

# Technical Opinion: A Comparative Look at China and the U.S.'s Growth in E-Finance

Having spent several weeks interning at a fund management company as a software engineer, I was given an interesting consideration: Does technology have any application in the financial world? With modern trends of incorporating technology into much of our daily lives and futuristic aims of automatic and replacing complex tasks with sophisticated software, it does not seem unlikely for technology to also grow in a complex ecosystem such as finance. And that is what we see; financial technology, also known as fintech, is seeing great interest by two great world powers, China and the United States, seeing many startups and investments by interest groups. To see the growth of fintech, this paper will see on these two environments, comparing their e-finance development, technologies, and possibilities for further potential growth.

Generally speaking, the environment for the growth of e-finance currently appears to be more primed in China than in the United States. In the initial development of China's e-finance, two of China's tech giants, Alibaba and Tencent, and a Chinese branch of the U.S. headquartered eBay, eBay (China), vied for control of the majority consumer-to-consumer (C2C) market share in China.

A large contributor to China's e-finance growth was due to Alibaba and Tencent's successes in e-commerce (and specially, for Tencent, mobile applications). China's early C2C e-commerce sector was dominated by Eachnet. Launched in September 1999, Eachnet was China's most popular online auction market, attracting more than 870,000 registered users and having a peak market share exceeding 90 percent<sup>1</sup>. eBay, drawn by the successes of Eachnet, acquired the company in 2003 to try to integrate it into the global eBay platform and to launch its C2C business in China. At around the same time as eBay's entry into China's C2C e-commerce sector (year 2003), Alibaba Group Holding Limited

(alibaba.com) launched Taobao (taobao.com), a Chinese C2C vendor, to compete in China's e-commerce sector.

The market competition for Chinese e-business was intensely fought by eBay and Taobao. In 2003, Taobao and eBay made up approximately 80% of the C2C ecommerce market share, with Taobao holding 7.8% and eBay 72.4%. However, in 2005, Taobao and eBay accounted for more than 95% of all transactions in China, with Taobao holding a transaction value of up to 58.6% and eBay 36.4%. In just two years, the cumulative market share by Taobao and eBay saw a more than 15% increase to hold nearly 100% of China's total transaction volume, and Taobao's market share to eBay increased from an initial 1:10 ratio to 2:1<sup>2</sup>.

So what strategies did Alibaba employ over eBay that produced such an outcome; and how might that tie into fintech and e-finance growth in China? Well for the former question, there are too many aspects that have contributed to Alibaba's success for the context of this paper, so I will only focus on the decisions regarding technology design.

Although there are some biases among Chinese users in that Taobao is indigenous to China whereas eBay has its origins in the U.S., Alibaba aimed its design for its C2C infrastructure to be based more on real-life usage scenarios that users might find to be more convenient and/or comfortable. For instance, because Alibaba found that users are open to negotiating purchases, Taobao embedded a communications channel, free-of-charge, for potential

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<sup>1</sup> Source: May 2007, "The Nature of the Emerging C2C Electronic Market in China: A Case Study from Social Network Theory and CRM Perspectives" by Jin Chen, Cheng Zhang, Yufei Yuan, and Lihua Huang

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<sup>2</sup> Source: See 1

buyers to communicate directly with sellers during purchases; whereas eBay users had to resort to non-integrated software such as email or Skype<sup>3</sup> which was not nearly as efficient and produced difficulties in forming good buyer-seller relationships.

On the payment side, to supplement Taobao's online transaction process, Alibaba developed a third-party online payment system called AliPay in 2004. Because goods exchange services were largely unreliable and produced much buyer skepticism in China prior to Taobao, to encourage customer confidence and good seller practices, AliPay's initial design included an escrow service where users can first verify their satisfaction of a transaction before releasing payment to the seller.

