

Contagious Effect of the Fees for the Consolidated Financial Services under the Asymmetric Information*

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〈abstract〉

Banks traditionally focus on the financial services against the uncertain future liquidity needs, i.e. saving as well as lending. As the business model of banks has been shifted from the *originate to hold* model to the *originate to distribute* model since the enactment of *Gramm-Leach-Bliley Financial Services Modernization Act* in 1999, the financial services encompass information gathering and generating, underwriting and risk sharing through packaging claims for the investors, in addition to the payment and settlement services. Ensued are the financial market integration and diversification of financial services, with which the accessibility to financial services is arguably significantly enhanced. Such integration and diversification necessarily entails the risk of contagion due to the non-fulfilling service over the several other financial services, which would be contained easily under the separate financial services. This paper addresses the pricing of fees for the integrated financial services through which the contagion could spread when the users of financial service are not immune to the failure to fulfill their obligation due to the economic turmoil. Consequently the information asymmetry about the clients is unavoidable. Higher fees could drive out the otherwise *good* clients out of the pool of customers for the financial services. Then, the risk could be exacerbated due to the proliferation of bad clients who are vulnerable to the financial distress and liquidity crunch. So the banks should take into account the interactional effect of the fees between/among the *non interest* based activities and *interest* based activities under the information asymmetry. Contrary to our general perception, the current analysis demonstrates that the bank should focus on the reduction of cost associated with good clients rather than that of bad clients.

Keywords : Banks, Financial Service Fees, Adverse Selection, Financial Market Integration

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I . Introduction

A simple accumulation of capital had been treated as a major exogenous factor under a vast development economics literature (Beck, Levine and Loayza, 2000). However, the Schumpeterian view, an endogenous growth theory, entailing a strong tie between the financial development and the economic growth has been reinvigorated as several cases are observed such that these countries' financial sector has been developed greatly to facilitate the economic growth since the breakdown of Bretton Woods system. Casual observations indicate that the talented new entrants are fostered by "creative destruction" through broader access to external funds which would otherwise be blocked by the incumbents (Rajan and Zingales, 2003b).

By the end of 1980s, capital control has been dismantled and the competition bred by the increased trade and international capital movements have fostered the financial development across the world. As the increased level of cross-border capital flows weakened the incumbents' opposition to the development of financial sector which would breed the competition within a country, the linkage of financial development and economic growth is reinforced so that it could explain not only the time-series variation but also the cross-sectional differences in the financial development (Rajan and Zingales, 2003a).

Most scholars agree with the notion that the major role of financial inter-mediary lies in facilitating liquidity within the economy (Diamond, 1984; Gorton and Pennacchi, 1990). However, they did not provide distinctive evidence why banking service cannot be served by the non-bank financial intermediaries such as finance companies funded with short term debt or mutual fund comprised of liquid assets i.e. T-bills. Prominent among the analyses, Kashyap, Rajan and Stein (2002) demonstrates that the bank differs from the non-bank financial intermediary in that the bank emerges as the optimal structure which minimizes the transaction costs associated with unnecessarily large hold of liquid-asset stockpile. Thus the consolidation of financial services, e.g. the co-existence of deposit-taking and lending, is prevalent within the banking system. So the development of financial sector and its beneficiary effect on the economy should not be limited to the case of growth of arm's length market.

Traditionally, the spread between deposit and loan interest rate has been the main source of bank profit. As the economy grows, it tends to be integrated beyond the boundary demarcated by the government. However, more sophisticated banking services are needed specifically for the purpose of generating information about the clients as well as investment opportunities. The breakdown of the Glass-Steagall Act of 1933 that once separated the permissible activities of commercial banking and investment banking has culminated in the Gramm-Leach-Bliley Financial Services Modernization Act of 1999. Thus it opened the path toward the universal banking system under which the commercial banking and investment banking are integrated. In Australia, the *Financial Services Reform Act* has changed the financial landscape significantly since its adoption in 2001.

