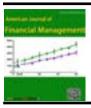
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Countermeasures for the Development of Internet Finance Based on E-commerce Platform

Xin Lu

Business School, Hubei University.

ABSTRACT

"Internet Finance" is an organic combination of contemporary *Correspondence to Author: information, network technology and financial transactions. Xin Lu At the same time, it is also a new type of financial model. Bussiness School, Hubei University. E-commerce has made a huge contribution to the development of Internet finance, providing massive amounts of customer data and e-commerce for the development of Internet finance. How to cite this article: Platforms and Internet technologies, and Internet finance's role Xin Lu. Countermeasures for the in promoting e-commerce are also obvious. The development Development of Internet Finance of Internet finance based on e-commerce in China has been Based on E-commerce Platform. rapid, and it has now become an important force in the financial American Journal of Financial industry, and has maintained a rapid development. Through Management, 2020; 3:7 analysis, this article proposes countermeasures for Internet finance development for e-commerce platforms.

Keywords: The Electronic Commerce; The Internet Finance



The change of the Internet industry in China over the years is very remarkable, and the expansion of the Internet industry into the financial sector is one of our greatest achievements. This penetration and influence is not only reflected in the transformation of traditional financial industry business by Internet technology, but also in its internal philosophy and spirit. Because of this huge difference, a new concept of "Internet finance" has appeared in the academic world, and with its rapid development, this new type of financial model has been actively discussed and paid close attention to. In 2013, Alibaba and Tianhong Fund launched Yu'ebao, a fund product, which pushed the development of Internet finance to a peak and quickly attracted consumer interest, peer imitation, and dissatisfaction from the banking industry. Subsequently, various "baby" products were launched one after another, and the entire Internet financial industry was in a state of extraordinary prosperity.

1. Research Status

Most of the research on e-commerce finance focuses on the specific model of e-commerce finance. Of course, there are a few research papers on the development of e-commerce finance industry. Two perspectives explore the current status of e-commerce finance, and specifically analyze the differences between the two models of Ali Finance and JD Finance.

Hu Xiaowen comprehensively analyzed the Internet finance industry from a holistic perspective in 2014. Li Yan (2014) classified different types of internet finance models and compared their advantages and disadvantages in detail. Wang Haiquan and Nong Feilong (2014) Cooperated with the "Research on Internet Finance Development-Related Issues in China", sorted out China's actual situation, and gave some personal opinions on some hot issues and countermeasures.

In addition, there are researches on Internet

personal wealth management products such as Yu'ebao and Wealth Management. Wang Tianyu (2014) analyzes the adverse effects of the emergence of Yu'ebao on China's traditional financial banks. Lu Yi (2014) has four perspectives: Strengths, weaknesses, opportunities, and threats were discussed. Wang Ying (2014) briefly analyzed Yu'ebao from a more comprehensive perspective.

2. Overview of Internet Finance

At present, neither the industry nor the academic circles have reached an agreement on the understanding and understanding of Internet finance, and there are still many disputes on the nature of Internet finance between the two sides. Xie Ping first proposed the term "Internet finance" in the formal literature and defined it. Xie Ping (2012) believes that financial intermediaries should not exist in theory of the general equilibrium theorem, but because of the problem of information asymmetry between savers and financiers, financial intermediaries have economies of scale and specialized financial technologies. As well as information processing capabilities, these problems can be mitigated, and at the same time, additional costs incurred during the operation of funds can be saved. With the development of Internet technology, the problem of information asymmetry between savers and financiers, and the transaction cost of financial links will be well resolved, and financial intermediaries will lose their existing value. Therefore, Internet finance is a new type of financial model to get rid of financial intermediaries through the Internet. Jack Ma's influence on the definition of Internet finance is also relatively large. For the first time, Jack Ma distinguished the concepts of "Internet Finance" and "Financial Internet" with concise words, and the sign of the difference first lies in the market players. He believes that the financial Internet is an old concept. It only involves institutions in the industry using Internet tools to 2 expand their business, but Internet finance has turned over. It is a model where the Internet industry penetrates the financial industry and conducts online transactions. This definition of traditional financial institutions' use of the Internet for technology and service innovation to be excluded from the concept may give us some thinking, but it seems more limited, as the continued penetration and integration between finance and the Internet, this limitation becomes more apparent. In contrast, many people hold the view that the perfect combination of Internet skills and financial business constitutes a new type of financial model, namely "Internet finance".

