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Financial Restraint and the Market Enhancing View

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Introduction

Analysts of development have long discussed the proper role of the government in promoting economic growth. Although nuances differ, in general, two distinct approaches have predominated, one emphasizing the role of the market, the other emphasizing the role of the state in promoting development. The Market Friendly View (World Bank, 1993) presumes that – in the absence of inefficient government intervention – the market generally functions efficiently, and so the government should act to ensure secure property rights and competition, but otherwise not interfere in economic activity. In contrast, the Developmental State View (Johnson, 1982, Amsden, 1989, Wade, 1990) presumes that market failure is pervasive and thus government intervention is necessary to mobilize savings, allocate resources efficiently and promote technological catch-up.

A central role of an economic system (including both the private and public sectors) is to coordinate economic activity across the various agents in the economy. The two views stress a different primary locus of coordination in the economy. The Market Friendly View emphasizes the role of the market, whereas the Development State View emphasizes the role of the government. These two views inherently consider the roles of the market and the state as **substitutes**; either decision making and coordination is decentralized and carried out through market transactions or coordination is performed by a centralized agent – the state – or at least the state intervenes actively to alter what the market itself would do.

This paper continues in the tradition of a third view – the Market Enhancing View (Aoki, et al., 1997, Council of Economic Advisers 1997) – which instead suggests that the proper role of the state is to engage in activities which **complement** the market. This view presumes that most economic activity should be performed by decentralized agents engaged in market transactions, but it also recognizes that market failures are much more pervasive than is implicitly recognized by the Market Friendly View. The

fundamental tenet is that government can take actions that improve the efficiency of decentralized markets.

Examples of the kinds of activity envisioned by the Market Enhancing View include promoting joint research activity, government-business deliberation councils, standards setting, market promotion, prudential regulation, etc. A common element of these diverse policies is that the ultimate locus of control of economic activity remains in the private sector, not in the government. The role of the government is to facilitate a more efficient functioning of private markets. This stands in marked contrast to both the Market Friendly View, which envisions a minimalist government, and the Developmental State View which gives the government the explicit responsibility for resource allocation decisions.[1]

In this paper we apply the Market Enhancing View of government to the financial system. We describe a set of polices that we have called *financial restraint* in our previous work (Stiglitz, 1993ab, Hellmann et al., 1994, 1996, 1997ab) and show how these policies embody the principles of the Market Enhancing View. The paper therefore has two objectives. First, it attempts to show how the principles of the Market Enhancing View can be applied to financial markets. Second, it explains how our previous work on *financial restraint* implicitly takes the Market Enhancing View of government policy.

We begin by analyzing the nature of financial transactions to understand why purely decentralized financial markets will, in general, fail to yield an efficient allocation of resources. Essentially, all financial transactions involve the exchange of a real good for a promise of repayment in the future. If agents financial intermediaries in particular- cannot make credible promises of future repayment then there will be too little financial intermediation. Those resources that are intermediated by the financial sector may be misallocated. When a bank with little stake in the future captures deposits, it has

incentives to engage in "gambling" or "looting" activities. A bank can gamble by investing in projects that are excessively risky or poorly diversified. If the projects succeed, the bank wins; if they fail, the depositors (or the government) bear the loss (cf. Stiglitz and Weiss, 1981, Kane, 1989). Akerlof and Romer (1993) also explain how banks engage in directly fraudulent activities that they call looting. Bank managers invest in projects that allow them to extract money for their private use at the expense of the bank that will be driven deliberately into bankruptcy.[2]

The purpose of *financial restraint*, then, is to promote the creation of a large number of decentralized agents that can make credible promises of future repayment, and thus will not engage in gambling or looting behavior. This is achieved by a set of policies designed to create "franchise value" (Caprio and Summers, 1995), i.e., a flow of economic rents that the bank can only capture through its continued viable operation.[3] Franchise value induces banks to become long-term players that have incentives to keep their promises, and particularly not to defraud depositors by gambling or looting.

A related issue for the financial sector in developing economies is the process of deposit mobilization. In a competitive market, banks may have too few incentives to develop deposit taking infrastructure in rural areas. This problem arises because it is

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[1] The interventions contemplated here go well beyond the Pigouvian taxes for correcting externalities; they affect in fundamental ways how markets function.

[2] Underlying both are information asymmetries: depositors (and sometimes regulators) cannot distinguish the riskiness of bank portfolios, or even in many cases, the presence of looting activity.

[3] Assume some set of policies have been put in place that allow the bank to capture an economic rent each period it effectively manages its portfolio (and consequently, the bank does not go bankrupt). As long as the bank continues viable operation, it will continue to capture this rent. While the per period value of the rent may be small, the capitalized value of the rent will be much larger. It is this capitalized value that Caprio and Summers refer to as "franchise value." Critically, the franchise value is predicated upon future earnings and cannot be looted in the present.

Franchise value is simply the analog in these markets of 'reputation rents' which have been studied extensively elsewhere as the basis of ensuring good behavior in the presence of moral hazard or contract enforcement problems (Klein and Leffler (1981), Eaton and Gersovitz (1981), Shapiro (1981), Shapiro and Stiglitz (1984)). A distinguishing feature between these models and the theory of *financial restraint* is that in these earlier models markets themselves create the rents by restricting entry. The distinguishing information assumption is that, for example in product markets, the marginal cost of production is known; customers infer that if the price is too close to the cost of production this producer will have an incentive to cheat. In financial markets the relevant components of marginal cost and profit are likely to be unobservable.

costly to open branches in undeveloped areas. Prior to entry, the may exist uncertainty as to the ex post profitability of opening a branch. After entry, successful branches soon face competition, whereas the bank alone bears the cost of a failed branch. In essence, the bank creates a public good (regarding the value of opening a branch) when it enters. Another goal of *financial restraint* is to create rent opportunities so that banks have efficient incentive to invest in deposit mobilization.

