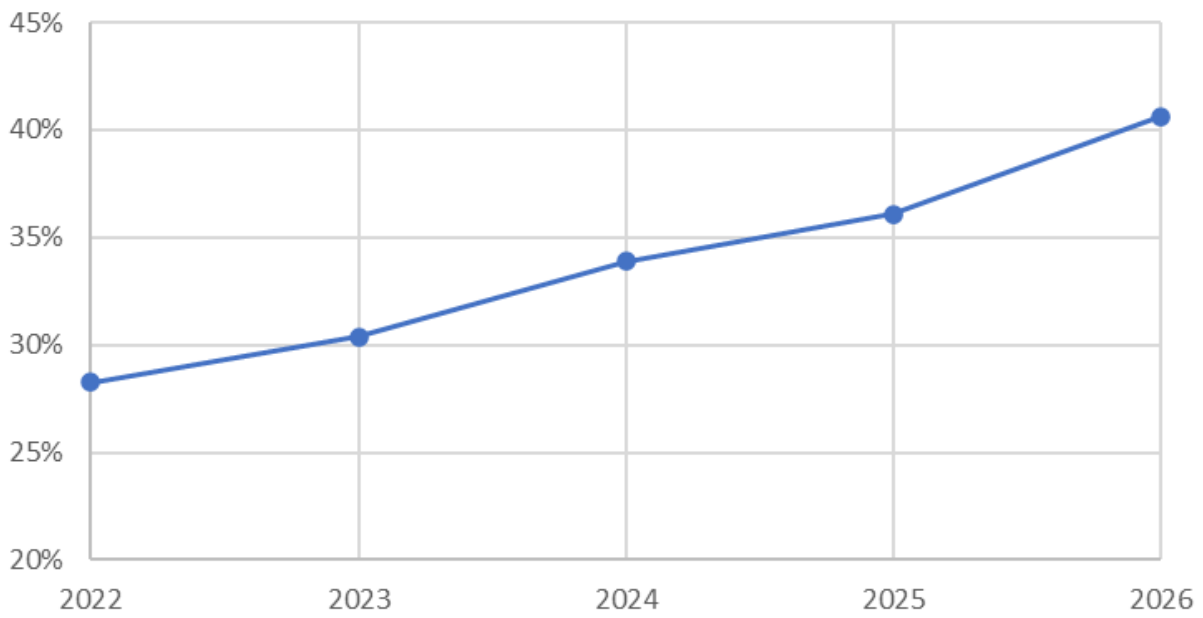
Additionally, Apple TV+ should be readily available to users of any streaming device, such as Roku TV, Amazon Fire, etc., rather than only those who own an Apple TV. Although the limited availability may encourage customers to buy an Apple TV, it is likely to discourage many from using Apple TV+ since streaming devices are not commonly replaced once purchased. To the same tune of keeping up with trends of users and competitors, Apple Music should consider signing contracts with well-known podcast hosts. Spotify has negotiated many of these agreements, and with the surge in popularity of podcasts, exclusive content would draw listeners to the platform. Since Spotify is currently Apple's largest competitor regarding audio streaming services, it is imperative that Apple learns from Spotify's successes and weaknesses to modify its own service using this newfound knowledge. To accomplish the reinforcement of the Apple ecosystem, Apple must strengthen the weaker and underrepresented aspects of its goods and services.

