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The growth of payment apps like Alipay, Apple Pay and Samsung Pay, the risks and the benefits, and the problems these create

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ABSTRACT

Nowadays, with the development of internet connection and the development of mobile devices, people generally tend to use mobile payment applications more frequently than ever before. Meanwhile, a number of multinational companies want to grab this tremendous market, so a number of payment applications emerged in recent years. Even though mobile payment market has become a mature market in some countries such as China, it still appeared to be an attractive point to develop economy for many countries. This research paper analyzes the features of popular payment applications on the market, using descriptive method to explore how mobile payment influences the traditional payment organizations (banks). Also, this paper focus on the aspect of risk regarding payment applications, applying F-test to test whether the launch of payment applications has significant influence on the risk level of parent companies or not. Meanwhile, this research paper utilizes the multiple regression model to figure out how characteristics of payment applications influence the customers' usage frequency. The research result shows that launch of payment application has significant influence on the risk level of parent company. In addition, another result is that characteristics (convenience, regionalism, security) of payment application may have no significant influence on consumers' usage frequency.

Keywords: launch of payment applications, risk level, characteristics, usage frequency.

1.INTRODUCTION

Traditionally, people tend to use cash or credit cards to pay for daily necessities and other commodities. With the development of technology and evolution of information exchange, mobile payment applications born to fulfill needs of modern citizens. Mobile payment applications, also referred to as mobile money, is a new payment method performed via mobile device. Mobile payment applications can provide wide range of services to customers, including daily consumption, regular loan repayment and so on. Due to its convenience, to a certain extent, payment applications have stroke on traditional payment methods. From the concept of mobile payment was proposed in 2000, mobile payment has passed through nearly 20 years. Mobile payments have experienced explosive growth in the last 10 years due to the increasing popularity of mobile devices, especially in China, where more than 42% Chinese currently use mobile payment applications.

Being benefited from the rapid spread and rapid growth of mobile payments, a large number of payment applications have emerged in the global market, like Alipay, Wechat, Apple pay as well as Samsung pay. It is worth investigating that most of the applications show a distinct regional distribution, which mean they are widely used only in a certain country.

Although mobile payment has brought great convenience to people's lives, mobile payment risk is gradually becoming the main type of payment risk. And it presents a new trend of concealment, complexity, crossover, etc. The account piracy and fraud that occurred on the mobile phone side showed a high incidence, causing serious losses to the user funds. Accordingly, this study is going to examine the potential risks in mobile payments as well as the future development trend of payment applications and the relationships between these two aspects. Besides, this study will also mainly focus on the essential influences caused by mobile payment applications.

2.LITERATURE REVIEW

2.1.1 Characteristics of Alipay

As a subsidiary of giant Alibaba, Alipay has become the biggest mobile payment application all over the world. Lerong (2018) points out that Alipay and WeChat dominate the mobile payment sector with a value of 5.7 trillion in China. As of March 31, 2018, the number of Alipay users reached 870 million. According to the statistics of the fourth quarter of 2017, Alipay occupies 54.26% of the third-party payment market in China and continues to grow. It is the most important part of the Chinese people's cashless process. Taking China as a headquarter and radiating to the whole world, Alipay has operations in more than 70 countries, including the United Kingdom, the United States, Japan, South Korea and Australia. Being different from its competitors, Alipay heavily relies on QR code (Quick response code), which is a 2D barcode can be scanned, to operate its basic services. Alipay's uniqueness reflected not only in QR code, but also in its diversity of services. Alipay's competitors emphasize their payment functions, but Alipay's products such as YUEBAO, Huabe, and JIEBEI have replaced the loan function of banks to a certain extent. Alipay has become an instrument with high financial attributes.

As YongXU (2013) predicts, mobile payment applications would have a broad prospect of development. Also, he states that it is important to take some precautionary measure to prevent potential payment risks which embedded in mobile payment market.

Chinese government has strengthened some regulations to supervise mobile payment applications. Recently, Alipay announced its unique insurance products to ensure account safety of customers.