On the other hand, eBay's payment platform, PayPal, which it acquired in 2002 for 1.5 billion USD, was developed to remedy online transaction issues in the U.S. in the late 1990s and as a result did not consider an escrow service until much later. Back then in the U.S., small online businesses with relatively low sales volume mostly did not accept credit card payments due to high transaction fees; and consumers had security concerns regarding their personal and financial details because they typically had to enter their payment and shipping information for each online purchase they made<sup>4</sup>.

This combination of an embedded communications system and reliability of AliPay, compared to eBay's lack of, drew much of eBay (China)'s market share to Taobao, making it the leading C2C e-commerce company in China with 80+ million registered users and the current highest volume of transactions in China (at RMB43.3 billion in 2007, with a C2C market share of 83.9%)<sup>5</sup>. With this large user base and involvement in C2C e-finance, Alibaba would see a great possibility in expanding their e-financial services and potentially becoming a fierce competitor in future finance.

In June 2013, Alibaba took initiative in branching out to China's financial sector through its launch of Yu'E Bao. Yu'E Bao allowed AliPay

users to invest their idle AliPay account balances in the Zenglibao Money Market Fund, managed by Tian Hong Asset Management, for a minimum investment of one yuan. To ensure convenience of use, AliPay also allowed customers to redeem their fund holdings at any time to pay in online transactions and to check their returns online daily. By January 2014, it was reported that the Zenglibao fund had assets of over 250 billion yuan, making it the largest fund in China<sup>6</sup>.

Likewise, Tencent Holdings Limited, a Chinese investment holding company, has also found much success in e-finance. In addition to their fairly successful C2C online shopping platform, PaiPai, and third-party payment system, TenPay, Tencent owns and develops a multi-platform messaging service called WeChat, which currently is the most popular in China with more than 400 million active users. Tencent has enabled users to link their bank cards to their WeChat accounts to seamlessly transfer funds to Tencent's money market fund, Licitong. WeChat's preexisting popularity and ease of use in its financial functions have resulted in Licitong reaching 100 billion yuan in assets in less than a year since its inception in January 2014<sup>7</sup>.

In addition to money market funds, Alibaba and Tencent have also branched into offering online money transfers upon receiving licenses in 2014 to open China's first private banks. They even have provided loans to small businesses and developing new investment products, which earlier banks have been more hesitant to do.

Will Tao, an analysis director at internet consulting firm iResearch, does well to summarize these successes: "The surge in online and mobile payments in China gives tech companies the customer base that should allow them to compete in the banking sector, especially with the popularity of their internet-based fund products." He goes on to mention: "Chinese regulators are keeping a largely positive outlook towards competition in the financial services industry"<sup>8</sup>. This is to say, that because of Alibaba and Tencent's successes in e-

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<sup>6</sup> Source: March 2014, "Internet Finance Growing Rapidly in China" by Takeshi Jingu

<sup>7</sup> Source: March/April 2015, "Internet Finance and China: Will Banking Innovation Promote Growth and Reform?" by Leonora Walet

<sup>8</sup> Source: See 6

<sup>3</sup> Source: "Why eBay Lost to Taobao in China: The Global Advantage" by Carol Xianjuan Ou and Robert M. Davison

<sup>4</sup> Source: August 2015, "Why AliPay is more than just the Chinese equivalent of PayPal" by Matthias Hendrichs

<sup>5</sup> Source: See 3

commerce and wealth management, to inject competition and innovation in banking, state regulators have not placed heavy regulations on internet banking, providing internet banking with the much needed push to compete with the traditional state-controlled Chinese banks, which were already highly regulated.

Such circumstances have fostered an ideal environment for start-ups and internet companies to partner with fund management companies to produce similar e-finance products. These include Baifa (2013), launched by Baidu, with Harvest Fund Management, and wealth management products by Tiantian Fund Sales in partnership with three fund management companies. The new product launches are significant in that they introduce much innovation in the publicly offered fund space than existed before. For instance, not only did Alibaba's Yu'E Bao and Tencent's Licaotong diversify sales channels for publicly offered funds, but also they have reduced the barrier for market entry from publically offered funds' typical minimum investment of 1,000 yuan, enabling and encouraging many internet users to invest than ever before<sup>9</sup>.

