How the Finance Industry is Shaped by Technology – A Corporate Experience

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How the Finance Industry is Shaped by Technology – A Corporate Experience

by

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Introduction

This summer I completed an internship with Fidelity Investments. I worked within the Fidelity Fund and Investment Operations department which provides support for Fidelity products, such as mutual funds. Within this department, I worked on a team that did fund accounting. My team was a technology team that worked closely with the business team to ensure accurate reporting of expenses and billing on mutual funds. Fidelity is one of the largest financial services companies in the world and it was a pleasure to get to experience what working for Fidelity was like. Throughout my internship, I learned a lot about technology, agile management framework, professional skills, and networking.

I started working at JP Morgan Chase & Co. at the beginning of November 2022 as a part-time associate banker. JP Morgan Chase & Co. recently started a market expansion campaign in Northwest Arkansas by opening a Chase branch in Fayetteville. I was lucky enough to receive an offer for this role, and I believe it has been a very valuable experience. Within my role at Chase, I have learned a lot about public financial services such as banking, credit, loans, and investments. I have developed my interpersonal skills by dealing with new clients daily.

For this paper, I want to analyze how new technology affects the financial industry for individual clients. My internship at Fidelity Investments provided me with a back-end view of the technology used for clients, while my Chase experience has provided me with an in-depth view of how clients use technology daily. I believe that the financial services industry is being taken over by new technology. This has created a new experience for customers that has made it easier for them to bank, apply for credit, and invest their money. I find this subject to be very interesting as someone who wants to go into the financial services industry. Fidelity Investments and JP Morgan Chase & Co. are large corporations that are leaders in the industry. From my experience, I have found that both companies are aware that if they are not constantly innovating, they are going to fail.
Fidelity Investments Introduction

Fidelity Investments is a large mutual fund company that provides investment services for individuals as well as companies. Fidelity was founded in 1946 and helps over 40 million people achieve their financial goals. They help support advisors as well as benefit plans for businesses. Fidelity has many different lines of business and is a market leader in the financial services industry. As a former intern at Fidelity, I can say that Fidelity is an innovative company that is always client-focused. As a private company, Fidelity employees own 51% and the Johnson family owns 49%.

Another aspect that I observed during my internship at Fidelity was the constant search for innovation. From the top management down, it was clear that Fidelity does not want to fall behind its competition. I believe that this is an important aspect of a financial company in this age because technology is advancing so rapidly. A specific example I can think of regarding innovation at Fidelity was their use of the remote environment. I found that I was able to seamlessly transition from the headquarters to my home with their use of technology. Something I found interesting at Fidelity was that Fidelity happened to be testing remote work the week before the pandemic began. I believe this is a great example of how Fidelity is attempting to innovate and stay ahead of the competition.

I was placed in Fidelity Fund and Investment Operations for my internship this summer. Fidelity Fund and Investment Operations (FFIO) performs business operations for Fidelity. Some of the operations include accounting for mutual funds and regulatory requirements for Fidelity’s products. I was on a technology team that does expense and billing for mutual funds. Fidelity uses Agile methodology for their technology teams which was new to me at the beginning of the summer. I will do a more in-depth explanation of Agile as I explain what I was doing daily at Fidelity.

First, I want to give a quick explanation of how mutual funds work in general. This explanation is not specific to mutual funds at Fidelity. Mutual funds are typically open-ended investment companies that people pool their money into. After the money is pooled, managers of the fund can purchase stocks, bonds, and other securities to diversify. The main advantage of a mutual fund is that the fund is run by professionals and the individual does not have to actively manage a portfolio. The shares of the mutual funds are redeemed by the investors as their portion of the fund. The law requires that mutual funds must report their share price at the end of each business day. It is extremely important that this reporting is accurate as it could have dramatic effects if it is not. Mutual funds also have expenses as the people who manage the fund must receive compensation. There are also other fees such as redemption fees, distribution fees, accounting fees, and custodial expenses. All these fees are dependent on the mutual fund, but the bottom line is that these fees must be reported accurately.