This article believes that Internet finance can be understood from both narrow and broad levels. In a narrow sense, Internet finance refers to the collective name of institutions, behaviors, tools, and markets that use Internet technology to realize the function of financing through finance; in a broad sense, all financial formats that use Internet technology and reflect the basic spirit of the Internet belong to Internet finance category.

Therefore, Internet finance in a broad sense should include, but is not limited to, multiple modes such as online banking, online lending, online wealth management, online financial product marketing, and third-party payment.

Under the influence of Internet technology, the development and evolution of Internet finance has far exceeded the changes in the traditional financial industry. Internet finance has shown great innovation. At present, China's Internet finance model can be broadly classified into seven types, namely P2P online lending, thirdparty payment, e-commerce platform model, big data finance, Internet financial portal, issuan information financial institutions, and crowdfunding (see Table 1.1) The characteristics and risks of different financial models are also different. However, on the whole, Internet finance has fully penetrated into the traditional financial service industries such as bank credit, payment settlement, wealth management services, securities and marketing, and insurance, and has shown strong and vigorous vitality.

Table 1.1 Main Modes of Internet Finance in China

Financial model	Main business	Typical representative
	The first is a pure online model, which is characterized by	
	the fact that fund borrowing and lending activities are con-	Renrendai, Paipaidai,
	ducted online, without integrating offline audits.	Helidai
P2P Online Ioan	The second is an online-offline combination model, which	
	not only provides platform services but also is responsible	
	for examining the creditworthiness and solvency of bor-	Pterosaur Ioan
	rowers offline.	
Crowd funding plat-	Use the online platform to showcase the project design	Amoy.com, roll time,
form	and finance in the form of "group purchase" plus "pre-pur-	Dreamcatcher, Angels,
	chase".	Venture Capital
Third party payment	The first is an independent model, which provides pay-	
	ment products and payment system solutions, and does	Quick Money, Epro Pay,
	not provide e-commerce transaction guarantee services.	Remittance World, Lakara
	The second is the e-commerce model, which relies on its	
	own e-commerce website to provide payment guarantee	Alipay, Tenpay
	and fund clearing services.	

	AIII Lu, AJI W, 2020, 3.7	
	The first is the network platform model, which provides fi-	
	nancial management and payment and settlement ser-	Wealth Management,
	vices based on its own network instant messaging soft-	Baidu Baifa
E-commerce platform	ware.	
model	The second is the online e-commerce model, which relies	
	on third-party payment platforms of e-commerce to coop-	Yu'er Bao, China
	erate with money market funds to provide financial man-	Merchants Bank Chao
	agement and payment clearing services.	Chaoying
	The first is the platform model, which provides convenient	
	and efficient microfinance services for merchants of the	Ali Microfinance
	Alibaba Group in a "closed process + big data + cloud	
Big data finance	computing modeling" approach.	
	The second is the supply chain finance model, with e-com-	
	merce as the core enterprise and providing loan guarantee	JD "Jing Bao"
	and other related financial services to suppliers.	"Suning small loan"
Internet financial por-	Use the Internet to sell financial products and provide	Rong360, Haodai.com, 91
tal	third-party services in a "search + price comparison" man-	Financial Supermarket,
	ner.	Yinzhao.com, etc.
Information financial	Traditional financial institutions use information technology	CCB "Shanrong Busi-
institutions	and network technologies to transform and provide diversi-	ness", Bank of Communi-
	fied online financial services.	cations "Boaohui"

In general, it can be summarized as the following five aspects:

First, go to the center and become civilian. Under the traditional financial model, financial institutions represented by commercial banks, securities companies, and insurance companies play the role of financial intermediaries or hubs. Financial resources are first concentrated in financial institutions, and then financial institutions complete the allocation of financial resources. This method of resource allocation is broken under the Internet financial model, and fund supply and demand sides can be directly connected through the Internet, thereby getting rid of the dependence on the traditional "funding hub". This not only greatly improves the efficiency of financial resource allocation, but also enables the majority of small and medium-sized enterprises and grass-roots classes to enjoy convenient and efficient modern financial services.