Comparatively, in the U.S., e-finance is seeing high interest in fintech, seeing a 191 percent increase from 3.39 billion USD in 2013 to 9.89 billion USD in 2014<sup>10</sup>, making it the country to have invested most into fintech in the world<sup>11</sup>; however, the environment for e-finance growth does not appear to be as ideal in the U.S. as in China. A surface level comparison of e-finance development between these two countries shows that the United States and China have a lot of similarities. More specifically, like China's Alibaba and Tencent, Apple and Google, two highly successful tech companies from the U.S., have released e-finance services, hoping to popularize their new services through the user bases they have already built. The difference however is that Alibaba and Tencent methodology on e-finance development relies on pushing new services through

their already heavily used services AliPay and WeChat (respectively), whereas Apple's ApplePay and Google's Google Wallet are more standalone applications that are features on select mobile devices. Cases like these, where financial functions are not embedded in a widely accessible, popular, and preexisting service detracts the permeability of the public to these new financial technologies as there may be issues with accessibility to these new financial services.

Additionally, there appears to be less consistency in the public's usage of these technologies as a result of high competition among many companies, of which none particularly dominate. Tech companies such as Apple and Google are not as well known in e-commerce, resulting in having to face potentially more competition from other companies, such as American Express, Visa and PayPal, which already possess high consumer trust due to their strong brand<sup>12</sup>.

And lastly, China's encouragement for these fintech companies to branch into banking and wealth management with decreased regulation on internet banking has assisted e-finance growth; whereas similar wealth management products such as PayPal's money market fund was not only restricted by tighter regulation, but also suffered due to economic crises, resulting in generally lower returns for these mutual funds and unprofitability for the funds' operators<sup>13</sup>.

Despite the differences in both of these countries with regards to e-finance growth, the environments are steadily equalizing as: China starts to tighten regulation around internet-finance to protect its traditional, state-run banks<sup>14</sup>; people in the U.S. become more exposed to and accepting of these new technologies; and existing banks begin working with tech start-ups to diversify their products and services in the finance sector<sup>15</sup>.

How far would I project e-finance to grow? Well, from the perspective of a software engineer and enthusiast, I can say that E-finance is still a

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<sup>9</sup> Source: See 5

<sup>10</sup> Source: June 2015, "Fintech Investment in U.S. Nearly Tripled in 2014, According to Report by Accenture and Partnership Fund for New York City"

<sup>11</sup> Source: "Value of investment in Financial Technology in selected countries worldwide in 2014 (in million U.S. dollars)" by Statista

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<sup>12</sup> Source: September 2011, "Google Wallet Opens for Business" by Marguerite Reardon

<sup>13</sup> June 2011, "Why It's Time to Move your PayPal Balance" by Kelli B. Grant

<sup>14</sup> August 2015, "China Curbs Online Payment in Fresh Blow to Internet Finance" by Bloomberg Business

<sup>15</sup> Source: See 7

relatively fresh area of interest with still lots of room to grow. Recent trends have shown that convenience-oriented designs have been increasingly successful and popular. For example, AliPay and PayPal's ability to perform purchases in several outside locations and transfer money to other users replicate a more streamlined money exchange process<sup>16</sup>; and Google Wallet's compressing of multiple credit cards and receipts into a single mobile application to simplify the physical wallet<sup>17</sup> are only few of the many recently surfacing technologies of recent years. More innovative approaches have instead augmented daily tasks rather than simplify them. These include the aforementioned functions of investing idle account balances for AliPay and PayPal in their respective money market funds, and new applications such as Acorns, which invests leftover change made after each purchase<sup>18</sup>. I expect future development will likely continue a similar trend of touching upon and simplifying common financial tasks, and would not be surprised to find that, in the near future, will replace much of the physical aspects of finance (such as money and wealth management and money transactions) with digital equivalents.