There are two key policies necessary to implement *financial restraint* – deposit rate ceilings and entry restrictions. It is important to note that the magnitude of each of these interventions must be modest. The deposit rate ceiling must be set high enough to provide a positive real rate of return for depositors. And the number of banks must be large enough to foster some competition between banks, yet remain small enough that the banks preserve some of the rents created by the deposit rate ceiling.

When these two interventions are implemented effectively, banks earn rents on the deposits they hold this period and each period into the future, creating the franchise value necessary to produce long run incentives for the bank. Furthermore, by creating a sufficient number of these agents, the resource allocation process becomes a decentralized one where firms have many banks from which to seek financing.

Of course, the government could create franchise value simply by providing a subsidy to well-behaved banks. This is the traditional neoclassical prescription of using taxes and subsidies as opposed to price or quantity controls. If the "optimal" tax-and-subsidy mechanism could be costlessly implemented, it would be at least as efficient as *financial restraint*.[4] Unfortunately, there are numerous reasons why this is not possible, such as the information requirements needed by the government agent and the incentive problems faced by government bureaucrats with discretionary control over the subsidies. Worse, this mechanism represents a significant centralization of resource allocation in the economy because the government's discretionary control over the flow

of subsidies invariably would lead to increased influence and control by the government over investment decisions.

The policy analysis of this paper was developed by examining the policies actually practiced by a number of governments throughout East Asia, and most notably Japan. Since World War II, the Japanese financial system has experienced tremendous success (during the high growth period), while it currently is suffering significant distress. The ideas outlined in this paper can explain both phenomenon. During the high growth period, the Japanese government effectively practiced *financial restraint*, but the government mismanaged the transition away from *financial restraint*, failing to replace these policies with an effective alternate form of prudential regulation. Examples of how these policies were actually implemented in Japan and elsewhere in East Asia are developed at the end of the paper.

In the remainder of the paper, we develop these ideas more thoroughly. Section 1 discusses the fundamental challenge to financial policy – why a purely decentralized market for financial intermediation may lead to too little investment in deposit mobilization, an inefficient allocation of resources, and insufficient incentives to monitor firms. Section 2 explains the policies of *financial restraint* and how they serve to create a better alignment between private incentives and social incentives. A comparison between *financial restraint* and more traditional government intervention is presented in Section 3. Finally, Section 4 presents examples of actual policies that were practiced by East Asian governments. A brief conclusion follows

Section 1: The "free market" in financial intermediation

Financial intermediaries serve a number of functions in the investment process in an economy. Herein we emphasize three roles that are most central in this process –

[4] More fundamentally, if the government could observe "good behavior" so it could encourage it by

mobilization of savings, allocation of investment, and monitoring the performance of borrowers. In an efficiently functioning market for financial intermediation, banks should have appropriate incentives to invest in undertaking these activities. We argue, however, that there are numerous impediments to creating these appropriate incentives, and that they are most severe when an economy is in a low state of financial development.

Let us begin by examining the process of deposit mobilization. In rural areas, where no banking infrastructure exists, those with savings are required to self-intermediate, either by using hard goods (such as land, grain, cattle, precious metals, etc.) as a store of value or by lending savings to another through informal market activity.[5] Some of this "self-intermediation" activity, of course, is efficient.[6] Rural cooperatives, personal lending based on family ties, and other forms of credit institutions that utilize the information and relationships already established in rural areas may achieve a high risk-adjusted return on a fraction of their activity.[7] Our point is that there also exist large numbers of savers who earn a lower risk-adjusted return through these informal market activities than they could if they had access to the formal financial sector. For these savers who could earn a higher (risk adjusted) return if they were to deposit their funds in a bank, it is often the case that the transaction costs of traveling to the nearest major city (and the

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subsidization, it could also – at less cost – simply disclose that information.

[5] See Hoff, Braverman and Stiglitz (1993) for a thorough discussion of these issues.

[6] Typically, though, there is restricted scope for (geographical) risk diversification.

[7] The idea that some economic activity can be more efficiently engaged in rural areas is part of a broader theme of "rural-inclusive development" (see the chapter by Hayami in this book). In contrast to a model where development primarily occurs in urban areas and people must migrate from rural to urban locations to participate, when there is parallel development in rural areas, some real efficiencies are achieved. Fewer investments in infrastructure (such as housing for new urban residents) are needed to support the same level of activity and, importantly, existing networks of relationships are not disrupted. Thus, rural-inclusive development has the dual advantages of reducing congestion externalities in urban areas while preserving the information embodied in rural relationships.

In this context, one common criticism of *financial restraint* – that deposit rate controls distorts investment allocation – has different implications. Consider the case where the net effect of a modestly binding deposit rate ceiling (reducing deposit rates from 5 percent to 3 percent in real terms) is that some marginal investment flows through the informal financial sector. This will support an expansion of relatively efficient economic activity in the rural sector (those that yield a net return to savers of between 3 and 5 percent). This activity will reduce congestion costs in urban areas and reduce the need for duplicative investment (i.e. housing). The net effect could be positive.

potential risk of theft on the way) to deposit and reclaim their funds creates a sufficient barrier that they do not do so.

Secondly, even when informal market activity can be used to finance efficiently a set of economic activities, the scale of projects that can be financed through this mechanism is limited by the very nature of the activity. To the extent that there are large scale investment activities that require agglomeration of capital, finance through the formal sector is required.

Essentially, there is a "missing market" in financial intermediation and this missing market results in an inefficient allocation of investment. Our claim is that, particularly in rural areas and small population centers, there is too little investment in deposit mobilization infrastructure when there is a "free market" in financial intermediation. There are markets that could be efficiently served, but that perfectly competitive private banks have insufficient incentives to invest in that service.