In the early 1980s, several commercial banks already began to decline their shares of traditional lines of business such as loans and deposits and increased the fee-based financial services i.e. checking, trust, letters of credit, and cash management. These fee-based activities are expanded to the investment banking and insurance sales, e.g. sales of insurance and mutual fund, fee-charging payment and settlement services, data processing, securitization of mortgages and so on. It is a plethora of non interest income activities for the banks. As the shift of activities is under progress, an integrated theory of diverse financial services by the commercial banking is called for. For instance, Radecki (1999) has claimed that the payment services constitute one of the essential activities of banking industry in light of the increased portion of payment-driven revenues from the operating income for bank holding companies. Therefore, he calls for theoretical and empirical analysis on the payment services to better understand the ever-changing characteristics of banking.

Even if the diversification of financial services due to the consolidated financial markets seems to be an irreversible trend, several scholars have dealt the diversification issues a la potentials for cross selling among the traditional interest related activity and non-traditional activities. Lepetit et al. (2008b) claims that the lower lending rates could be used as bait for the customer to rely more on the fee generating financial services. However, the existing literature has shown negative effect of diversification on banks.

In light of earning volatility, non-interest income is more likely to be subject to the fluctuation since the clients are more likely to walk away from the banks (DeYoung and Roland, 2001). Stiroh (2004) has empirically shown the reduced volatility of net operating revenue for the U.S. banking industry is due to the stability of interest income rather than non interest income. In addition, Stiroh (2006) directly tests the risk/return relationship in the U.S. banks to claim that the pervasive shift toward noninterest income has not improved the banks performance in light of portfolio perspective. In Demsetz and Strahan(1997), the reduced level of risk associated with income for the banks due to the diversification could lead the bank holding companies to the pursuit of riskier lending while operating with greater leverage. This aspect of dark side of diversification is empirically confirmed such that diversification benefits are offset by the cost of diverged returns due to the increased exposure to the economic shocks (Stiroh and Rumble, 2006). To that regard, the fee structure of the bank has significant impact not only on the robustness of the bank industry but also the overall economy.

Most of the fee-related literature suggests that the higher correlation between the interest income and non-interest income is due to the overlapping sales of various and diverse financial services to the same clients. In the similar vein, the current paper addresses the effect of level of fees on the characteristics of consumer groups, when the consolidation of the financial services may work as a channel through which the adverse selection among the clients. The risk could be transmitted to other financial services through the consumers, which once were separately provided and thus believed to be independent of each other.

As the overlapping financial operations are allowed among the financial institutions such as banks, investment banks, securities companies and insurance companies which were segmented within the financial market in the past, the adequate regulation on the fees cannot be overemphasized in terms of not only banking performance but also the nationwide financial industry. Therefore the pricing of fees for the diverse financial services under the consolidated financial intermediaries e.g. one stop service¹⁾ should

1) The Fall of the House of Weil, *The New York Time*, January 13, 2009, 4:59 pm.

“AsCitigrrou weighs a plan to break itself apart, it is essentially seeking to unwind the epochal 1998 deal that gave it life. And it means the unwinding of the dream of Sanford I. Weill to create a one-stop

be assessed in terms of providing proper incentives to the supplier as well as enhancing consumers' welfare.

In particular, the financial industry of Korea has undergone a huge reform since the Legislation of Financial Investment Services & Capital Market Act has been approved in the plenary session of National Assembly on July 3rd 2007 (*Ohmynews*, July 3rd, 2007). This tendency will be intensified when the enactment of *The Capital Market Consolida- tion Act* becomes effective on February 4th 2009. So, the users of financial services will become more closely linked with each other through the consolidation of the financial services. And the worst outcome seems more likely to take place in such a way that the diminished access to the financial services results in whilst the bank's profit becomes lower. So, the current analysis sheds lights on the role of the fee level in terms of the social surplus estimated by the sum of banks' profit and the extent of outreach of the services to the consumers, which draws not only the industry wide attention but also the academy wide interest.

The remainder of the paper is organized as follows. Section II discusses the international comparison of the accessibility of the financial services with respect to the service rendered fees. Then, in the section III, we provide a simple model for the interactional effect of the fees under the consolidated financial services. The comparative static analysis on the change of the economic environments sheds light on the effect of the fee for a certain financial service on the other financial service. Section IV concludes.