2.1.2 Characteristics of Apple Pay and Samsung Pay

Apple Pay is a mobile payment service that pays for specific Apple mobile devices when you check out at physical and online stores. This service replaces the traditional credit or debit card payment process and digitizes it. This service enables Apple's mobile devices to communicate with point-of-sale information systems (POS) via Near Field Communication (NFC), Secure Element (a chip dedicated to storing encrypted payment information) and Apple's Touch ID (only available) Touch ID function for iPhone) or Face ID (for iPhone with Face ID only) and Wallet to pass information to each other. Stephanie (2019) states that Apple Pay

like a double-edged sword. On the one hand, due to the strict restrictions on the use of equipment, Apple Pay is extremely secure in contrast with Alipay or other applications. However, it greatly limits the growth of the user community and has certain limitations for the development of itself.

Released at August 20, 2015, Samsung pay is the latest payment applications among mainstream payment applications. As similar as Apple Pay, Samsung pay also based on Near Field Communication (NFC) for its operations. Insung Son and Jinsu Kim (2016) put forward an idea that Samsung Pay has preponderance over Apply Pay in the field of fully utilizing credit cards. They expect Samsung Pay will grow rapidly in the future, so that Samsung Pay may occupies a large proportion of payment market and generate huge profit.

2.2 How banks influenced by mobile payment applications

Before prevalence emergence of mobile payment applications, most of banks rely on cash. Also, at that time, a large proportion of people tend to use cash. In order to adapt to the development of the Times, banks also make some rudimentary changes. As Humphrey, Willeson and Lindlom (2006) suggests that banks get used of paper-based process of working before the development of electronic payment. However, due to the advancement of technology, the switch, which from paper-based payment to electronic payment, bring annually 1% upward to Italy in 2006. Benefited by electronic payment, Banks can cut a lot of unnecessary employees who were assigned to cash acquisition service. Meanwhile, ATM has become a signal of efficient operations to banks since the popularization of electronic payment. Accordingly, banks can accomplish saving in banks operating costs and increase their retain earnings.

After 2010, more and more mobile payment applications entered the world market such as Alipay and Paypal. And most of these applications are third-party products, which means they don't belong to any traditional banks. Due to the convenience that provided by third-party payment applications, many customers give up banking services and switch to payment applications. Payment applications has taken over a part of core interests of banks and puts a lot of pressure on them. Therefore, banks also launch their own payment software. Fenu and Pau (2015) provide an idea that the popularity of mobile devices motivates banks to invest more money in mobile payment applications. By taking a series of measures, banks have regained their competitive edge in the market. Besides, Banks can improve their mobile

marketing through available data absorbed from their mobile devices.

As Miao and Fangping (2014) states, there is a general situation that banks and providers of third-party payment applications are pursuing their own interests respectively, the trilateral game between them will fall into the “prisoner’s dilemma” inevitably. As a result, this dilemma will lead to enormous of social resources eventually.

2.3 Main improvements and general effects of mobile payment applications

Guangzhou and Rui (2007) point out that third-payment applications offer an effective business intermediary between merchants and customers. These applications can provide more safety protections to both of individual and business partners. As the evolution of e-commerce market, mobile payment will become the ultimate solution in the coming future.

With the development of mobile payment market, mobile payment applications have imposed exception effects on the whole market. Thirupathi, Vinayagamoorthi and Mathiraj provide many valid examples. 1. payment applications directly result in cashless transactions, which help to reduce the emergence of block money 2. payment applications help to avoid robber in banks 3. This digital transaction helps to transfer one person's money to another under any circumstances. 4. When using mobile payment applications, customers will receive discounts such as discounts, gifts, quotations, etc. 5. This cashless transaction reduces manpower, such as physical objects in the bank, queuing, etc., to avoid unnecessary disputes with bankers. 6. This cashless transaction is most helpful for banks to avoid bank congestion and put pressure on employees

2.4 Risks and future of mobile payment applications

Because new technologies can offer potential business opportunities, mobile payment applications still continue to improve and evolve. As Issa and Sherali (2014) discuss, vendors of mobile payment applications must evolve as well, to catch up with rapid changing technology and market. Lots of vendors have already taken a series of measures in order to constantly support sophisticated applications. On the other hand, to allow clients get better use of payment applications, designers must continuously update their mobile payment systems. Gajda (2015) expects that by bringing phone manufacturers, network operators, applications developers, merchants and clients together, mobile payment applications would be eventually introduced to a vastly expanded future.