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<sup>16</sup> Source: See 4

<sup>17</sup> "Apple Pay vs Google Wallet: How They Work" by Karthik Raghavan

<sup>18</sup> April 2015, "Acorns is an 8-month-old app that makes investing spare change dead simple, and it just raised \$23 million" by Maya Kosoff

Too see more specific information on today's fintech/e-finance here is a supplemental chart on just several of China and U.S.'s many fintech startups and companies:

## United States:

<b>Wealth Advice/Management</b>	
Wealthfront: <a href="http://www.wealthfront.com">www.wealthfront.com</a>	Based on a customer's finances, investment goals, and risk tolerance, Wealthfront determines how to allocate that customer's money across low-cost index exchange traded funds that invest in stocks, bonds, and commodities on a global scale.
Motif Investing: <a href="http://www.motifinvesting.com">www.motifinvesting.com</a>	Motif Investing is an online broker that allows investors to invest in pre-made portfolios called motifs based on economic, industrial, and political trends or popular investing strategies. Investors can also customize their own portfolio based on their risk tolerance and level of exposure to certain markets. Motif Investing also utilizes an innovative social platform that enables users to share ideas.
LearnVest: <a href="http://www.learnvest.com">www.learnvest.com</a>	LearnVest enables individuals to build their own financial planning program by setting up a financial plan for their money and an accompanying program to get that plan working to its full potential.
FutureAdvisor: <a href="http://www.futureadvisor.com">www.futureadvisor.com</a>	FutureAdvisor is an investment advisor that takes academically researched portfolio management principles and applies them to users' situations.
SigFig: <a href="http://www.sigfig.com">www.sigfig.com</a>	SigFig provides clients with online portfolio management by helping evaluate personal portfolios by need and allows them to see all of their investments in one place.
<b>Loans</b>	
Kabbage: <a href="http://www.kabbage.com">www.kabbage.com</a>	Kabbage is a financial and data technology company that provides working capital to small business in the United States and the UK. Utilizes its Data Context Engine which is connected to data sources used by small businesses, which include shipping, accounting, social media, ecommerce, payments, etc. to provide funding.
OnDeck: <a href="http://www.ondeck.com">www.ondeck.com</a>	OnDeck provides loans to small businesses through its technology platform, which leverages electronic information including online banking and merchant processing data to identify the creditworthiness of businesses.
Prosper: <a href="http://www.prosper.com">www.prosper.com</a>	Prosper is America's first P2P lending marketplace that allows people to invest in each other. Borrowers can list loan requests between \$2,000 and \$35,000 and individual lenders invest as little as \$25 in each loan listing they select.
<b>Transactional Services</b>	
Square: <a href="http://www.squareup.com">www.squareup.com</a>	Square, Inc. is a financial services, merchant services aggregator and mobile payments company that uses a free credit card reader on mobile devices to allow anyone to accept credit cards anywhere for a low transaction rate per swipe.
Stripe: <a href="http://www.stripe.com">www.stripe.com</a>	Stripe allows online businesses to accept payments directly to their bank accounts from a range of local and international cards in more than 100 international currencies.
PayNearMe: <a href="http://www.paynearme.com/en">www.paynearme.com/en</a>	PayNearMe is the electronic cash-transaction network that enables cash dominant consumers to make cash purchases online or in store, pay rent, bills or transfer money. 'In-store' service is offered by 7-Eleven, Family Dollar, and ACE Cash Express stores.
Dwolla: <a href="http://www.dwolla.com">www.dwolla.com</a>	Dwolla is a payment network that allows any business or person to send,