Our idea (which is developed formally in Hellmann, et al., 1996) is that the potential return to investing in a rural market depends partly on aspects of the market that are not observable until after entry. Once any one bank has entered, however, then this information becomes observable to potential competitors. Thus, if a bank enters an attractive market, it will soon face competition, eroding any rents, whereas if it mistakenly enters a poor market, it will bear the costs of entry alone.[8] Entering rural markets provides a public good – information about the quality of the market – that private banks have too little incentive to provide relative to the socially efficient level.

Furthermore, even in markets where entry has occurred, there can be too little investment in deepening the market. If only a fraction of the local populace currently utilizes the banking system, perhaps because the savers bear a fixed cost of converting their savings into liquid assets, banks could make investments to help these savers

convert to financial intermediation. In a competitive market, however, banks will earn no rents on their marginal depositors. As a consequence, they will make no fixed investments to deepen their deposit base.

For both of the above two reasons, a competitive market for financial intermediation results in providing banks too little incentives to invest in financial deepening. While these issues are not severe in a highly developed economy, where most savers have access to financial intermediation, these issues can be severe in a less developed economy.

We now turn to the second major function of financial intermediation – the allocation of investment. Ideally, banks should consider themselves as long run agents and have the proper incentives to invest in screening borrowers to select projects with the highest expected return. The concern we raise is that banks frequently do not have the proper incentives and can instead earn a higher return by investing in risky projects, with depositors (or the government in the case of deposit insurance) bearing the downside risk.

Experience over the last decade and a half bears out this concern. The banking crises in the United States, Japan and Mexico are now well known, but systemic financial crises are much more widespread. Caprio and Klingebiel (1996) identify over 60 countries which experienced a systemic banking crisis in the last two decades. They show that financial crises occur partly as a product of unexpected shocks to the macro economy. But they provide ample evidence that these macro shocks only uncover banking structures already weakened by moral hazard activities of at least some of the banks. Since any banking system has to deal with macro economic shocks, it is important to

[8] This is a general problem, but its consequences may be particularly severe in financial markets. See Hoff and Stiglitz (1993).

understand and address the fragility of the financial system by examining how the incentives of banks become misaligned.[9]

In our previous work (Hellmann et al., 1994, 1996, 1997ab) we have examined in great detail the incentives of banks to engage in prudent versus imprudent (gambling and looting) behavior. A bank choosing the "prudent" strategy has an expected stream of future income from this strategy – this is its franchise value. Were the bank to gamble instead, it enjoys the prospect of higher returns should the gamble succeed. Should it fail, however, the bank loses its own capital plus its claim of future returns it could have captured had it followed the "prudent" strategy. It is immediately evident, then, that the greater is the bank's own equity and the greater is its franchise value, the lower is the bank's incentive to gamble.[10]

Excessive competition has a deleterious effect on the bank's franchise value. As the intensity of competition increases, the rents captured by each bank falls. In most markets, the effects of competition increase allocational efficiency as the price approaches the marginal cost of production. This is not necessarily the case in the market for financial intermediation. As competition drives down the bank's rents, at some point the bank's franchise value is diminished sufficiently that it does not mind risking that franchise value by gambling with depositors' funds. This is best seen in the limiting case of a bank with no franchise value: the bank places no value on continuing operation in the future. Once confronted with a gambling or looting opportunity, this bank will always take it, because it captures all of the upside while bearing none of the downside loss. Depositors, with imperfect ability to monitor banks, will place their funds in those banks and suffer losses.[11]

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[9] The distinction is somewhat stylized: the point is that private incentives lead to excessive risk taking – given that their private incentives do not internalize social cost.

[10] The same reasoning applies to the case of looting.

[11] In Hellmann et. al. (1994) we also discuss why capital requirements should not be expected to solve completely the problem of rogue banking.

We consider the third major function of financial intermediation – monitoring the performance of borrowers. To monitor borrowers properly, banks need to make specific investments in the relationship with the borrower. The private return on the investment depends on the longevity of the relationship between borrower and lender. As noted above, banks may have inefficient incentives to engage in risky lending that increases the risk of bank failure. This has a deleterious effect on the bank's incentives to make specific investments in its client borrowers.

In a related manner, the bank only internalizes the value of these specific investments to the extent to which they increase the value of its equity (and not the increased return this may cause for depositors due to lower risk of default). This is another way of expressing that banks have too little incentive to invest in monitoring borrowers.

More subtle, however, is the effect that this may have on the ability of the banking system to develop an institutional mechanism that enhances the governance of financial intermediation, such as the main bank system in Japan. These informal, institutional mechanisms require investments by both banks and firms and which are complements to investments in firm specific knowledge. Thus, the erosion of incentives to invest in specific knowledge also harms the financial sector's ability to develop these complementary institutions. Related to this effect, the extent to which banks invest in gathering specific firm knowledge may alter the technology choice of the firms. (See Dinc (1997).) The essential idea is that firms can invest in more complex technology when banks invest in firm specific knowledge because it enhances the bank's credibility to intervene appropriately should the firm experience distress.

Two key features are complementary to the development of these monitoring institutions – the investment by banks in firm specific knowledge and the ability to capture rents in the financial sector. When governments practice a laissez-faire policy, the extent of competition reduces the incentives of banks to make these investments while at the same time competing away rents from the financial sector.

Finally, when we consider that the nature of competitive interaction can probably be characterized as monopolistic competition, it is likely that in a laissez-faire marketplace there will be both excessive entry and too large an incentive to raise deposit rates. This is due to the "market-stealing" effect. Banks do not internalize the adverse effects of their actions on other banks when making strategic decisions. Mankiw and Whinston (1986) show that, for homogeneous goods markets this business-stealing effect results in excess entry.[12] Similarly, a like effect applies in setting deposit rates, both because banks do not internalize the adverse impact of profits of other banks and because banks do not internalize the impact on raising deposit rates on the fragility of the banking system.