In contrast to bright future of payment applications, Kadhiwal, Shaheed and Zulfiqar still perceive some serious risks caused by payment applications. They point out that security issues, which are authentication and authorization for mobile transactions, have to be settle. Also, they think that there still no standard rules for mobile devices which are frequently using mobile payment applications, and it may be pertinent issue for the development of mobile payment. The good news is, a large portion of vendors are currently working on these essential problems.

3.METHODOLOGY AND DATA

3.1 Discussion and Explanation of DataSet

In my paper, I list 5 different research questions. 3 of them are descriptive questions which means I could answer these questions on the basis of others' literature. In the last two research questions, I mainly focus on the relationship between launch of payment application and the risk level of parent company. Therefore, I look up the company's stock price which is 2 months before and after the release of the payment applications. For example, since Apple announced its Apply pay on October 2014, so I collected stock price of Apple during the period from August 2014 to December. To analyze the relationship, I try to use the standard deviation of stock price to stand for risk level. The higher SD is, the higher risk parent company has. I will use the F-test to figure out the standard deviation of stock price which in different period. For instance, compare SD of stock price during August 2014 to October 2014, with November 2014 to December 2014. Except for risk level, I also try to find out that what kind of product characteristics of different payment applications that will affect consumers' choices? I provided many survey questions in terms of security, regionality and convenience. I make a questionnaire to collect the response from the group users of payment applications. In order to effectiveness of my questionnaire, I eliminate duplicated, multiple surveys with the same IP address.

To analyze the relationship between payment application and the risk level of parent company, I use stock price of two different companies. I search and collect data mainly from Yahoo Fincane and Bloomberg platform. Also, I use the daily data to make sure that my DataSet is valid.

3.2 Sample

As my thesis topic mentions, I focus on the data of parent companies of mainstream mobile payment applications. For example, Apple, Inc, Samsung Corp as well as ALIBABA. However, ALIBABA was not going to public when it released its payment application Alipay, which is very popular now. Due to this limitation, I concentrate on Apple and Samsung whose stock price during the period of applications launch are available. For Apple, the period of stock price is from Nov 2014 to Dec 2014. And for Samsung, the period of stock price is from Feb 2015 to June 2015.

For my questionnaire, I plan to collect data from 200 different individuals. I will not only focus on the range of WKU students as a lot of my friends do because mobile payment basically involves all age groups. I tend to use this technique to avoid bias of research to a certain extent.

3.3 Methodology

I applied descriptive-correlational research design in my thesis. I try to evaluate the relationship between different variables. I divided my method into a series of steps. First, I put all collected data into EXCEL and classify them. Then, I will use F-test to calculate the change of standard deviation in different period. Eventually, I will find out the relationship between launch payment application and the risk level of parent company. Basically, quantitative method is being used in this section.

I also used questionnaire to collect primary data to analyze the characteristics of payment applications that may affect consumers' choice. Qualitative and Quantitative method are being applied in this section. I also use EXCEL to test data collected from my questionnaire.

3.4 Model and Hypotheses

Hypothesis1: Launch of payment application has no significant influence on the risk level of parent company.

Model 1: to analyze the relationship between launch payment application and the risk level of parent company.

F-test

$$F = (SSE1 - SSE2 / m) / SSE2 / n-k$$

where SSE = residual sum of squares, m = number of restrictions and k = number of stock price.