Second, cross industries, cross products. Internet finance not only lowers the barriers to entry

for the financial industry, but also makes financial innovation no longer a patent for financial institutions. Internet companies and e-commerce companies use professional Internet technology and their own accumulated big data to design and develop diversified financial products, which have attracted many customers. The innovation and development of various Internet companies has greatly driven the pace of financial innovation.

Third, low cost and high efficiency. The development of the Internet financial model has greatly reduced the time and transaction costs of information screening, product pricing, and transaction settlement between the supply and demand of funds, and has also improved the efficiency and transparency of information dissemination. In addition, the use of big data and cloud computing has greatly improved the capital turnover rate and the service efficiency of credit products. Fourth, rapid development and wide coverage. Under the Internet financial model, due to

mature Internet technologies, the development of Internet informatization has generally made the design and development and marketing of financial products efficient and convenient. It has also allowed new financial products to be quickly recognized and their development gradually extended. In addition, the maturity of mobile Internet technology and the popularity of terminal equipment have greatly expanded the geographical boundaries of Internet financial services, and Internet financial services can be carried out in all areas covered by wireless signals. From the perspective of business types, Internet finance has greatly facilitated the financing of SMEs and the fragmented financial management of grassroots classes, thereby covering the blind spots of traditional financial services to a certain extent. Fifth, risks are high and supervision is difficult. The rapid development of Internet finance also contains a hostile environment. There are three main factors: First, because China's credit system is still incomplete and related laws and regulations are not complete. For example, the default cost of Internet financial services represented by P2P network lending is low, which can easily induce moral hazard and affect the financial system. The second is that the development of Internet technology also has some impacts. Nowadays, hackers and viruses continue to rag, and the security of personal information and funds is also threatened in an open network environment. Third, because of the Internet financial, the international and open nature makes it difficult for the existing regulatory frameworks of various countries to carefully monitor them.

3. The Connection Between E-commerce and Internet Finance

Participation in this emerging field of Internet finance is certainly not only e-commerce, but also the traditional financial industry and many other Internet financial intermediary platforms that are struggling to follow up, but there is no doubt that according to the current situation in China, it can be said that Tightly, the first thing to do is e-commerce.

At present, most related concepts derived from Internet finance, such as common electronic payment platforms and online small loans, are extensions of the concept of e-commerce. The development trajectory of China's Internet finance has almost followed the development of Alibaba's series of financial services. From the great success of Alipay to the huge promotion of small and micro loans by Ali Microfinance, it even affected the reform and adjustment of the entire financial industry With the great popularity of "baby" products brought by Yu'ebao, e-commerce (especially the large e-commerce companies Alibaba) has undisputedly been the leader in the development of China's Internet finance.

3.1 Opened Multiple New Profit Channels for E-commerce Companies

Internet finance is a feast of wealth. Finance was originally an area full of risks but also full of huge returns. Due to China's special situation, finance is firmly controlled in the hands of state-owned capital, and private capital is basically difficult to get a share in this field. The gap in third-party payments, the lack of credit for SMEs, and the rise of Internet finance undoubtedly provide a major business opportunity for private capital. The e-commerce companies represented by Alibaba and JD.com have brought considerable returns to their financial business expansion. They have also moved away from the single profit model of "business opportunities + booming", with broader profit channels and stronger corporate vitality

3.2 Conducive to Improving the Ecosystem and Service System of E-commerce

From the actual situation, it is precisely because of the emergence of Alipay that Alibaba's participation as a third party identity has effectively solved the trust issue of "pay first or deliver first"

in e-commerce, and promoted the C2C platform of Taobao The great development has also laid a good foundation for the prosperity of this fashionable business activity of online shopping.

In addition, the companies that settle on Alibaba's e-commerce platform are mostly small and medium-sized enterprises (more small businesses) and personal online stores. These small and medium-sized enterprises and personal online stores are weak, and the market is slightly sneezing, they are very likely to "cold", the viability is weak, and most of them cannot get the effective funding support of the bank, the development prospects are unpredictable, but the profits and losses of these enterprises are closely linked to the development of Alibaba. [] Therefore, the development of e-commerce platforms must require the solution of these enterprises' funding problems. Alibaba's initial approach was to cooperate with banks, and later it simply became a small and micro loan business independently.

All in all, the development of financial services is closely related to the development needs of ecommerce platforms.