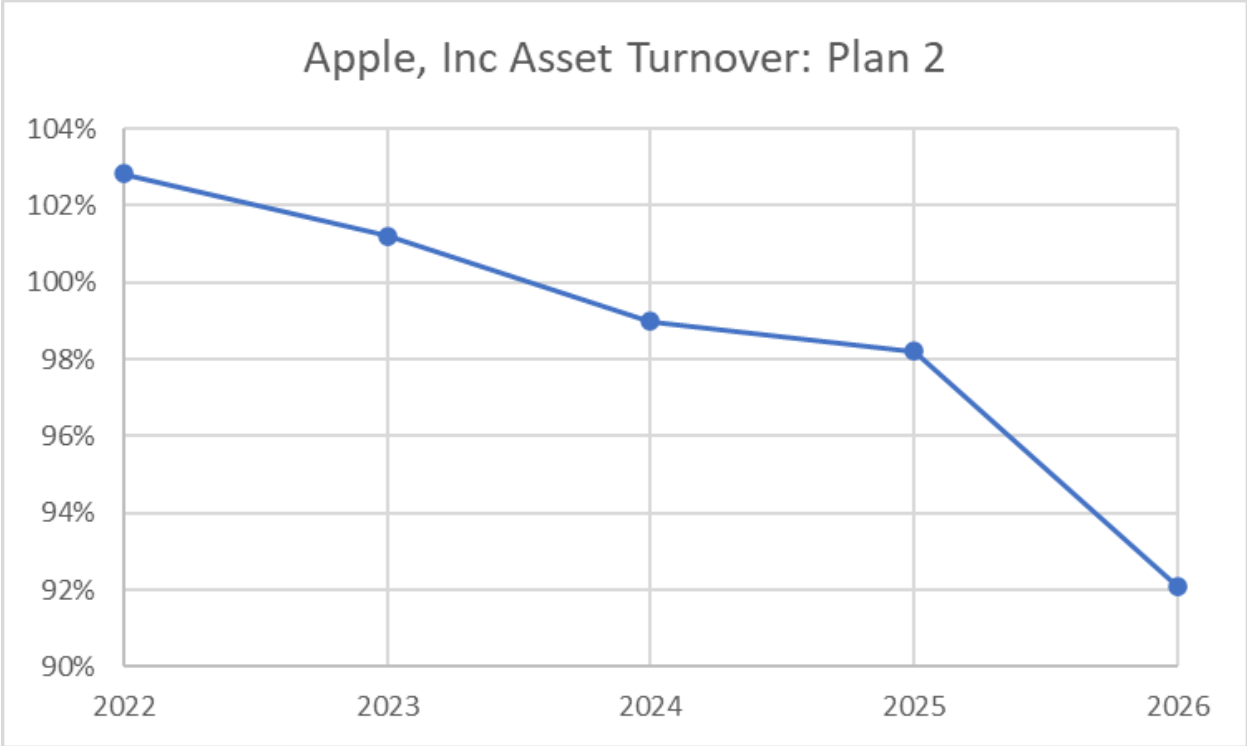
If Apple were to try to implement any, or all, of these potential action plans to thwart away competition, the accounts mentioned in the table below would be affected differently across upcoming years. First off, as generations of consumers who are already receptive to Apple products become the leading decision makers sign contracts and progress their businesses using Apple products, revenue will be reflected with an initial take off followed by an extended period of increase. Second, revenue would likely increase for several years as Apple TV+ and Apple Music become more popular and gain more users. Once word spreads that these Apple services are newly revamped and “better than ever,” the younger generations will jump at the opportunity to see what is offered, which has been a trend throughout Apple’s history. Cost of goods sold would potentially increase slightly if more people were to buy Apple TVs, but the wider availability of Apple TV+ would limit how much this account grows. Total selling and operational expenses and liabilities would certainly increase for the first couple of years that these new action plans are being implemented, but revenues will rapidly overcome the initial expenses and Apple’s profit margin would grow largely. The charts included below show the effects of the plan on a few of Apple’s ratios in future years.

Apple, Inc ROA: Plan 2



Apple, Inc Profit Margin: Plan 2





Ultimately, Apple can look to improve its product differentiation strategy by pursuing our plans mentioned above. In doing so, they would increase expenses in the coming years, but the increase in revenue would outweigh those outlays. Additionally, Apple would be able to increase its profit margin by following these plans. Since product differentiators pursue high profit margins, this would set Apple even farther apart from its competitors.

CASE STUDY TEN

In this week's case, we took a deeper look into Apple's risks as a company. In addition, we looked at Apple's data security and researched some possible ways to mitigate these risks. We first needed to research Apple's greatest operational risks and recommend ways to prevent these risks. In doing this, we found Apple's greatest threats in the current day. Next, we needed to research Apple's greatest macroeconomic risks. The macroeconomic risks looked at Apple's threats outside of just the United States. We were responsible for recommending mitigation measures for these risks. Lastly, we transitioned to Apple's cybersecurity risks. Since hacking and internet scammers have become more people in the past decade, it was important to consider Apple's cybersecurity risks and how they could prevent vulnerabilities.

To think that it has been nearly two years since the COVID-19 pandemic swept through the world and uprooted billions of lives in its wake is difficult to comprehend. It is similarly difficult to understand the extent to which businesses are still feeling the effects of the pandemic today. Supply chains across all industries have been tested in a handful of different ways since the pandemic began. It is no surprise that the shelves in our supermarkets have been sparse throughout the past two years as supply and demand have varied greatly.²³ Apple, along with other electronics companies, has experienced supply chain disruptions particularly regarding semiconductor chips. In the time of lockdowns and restrictions, electronics were relied on more and more for entertainment while car sales dropped dramatically. Suppliers of chips started redirecting their products towards manufacturers of small electronic goods rather than towards car manufacturers (modern cars sometimes require up to 3,000 chips). When restrictions were relaxed and car sales gradually increased, the semiconductor chip shortage became a serious

²³ <https://www.fastcompany.com/90711792/supply-chain-issues-will-continue-well-into-2022-with-a-twist>

problem for both industries. Some car manufacturers started to hoard chips, making the shortage an even bigger problem for companies like Apple. Other problems related to the ongoing supply chain issue, such as worker shortages and shipping delays, have also added to Apple's greatest operational risk in the current day.