So, I firstly list stock price of two month before application launch and stock price of two month after application launch. Then, I calculate the daily change of stock price. Then, use the function of F-test Two Sample for variances to find out the result. Finally, if the F-value is lower than the F critical value which means the variance of two population are equal, we do not reject the hypothesis. If not, we reject the hypothesis.

Hypothesis2: Product characteristics of payment applications have no significant influence on consumers' choices.

Model 2: Multiple regression test

$$\text{Customers' usage frequency} = \beta_0 + \beta_1 \text{convenience} + \beta_2 \text{security} + \beta_3 \text{regionalism} + e_i$$

In this model, dependent variable y is customer's usage frequency, independent variables are convenience of payment application, security of payment application and regionalism of payment application. Firstly, I collected data from different individuals based on an online questionnaire. Then I use the regression model to test whether these characteristics of payment application influence customer's usage frequency or not. The α -value is equal to 0.1. Accordingly, if the result of p-value is bigger than 0.1, then we accept the null hypothesis. Therefore, characteristics of payment application have no significant influence on customers' usage frequency. Conversely, if the result of p-value is smaller than 0.1, then we reject the null hypothesis, which means that characteristics of payment application have significant influence on customers' usage frequency. By conducting this model, we can figure out that what kind of characteristics of payment application are essential and pivotal.

4. ANALYSIS AND FINDINGS

AS I mentioned in the section of data and methodology, two different hypotheses would be tested, by 2 different models.

4.1 Risk level of companies which launch payment applications

4.1.1 Apple Case

In this section, significant level is set on 10%.

Regarding this part, to compare the risk level of parent companies before and after launch payment application, I applied F-test in this section. In order to make the test result precisely. Both Apple and Samsung have been tested in this section. After careful calculation, the situation of how does the Apple stock price changes (before and after the launch of Apple Pay) showed in table 1.

<i>APPLE</i>	<i>Stock price after launch</i>	<i>Stock price before launch</i>
Mean	112.7013095	100.935952
Variance	10.2996391	6.82757102
P(F<=f) one-tail	0.096158889	
F Critical one-tail	1.681644228	

Table 1 Results of Apple Case

Clearly, as table 1 shows, the mean of Apple stock price endured a significant increase after launch of Apple Pay, 117.7 versus 100.9. This result implies that due to the influence of apply pay, Apply.inc company received positive messages from stock market. Meanwhile, capital market released positive sign regarding the prospect of Apple Pay. Namely, the launch of Apply pay had a very positive influence on Apply company. In terms of variance, the variance is 10.29 after launch and 6.83 before launch. Because the risk level would go higher with the variance increase. To a certain content, Apply Pay increased the operating risk of Apply.inc.

Also, because P-value is 0.0961, which is less than 10%. We can reject the null hypothesis that the launch of payment application has no significant influence on the risk level of parent company. In other word, we can conclude that launch of Apple pay has significant influence on the risk level of Apple.inc.

4.1.2 Samsung Case

To make sure that the result is valid, I also applied the case of Samsung in F-test. The result can be seen in table 2.

<i>Samsung</i>	<i>Stock price after launch</i>	<i>Stock price before launch</i>
Mean	258.871316	279.955476
Variance	114.633716	51.5253
P(F<=f) one-tail	0.00655257	
F Critical one-tail	1.69279721	

Table 2 Results of Samsung Case

Accordingly, to compare the mean of stock price before launch and after launch, which is 258.88 versus 279.96, we can figure out that Samsung Pay adversely affect the market emotion to Samsung company. On the other hand, by comparing variance before and after launch of payment application, it is clear that stock of Samsung suffered a frustration after Samsung released its payment application. Because the variance is 114.63 during the period of two month after launch of Samsung pay, this number exceed the original value, which is 51.52 a lot.

Based on the result of P value, which is 0.006, we can reject the null hypothesis that null hypothesis that the launch of payment application has no significant influence on the risk level of parent company. Therefore, we can conclude that the launch of Samsung Pay has significant influence on the risk level of Samsung company.

There is no obvious different between the results of Apple and Samsung. Therefore, the alternative hypothesis can be established. Launch of payment application has significant influence on the risk level of parent company.