Section 2: Market enhancing through *financial restraint*

The purpose of the preceding section was to demonstrate the impact of a government practicing laissez faire policies with respect to the financial sector, particularly when the economy is in a low state of financial development. In order for the banking sector to function efficiently, banks must make a number of different kinds of investments – in deposit mobilization infrastructure, in selecting efficient investment projects, in firm specific knowledge regarding borrowers – but the incentives to make these investments depend on the ability of the bank to capture rents. The laissez faire competitive equilibrium has too little rents for three main reasons: 1) When banks fail, they impose costs on depositors and so banks do not internalize the benefits to depositors when making private investment decisions; 2) some of the investments create information that is partly a public good, so the banks do not capture the full value of their investment; and 3) under conditions of monopolistic competition, there can be both excessive incentives for entry and to compete for deposits by raising deposit rates due to the "business-stealing" effect.

[12] They also show that, if consumers have preferences for product variety, there may be too little incentive for entry. We believe, however, that the former result is more applicable in the case of deposit markets.

The preceding arguments do not imply a radical departure from free market banking – such as having government owned banks with the government ultimately responsible for the mobilization and allocation of funds. As mentioned in the introduction, this is the response proposed by those favoring the Developmental State View of government – a view which we believe does not adequately consider the limitations of government action.

Instead, we favor the Market Enhancing View, which primarily emphasizes the importance of decentralized agents processing locally available information. Where this view differs from the Market Friendly View is really a difference in emphasis – we argue that market failures are more common than is implicitly assumed in the Market Friendly View and that there are government policies that can effectively address these failures.

In particular, we show in this section how two policy instruments – deposit rate ceilings and limitations on entry – can promote a more efficient equilibrium in the private sector. These policies seem counterintuitive, at first. How can government acting to restrict competition promote efficient market-based outcomes?

Essentially, unrestrained competition inhibits the capture of the rents necessary to justify making investments are that are socially efficient. By practicing *financial restraint*, the government creates a competitive environment that retains most of the benefits of a decentralized system of financial allocation, while also creating the positive incentives to invest in activities that are underprovided in a laissez faire competitive market.

Even though some restrictions on entry are necessary to ensure that banks capture rents, it is not the objective of *financial restraint* to have a small number of banks. Rather, a sufficiently large number of banks should be allowed to enter such that there exists

some competitive pressure in the lending market, so firms have alternative sources from which to seek funds. There is value in having more than one agent with the ability to process locally available information about the quality of the managers of individuals firms and the likely prospects of investment projects. With more information processing nodes, the quality of projects ultimately financed by the financial sector should improve. As Sah and Stiglitz (1986) have shown, when the decision making process for whether to proceed with a project is decentralized, there is a bias towards approving projects whereas in a hierarchy, there is a bias to reject projects.[13] Sah and Stiglitz establish conditions (e.g. where the cost of rejecting good projects is greater than the cost of approving bad ones) under which the decentralized mechanism is preferred. More broadly, they argue that some degree of decentralization is preferred to a single hierarchy. Thus, too few banks in the financial system may be harmful. Given that we have already argued that excessive competition is also harmful, we conclude that an intermediate level of competition is optimal.[14]

Next we consider how *financial restraint* can affect the incentives to mobilize deposits. As discussed in Section 1, the reason why banks have too little incentive to develop rural and small population center markets is because the act of entry creates public information about the quality of the market. Producing this public good is costly, because if the market is attractive, competing banks enter and reduce the returns to the first bank.

If the first bank, however, received what amounts to "patent protection" for providing this public good, then banks would have a countervailing incentive that rewards entry into underdeveloped markets. If the government does not allow immediate competitive entry after a bank enters a new market, then the first mover would be able to capture

[13] That is, under decentralization, the probability of a bad project being accepted is higher than under hierarchy, while under hierarchy, the probability of a good project being rejected is higher.

[14] Moreover, as in any monopoly, lending rates will be high, discouraging socially profitable investment from being undertaken. To the extent that banks' information gathering activities produce highly correlated information competition for lending to any particular customer may be limited (see Jaffee and Stiglitz, 1990). In that case free entry dissipates profits through competition for deposits - with all of the adverse effects noted earlier - without the positive effects of competition in lending activities.

rents before competition ensues. When there are a number of markets not presently served by any bank, this is a welfare enhancing policy.[15] Consumers are better off having one bank (even one capturing temporary monopoly rents) than having none at all. Banks will only enter if expected profits are positive, and firms benefit from an increase in the amount of savings that are available to finance investment.

Similarly, even in markets that have a banking infrastructure, if a sizable fraction of savers do not make deposits (and hence are disconnected from the financial sector) *financial restraint* creates incentives for banks to make investments to deepen the penetration of the banking sector. With deposit rate ceilings, banks earn rents even on their marginal depositor. Thus, they will now create incentives to bring new depositors into the system.[16]

With *financial restraint* banks have the opportunity to earn rents on an ongoing basis, creating a franchise value for the bank. It is useful to get an understanding of the magnitudes involved. Consider a stylized model of the financial market where there is perfectly elastic demand for capital, earning a 5 percent return. Let us assume that a bank in this economy is capitalized with 10 percent equity and 90 percent deposits. As Table 1 shows, in a free market equilibrium without risk aversion, both deposits and equity will earn a 5 percent return.

Now consider what happens if the government intervenes in the deposit market by placing a 3 percent ceiling on deposit rates. Depositors suffer a modest loss of income, with their rate of return falling from 5 percent to 3 percent. The return on equity,

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[15] A related issue is what is the optimal length of "patent protection" for banks that open up new markets. Clearly, as the length of the patent increases there are countervailing effects – the bank's incentive to enter a market is rising, but consumers receive lower returns on their deposits. An optimal policy must trade-off these two effects.

[16] Of course, it is important to note that the efficiency of these kinds of investments depends crucially on the state of financial deepening of the economy. When the exists substantial opportunities to bring new depositors into the financial sector, these investments have a positive social payoff by increasing the average return on investment in the economy (as depositors shift from self-intermediation to financial intermediation). Once most depositors already have access (i.e. have opened a savings account), then investments to recruit depositors from other savings institutions are dissipative and inefficient.

however, increases dramatically, from 5 percent to 23 percent! the owners of this bank now earn a net return of $2.3 each period. The capitalized value is this income stream is $46: this is the franchise value of the bank.