To mitigate this risk, Apple should have their suppliers sign contractual obligations to make complete deliveries on time to avoid compensation penalties such as credit on Apple's account or payments towards covering the loss of revenue from the delay. Apple both operates and is recognized on such a large scale, so the company can bring an intimidating amount of bargaining power to these negotiations. It would be wise of them to invest into a legal team that adds both value and security into these agreements given the current climate and resulting business hurdles. There is a motivating amount of mutually assured destruction or benefit for all the participants by creating and notarizing a contract. Apple has invested into this legal document to avoid the sacrifice of revenue loss and PR positivity, and suppliers get to work closely with an extremely profitable powerhouse technology company without repercussions if their end is upheld.

Additionally, Apple should diversify their range of supplier relations where applicable. Of course, not all of Apple's purchases could be made elsewhere, but the things that can should be explored because over the past two years so many companies have suddenly and severely been plagued with major supply chain issues. Investing into building relationships as a potential client with other companies now in case an urgent need arises would be another safeguard surrounding income. Even if for certain materials this has not been a company practice historically, Apple would come up with a way to approach this control respectfully enough not to

compromise established working relationships. Having a backup is common practice amongst many industries requiring large levels of production and would protect Apple in a bind.

One of Apple's greatest macroeconomic risks today relates to the war in Ukraine. An immediate effect of the war was Apple cutting off sales to citizens of Russia. Apple cited the need to do this over "standing with all of the people who are suffering as a result of the violence." This action has caused Apple to lose \$3 million a day from iPhone sales alone, which will be over \$1 billion for the year from all products if current losses continue. Apple plans to make 20 percent fewer iPhones in the coming year and plans to see a drastic drop from 76.8 million units of AirPods shipped in 2021.²⁴ Some of the sanctions placed on Russia will increase the price of materials Apple needs to buy. As a result, Apple Insider surmised that the Ukraine and Russia war could increase material prices for Apple. In fact, according to Reuters, the price of aluminum already surged to record highs after several nations placed sanctions on Russia (a major producer of aluminum).²⁵ In addition, Russia supplies the United States with one third of its palladium supply.²⁶ If the war continues and sanctions persist, Apple will see increased costs and will have to raise prices on their products. The war will also have a significant impact on Apple's stock. On top of the Russia conflict, increasing inflation rates pose another macroeconomic risk. Inflation rates that continue to rise will cause investors to have less money to spend on potential products and stocks, which will result in a bearish market.

To lessen this risk and avoid increasing prices for consumers, Apple should find suppliers outside of Russia. As the Russia-Ukraine war continues, Apple cannot rely on Russian imports of raw materials for iPhones and other products. Therefore, to avoid increasing costs, they should

²⁴ <https://asia.nikkei.com/Spotlight/Supply-Chain/Apple-to-cut-iPhone-AirPods-output-amid-Ukraine-war->

²⁵ <https://www.reuters.com/markets/europe/lme-aluminium-nickel-gain-russian-supply-worries-intensify-2022-02-28/>

²⁶ <https://www.laptopmag.com/news/russia-and-ukraine-war-will-it-negatively-impact-apples-supply-chain>

expand their supplier pool. This increased supplier pool would also help manage the supply chain issue. With more suppliers, Apple would be less likely to run short on raw materials for production and would not lose sales. In addition, if Apple were to increase their suppliers and the Russia-Ukraine conflict and sanctions come to an end, Apple would be able to end their contracts with the new suppliers or keep them and increase their production. To combat inflation, Apple should assess their operating expenses and find areas to create savings. In doing this, Apple would be able to absorb the impact of inflation and not pass the effects of inflation onto the consumers and the price of their products. One area to possibly lower expenses is sourcing raw materials for a better deal. If Apple were able to find new suppliers and create a cheaper contract for their raw materials, they would be able to counteract the effects of the Russia-Ukraine crisis and inflation at the same time.