	request and accept money. Dwolla provides a free web based software platform which allows users to send, receive, and request funds from any other user.
Stellar: <a href="http://www.stellar.org">www.stellar.org</a>	Stellar is a decentralized protocol that allows users to send and receive money in any pair of currencies (even provides currency exchange services).
<b>Misc</b>	
Coinbase: <a href="http://www.coinbase.com">www.coinbase.com</a>	Coinbase allows users to use the digital currency Bitcoin. The company provides Coinbase, a digital wallet and payment solution for people to pay and receive payments.
Credit Karma: <a href="http://www.creditkarma.com">www.creditkarma.com</a>	Credit Karma allows consumers to look at their credit score free of charge. The company attempts to demystify credit and helps to inform users of what makes up their credit report and where they stand with their credit score.
Personal Capital: <a href="http://www.personalcapital.com">www.personalcapital.com</a>	Personal Capital provides online investment advisory services that specialize in investors who have traditionally been underserved.
BitPay: <a href="http://www.bitpay.com">www.bitpay.com</a>	BitPay is a B2B e-commerce payment service provider that offers tools to accept bitcoin payments online or in person, with the option to receive the funds as a bank direct deposit.
Kickstarter: <a href="http://www.kickstarter.com">www.kickstarter.com</a>	Kickstarter is a global crowd funding platform for creative projects. Project creators that are seeking funding can select a deadline and a minimum funding goal.
LendingClub: <a href="http://www.lendingclub.com">www.lendingclub.com</a>	LendingClub is the world's largest P2P lending platform. The company assesses applicant's risks and lets investors lend directly to individuals or spread their money across a number of loans.

## China/Hong Kong:

<b>Wealth Advice/Management</b>	
Wheat Finance: <a href="http://www.maizijf.com/en/index.html">www.maizijf.com/en/index.html</a>	Wheat Finance (WeFi) is a China's mobile Internet financial service group that provides B2B and B2C services for wealth management, equity investment, investment and financing consulting and other comprehensive asset management.
CreditEase: <a href="http://www.creditease.cn">www.creditease.cn</a>	CreditEase is a business consulting firm that offers wealth management services. It primarily caters areas such as wealth management, credit management, microfinance investment, and microcredit loan origination, and servicing. CreditEase operates a P2P platform that connects lenders with creditworthy borrowers to supply loans.
<b>Loans</b>	
Fundity: <a href="http://www.fundityapp.com">www.fundityapp.com</a>	Fundity is a loan broker that helps clients find home and personal loans at good rates. Users can loan request and they will be liaised with multiple banks and money lenders for users to determine the best for them.
Renrendai Business Consulting: <a href="http://www.renrendai.com">www.renrendai.com</a>	Renrendai is a Beijing-based company that provides a P2P platform for financial services such as loans, debts, investment, and other services. It targets white-collar employees and small business owners as its primary customer base. The company controls default risks by measuring borrowers' income, occupation, assets, and family connections.
Hithink RoyalFlush Information Network:	Hithink RoyalFlush Information Network provides network financial information services, data analysis, and software system services in both

<a href="http://www.10jqka.com.cn">www.10jqka.com.cn</a>	China and globally. The company offers its services to securities markets investors through internet and mobile networks, and also provides online transaction systems for securities companies.
Shanghai PPDai Financial Information Services: <a href="http://www.ppdai.com">www.ppdai.com</a>	Shanghai PPDai Financial Information Service Co. Ltd. operates as a finance information service enterprise. The company provides internet finance, borrowing, and lending services.
Howbuy Investment Management: <a href="http://www.howbuy.com">www.howbuy.com</a>	Howbuy Investment Management is a Chinese third-party investment consulting company that founded Shanghai Howbuy Fund Sales, which is a third-party funds sales platform.
Rong360: <a href="http://www.rong360.com">www.rong360.com</a>	Rong360 is a Chinese provider of customized financing and loan services. The company enables users to search and compare loan products from various banks and lending agencies. Rong360 allows users to make direct contact with bank business personnel, while building an all-around direct selling platform of financing and loan products.
<b>Transactional Services</b>	
Lianlian Yintong Electronic Payment: <a href="http://www.lianlianpay.com/international/index.html">www.lianlianpay.com/international/index.html</a>	Lianlian Yintong Electronic Payment offers internet and mobile phone payment services to end users and merchants.
AliPay: <a href="http://www.alipay.com">www.alipay.com</a>	AliPay Cross-Border E-Payment Service is a payment solution that enables buyers to pay for goods sold on international partner merchant websites using Renminbi (RMB). Alipay will then remit the sum in a foreign currency (of twelve that are currently supported) to the international merchant in settlement.
ChinaPNR: <a href="http://www.chinapnr.com">www.chinapnr.com</a>	ChinaPNR is a financial payment company focused on online, POS, and mobile payment services. It also offers a “Money Manager” product and is primarily focused on promoting e-commerce in the traditional distribution industry.
YeePay: <a href="http://www.yeepay.com">www.yeepay.com</a>	YeePay is a Chinese third-party payment service provider that provides a platform that integrates both online and offline electronic payments, enabling consumers and businesses to make and receive payments through the internet, mobiles, and telephones.
<b>Misc</b>	
WeCash: <a href="http://www.wecash.net">www.wecash.net</a>	WeCash is a China-based big data credit assessment platform. Uses machine-learning algorithms on mobile data from roughly 600 million mobile internet users to quickly provide extensive credit assessments and build predictive models for customers’ credit risk.
JD.com: <a href="http://en.jd.com">http://en.jd.com</a>	JD.com is the largest online direct sales company in China in terms of transaction volume with a market share in China of 54.3% in the second quarter of 2014, according to iResearch, a third-party market research firm. JD.com offers online and in-person payment options.
ZhongAn: <a href="http://www.zhongan.com">www.zhongan.com</a>	ZhongAn is an internet-based insurance company that uses big data technologies to create new products. They primary target customers are participants in the internet economy, such as internet electricity providers, finance and other internet social networking and internet companies, and individual clients.