Table 1: Franchise Value of a Bank

	Free Market			Financial restraint		
	Amount Invested	Gross Return	Rate of Return	Amount Invested	Gross Return	Rate of Return
Assets	$100	$105	5%	$100	$105	5%
Deposits	$90	$94.5	5%	$90	$92.7	3%
Equity	$10	$10.5	5%	$10	$12.3	23%
Franchise Value of Equity =>	$0.5/(5%)=$10			Franchise Value of Equity =>	$2.3/(5%) = **$46**	

This franchise value significantly alters the relative return to gambling versus prudent loan portfolios. When investing $100 of capital, the owners act as if they have $46 at stake. Gambling only has a higher private return for the equity holders if the loss in a bad state exceeds the value of the equity they invested; otherwise they bear all of the downside risk. If the owner were confronted with a fair gamble he would only take it if he could win or loose more than 46 percent of the bank's assets. Similarly, he would only loot the bank if he could take out more than 46% of its assets. Both of these events are so extreme that under most plausible scenarios the owners prefer to invest the bank's assets prudently.

More generally this example shows that if the franchise value is sufficiently large, then banks have no incentive to gamble because the loss of future rents is greater than any short term gains from gambling. As a consequence, the incentives of banks are aligned with a more socially optimal incentive structure. This improves the efficiency of investment projects funded by the financial sector.

Finally, we consider the effect of *financial restraint* on lending rates, amounts and its role in promoting more effective bank monitoring of firms. The effect of deposit rate control on lending amounts and rates is fairly complex. Neo-classical analysis suggested that with a downward sloping demand curve and an upward sloping supply curve a deposit rate ceiling would reduce the amount of savings and thus increase the lending rates.[17] We have already discussed why the problem of disintermediation on an upward sloping supply is easily overstated and why *financial restraint* may actually *increase* the amount of savings mobilized.

The other question thus concerns the effects on the market for loans. An important feature not acknowledged in the neo-classical framework is credit rationing (see Jaffee and Stiglitz 1990 for a survey). Stiglitz and Weiss (1981) show that in the presence of adverse selection and moral hazard problems, lending rates may be insensitive to changed in the supply of fund. Moreover, an argument can be made that *financial restraint* is likely to increase the *efficiency* of the lending market by improving the *quality* of lending transactions. In particular, because of the rent opportunities and because of the incentive to be long-term agents, banks may have strong incentives to invest in monitoring capabilities. With better information, banks can alleviate some of the inefficiencies associated with credit rationing. This will translate into lower lending rates to some but not all firms - lower quality firms now have to pay a higher interest rate commensurate to their risk. The overall effect, however, is to increase the efficiency of the lending market.

With respect to banks' monitoring of firms, it should be readily apparent that the creation of franchise value supports bank managers acting as long run agents. When banks have substantial franchise value, they bear most of the risk of their decisions. Thus, they have appropriate incentives to make investments in specific knowledge about their borrowers.

[17] Hoff and Stiglitz (1993) also discuss some departures from the neo-classical lending market equilibria for developing markets. They emphasize that substitution patterns between the formal and the informal sector may cause lending rates to be insensitive to changes in loan supply.

As noted in Section 1, there are also additional positive incentives that support the creation of institutional monitoring mechanisms. Investments in these governance structures are complementary to investment in firm specific knowledge and can more easily be supported when the banks capture rents from their activities. Thus, the main policies of *financial restraint*, while not directly affecting the creation of these mechanisms, do create an environment conducive to their emergence by increasing incentives for complementary investments.

It is worth noting, however, that the implementation of *financial restraint* does require that the government place limitations on entry of new banks and on the opening of new branches by existing banks. While these limitations could be implemented simply by charging high entry fees, in practice they are implemented through discretionary controls. Anytime a government agent is given discretion, there exists some potential for abuse, but it also creates an opportunity. If these discretionary rents are used to reward banks that are effective monitors of their client portfolio, then these policies can also serve to promote the development of institutional monitoring mechanisms. Some examples of how the policies of East Asian governments served these objectives are described in further detail in Section 4 below.

Section 3: Rent opportunities versus subsidies

An important objective of the policy of *financial restraint* is to create franchise value for banks. If that is the case, why use deposit rate controls and entry restrictions to create franchise value, rather than giving subsidies to banks? Neo-classical economists by and large believe that if governments intervene they should use taxes and subsidies rather than price and quantity controls. In models that assume only minor departures from the perfect market assumptions, such policies are sometimes indeed shown to be superior. In our context, a 'tax-and-subsidize-approach' would entail the government

imposing a tax on deposits and distributing the revenues to banks. (In fact, the government need not rely on taxing deposits, but instead it can devise optimal taxes on a broad set of economic activities, and then use these tax proceeds to subsidize banks.) We argue a tax-and-subsidize approach is not superior to *financial restraint* because it induces entirely different behavior by the agents in the system.

To understand the difference between *financial restraint* and a tax-and-subsidize approach we need to emphasize the difference between *rent opportunities* and subsidies. Unlike a subsidy, a rent opportunity does not guarantee the receipt of profit, but it only provides a chance at making profit. Whether an agent takes advantage of this chance depends entirely on its own actions. While the formalizations of neo-classical theory emphasize the price-setting functions of markets, the Austrian school always emphasizes the "entrepreneurial" aspect of a market system, where decentralized agents pursue profit opportunities through economic activity. It is this entrepreneurial role of markets upon which *financial restraint* builds. If the agent performs well, it will make a high profit, but it if performs poorly, then no subsidy will bail it out. The important property of *financial restraint* is that it provides *contingent rents*: a bank can only make profits if it engages in activities that create profits.[18]

Another reason that *financial restraint* is preferred relates to the difference between a self-selection and a screening mechanism. In order to implement a policy objective the government can choose among alternative systems that vary in their degree of centralization of control and information processing. In a tax and subsidize system the government needs to spend considerable resources on screening applicants.[19] For this it must have a fairly centralized approach of evaluating past performance and future plans of it applicants, banks in our case. With *financial restraint*, however, the government

[18] In principle, the government could subsidize only successful firms, e.g. the larger the profit, the greater the subsidy. But this would require that the government observing economic (as opposed to accounting) profits. With *financial restraint*, the government requires far less information.