4.2 Characteristics of payment application

In this section, I apply a multiple regression analysis here to test whether different characteristics of payment application would influence customers' usage frequency or not. My data set includes 101 different individual respondents.

$Customers' usage frequency = \beta_0 + \beta_1 convenience + \beta_2 security + \beta_3 regionalism + e_i$
(β_0 stands for a constant term in this model. Each of $\beta_1, \beta_2, \beta_3$ represents the coefficient of key variable. e_i is a control variable)

As a result, I can get the result of multiple regression analysis. Which can be showed in table 3.

$Customers' usage frequency = 28.18 + 0.1219convenience - 0.0054security + 0.3682regionalism$

Table 3, Multiple Regression results of Consumers' usage Frequency

	Coefficients	t-Sat	P-Value
Intercept	28.188061	1.72481845	0.08774519
Regionalism	0.12196295	0.64964271	0.5174585
Security	-0.0053699	-0.0279119	0.97778974
Convenience	0.3681973	1.60699317	0.11130635

4.21 Analyze convenience, Regionalism, Security

There are too many types of definitions regarding convenience such as velocity of payment, accessibility and so on. Therefore, every respondent in my questionnaire should indicate that how convenience of payment application affects them, and they should score the convenience from 0 to 100. My result mainly focuses on how convenience contributes to the usage frequency of customers. This technique also applies on aspects of security and regionalism in the same way.

According to table 3, convenience as variable 1 has 0.11 p-value, which is bigger than the significant level of 0.10. This situation indicates that we need to accept the null hypothesis, which is convenience of payment application that may has no significant influence on customers' usage frequency. Also, convenience has a positive relationship with consumers' usage frequency because its coefficient level is 0.37, which is larger than zero. So, there is a situation that can be fully explained by 0.37 coefficient data, with the improvement of payment application's convenience, people tend to increase the frequency of using payment software. In other words, if a payment application become more accessible than before, it would bring more potential customer to itself. For instance, Alipay currently use the technique of QR code, which is a code can be scanned by every electronic device to initial a mobile trade, to offer its basic service to customers. QR code is widely known as the most convenient way to operate mobile payment. Therefore, Alipay can achieve such a big customer group and retain them all over the world.

In terms of the security aspect, it has a p-value of 0.977. Because p-value of security is bigger than significant level of 0.1, we cannot reject the null hypothesis, which is security of payment

application that may have no significant influence on customers' usage frequency. Combine with the coefficient level of -0.005, which is less than 0, we can conclude that the security with significant level of 10% has a negative relationship with customers' usage frequency. Namely, we can take it for granted that with a more secure payment application, people generally decrease the frequency of using payment application. Relatively, this result seems to contradict our habitual thinking. However, higher security often accompanied by increased operational complexity. For example, Alipay does not allow customers to use QR code to make transaction, and its operation is more complex than other payment applications. However, that is also the reason why Apple pay is extremely safe.

On the basis of table 3, regionalism has a p-value of 0.517, which is larger than the significant level of 0.1. The result of P-value indicates that we need to accept the null hypothesis, which is regionalism of payment application that may not have significant influence on customers' usage frequency. Also, the coefficient level of regionalism is 0.1219, which is larger than zero. Therefore, Regionalism with significant level of 0.1 has a positive relationship with consumers' usage frequency. In other words, people tend to use payment application more frequently when parent company of payment application become more closer to them geographically. This conclusion can high explain why so many Chinese currently using Alipay and Wechat Pay, or why Apple's largest payment market is in U.S. All of these payment applications based in their own country so that they can obtain a huge customer base.