According to its website, Fidelity has over 200 different funds. Fidelity is required to accurately report the net asset value (NAV) of some of these funds at the end of every business day. Accounting for these funds can be difficult as each one has different expenses. Obstacles to accounting can come up daily, and it was my team’s job to communicate effectively with the business team to discuss and find creative solutions.
J.P. Morgan Chase Introduction

J.P. Morgan Chase is the largest bank in America and is well-known around the world. I have found it fascinating to work for the largest bank in the United States and it is interesting to see how they do their business from the inside. From day one at Chase, I have noticed that the company takes itself very seriously and takes pride in its services. In the year 2000, J.P. Morgan merged with Chase Manhattan to form the company that it is now (J.P. Morgan Chase). Over the past 100 years, Chase has acquired many different banks around the United States that make it as powerful as it is today. Chase has a strong and innovative business plan as they have prospered throughout tough times in economic history.

In addition to being the largest bank in America, J.P. Morgan Chase is also systematically important to the economy of the United States. Chase has established itself in a position where a large portion of consumers and companies rely on them to safeguard their assets. The earliest history of Chase can be traced back to the Chase Manhattan Company which was founded in 1799. Throughout its history, Chase has influenced the economy through retail banking, private banking, commercial banking, and investment banking services.

I work in the retail and community banking part of J.P. Morgan Chase. I have learned a lot about banking and finance during my time at Chase. We work with customers daily to organize and help them with their finances. As an associate banker, it is my job to help clients with their initial needs when they come into the branch. I have helped customers with a very broad variety of issues and have found different ways to tackle problems.

Banking is an industry that is changing rapidly before our eyes. Every day technology advances more and more. If you think about it, banking was an industry that was much different 10, 20, and 30 years ago. I believe that the most recent innovations in banking have come from online platforms that make banking easier for clients. For example, if you had a check to deposit 20 years ago, you had to go to a physical bank location to deposit it. Now, people can deposit checks into their bank accounts using apps and computers. In the past few years, we have seen a decrease in the use of checks altogether. Instead of writing checks, people are using online platforms such as Venmo, PayPal, and Zelle. This is a great example of how constant innovation is necessary for the finance industry. For example, you have a bank that spends a lot of time and effort upgrading its app to be able to accept mobile deposits. After developing this technology, apps such as PayPal and Venmo gain popularity and become the primary source of funds transfers. If the bank was content with its online check deposit system, it would fall behind the competition as they become more online-based.
Corporate Experience

I want to analyze my experience at Fidelity and J.P. Morgan Chase. I have found that the companies have similarities and differences in the way they do business. I do not want to do a comparison of the two companies or a comparison of my experience at the two companies. I want to use my experience at both companies to analyze how technology is ever-changing in the finance industry. If you look at financial companies from 50 years ago, there were probably not many companies hiring full-time software developers to help with accounting. I believe technology is the future and finance companies must embrace that to see success.

Fidelity

My experience at Fidelity Investments can be separated into three major parts. The three parts I want to discuss are the initial experience, ScrumMaster certification, and connecting with associates. I believe that I learned a lot about technology and how it is used in a large finance company. Fidelity was a great company to work at because they serve a large group of clients all over the United States. Fidelity mutual funds are some of the largest in the world and Fidelity is very well-known in the financial industry.

The first part of my experience was an introduction to the corporate environment. I enjoyed how Fidelity did Zoom calls and webinars for the interns who were starting. The Zoom calls and webinars were a great way to connect with other interns and get a feel for some of the culture at Fidelity. The presentations were about compliance and other stuff related to the summer at Fidelity. Fidelity has offices all over the United States, so interns were located all over. I was able to do my first day inside the headquarters in Westlake, Texas. My first day was almost completely online as I went through Zoom calls and additional training.

I find it fascinating that a company has the technology and resources to be able to ship out laptops to over 1000 interns to start on the same day. After logging into my laptop, I was easily able to access apps on my computer such as Outlook and Zoom. I found the technology department to be extremely helpful throughout the process of logging on. Overall, I found my first experience at the company to be very well organized and put together. I believe that Fidelity treats their interns very well because they know they can be the future of the company. I also found the staff in Westlake to be respectful of interns and helpful when I had any issues.