[19] That is, since the purpose of the exercise is to create an enterprise with positive (franchise) value, there will be an excess supply of applicants. Less efficient firms – for whom the subsidy will not ensure good behavior – still desire to enter.

relies more on a self-selection mechanism. Only those agents that are able to perform in a contingent rent environment will choose to seek bank charters. Agents use their own information in choosing to seek bank charters. The government's burden to evaluate those agents is somewhat lower.[20] Reliance on a self-selection mechanism such as *financial restraint* is particularly valuable if a government has relatively poor information or information processing capabilities.

One objection to the above argument is that it assumes a 'conventional' implementation of government subsidies that is not contingent on performance. Laffont and Tirole (1993) summarize the extensive literature on the optimal policy design of government regulation and procurement. A general result of this literature is that the payoff to the firm should be positively correlated with the firm's performance. *Financial restraint* precisely satisfies this condition, since banks are residual claimants on rents.

This literature suggests that a system of subsidies, where the government commits to an optimally chosen contingent subsidy structure, is an alternative to *financial restraint* and preferable because it entails open subsidies rather than the hidden ones implicit in *financial restraint.* We disagree with this conclusion because it rests on assumptions that we believe are not justifiable in the context of financial market regulation. Examining these assumptions helps us to understand some of the fundamental properties of *financial restraint.*

Second, the incentives and the opportunities for the government may differ. In the optimal regulation framework the government can make verifiable transfers to the agents - in our case the bank - at no cost. This assumes that the government agency in charge of the subsidies can be trusted to implement such a policy honestly and efficiently. In an "optimal subsidy" scheme, the government would raise revenues through an optimal tax structure and then provide the appropriate contingent subsidies

[20] The extent to which this is true depends on assumptions concerning how firms differ. In some cases *financial restraint* may fully resolve the selection problem, in others it may differ little from the case of subsidies.

to the banks. Thus, the flow of funds courses from households to the government and then to the banks. While this literature focuses on the problems that a government has in collecting information from and enforcing contracts in the private sector, it does not address the problem that there may be similar problems with respect to the government's own actions. But precisely because tax revenue is at one stage controlled by the government, there are significant political economy questions about whether the government can credibly commit to deploying those funds as determined by the optimal contingent subsidy scheme. Even if that were the government's objective, agents within the bureaucracy are vulnerable to corruption, particularly if their discretionary control is substantial.

A fundamental strength of *financial restraint* is that the government does not directly interfere in the flow of funds from depositors to firms. The government only creates the rent opportunities, by placing a modestly binding deposit rate ceiling. Depositors are therefore "taxed" by the amount by which the rate ceiling is binding, with 100 percent of the revenue from this tax captured by the bank. This provides fewer opportunities for government officials to divert funds to alternative uses. There is less scope for corruption, as government officials are not controlling the resources themselves. And the government does not need to have as much information about the individual performance of each bank.[21]

[21] This argument may overstate the difference (in their propensity to generate corruption) between *financial restraint* and the optimal subsidy scheme. Under *financial restraint*, there will presumably be excess applicants for entry, who then may compete to capture an entry franchise by paying bribes to the government bureaucrat. Interestingly, however, bribes to receive the entry franchise do not adversely affect bank behavior (and thus does not affect efficiency), provided that the bribe is a sunk cost after the bank has gained the entry franchise – it is the on-going value of the bank that provides the bank's incentives. If the government official takes an 'equity' position in the bank - that is his payoff depends on the bank's performance - he has improved incentives to select well, but the bank has reduced incentives to perform well.

The essential argument for *financial restraint* present herein is that the scope for corruption may be reduced when the government is not directly involved in the flow of funds. On the other hand, in principle, an explicitly defined, transparent, and accountable contingent scheme (in which potential entrants pay the government an up-front fee in return for a contingent reward) might reduce the role for government discretion and corruption, and improve self-selection without adversely affecting performance.

Recognizing the difference between *financial restraint* and subsidies also helps us to understand more precisely the difference between *financial restraint* and financial repression. First and foremost, there is a substantial difference in the magnitude of the intervention implied by these two policy regimes. *Financial restraint* presumes a stable macro-economic environment and low inflation. In contrast, financial repression is usually associated with high inflation which, in combination with binding nominal deposit rate ceilings, yields low very negative real interest rates.

Financial restraint takes the Market Enhancing View of government, whereas financial repression is more closely associated with the Developmental State View. In financial repression the government typically owns banks. It becomes responsible for the mobilization of deposits, and it takes a direct role in the allocation of funds, such as through directed credit programs and loans to public enterprises. Financial repression is thus more akin to the tax-and-subsidize approach, although it goes further. Under financial repression the government actively gets involved in the allocation of resources, through its directed credit programs and possibly loans to state-owned enterprises. As a consequence, financial repression is often associated with a centralized mechanism of credit allocation. As we have argued above, such a system makes poor use of decentralized information. But since the government is involved in the flow of funds, financial repression provides opportunities for government officials to divert funds to their private use or their political constituents. And precisely because the government is involved in the flow of funds, financial repression is associated with predatory government behavior. If the government uses the financial sector to raise revenues for its own needs, banks cannot obtain rents from establishing reputations, making sound investments or improving the financial infrastructure.[22] As a consequence we conclude that financial repression produces a net flow of rents from the private sector to the

[22] Moreover, if the government uses the funds for its own consumption the production sector is also deprived of funds.