3.3 Enhance the Competitiveness of E-commerce Companies

Competition in China's e-commerce industry has extended from basic areas such as retail and logistics to the entire supply chain area including financial services. The development of supply chain financing business can not only improve the business ecosystem, but also create a closed loop of the e-commerce ecosystem on the e-commerce platform. Through this financial closed-loop, suppliers, small and micro enterprises, personal online stores, consumers, etc. Hold fast. This method of competition is very effective and feasible.

In short, there is a close relationship between Internet finance and e-commerce. They are organically combined and have a close internal rela-

tionship. E-commerce has three natural advantages in doing internet financial business. At the same time, the two promote each other and complement each other. E-commerce is currently the largest realistic driving factor for Internet finance, occupying most of the market share, and has an indelible contribution to the generation and growth of Internet finance. Internet finance is an important part of improving the e-commerce business ecosystem and service system, and it plays an important role in enhancing the competitiveness of e-commerce companies and expanding their profit channels.

3.4 Development Advantages of Internet Finance Based on E-commerce

The core needs of the financial system are information and data. Risk management and financial resource allocation can only be carried out if the information on both the supply and demand sides of the capital is available (of which the information on the capital demand side is undoubtedly more important). Risk control is where the traditional financial industry is very careful and very cautious. But caution is often inefficient.

Alibaba has created a new credit model in China-"e-commerce platform data + small loans". After collecting, sorting, processing and calculating and analyzing these data, they can be transformed into "credit ratings" of enterprises and individuals as the basis for evaluating customer credit. This model makes good use of the advantages of its massive customer data to explore this mature set of borrower evaluation and financial risk control systems. Not only is the borrowing process short and low cost for customers, but it is also completely standardized and batched, which is very suitable for small and micro loans. The advantage of the Internet financial model based on the e-commerce platform compared with other models is that it is associated with front-end consumption, and the liquidity of funds and user stickiness are greatly enhanced. The ecommerce platform and its financial business are undoubtedly complementary and organically combined. Due to the existence of the e-commerce platform, third-party payments and Internet financing in the Internet finance industry are well supported. And precisely because of Alibaba's huge share in the e-commerce market, the development of Alipay and Yu'ebao also have inherent incomparable advantages.

In addition, in terms of financing, the existence of e-commerce platforms enables the Internet fi-

nancing business to have a stable and large cus-

tomer base, which is also very conducive to the conduct and control of credit business. In addition to using massive data to establish a credit system, e-commerce also uses a trust mechanism in building a good business ecosystem. This is a contract-based trust mechanism. For example, Alibaba has a set of disciplinary system, and violation of the contract will be punished accordingly, including a certain degree of account restrictions, damage to credibility, and even the removal of its stores, which will also help the credit risk control to a certain extent. In terms of finance, we have already mentioned the connotation of the Internet. Internet finance requires not only the strong support of network technology and information technology, but also the spirit and philosophy of the Internet "openness, equality, cooperation, and sharing." In fact, the traditional financial industry has long used the Internet technology to transform its financial business in order to improve efficiency and reduce costs. However, this is only a contribution to the technical preparation for the emergence of Internet finance. It is the e-commerce industry that bravely breaks the rules and develops a new and refreshing financial model, the key lies in the concept. E-commerce's development of financial business and its concept of doing e-commerce are consistent. Emphasis is on trying to serve customers, focusing on customer experience,

giving up some benefits in the early stage of development, and using low-cost or even free methods to attract customers on a large scale, and then Make money through economies of scale.

4. An Empirical Analysis of Development Strategies with "Yu'ebao"

4.1 Overview of the development of "Yu'ebao"

4.1.1 Generation of Yu'e Bao

Yu'ebao was created in June 2013 and was jointly issued by Alibaba Group's third-party payment platform "Alipay" and Tianhong Fund. It is a product that uses idle funds to gain value. The specific operation is that Alipay individual users transfer account balance funds to "Yu'ebao". Yu'ebao first transfers funds to the fund company for investment, and then the fund company converts the proceeds according Return to investors within a certain period.

Alipay and fund companies complete the process of fund account opening and fund purchase for users through one-stop services, and if users choose to use the funds in "Yu'ebao" for shopping payment, it is equivalent to redeeming the fund. "Yu'ebao" business of this type has opened the way for precipitation funds to be converted into investment capital, and then to obtain interest income in the form of service fees.