I believe this part of my experience represents the technology at Fidelity. If you asked an intern from 20 years ago at Fidelity if they were able to use laptops to work at home, they would not have the same answer as me. Having the infrastructure to be able to support working at home takes a lot of effort and time. If Fidelity had been content with working in the office, they would likely have fallen behind their competition. A large part of their success in the past couple of years can be dedicated to the fact that they were ready for a situation that required a large portion of their workforce to be remote. Fidelity and other finance companies must use their resources and time to stay ahead of their competitors.

The second part of my experience at Fidelity can be dedicated to learning Agile methodology and Scrum. Before my internship, I had no previous experience with Agile other than what I had quickly learned in classes. Agile methodology is a new style of approaching
project management that allows teams to work more efficiently. One of the main features of Agile is that the product is built in increments with constant feedback. The alternative to Agile is Waterfall methodology. Waterfall methodology is the traditional way that teams approach projects. Waterfall methodology can be thought of as a straight line between an idea and a finished product. Although this may seem like the best approach, it is not always the most cost-efficient, timely, and productive. A lot of projects take years to complete, and in the time frame of two years, some priorities and requirements may likely change. In the world of finance, it is almost guaranteed that priorities are going to change. If you start on a project with a clear goal and completion date in two years, a change in priorities six months in could have dramatic effects on the budget and timeline.

Agile is the most efficient way to combat this issue and resolve issues as they arise. Agile builds the project in increments as time goes on. Agile does constant check-ins with the client and team to ensure that as priorities change, the project changes as well. Agile is commonly used for complex projects where variables are numerous, and budgets are large. Agile methodology can be pictured as building a skyscraper by using small blocks, while Waterfall can be pictured as building an entire skyscraper on the ground and turning it upright. There are not many skyscrapers built using the latter method. In some cases where there are no changes or variables, Waterfall can be a more efficient approach. As I mentioned earlier, the finance industry is rapidly changing, so this is rarely the case. As a company, Fidelity realizes this and implements Agile methodology into most of their programming to ensure efficient use of resources.

For lack of better words, I was thrown into the fire when I came to learning Agile. There are a few different methodologies within the Agile framework, and in my department at Fidelity, we utilized Scrum. Scrum is a way that companies organize Agile and execute it daily. Scrum utilizes sprints which are ongoing two-week periods where the product is built. As soon as one sprint closes, the next sprint starts. Sprint planning is done to prepare for an upcoming sprint and delegate tasks to members of the squad. As I mentioned earlier, Agile is all about constantly reassessing the product and pivoting when need be. As a part of scrum, the squad does daily standups, sprint reviews, and sprint retrospectives. All these events are designed to encourage collaboration and determine issues before they arise. A scrum squad is typically made up of five to ten people consisting of a squad leader, a scrum master, and the rest developers. During my internship, I took on the role of scrum master. The scrum master’s job is to help facilitate scrum and ensure that the agile framework is followed daily. The scrum master is committed to the squad by helping receive feedback and helping when needed.

I was lucky enough to be able to take a scrum master certification class at the beginning of my internship at Fidelity. I received the certified scrum master certification from Scrum Alliance. I believe that this two-day-long class was extremely insightful and helped me learn the expectations of Agile. After completing this course, I was able to apply what I learned to the squad and help assist in the scrum master role. There is a lot of product area knowledge that is required to be a great scrum master, and it takes time to develop a full sense of everything that is going on. My background is not in technology, so some of the terminology is confusing and difficult to understand. I believe that all of this is a testament to how Fidelity is not content with
their spot in the financial services industry. If Fidelity did not make the switch to Agile methodology, other large corporations would have the opportunity to pull ahead and develop better technology. It is not an easy transition to transfer an entire workforce from waterfall methodology to agile, and Fidelity is embracing it and advancing upon it every day.