government, while *financial restraint* produces the creation of rent opportunities within the private sector.[23]

Section 4: Policy Examples from East Asia

In this section we show how the framework of *financial restraint* can be applied to understand some of the specific features of East Asian financial development. We will argue that although there are significant differences between them, the East Asian economies Japan, Korea and Taiwan practiced policies that broadly conform with the notions of *financial restraint.*

One notable characteristic of these high growth economies is the high saving rates. It may be surprising then to recognize that all of these economies implemented deposit rate controls. The literature on financial repression (McKinnon, 1974) emphasized the negative effect on saving of such controls. This is indeed easy to observe and understand when real deposit rates are significantly negative. But in East Asia deposit rates were, in general, positive in real terms. It seems that the sensitivity of savings to small changes in the deposit rate when rates are positive is relatively small. In their concluding chapter on financial development in Japan, Korea and Taiwan, Park and Patrick (1994, p. 336) note that "the empirical evidence on the elasticity of saving to real interest rates is mixed and unclear. In none of the three countries is there strong evidence of any significant effect of interest rates on savings behavior."

[23] Because the government is not involved in the actual flow of funds, *financial restraint* does not by itself increase the government revenues. There may, however, be an indirect effect on the government's cost of financing its fiscal deficit. By lowering the deposit rate, the government may encourage asset substitution into government bonds, i.e. it increases the demand for government bonds. The government may use this to increase its borrowing at the given interest rate and thus increase the amount of resources devoted to the government. Alternatively, the government may already have well-defined fiscal needs. In this case the increased demand does not lead to an increase in bonds, but rather to a drop in the bond rate. This has the advantage of lowering the government's cost of debt servicing and the distorting impact of taxation. Note that after World War II, the United States deliberately tried to keep its interest rates lower for this reason.

The development literature has traditionally focused on the adverse consequences of deposit rate ceilings, but in this paper we emphasize their benefits (provided that rates remain positive in real terms). Indeed, all of these economies experienced rising rates of savings while they engaged in the policy of deposit rate controls. We believe that a much more important influence was a change in the incentives of banks. (A reinforcing effect was that depositors care a great deal about the safety of their deposits, which was enhanced by *financial restraint*, perhaps more than offsetting the effect of the lower interest rate.)

During the postwar years, banks were engaged in a remarkable effort to collect domestic savings. In Taiwan the government's encouragement to mobilize deposits was so successful that became a net foreign lender by the end of the 60's. Apart from running an extensive postal saving scheme and instructing the government-owned banks to mobilize deposits, the government did not crack down on the informal sector – a sector that further mobilized domestic savings, especially in rural areas (Adams, Chen and Lamberte, 1993, Cho, 1990, Shea, 1994).[24] In the case of Japan, the zeal of banks to collect deposits seems to have been particularly high. Kitagawa and Kurosawa (1994) and Teranishi (1994) report that in order to physically collect deposits, Japanese banks sent out employees to their clients' offices and homes.

Apart from influencing deposit mobilization, deposit rate controls also affected the prudential behavior of East Asian banks. This affect can be most powerfully seen in the case of Hong Kong and Japan, the two countries that have had a private banking system throughout the post war period. Of all the East Asian economies, the country with the most liberal approach to financial regulation was undoubtedly Hong Kong. And while the government did not control deposit rates directly, it found it acceptable to let banks collude in setting their deposit rates. Lau (1997, p 50) notes that "… the Foreign Exchange Banks Association, headed by the Hong Kong and Shanghai Bank… functions as a deposit-rate-setting-cartel." The net effect of this collusion was that

private banks in Hong Kong were able to capture rents on their deposits, thereby creating a franchise value for banks.

In Japan, the government engaged in a number of policies designed to create and maintain franchise value for banks. Apart from deposit rate controls, the government maintained strict control over the number of banks in the economy, which has remained remarkably stable from the early 1950s to the present (Teranishi, 1994, p 85). It also limited access to alternative saving vehicles, and in particular retarded the development of bond and equity markets (see Teranishi, 1994). During the 1950s and 1960s, the financial system grew at a fast and stable rate of 14.25% per year (in real terms).

Aoki (1988, p 136) shows how the first oil shock severely diminished the margins between deposit and lending rates, which had been high and stable before. After the first oil shock the government policy gradually liberalized the financial market and, from 1975 on, the government gradually abolished deposit rate controls. Weisbrod, Lee and Rojas-Suarez (1992) document the decline in the banks' franchise value throughout the 1980s. They estimate that the return on capital of the city banks fell from over 26% in 1974 to under 5% in 1990. Kitagawa and Kurosawa (1994) furthermore show that net interest income of the city banks fell throughout the 1980s. Interestingly, net non-interest income rose until 1988 and then fell again. In the early 1990s, with the burst of the bubble economy, dramatic losses suddenly became apparent in the balance sheets of Japanese banks, leading to one of the biggest banking crises in history.

The current difficulties of the Japanese financial system are often broadly interpreted as evidence against government intervention in the financial sector and, in particular, that the deposit rate controls and restrictions on competition are adverse policies. We would argue, however, that these events can be interpreted within the framework of *financial restraint* – that the financial sector functioned effectively while the government

[24] In Korea, similarly, managers within the government-owned banks were given strong incentives to mobilize deposits (Cho and Hellmann, 1994).

practiced these policies but unfortunately the government poorly managed the transition to a more competitive environment.

Prior to the 1973 oil shock, Japan was practicing *financial restraint*, where banks faced a stable number of competitors and deposit rates were controlled. This system began to unravel during the 1970s, as the expansion of government bonds increased the substitutability between deposits and other financial assets. The government began a steady process of deregulating deposit rates. In light of declining franchise value, banks changed their loan portfolios, in particular by investing in high risk real estate. The decline in franchise value was not immediately evident, due to temporarily high profits in non-interest related activities (which was derived from business activities that were partly related to the real estate bubble). With the bursting of the bubble, however, it became apparent that financial liberalization had changed the true profitability of these banks.[25] In addition the pattern of loan losses strongly suggests some moral hazard on behalf of the banks – i.e. that they responded to the newly competitive environment by gambling with their banks' assets.