4.3 ANOVA TEST RESULT

Table2 ANOVA Test for Consumers' usage Frequency

F	Significance F
2.51202862	0.0630752

It can be seen from the ANOVA test table 2 that the regression equation can pass the total test, because the significance F-value is 0.0630752 (less than given α), and the statistic value of F is 2.51202862. In conclusion, this regression equation is extremely effective

5.CONCLUSION

This paper conducts a comprehensive analysis of the influence, which caused by mobile payment applications, on traditional payment organizations. Accordingly, as more and more payment applications entered the payment market, they are increasingly taking away the market position of bank or other traditional payment associations. In response to the decline market share, a number of banks take a series of measures to change the dilemma: they transit their paper- process working to electronic work, a method to cut cost. As a result, banks can cut a lot of unnecessary employees who were previously assigned to do some paper-based work. Also, banks generally do some research and development for their own mobile payment applications. Under the general trend, banks are trying to make some changes to deal with the impact of mobile payment applications. However, a decline in market share for traditional banks is inevitable.

Then, based on the F-test result, we can conclude that the launch of payment application has significant influence on the risk level of parent company. After the launch of payment application, almost all of companies shows an upward variance. Accordingly, these companies such as Apple and Samsung, suffer more operating risk, including capital precipitation, cash out risk, liquidity risk, market risk and even money laundering risk. For instance, as for now, there are a total of 270 third-party payment companies that have obtained a payment license all around the world. Due to the industry's limitations, homogeneity is a very serious issue in terms of products and services. Namely, different payment application providers generally can provide the same products, the competition is becoming more intense. In order to compete for market share, the only bargaining chip is used, regardless of cost escalation. Therefore, the profit of narrow third-party payment industry has been compressed even smaller, but companies cannot survive without profit. Eventually, it is easy for some companies to take unfair competition in order to attract users, even vicious competition. This is how companies exposed to market risk after they launched payment applications.

Lastly, characteristics of payment applications may have no significant influence on customers' usage frequency. These characteristics include convenience, regionalism and security. In a conclusion, these aspects generally cannot change customers' usage frequency a lot. Namely,

when customer use payment applications, they care little about the convenience, regionalism or security of applications. Once a company launch a payment application, they should put more effort on other dimension such as accessibility of payment application or ease of operation of payment application. By conducting this research, we can clearly figure out that the success secret of Alipay, Wechat Pay is not only about that they are convenient, secure payment application, but also that they consider more aspects regarding themselves.

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APPENDIX A

Questionnaire on the characteristics of payment applications that affect the frequency of customer using payment application.

1. Your gender

Male

Female

2. Your age

Under 18

18-30

30-40

Over 40

3. What is your daily frequency of using payment application?

Respondents choose from (Alipay, Wechat Pay, Apple Pay, Samsung Pay, Paypal, etc)

4. I tend to use mobile payment applications which based on my national countries

Respondents need to indicate a number which from 0 to 100 to express attitude towards this question

5. The convenience of mobile payment software is a very important consideration for me to choose it.

Respondents need to indicate a number which from 0 to 100 to express attitude towards this question

6. Security is an important consideration for my choice of mobile payment software

Respondents need to indicate a number which from 0 to 100 to express attitude towards this question