The last part of my experience at Fidelity is related to building connections with associates and advancing my knowledge of technology in the corporate world. I thought throughout the ten-week program, I was able to create many lasting connections that shed light on all the business units within Fidelity. Fidelity has many different channels of revenue, and it would be tough to list all of them. I realized that there is technology behind every source of revenue at Fidelity. I was able to connect and join Zoom calls with many associates from across the country. My boss was in the New Hampshire Fidelity headquarters, and I was able to communicate with her effectively daily. Fidelity utilizes Microsoft Office products such as Teams, Outlook, Excel, and PowerPoint. In my experience, we also used programs to keep track of each sprint. The program we used, called JIRA, helps keep track of tasks within each sprint. Each task has a story, and each story has an epic that it belongs to. These terms are used to categorize what each project is and how it relates to progress within the company. When there are hundreds of different projects going on at the same time within a company, it is necessary to be as organized as possible.

**Chase Bank**

While my experience at Chase Bank has been a lot different than my experience at Fidelity, I have still learned a lot about personal finance. I believe that personal finance is one of the most important skills anyone can have and there are a lot of careers within the field. I am passionate about helping people and I have enjoyed the interactions and experiences I have had during my time at Chase. I believe my experience at Chase can also be divided into three major sections as well. The first thing I did at Chase was go through a long period of training followed by a transition into the physical location. After about a month of being in the physical location, we opened the doors to the public and deal with clients daily.

The first part of my experience at Chase was at what we called “Launch HQ.” At Launch HQ, we had office space rented out for training and onboarding. At our branch, we had about ten associates that were going through different phases of the training process. Of the ten associates, we had five associate bankers which is the role I am currently in. The associate banker role is the most entry-level role in the branch, and it provides a broad experience that promotes building skills in the banking industry. Coming into the role, I was familiar with basic finance and banking, but I did not have any prior experience in the industry. Like any industry, there is a learning curve that only experience can help develop.

Banking is an industry that has a ton of regulations. There are hundreds of rules in place that are designed to protect people, their identities, and their money. As a company, Chase is strict and straightforward when it comes to its tolerance of these rules. Chase is a large company and attempts to eliminate any actions that can create risk. This was the first thing I learned as I started my online training and began my experience at Chase. Some of the rules may not make any sense to the outside eye, but there is always a reason and an explanation as to why they were
put into place. As I learned quickly, these rules are put in place by Chase and regulators to safeguard clients.

As the banking industry becomes more and more digitalized, regulators must keep up and design policies that fit the programs banks use. Customers at Chase have a multitude of online services that make their banking experience more personalized and efficient. Banks that have failed to digitalize their systems have fallen behind the curve. With more things being online, there is more room for training in the online space. During the training process, I was taught how to help customers with their phones. Banks want their clients to utilize digital banking because it saves both parties’ time. If you think about it, it goes back to the saying that if you feed a man a fish he will eat for a night, but if you teach him to fish, he will eat for a lifetime. In some ways, this applies to clients of the bank. For example, if a customer comes in every day to deposit a check into their account, it is possible that this process could be completed online. Completing this process online would save the customer a trip to the bank.

The second part of my experience with Chase has to do with our transition to the physical location. The branch is in Fayetteville and is the first Chase branch in Northwest Arkansas. Being the first-to-market branch has some advantages and disadvantages. First-to-market branches are the first branches that go into a new area. Typically, the demand for a new branch is predictable to some degree, but there is no way to know exactly how a branch will perform. Since there are a lot of different transactions that occur in a branch, it is hard to predict which ones will be uncommon, and which will be common. Luckily for us, the Chase training program does a good job of giving a complete overview of the functions of the branch. There are numerous training modules and by the end of the training, every employee has in-depth knowledge of the system.