II. International Overview of the Financial Service Fees

A large empirical literature based on extensive cross-country data has demonstrated positive relationship between the financial sector depth and GDP per capita growth, productivity, and corporate growth rate, whereas negative relationship with poverty

financial shop, which encompassed virtually every kind of banking and brokerage service under the sun.

The statement above describes the break-up of one stop financial services under the consolidated banking.

(Beck, Levine and Loayza, 2000; Beck, Demirgüç-Kunt and Levine, 2007). The bank access and use of banking services are largely limited by the extent of barriers such as minimum account balance requirements, fees, number of required documents and payment fees. Thus the priced or non-priced barriers prevent the significant portion of population from reaching out to the use of bank services. It has been taken for granted that the transaction cost incurred in the bank operation and the information asymmetry as to the clients' payback capacity are the main sources of market frictions which limit the bank's outreach to the otherwise good clients. The measure of access to and use of banking services are proposed in Beck, Demirguc-kunt and Peria (2007) as the banking sector outreach indicators. However, those banking services taxonomy is limited to the deposit and loan service.

A world wide survey (Beck, Demirguc-kunt and Peria, 2006) on the barriers to the bank access and the use of banking services has well documented the common features of indicators of barriers despite some caveats of ignoring the idiosyncratic institutional arrangements among the different countries let alone the various stages of development of financial system. The indicators for the measure of access to financial services are divided into three areas of financial services: deposit, loan and payments. The indicators of barriers to the access to financial services are evaluated along with the three different service dimensions: Physical Access, Affordability and Eligibility.²⁾ The fees associated with the aforementioned services are as follows, for example, minimum balance needed to open a (checking) saving account for deposit service, minimum amounts for SME loans for credit service and cost of transferring funds internationally or ATM transactions cost for payment services(Beck, Demirgüç-Kunt and Peria; 2006).

According to the cross-country data gathered and analyzed by Beck et al. (2006), the indicators of bank service access, affordability and eligibility barriers to deposit, loan and payment services vary along with the fees and minimum balance requirements in both checking and saving accounts. In particular, the ordinal rank of Korea³⁾ seems

2) Each dimension refers to the points of service delivery, the costs in terms of minimum balances required by the bank and of fees paid by the clients, and the number of documents and other regulatory legislation respectively.

3) The rank is inferred from the [Figure 1] through Figure 1in Beck et al. (2006, houghthe did not report the ordinal rank explicitly

not to diverge in terms of deposit service when it is ranked as 11th from the lowest out of 55 countries in terms of Minimum Balance to Open a Savings Account (% of GDPPC⁴) and as 16th out of 56 countries in terms of Annual Fees of for a Savings Account (% of GDPPC). However, in checking account, the rank seems to diverge as Korea is ranked 37th from the lowest out of 56 countries in terms of Minimum Balance to Open a Checking Account (% of GDPPC) whereas 14th in terms of Annual Fees for a Checking Account (% of GDPPC). This result may indicate that the liquidity provision service fee is relatively low in Korea as well as in the developed countries. Of interest lies in the Fees on Consumer Loans⁵) which is ranked as the 31st out of 46 countries, the Cost to Transfer Funds Internationally (% of US\$250)⁶) and the Fees for Using ATM Cards (% of US\$100)⁷) which are ranked 29th out of 44 countries and 40th out of 47 countries respectively. Loan service fees associated with the credit availability to an individual consumer is relatively expensive. In particular, the payment service fees are pretty high for Korea, which is the main concern of the current paper.

Let alone the banks' idiosyncratic features which could affect the supply level or amount of financial services, the current analysis could become complicated when the pricing of bank services should be analyzed within the comprehensive framework taking into account the different marginal costs for the rendered bank services as claimed by Udell (1986). In addition, contrary to the features such as adverse selection associated with the level of loan interest rate, the level of payment service fees and information related fees do not directly incur the cost, *per se*, associated with information asymmetry such as agency cost, e.g. adverse selection or moral hazard. However, they could affect the bank performance indirectly through the interaction between the levels of fees and the quality of the pool of the consumers who are involved with the banks through deposit services e.g. loan and credit. Higher fees may crowd out the good consumers of the bank services from the pool, who would, otherwise, remain within the pool as the faithful users unless the bank could offer the consumers with the superb services in terms of quality (information accuracy) and quantity (either *higher* savings rate or *lower* loan

4) GDP per capita.