Data pulled from: [www.crunchbase.com](http://www.crunchbase.com), [www.chinafintech.com](http://www.chinafintech.com), [www.chinafintechstartups.com](http://www.chinafintechstartups.com), [www.forbes.com](http://www.forbes.com), and [www.fintechinnovators.com](http://www.fintechinnovators.com).

## Works Cited

- Chen, Jin, Cheng Zhang, Yufei Yuan, and Lihua Huang. "The Nature of the Emerging C2C Electronic Market in China: A Case Study From Social Network Theory and CRM Perspectives." *Proceedings of the 9th International Conference on Social Implications of Computers in Developing Countries* (2007): n. pag. May 2007. Web.
- "China Curbs Online Payment in Fresh Blow to Internet Finance." *Bloomberg Business*. N.p., 2 Aug. 2015. Web.
- "Fintech Investment in U.S. Nearly Tripled in 2014, According to Report by Accenture and Partnership Fund for New York City." Accenture. N.p., n.d. Web.
- Grant, Kelli B. "Why It's Time to Move Your PayPal Balance." *MoneyWatch*. N.p., 24 June 2011. Web.
- Hendrichs, Matthias. "Why Alipay Is More than Just the Chinese Equivalent of PayPal." *Tech in Asia*. N.p., 3 Aug. 2015. Web.
- Jingu, Takeshi. "Internet Finance Growing Rapidly in China." *Iakyara* 189 (2014): 1-4. Nomura Research Institute, 10 Mar. 2014. Web.
- Kosoff, Maya. "Acorns Is an 8-month-old App That Makes Investing Spare Change Dead Simple, and It Just Raised \$23 Million." *Business Insider*. N.p., 15 Apr. 2015. Web.
- Ou, Carol Xianjuan, and Robert M. Davison. "Why EBay Lost to TaoBao: The Global Advantage." *Communications of the ACM* 52.1 (2009): 145-48. Web.
- Reardon, Marguerite. "Google Wallet Opens for Business." *CNET*. N.p., 19 Sept. 2011. Web.
- "Value of Investment in Financial Technology Companies in Selected Countries Worldwide in 2014 (in Million U.S. Dollars)." *Statista*. N.p., n.d. Web.
- Walet, Leonora. "Internet Finance and China Will Banking Innovation Promote Growth and Reform?" *CFA Institute Magazine*. N.p., Apr. 2015. Web.