Since our Launch HQ was not near any other branches, our training process was done almost exclusively online. For me, the first day in the branch was the first time I had been in a Chase branch since I got hired. The first day in the branch was about a month after my start date. At the time we moved into the branch, I was close to the end of my training modules. The amount of technology that is in the branch was impressive to see when we first moved in. There is a lot of behind-the-scenes work that goes into opening the branch and most of it requires the use of technology. The branch has a ton of safety features and technology that helps our team daily. Without power, there is no way a branch could stay open. This is crazy to think about because, at the time that Chase was founded, electricity in buildings was not even a thing. I believe this is a testament to how technology has changed our lives.

Before our branch opened, I was fortunate enough to take a trip down to Little Rock to visit an open branch. There are a few Chase locations in Little Rock that have opened within the past couple of years. I was able to visit these branches and do some shadowing to gain some real-world experience. I believe this experience was eye-opening and valuable. Although online training is helpful, there is no way that it can fully prepare you for the situations you see in the branch. Most of the time, banking is never as straightforward as it may seem. If it were straightforward, people would not have to come to the branch often and could do their banking online. Most of the situations we are tasked with in the bank are unique to each individual.
Finding solutions for these issues can be complicated and impossible to explain in a training module. My biggest takeaway from my visit to Little Rock was that things in the branch are not always as simple as they seem.

The third part of my experience at Chase relates to branch operations and continuous learning. One of the main things I have learned about my role at Chase is that I can learn something new every day. I believe that everything I learn can apply to my own life or the customers that I will help in the future. For example, there are no training modules that can teach you how to interact with a client that will make them trust you. There might be training that can help give tips on how to build a relationship with a client, but experience is the main thing that can help build trust.

After opening the branch, we saw numerous clients that vary from complex account openings to basic check cashing. While I am in the branch, not an hour goes by that I am not actively using technology. For example, when a client walks in the door, after greeting them and addressing their need I check them into our system using a tablet. The tablet allows us to see the schedule of everyone on our team and give the client an approximate wait time. Without the updated calendars on the tablets, we would have to communicate manually and use paper to show schedules. The main advantage of the online calendar is that it can be updated instantly based on cancelations and added appointments.

In addition to the technology we use to check clients in, we also have technology in place to do teller line operations and perform account maintenance. Part of my role at Chase is to assist customers with teller line operations. Teller line operations include cashing and depositing checks, withdrawing and depositing cash, making payments, and printing cashier’s checks and money orders. Back in the day, all these operations were done on paper with withdrawal and deposit slips. There are still some situations where clients are going to use paper, but the use of technology has decreased the amount of paper necessary to perform transactions. Another thing that our technology allows us to do is reduce risk. When someone presents a check, we can use technology to recourse it and determine whether that check presents a risk. I believe that this technology saves the bank large amounts of money when it comes to consumer fraud. As I mentioned earlier, Chase takes mitigating risk very seriously as banking is about keeping assets safe.

The final thing I have observed while being in the branch is how helpful consumer technology can be. A lot of the time, clients come into the branch with issues they do not realize they could fix on their phones. Understandably, some people are reluctant to use technology because they have fears about their data being leaked. Utilization of the Chase Mobile app and online website are ways that clients are easily able to access their account information. The app can be the easiest way for a customer to do a lot of different transactions without ever having to come into the branch. There is a lot of technology behind the app that allows our clients to be able to safely access their bank accounts. Chase prides itself on being secure with customers’ data on all occasions. When a customer comes into the branch, we must be careful with their data. We also must be careful with the data that we give clients. These same rules apply to our online platforms as there are people online who do not always have the best intentions. Chase
works constantly to ensure that customers have the most efficient and reliable experience for banking.
Technology in Financial Services

In the final part of this thesis, I want to talk about some of the ways technology has changed finance based on what I have observed in my two roles. I believe I have had a unique experience in two different roles at large financial services companies. Both companies are respectable and successful within their respective realms of finance. I want to avoid doing a comparison of the technology that each company uses because I do not feel like I have the proper data for that. My experiences at both companies were in completely different departments and it would be unfair to compare one to the other. I think it is important to analyze the work I have completed and the skills I have developed in my past two positions. Self-analysis is an important part of advancement and a great tool to soak in large amounts of knowledge. While it may seem like you are absorbing a lot of information at the time, it may be more valuable to do a holistic review at times.