5) Refer to the Figure 11 in Beck et al. (2006).

6) Refer to the Figure 15 in Beck et al. (2006).

7) [Figure 16] in Beck et al. (2006).

rate or both).

Beck and de la Torre (2007) propose a conceptual framework on which the level of access to financial services is determined as an equilibrium outcome in which the demand coincides with the supply. In their model, the impediments to access to financial services may result from the presence of transaction cost, information asymmetry, and uncertainty. However, transaction cost and uncertainty could hardly be barriers since they occur symmetrically to the participants in the banking service market because both parties (banks and financial service consumers) who are engaged in the economic transaction take into account of the presence of transaction cost and uncertainty symmetrically when they make decisions. Therefore they should be treated as constraints rather than barriers, which could be relaxed as the information technology makes progress. Thus, removal of information asymmetry could enhance the welfare for the users as well as the service providers i.e. banks. To that regard, the current paper extends the parlance of positive effect of banking services over the economic growth within the specific window of analytics on the fees associated with banking services.

III. Model

Before we proceed further, we assume away the endogenous feature of fee determination due to the effect of interplay between the interest earnings and other state variables. Banks are not assumed to choose the target profit level in such a way that the level of fee is determined to make up the loss of interest income. That is, a bank determines the level of fee solely based on the demand and supply of the relevant financial services. Thus we construct the model in such a way that the level of fee is solely determined by the demand and supply of the financial services under the perfect information, so that the interest rate for the loan and deposit should not be an outcome from the interplay between the level of fee and interest rate. The aforementioned assumptions, we believe, are not far-fetched since the decision process for the interest rate separates itself from that of fee within the bank. Deposit and loan rate is, *de facto*, affected by the government policy adopted and chosen by the central bank or the ministry

of finance, but the fees are not. Also, the profit from interest rate spread is determined by the amount of loan and deposit, whereas that from fee mostly relies on the frequency of transaction.⁸⁾

Under the imperfect information as to the characteristics of consumers, the income from interest rate is not fully independent of that from fee, even though the two sources of income are initially separated from each other. As the bank is forbidden to discriminate consumers based on the feature, e.g. deposit amount, the access to financial services should be anonymous. The bank cannot refuse a consumer the same deal prepared for another consumer. Thus, the two apparently distinctive financial services become inter-related through the medium of consumers' response, because a typical consumer is not believed to be rich enough to separate his loan or deposit account from the payment and settlement services. In practice, it is very rare for a consumer to bring his own cash whenever he transfers his own money through the payment and settlement services. He would rather use the cash in his account. This feature is the key factor that drives the outcome of this paper. We claim that the financial intermediary should consider the ever changing feature of consumer type within the pool of customers.

1. Consumer Types for the Financial Services

We divide the consumers looking for the financial services into two types: θ and $1-\theta$. Type θ consumers are prone to liquidity strain and credit crunch, i.e. their income may not be stable along with the fluctuation of economy and/or their wealth is not large enough to undergo the economic downturn. Thus, financial services are crucial not only in stabilizing the otherwise volatile level of income but also in providing cushion to survive the economic recess. Then, we could say that type θ consumers' demand for financial services is inelastic so that they have high reservation price for the financial services. This is the distinctive feature that separates the financial service contract from those of other general services and goods in such a way that, among the financial service consumers, the biggest beneficiary could be the worst antagonist against the financial