Modern corporations are especially susceptible to hacking and other forms of malicious cyberattacks. There are many different forms. Sometimes, a group of hackers will break into a company and implement ransomware, which only allows the company back into its system after paying a heavy fee. Perhaps the most infamous ransomware attack came last year when Colonial Pipeline Company's network was hacked and a major fuel pipeline was shut down, crippling the United States fuel supply, and raising gas prices all over the country.²⁷ More recently, our government has detected shady behavior from abroad, specifically China and Russia. CNN reported on March 23rd that "hackers associated with Russian internet addresses have been scanning the networks of five US energy companies in a possible prelude to hacking attempts."²⁸ Just weeks before that, Chinese hackers infiltrated the networks of six United States state

²⁷ <https://www.bloomberg.com/news/articles/2021-06-04/hackers-breached-colonial-pipeline-using-compromised->

²⁸ <https://www.cnn.com/2022/03/22/politics/fbi-energy-hacking-warning/index.html>

governments.²⁹ Every day, government employees and members of the private sector who are contracted by corporations fight off millions of attempts to breach private networks. Since Apple is one of the largest corporations in the world, it is extremely susceptible to attacks and must defend itself.

We recommend that Apple take multiple steps to ensure that vital customer and company information is not leaked. First and foremost, it is essential that Apple cultivate an effective internal tech team. These workers will know the most about Apple software and networks and will be able to diagnose problems quickly. However, to be cost effective, Apple must also outsource some of its security work. A healthy dose of internal and external surveillance should be required so that the company can quickly diagnose and combat any potential threats. Additionally, we recommend that Apple be compliant with the United States government and other nations in which it has offices. It is important that Apple reports any attempt to illegally access their system so that the perpetrators can be prosecuted. Additionally, this may lead to further investigation against countries like Russia and China that sponsor hackers and pay them to break into networks. Lastly and most simply, it is recommended that Apple design its network to force employees to change their passwords every few weeks. While it sounds trivial, many people use the same password for multiple sites. Once one database gets hacked, criminals can use the leaked passwords to try and access other information. By requiring people to change passwords and giving them basic education about the constant threat of hacking, Apple can greatly reduce its risk.

Ultimately, Apple faces risks in multiple areas and must address those risks to remain a top provider of electronics. Considering operational risks, Apple should diversify their suppliers

²⁹ <https://www.cnbc.com/2022/03/09/china-state-backed-hackers-compromised-6-us-state-governments-report.html>

and enter into contractual agreements so that they are required to provide enough raw materials for Apple. In a similar manner, Apple should find other suppliers outside of Russia to deal with its macroeconomic risks. In doing so, Apple will not need to worry if Russian sanctions persist, and they are not able to import necessary raw materials. Also, Apple might be able to create better contracts with suppliers to reduce expenses and prevent the effect of inflation on product pricing. Lastly, Apple must stay vigilant with its cybersecurity protocols since the iPhones and other devices collect private information on consumers. All in all, Apple must identify and respond to operational risks, macroeconomic risks, cybersecurity risks, and more to prevent increasing costs or the downfall of the company.

CASE STUDY ELEVEN

Apple, Inc.

Overview/Problem Summary:

- Products/Services - Consumer electronics/online services
- Competitors - Samsung, Microsoft, Google, IBM, Amazon
- 2021 Gross Margin - \$152.8 Billion
- Problem - Research the different service lines for Apple and pitch to our firm's partners

Tax

- Strategies to reduce tax payments, increase savings
- Option one: relocate foreign subsidiary
 - Multiple located in Ireland; move Apple Europe Limited from London to Cork
 - Could face future increases in tax rate; OECD working to eliminate tax havens
- Option two: increase presence in London
 - UK Finance Act of 2021 "Super Deduction"; up to 130% of investments deducted
 - Last day is March 31, 2023; loss carryforwards can reduce taxes after hike in rate

Audit

- 3 Riskiest Accounts:
 - Revenue
 - Segregation of duties - filing, shipping, recording sales orders, etc
 - Documentation - paper trail
 - Inventory
 - Physical controls to safeguard assets
 - Documentation - paper trail
 - Research & Development Costs
 - Proper authorization
 - Review of contracts
- Data Analytics to support substantive tests:
 - Select transactions and trace through processing
 - Recomputations/recalculations
 - Confirmation of balances with outside parties
 - Search for unusual transactions
 - Review of cash receipts for inventory
 - Field checks in systems to prevent fake sales (SAP)
 - Budget deviation analysis

Advisory

Risk Advisory

- Macroeconomic risks - Loss in revenue due to War in Ukraine
- Operational risks- Supply chain issues in relation to semiconductor chips

- Cybersecurity risks- Hackers releasing personal information
- Suggested solutions: Diversify suppliers, have suppliers sign contractual obligations, Healthy balance of outsourcing security work/ internal security