As I have previously mentioned, the finance industry is changing rapidly, and companies must remain up-to-date if they want to remain competitive. I am lucky to have experienced the technological efforts made by large companies such as J.P. Morgan Chase and Fidelity Investments. The first thing I want to analyze is a timeline of major financial technology milestones. After analyzing how finance has changed in the past, I want to analyze how the future could shape financial technology.

Financial technology is commonly referred to as FinTech. FinTech is a common topic among professionals and has grown in popularity as we have seen the rise of the internet. FinTech can be divided into categories such as payments, advisory services, financing, and compliance. FinTech is not something that has just started, rather it has been around since the beginning of the use of currency. The first breakthrough in the FinTech industry that I would like to emphasize is the beginning of credit cards in the 1940s and 1950s. Credit cards gained popularity because they made payments easier for customers who did not want to carry cash. Credit cards have come a long way since their invention. Advancements in credit cards include contactless payments, online approval systems, and online payment systems. Financial companies spend a lot of time and money to advance their credit card systems to make it as easy as possible for consumers.

The second major milestone that I want to talk about in financial technology is the first automatic teller machine (ATM) in 1967 by Barclays Bank. As we now know, the ATM was a piece of technology that would advance throughout the years to become what it is today. ATMs are a quick, easy, and safe way to acquire cash with a debit card. ATMs have become more advanced throughout the years and allow clients to easily access cash from locations around the globe. The use of the internet and online banking came after the introduction of ATMs. The introduction of online platforms began in the late 1990s and early 2000s. Online banking is essential to the world that we live in and necessary for bank branches to remain in business. As a banker at J.P. Morgan Chase, I can confidently say that the internet and online services are a necessity for the bank to remain in business.

Online banking is a huge category, and it can be broken down into many different sections. The 21st century has seen the rise of mobile payments, chatbots, and other interfaces.
The internet began as a simple tool where users could perform basic transactions, but it has developed into a powerful tool for artificial intelligence and blockchain activities. Modern technology has rapidly changed how the banking and finance industry function and it will continue to do so in the future. I believe it is interesting to watch how banking regulations change constantly to keep up with the use of new technology. Regulators must work hard to ensure that the laws keep up with technology to ensure that consumers are safeguarded.

As we move into the future of FinTech, one of the main topics that comes up is the use of Blockchain. Blockchain is the technology behind popular digital currencies such as Bitcoin. The use of Blockchain technologies remains a question mark in the present as we are unsure what their future holds. Within the finance industry, some products are failures, and some are massive examples of success. It is hard to determine where Blockchain stands now, but it will be interesting to watch as the future unfolds.

The last piece of financial technology that I want to highlight is artificial intelligence. Artificial intelligence is at an interesting point and will likely drive a lot of innovation throughout the 2020s. Finance companies that utilize artificial intelligence will acquire new ways to look at and solve complicated problems. Not only can artificial intelligence be used to help consumers solve technical issues, but it can be used to analyze data and reports. The FinTech industry is at an interesting point, and artificial intelligence will likely mark an important point when we look back on Fintech history.
**Closing Thoughts**

After analyzing the history of FinTech, technology within a Chase branch, and technology in fund accounting at Fidelity, I believe there is a lot to digest. As I have proven in this research paper, it is obvious that technology is a very common denominator among financial institutions. Financial institutions are dumping large amounts of resources and manpower into new projects involving technology. Fidelity is prioritizing organization and new management tactics that provide the most efficient way to tackle new projects. Chase is developing solutions that allow clients to manage their money more efficiently. I am not saying these items are exclusive to these companies. If a financial company is surviving in the modern world, they are likely doing all these things and more.

As a current student who is about to enter the corporate world of finance, I find this analysis to be insightful and useful for my career. No matter what happens, I believe it is important to pick a company that prioritizes innovation and constant improvement. A company that does not prioritize this will be left behind almost immediately. As I move on throughout my career, I want to be able to stop and analyze how each decision a company makes can relate to the history of financial technology.
Works Cited