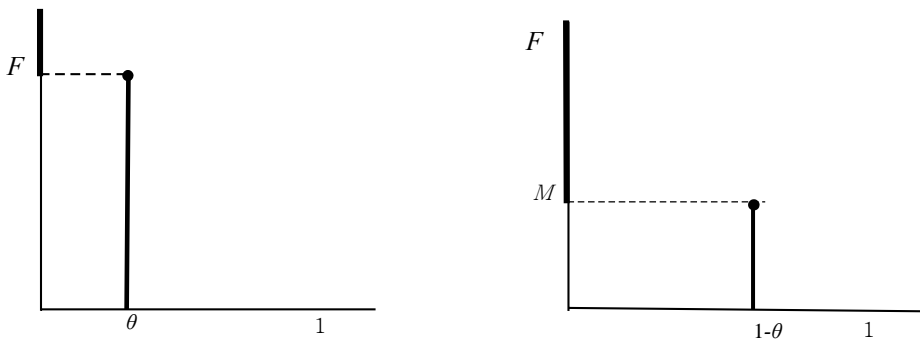
8) As for the large value funds transfer, the fees could be increased. However, the fee is not increased proportionately.

institutions through loan, deposit, payment services, and so on. Thus they must rely on the financial services even at a higher level of the fees. The highest acceptable level of fee for the θ type clients is given as F .

In contrast, the $1-\theta$ type consumers are relatively wealthy so that they are not sensitive to the liquidity strain and credit crunch. Therefore the financial services are not so crucial to them when they drive their economic lives. Hence the $1-\theta$ type customers do not use the financial services unless the level of fee is lower than a certain level given as M in the [Figure 2]. Thus the demand for the financial services for the $1-\theta$ type consumers takes relatively flat over the span of clients. Therefore the coordinate space is consisted of the vertical axis representing the level of fees and the horizontal axis with the percentage of the whole potential clients.

[Figure 1] Demand Curve for Type θ and Type $1-\theta$

Horizontal axis represents the number of consumers for the respective types in terms of percentage of whole potential consumers of financial services denoted by 1. Vertical axis represents each type's willingness to pay for the financial services. Type θ consumer has reservation value of F ; whereas the Type $1-\theta$ consumer has M which is lower than F .

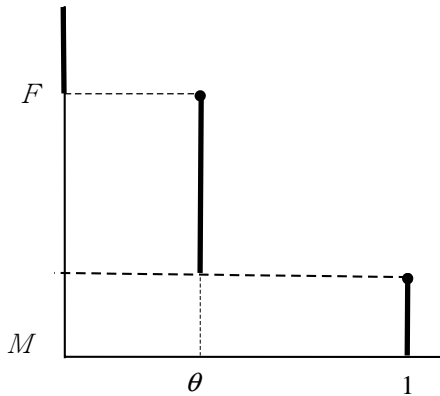


In [Figure 1], each graph represents the demand curve whose clients are inelastic to the price change and elastic to the price change respectively. A bank cannot tell the difference between the good and bad clients in terms of default probability when a client opens an account and eligible for the financial services. The bank knows that some clients are more dependent on the financial services than the other ones, but do not know their types.

Then, to the bank, the anticipated demand for the financial services is kinked at θ as shown in [Figure 2]. The demand curve shown in the [Figure 2] is the horizontal addition of the two demand curves in [Figure 1]. Then we adopt the kinked curve at the point θ as the demand curve for the representative individual consumer as well as for the whole potential consumers for the financial services without loss of generality.

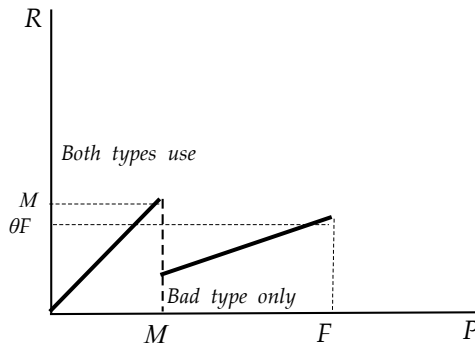
Of interest lies in that the fee oriented revenue, denoted by R on the horizontal axis

[Figure 2] Combined Demand Curve of the Financial Services



[Figure 3] Revenue from the Fee

The total revenue is increased as the level of fee is increased from 0 to M and to F along the horizontal axis denoted by P . Between 0 and M , the total revenue is increased along the 45 degree sloped line as the whole potential consumers are willing to use the financial services, the total revenue is increased along the decreased slope of revenue line from 1 to θ since only a part of consumers with type θ . Parameters could vary such that θF could be larger or smaller than M .