## Works Consulted/Considered

- "Alibaba vs. Tencent-Comparing the U.S. Investment Activity of the Chinese Internet Giants." *CB Insights*. N.p., 31 Dec. 2014. Web.
- Bensinger, Greg, and Joshua Jamerson. "Amazon Unveils Mobile-Payments Service for Local Shops." *The Wall Street Journal*. N.p., 13 Aug. 2014. Web.
- Chen, Jin, Cheng Zhang, Yufei Yuan, and Lihua Huang. "The Nature of the Emerging C2C Electronic Market in China: A Case Study From Social Network Theory and CRM Perspectives." *Proceedings of the 9th International Conference on Social Implications of Computers in Developing Countries* (2007): n. pag. May 2007. Web.
- "China Curbs Online Payment in Fresh Blow to Internet Finance." *Bloomberg Business*. N.p., 2 Aug. 2015. Web.



"China: Who's Dominating E-business." *Web2Asia*. N.p., 22 Aug. 2011. Web.

Desharnais, David. "Cross-Border Payments-China Leading the Way for E-Commerce." *Traxpay*. N.p., 1 Apr. 2015. Web.

*Five Banking Innovations from Five Continents: USA, Europe, Asia, Africa, Australia*. Rep. Banking Reports, Feb. 2015. Web.

Grant, Kelli B. "Why It's Time to Move Your PayPal Balance." *MoneyWatch*. N.p., 24 June 2011. Web.

Hendrichs, Matthias. "Why Alipay Is More than Just the Chinese Equivalent of PayPal." *Tech in Asia*. N.p., 3 Aug. 2015. Web.

Jenkins, Jay H. "If You Like Apple Pay, You'll Love the Potential for These Stocks." *The Motley Fool*. N.p., 6 Mar. 2015. Web.

Jingu, Takeshi. "Internet Finance Growing Rapidly in China." *Iakyara* 189 (2014): 1-4. Nomura Research Institute, 10 Mar. 2014. Web.

KANE, Marguerite. "EBay Picks up PayPal for \$1.5 Billion." *CNET*. N.p., 18 Aug. 2002. Web.

Kaushik, Preetam. "Is Artificial Intelligence the Way Forward for Personal Finance." *Wired*. N.p., n.d. Web.

Kosoff, Maya. "Acorns Is an 8-month-old App That Makes Investing Spare Change Dead Simple, and It Just Raised \$23 Million." *Business Insider*. N.p., 15 Apr. 2015. Web.

Ou, Carol Xianjuan, and Robert M. Davison. "Why EBay Lost to TaoBao: The Global Advantage." *Communications of the ACM* 52.1 (2009): 145-48. Web.

Raghavan, Karthik. "Apple Pay vs Google Wallet: How They Work." *Investopedia*. N.p., n.d. Web.

Ramirez, Steven. "Finovate Spring 2015: Fintech Innovation for Banking and Wealth Management." *Blog @Beyond the Arc*. N.p., 13 May 2015. Web.

Ray. "Alipay Is Ahead of Tenpay, the China Payments Rivalry Continues." *Let's Talk Payments*. N.p., 22 Sept. 2014. Web.

Reardon, Marguerite. "Google Wallet Opens for Business." *CNET*. N.p., 19 Sept. 2011. Web.

"Value of Investment in Financial Technology Companies in Selected Countries Worldwide in 2014 (in Million U.S. Dollars)." *Statista*. N.p., n.d. Web.

Vaseem. "Alipay Vs Tenpay-The China Payments Rivalry." *Let's Talk Payments*. N.p., 26 Sept. 2013. Web.

Walet, Leonora. "Internet Finance and China Will Banking Innovation Promote Growth and Reform?" *CFA Institute Magazine*. N.p., Apr. 2015. Web.

Waters, Richard. "Investor Rush to Artificial Intelligence Is Real Deal." *Financial Times*. N.p., 4 Jan. 2015. Web.

Xu, Sean, Zhu Kevin, and Jennifer L. Gibbs. "Global Technology, Local Adoption: A Cross-Country Investigation of Internet Adoption by Companies in the United States and China." *ResearchGate* (2004): 13-24. Web.