Through Yu'ebao, users can not only get higher income, but also can pay and transfer at any time. Users can directly purchase wealth management products such as funds in Alipay's website to obtain relatively high returns. At the same time, the funds in Yu'ebao can also be paid back. Can be used for online shopping, Alipay transfer and other payment functions at any time. The funds transferred to Yu'ebao will be recognized by the fund company on the second working day, and the revenue will be calculated for the confirmed shares. The advantage of Yu'ebao is that the funds transferred to Yu'ebao can not only obtain

higher returns, but also can be paid at any time, which is flexible and convenient.

4.1.2 Background

The fund industry was once glorious, and then gradually fell into a difficult situation such as customers losing a lot of money, weakening capital operation capabilities, and gradually losing talent. Not only that, it is also difficult to make breakthroughs in fund sales. Under the past ten years, bank-dominated fund product sales mechanisms, more than 80% of funds were sold through banks, resulting in increased sales costs, and customers will also consider them. The purchase cost makes the innovation and development of the fund marketing model difficult.

As a leading domestic e-commerce company, Alibaba has achieved great goodwill. Its leading third-party payment platform also reserves a large number of customer data resources, and its market acumen and financial investment in financial management business are both ahead of These powerful conditions of similar enterprises have helped Alibaba to conduct detailed analysis and preparation for the launch of Internet financial products.

4.2 "Yu'ebao" Internet Finance Features Based on E-commerce Platform

The reason why "Yu'ebao" was able to develop rapidly to form a 500 billion yuan fund in one year was based on the hundreds of millions of Taobao users that Taobao's e-commerce platform has developed over 10 years. Taobao.com is a popular online shopping and retail platform in China. It has nearly 500 million registered users, more than 60 million regular visitors every day, and the number of online products per day has exceeded 800 million. 48,000 items sold in minutes.

Traditional banks usually start with 10,000 yuan to purchase wealth management products, and Yu'ebao does not limit the minimum purchase amount for users, which promotes wealth management for all. On the one hand, it collects all

fragmented and idle funds of the society to the maximum extent, improves the utilization rate of social capital, and allows customers to enjoy the most convenient financial management services. Enlightenment.

"Yu'ebao" used the "long-tail theory" in its fundraising method. The long-tail theory mainly refers to those neglected products with a small
number of sales but a large variety of products.
Due to the large total amount, the final total revenue is surplus to the main products. They are
used to describe new models generated on platforms such as Amazon and Netflix. In the personal financial market, financial investment starting at as low as 1,000 yuan will be completely
ignored, but it is because of the low investment
starting point that it has attracted many customers, and it has been "fragmented" financing to reduce the amount of money to bring together the
total amount of funds. It's still huge.

With "Yu'ebao", users can not only get income, but also consume and pay out at any time, as convenient as using Alipay balance. Users can directly purchase wealth management products such as funds in the Alipay website. At the same time, the funds in "Yu'ebao" can also be used at any time for online shopping, Alipay transfer and other payment functions. Funds transferred into Yu'e Bao will be recognized by the fund company on the second working day, and revenue will be calculated for the confirmed shares.

Among various types of financial assets, "revenue" and "liquidity" are often not available at the same time, and the "Yu'ebao" business "makes more money than deposits and is more convenient than funds" provides users with an income and liquidity Emerging financial tools with good performance on the market. Compared with the 0.35% interest rate on demand deposits, the 3% -4% yield range of Yu'ebao is obviously more attractive. The general redemption of a currency fund takes about 2 trading days to reach the

account and can be consumed through a bank account. Tianhong Zeng Libao Currency Fund, which cooperates with Alipay, supports T + 0 real-time redemption, which means transfer to The funds in Alipay can be transferred to the balance of Alipay for consumption at any time. There is no handling fee for real-time account receipt, and it can also be directly withdrawn to bank cards. Without considering the risk, liquidity is comparable to "quasi currency".

4.3 Analysis of Problems in Yu'ebao

4.3.1 One-sided Publicity Emphasizes Benefits, Insufficient Risk Reminders

When recommending money market funds in fund promotional materials, fund investors should be reminded that purchasing money market funds does not mean that funds are deposited as deposits in banks or deposit-type financial institutions. The fund manager does not guarantee a certain degree of profit for the fund, nor does it guarantee minimum returns.