in [Figure 3], could be lower when only $1-\theta$ type clients remain within the pool of consumers at the increased level of the fee. Along the horizontal line, the revenue is increased along the 45 degree sloped line since both types use the services.⁹⁾

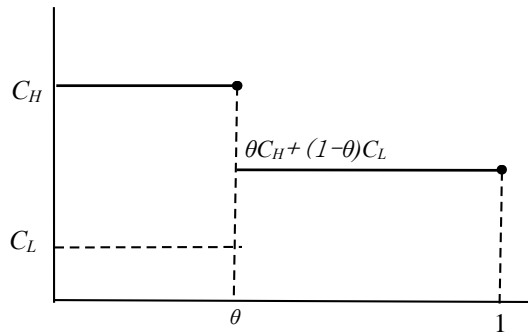
2. Supply of the Financial Services under the Information Asymmetry

The supply of financial services is determined by the marginal cost for the financial services. For convenience, we assume that the marginal production cost of financial services is normalized to zero without loss of generality. Thus we could focus on the effect of the marginal cost incurred by the type of financial service consumers. Under the perfect information as to the default probability of the clients within the pool, the bank could use its own discretion to restrain the occurrence of default which entails the additional cost to the bank. Thus the level of marginal cost for the financial services is higher for the clients whose price elasticity for the financial services is low than those with high elasticity.

Assuming the constant marginal cost over the span of types of clients within the pool, we set the level of marginal cost at C_H which takes into account of higher default rate if the type θ clients only participate in the financial services market. Then, we set the level of marginal cost at C_L when only the $1-\theta$ type clients are in the market and $C_H > C_L$.

[Figure 4] This Supply Curve Varies along with the Type of Consumers

This is true under the a priori belief that the consumers of type between 0 and θ are the first who would like to participate in the financial services because they are assumed to be in need of more urgency.

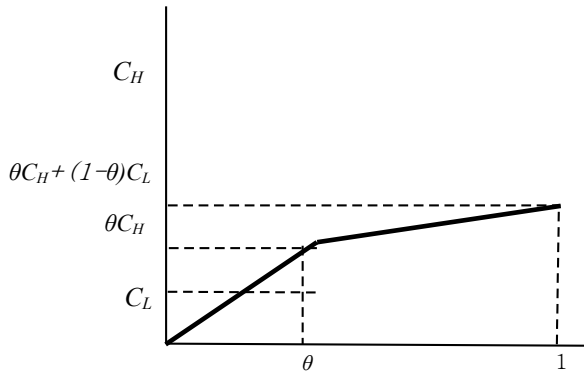


9) This outcome is in very consistent with the result in Stiglitz and Weiss (1981).

If the level of fee is set high enough, then only the θ type clients are interested in using the financial services with high price at H which satisfies participation constraint for the bank to provide the financial services. As the level of fee is decreased, the $1-\theta$ type customers begin to use the financial services. Then, the marginal cost will be dropped at $\theta C_H + (1-\theta)C_L$. When a bank faces a client who wishes to use the financial services under the information asymmetry as to the type of clients, the expected marginal cost will be $\theta C_H + (1-\theta)C_L$ when the price of the financial services is lower than or equal to M , otherwise the marginal cost would remain at C_H . Then, the supply curve looks like a step function shown in the [Figure 4]. As a result, the total cost line is drawn as given in the [Figure 5].

[Figure 5] Total Cost Curve

This results in the integral of marginal cost curve given in the [Figure 4].