APPENDIX B

APPLE STOCK PRICE 4 MONTHS(BEFORE LAUNCHED AND AFTER LAUNCHED APPLE PAY				
Date	Last Price		Date	Last Price
2014/12/31	110.38		2014/10/30	106.98
2014/12/30	112.52		2014/10/29	107.34
2014/12/29	113.91		2014/10/28	106.74
2014/12/26	113.99		2014/10/27	105.11
2014/12/24	112.01		2014/10/24	105.22
2014/12/23	112.54		2014/10/23	104.83
2014/12/22	112.94		2014/10/22	102.99
2014/12/19	111.78		2014/10/21	102.47
2014/12/18	112.65		2014/10/20	99.76
2014/12/17	109.41		2014/10/17	97.67
2014/12/16	106.745		2014/10/16	96.26
2014/12/15	108.225		2014/10/15	97.54
2014/12/12	109.73		2014/10/14	98.75
2014/12/11	111.62		2014/10/13	99.81
2014/12/10	111.95		2014/10/10	100.73
2014/12/9	114.12		2014/10/9	101.02
2014/12/8	112.4		2014/10/8	100.8
2014/12/5	115		2014/10/7	98.75
2014/12/4	115.49		2014/10/6	99.62
2014/12/3	115.93		2014/10/3	99.62
2014/12/2	114.63		2014/10/2	99.9
2014/12/1	115.07		2014/10/1	99.18
2014/11/28	118.93		2014/9/30	100.75
2014/11/26	119		2014/9/29	100.11
2014/11/25	117.6		2014/9/26	100.75
2014/11/24	118.625		2014/9/25	97.87
2014/11/21	116.47		2014/9/24	101.75
2014/11/20	116.31		2014/9/23	102.64
2014/11/19	114.67		2014/9/22	101.06
2014/11/18	115.47		2014/9/19	100.96
2014/11/17	113.99		2014/9/18	101.79
2014/11/14	114.18		2014/9/17	101.58
2014/11/13	112.82		2014/9/16	100.86
2014/11/12	111.25		2014/9/15	101.63
2014/11/11	109.7		2014/9/12	101.66
2014/11/10	108.83		2014/9/11	101.43
2014/11/7	109.01		2014/9/10	101
2014/11/6	108.7		2014/9/9	97.99
2014/11/5	108.86		2014/9/8	98.36
2014/11/4	108.6		2014/9/5	98.97
2014/11/3	109.4		2014/9/4	98.12
2014/10/31	108		2014/9/3	98.94

SAMSUNG STOCK PRICE 4 MONTHS(BEFORE LAUNCHED AND AFTER LAUNCHED SAMSUNG PAY				
Date	Last Price		Date	Last Price
2015/2/23	265.1346		2015/4/21	280.069
2015/2/24	265.1346		2015/4/22	283.3662
2015/2/25	267.462		2015/4/23	281.4267
2015/2/26	266.6862		2015/4/24	273.4746
2015/2/27	263.1951		2015/4/27	270.5653
2015/3/2	275.996		2015/4/28	264.9406
2015/3/3	275.0262		2015/4/29	268.6257
2015/3/4	278.7113		2015/4/30	273.4746
2015/3/5	275.802		2015/5/4	271.535
2015/3/6	279.6811		2015/5/6	264.1648
2015/3/9	275.4141		2015/5/7	265.7165
2015/3/10	275.6081		2015/5/8	259.5099
2015/3/11	285.8876		2015/5/11	259.122
2015/3/12	280.6509		2015/5/12	258.1523
2015/3/13	282.5904		2015/5/13	258.5402
2015/3/16	285.1118		2015/5/14	259.8978
2015/3/17	290.3486		2015/5/15	257.1825
2015/3/18	291.5122		2015/5/18	256.0188
2015/3/19	285.1118		2015/5/19	259.5099
2015/3/20	283.9481		2015/5/20	264.9406
2015/3/23	284.5299		2015/5/21	262.2253
2015/3/24	286.2755		2015/5/22	261.8374
2015/3/25	288.0212		2015/5/26	264.1648
2015/3/26	275.6081		2015/5/27	254.8551
2015/3/27	275.6081		2015/5/28	253.8853
2015/3/30	276.9658		2015/5/29	253.4974
2015/3/31	279.4872		2015/6/1	250.3941
2015/4/1	275.996		2015/6/2	252.7216
2015/4/2	278.1295		2015/6/3	246.9029
2015/4/3	278.1295		2015/6/4	259.316
2015/4/6	285.1118		2015/6/5	260.0918
2015/4/7	283.5602		2015/6/8	254.8551
2015/4/8	286.8574		2015/6/9	248.6486
2015/4/9	287.6332		2015/6/10	244.7695
2015/4/10	288.9909		2015/6/11	243.7997
2015/4/13	286.8574		2015/6/12	247.6788
2015/4/14	285.8876		2015/6/15	246.3211
2015/4/15	280.457		2015/6/16	243.4118
2015/4/16	286.4695		2015/6/17	243.2178
2015/4/17	281.2327		2015/6/18	245.3513
2015/4/20	277.3537		2015/6/19	245.5453