There are risks in the money fund market. Yields fluctuate due to changes in the money fund market. If the market situation is severe, and the income cannot be guaranteed, or even lose money, then a series of problems will arise, such as legal disputes, large numbers of people withdrawing funds, and so on. All in all, this series of problems will have an adverse effect on Yu'ebao and wealth management, which will limit their development and damage their reputation.

However, Alipay said in a prominent position on the homepage of Yu'ebao that Yu'ebao has a high yield, and its funds are used to invest in highly secure and stable financial instruments such as government bonds and bank certificates of deposit. At the bottom of the page, small words indicate that "monetary funds are a type of fund product. In theory, there is a possibility of loss, but from the historical data, the risk of stable returns is small." It can be seen that Alipay deliberately downplayed the objective risks of

"Yu'ebao" during the publicity process, which may cause investors to misunderstand.

4.3.2 Customer Funds are at Risk

As a product of Internet finance, Yu'ebao and Li Caitong break the traditional financial industry model on the one hand and bring benefits to people, but on the other hand, they also have great security problems. If they can't be solved completely, then their adverse consequences will far outweigh their benefits. The security issues are as follows:

Because "Yu'ebao" and "Alipay" are two parallel accounts, they can be converted to each other by transferring in and out. The security of Alipay accounts will directly affect the security of funds invested by "Yu'ebao" customers. In recent years, Alipay has been frequently stolen. At present, most people's WeChat login and Taobao account login are automatically logged in by default, so once the mobile phone is lost, even if there is no payment password, you can change the password through SMS verification, so the account will exist Risks, users will be harmed. Although Alipay declared "full compensation for stolen funds" on the promotional page of "Yu'ebao", the "Yu'ebao" online customer service stated that the compensation should be performed "if your Alipay account has been verified as stolen" Customers may face difficulty in proving evidence. In addition, the "Yu'ebao Service Agreement" clearly states that whether compensation can be obtained and the specific amount depends on Alipay's independent judgment. It is difficult to effectively guarantee the safety of customer funds.

4.3.3 External Competitive Pressure

Yu'e Bao has fierce external competition. On the one hand, the success of Yu'e Bao has attracted a lot of cooperation between e-commerce giants and fund companies, so similar Internet financial products have appeared one after another, including the "Baifa" cooperation between Baidu

and Huaxia Fund. At the same time, under its influence, the traditional financial industry has also implemented reforms and innovations, launched more diversified wealth management products, and also opened online subscription channels. These are all huge challenges for Yu'ebao.

5. Suggestions and Outlook

In recent years, Internet finance has flourished in China, leading lifestyles, creating user needs, and enriching financial products. Its developmen t has had a significant impact on China's financial industry, e-commerce industry, and small and medium-sized enterprises, and will further improve and develop. Make greater contributions to China's economic development and economic structural reform.

5.1 Rich Financial Product and Service Portfolio

Realize product diversification and build a wealth management service system for Alipay accounts. Strengthen the competitiveness with similar products, understand the advantages and disadvantages of similar products, and develop various financial products such as funds, wealth management, insurance, and asset investment projects. In addition, we carry out financial value-added services and provide customized financial management solutions according to the specific conditions of customers.

5.2 Strengthen Risk Control

Improve laws and regulations, regulate business processes, and avoid risks through systems and standardized processes. Strengthen investor education and raise their risk awareness. Publicize the "Yu'ebao" type business principle, guide investors to fully realize the risks of fund investment, avoid blindly comparing the expected rate of return of money funds with savings rates, and blindly follow the trend.

5.3 Continuous Innovation during Development

Due to the continuous improvement of Internet

technology, it is believed that the model of Internet finance will also be constantly updated. Faced with various competitive pressures and changes in the internal and external environments, only continuous innovation can maintain its competitive advantage.

References

- Staff: Survey: The World Economy, The economist, 1995(7):1-38
- 2. Lunt, P: Payment on the Net: How many? How safe? ABA Banking journal, 1995(4): 46-54
- Anthony F Herbst: E-finance promises kept, promises unfulfilled, and implications for policy and research, Global Finance Journal, 2001(12): 205-215
- Bos, J, & Chaum, D Smart cash: a practical electronic payment system. Technical Report, 1990(7): 302-318
- Campbell, D: Senior Research Fellow, Electronic Privacy Information Center, Washington. Letter to the Editor of The Wall Street Journal, 2000(5): 37-42