3. Adverse Selection and Profitability of Bank

Higher fee does not induce the adverse selection or moral hazard in itself because it does neither attract the customers whose default rate is high nor push the customers to pursue the investment opportunity with high return and high risk. The fees are not *de facto* crucial factor for the lenders to choose the investment project. Rather indirectly, higher fee could drive out the otherwise good and loyal clients out of the pool of customers for the financial services. Therefore, it could increase the default e.g. in the payment services since the remaining customers cannot help but using the financial

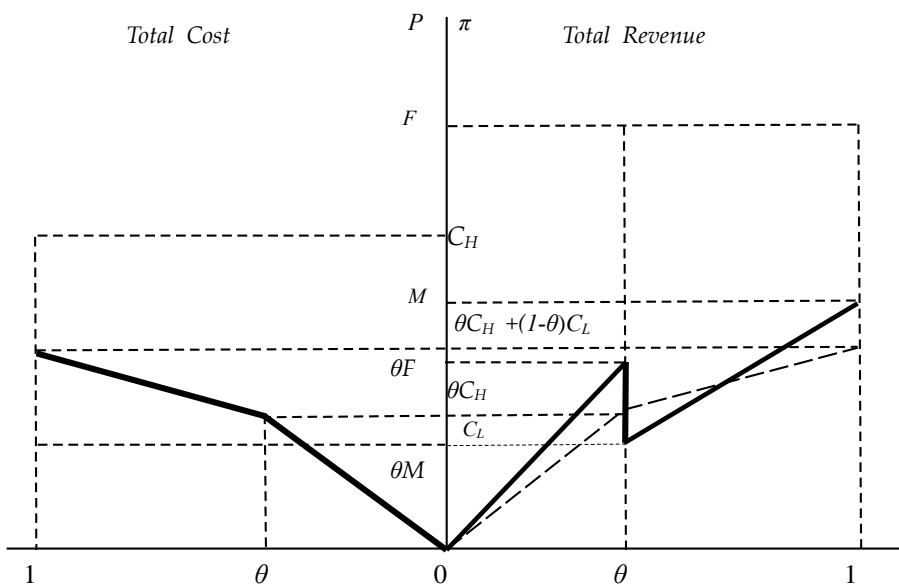
services even though they suffer from the liquidity strain and credit crunch.

On the contrary, some could argue that the lower fee could attract the bad customers from the other banks. However, it could not be the case because those clients have to forfeit the lending services available in the ex-bank and must open a new account in the new bank. Thus the clients who are easy to move around the banks for lower fees should not be bound with the liquidity strain or credit crunch.

Without loss of generality, we assume that the relationship among the variables is $C_L < M < C_H < F$ and $0 < \theta < 1$. Several features of the parameters within the model are well illustrated in the [Figure 6]. Total revenue and total cost line are drawn in the separate quadrant. As the number of service users is increased, the corresponding level of total cost is increased concavely in the left quadrant, whereas the total revenue line shows zigzag pattern in the right quadrant. Total cost line is rotated around the vertical axis and shown as the long dotted line in the right quadrant. Then the profit is in the right hand side quadrant for comparison between the revenue and cost.

[Figure 6] Total Cost and Total Revenue in the Two Quadrants

Vertical axis represents the price and cost. For each relevant points, the values of parameters such as F , M , θF , θM for the Total Revenue are shown along the left side of vertical axis, whereas C_H , $\theta C_H + (1-\theta)C_L$, θC_H , C_L for the total cost are marked on the right side of vertical axis. The longer dot line on the right side quadrant is the rotated total cost around the vertical axis for comparison.



As the number of financial service users is increased, the marginal revenue is dropped from F to M in order to increase the number of customers, whereas the marginal cost for the high risk customer remains at C_H . The first degree price discrimination is legally blocked for the bank. Therefore, we have a zigzag pattern for the total revenue and profit. Consequently several propositions are in order.

Proposition 1] Profit level of the bank could be lower when the fee for the financial service is set at high than when the fee is set low.

Proof) Higher fee leads to adverse selection among the pool of clients by forcing the good customers not to use the financial services. Thus the increased default probability among the users leads to higher marginal cost and the bank ends up with lower profit. The bank's participation constraint when the fee is set high is $\theta(F - C_H) > 0$. And the participation constraint with low fee is satisfied with the condition given below.

$$0 < \theta \leq \frac{M - C_L}{C_H - C_L} \tag{1}$$

If the price of the financial services is set high, then the profit will be given as below.

$$\pi_H = (F - C_H)\theta \quad \text{at} \quad M < P \leq F \tag{2}$$

If the price of the financial services is set low, then the profit will be as below.

$$\pi_L = M - [\theta C_H + (1 - \theta) C_L] \quad \text{at} \quad 0 \leq P \leq M \tag{3}$$

Thus, if $\theta \leq \frac{M - C_L}{F - C_L}$, then $\pi_L \geq \pi_H$. Q. E. D.

The intuition behind the proposition 1 is that the level of the percentage of clients who cannot but rely on the financial services, θ , is crucial in determining the bank's performance since it affects the default probability of the clients. It is worth noting that the level of marginal cost for the bad clients C_H is irrelevant to the bank's performance as long as the informational asymmetry is present. Rather the bank should

focus on the level of C_L . Thus the following proposition results in.

Proposition 2] Given the level of the percentage of bad clients, θ , the highest price at which the good clients would like to use the financial services M , and the highest price at which the bad clients would like to use the financial services F , the bank should exert efforts to reduce the level of marginal cost associated with good clients C_L .

Proof) If $\frac{M - C_L}{F - C_L} < \theta < \frac{M - C_L}{C_H - C_L}$ is the case, then the bank should only deal with the type θ clients since the participation constraint for the low fee is not satisfied according to the equation(1). Thus the bank suffers from the increased default probability in terms of loan and payment services. And the bank should focus on the decrease of C_H in order to improve its own performance. However, it is very difficult to achieve that goal since the bank deals with the clients with *de facto* high risk. As the first derivative of $\frac{M - C_L}{F - C_L}$ with respect to C_L is negative, $\frac{d \frac{M - C_L}{F - C_L}}{d C_L} < 0$, the bank could offer the lower fee by reducing the marginal cost associated with the good clients. The reduced C_L could make $\theta \leq \frac{M - C_L}{F - C_L}$ so that the bank could enjoy larger profit with the clients with low default probability. Q. E. D.

The current analysis demonstrates that the bank should focus on the cost associated with the good clients rather than that of bad clients if the bank is subject to the informational asymmetry regarding the type of individual client even though the bank has found out the weight of good and bad clients within the population.

IV. Conclusion

As the recent economic crisis seems to be developed into the allegedly *Greater* Depression, several financial economists have proposed rescue plans for the financial sector as well as real sector. In doing so, Investment banks are blamed for their reckless investment with sky rocketing leverage. However, many of them agree that the change

of the banking business model from the *originate-to-hold* to the *originate-to-distribute* should be delivered with more prudence. Interestingly, DeYoung and Roland(2001) has pointed out that the shift of commercial bank's revenue sources from the originating and holding to the fee based activities such as securitization of mortgages could exacerbate the volatility of bank earnings due to the increased financial leverage. They claimed that it was a myth without any solid ground that the non-interest income is more stable than interest income. In terms of current paper's perspective, we demonstrate there is another channel through which the risk for the banks could be exacerbated in addition to the unregulated leverage, especially when the financial services are consolidated.

In the current analysis, we address the issues on the pricing of access to financial services. The access to financial services is crucial since it leads to the growth of economy through the efficient allocation of capital and lubricating the flow of capital within the economy. The obstacles to the development of financial sectors are proposed as transaction costs, information asymmetry and uncertainty. The current paper sheds light on the role of fee when the profit maximizing pricing could bring up undesirable burden to the financial service suppliers i.e. banks rather than to the consumers under the presence of informational asymmetry as to the characteristics of consumers. Higher fees could drive out the otherwise good users of financial services from the pool of customers, leading to worsened performance with higher default rate. The banks should take into account the interactive effect of the fee on the bank's performance associated with deposit and credit service in pricing of financial services. Thus the adverse selection could be induced by the high fee which would otherwise be irrelevant to the information asymmetry.

Contrary to the conventional notion, the current analysis demonstrates that the bank should take care of the cost associated with good clients rather than that of bad clients in order to improve its performance in terms of profit. Due to the adverse selection, the bank might be concerned about the level of increased cost associated with high risk clients. However, the bank could avoid dealing with high risk clients only by reducing the cost associated with good clients. That is, the reduced cost C_L provides the bank with the incentive to set the low fee in order to maximize the expected profit.

In addition, the increased frequency of usage by the good clients helps reduce the default probability among the clients relying on the financial services.

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