We argue that the Japanese government did not err in establish a set of policies consistent with *financial restraint* in the early post-war period. Rather, those policies contributed to Japan's economic success during the high growth period. Where the Japanese government did err, however, was in not having a clear conceptual model and instead relying solely on a series of "pragmatic" steps to respond to issues as they arose. In response to the macroeconomic shocks of the 1970s, the Japanese government gradually evolved its policies from a regime of *financial restraint* to a more competitive regime. This regime required a new basis of prudential regulation, in which we believe capital requirements should play an important role (See Hellmann, et al 1994). The Japanese government erred by not increasing the capital requirements of the banks at the same time as it was allowing more competition and thus reducing the franchise value of the banks. If the Japanese government had a clear conceptual model of what it was

doing to achieve the goal of prudential regulation, these steps would have naturally followed.

Apart from the effects on deposit mobilization and incentives for prudent bank behavior, we argued that the government policies can have a significant effect on the governance structures in the financial systems. Taiwan provides a simple example of how the government can influence the *quality* of financial transactions. Wade (1990) and Shea (1994) report that postdated checks were the most common financial instrument of the informal sector in Taiwan. The government, however, imposed criminal (including jail sentences) and not just civil penalties for those who did not honor their checks. This created a powerful contracting instrument between parties in the informal sector, as it allowed parties to make promises of repayment more credible. This is clearly a policy in line with the objectives of the Market Enhancing View. One of the real hazards of lending relationships in the informal sector is the difficulty in enforcing contracts and the lack of collateral. This policy effectively addressed both issues.

Another interesting instance where the government designed or improved the governance in the financial system relates to the Korean design of preferential loan programs. Once a government decides to pursue an industrial policy with a directed credit program, one of the key challenges of implementing such a program is to design rules that efficiently allocate these preferential loans. As the experience of many developing countries has shown, such a process can easily become fraught with inefficiencies. The Korean government developed a system where directed credits are directly tied to export orientation and performance. This provided an effective governance structure as funds were allocated on the basis of a performance criterion that is easily observable and difficult to manipulate. Furthermore, as Cho (1997) discusses, the continued access to these preferential interest rates was contingent upon continued export growth. This can be thought of as an alternative method of monitoring

[25] Indeed, a study by Ueda, reported in the Economist (1994), suggests that the value of deposit rate

borrowers – only those that continued to achieve above a high threshold were able to continue to borrow funds.

The role of the government in creating efficient institutions is also visible in Japan, where the government played a role in designing institutions that support the financial markets. A book by Aoki and Patrick (1994) describes the "Japanese Main Bank System" as a complex system of economic relationships between Japanese firms, banks and the government. At the core of the system are long-term relationships between firms and banks and among banks that allow for an efficient sharing of various monitoring tasks and that provide strong governance control; these relationships occur among private profit-oriented agents. In a chapter of the book, Aoki (1994) then shows how the government supported the economic relationships between these private sector agents. In particular, he shows how the relationships between a main bank and a firm could potentially be disrupted if banks failed to live up to their promises to monitor the performance of firms. Put differently, there needs to be some monitoring of the monitor – or incentives – for the monitor not to shirk. Incentives depend on the rents obtained from monitoring. Aoki argues that the regulatory framework in Japan, particularly deposit rate controls, entry restrictions and discretionary branch licensing, allowed the government to influence the banks incentives and thereby sustain the Main Bank equilibrium.

These examples thus show how governments in East Asia took policy actions that enhanced the operations of the market, rather than just substituting for the market. It should, however, be remember that the type of actions and the extent of intervention differed significantly across the East Asian economies and across time. We therefore emphasize that the Market Enhancing View and *financial restraint* provide a set of principles for the government to enhance the effectiveness of a decentralized and competitive financial market. The implementation of these principles, however, needs to be adapted to the particular set of institutions of the country.

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controls, estimated at 650 billion Yen in 1980, had decreased to 70 billion in 1990 and vanished by 1994.

Conclusion

In this paper we have shown how the Market Enhancing View can be applied to the problem of financial market regulation. Unlike the Market Friendly View, we take the perspective that laissez faire competitive markets are not necessarily efficient. We focus on three central issues – deposit mobilization, resource allocation, and bank monitoring of firms. We find that banks have too little incentive to invest in deposit mobilization because these investments create a public good – information about attractive markets for subsequent entry. Furthermore, we find that the moral hazard problem in banking – where banks can impose losses on depositors and/or the governments – results in banks having excessive incentives to gamble and loot. Finally, because banks can exploit these risks, they also have too little incentive to invest in monitoring the borrowers of their funds.

Unlike the Developmental State View, however, we do not recommend that the government take direct action in financial markets by creating a government run financial sector. Instead we show how a simple set of policies – namely deposit rate controls and restrictions on entry into banking – create positive incentives that work towards aligning private incentives of banks with socially efficient incentives. Creating temporary "patent protection" of newly entered markets induces banks to invest in deposit taking infrastructure in rural areas. The flow of rents from the above policies creates franchise value that induces banks to refrain from moral hazard. Once banks are operating as long run agents, they have appropriate incentives to invest in firm specific knowledge to enhance their monitoring of firms.

We explain how this set of policies represents the Market Enhancing View: these policies use the entrepreneurial energy and informational efficiency of decentralized markets; the government does not interfere with the actual allocation of resources, but

rather provides conditions under which private agents undertake socially beneficial actions. This, we argue, is fundamentally different from the more traditional view of a government that uses taxes and subsidies to increase economic efficiency because our view recognizes the limited capabilities of government to implement effectively complicated policy mechanisms partly because of the limited information at its disposal. Rather, *financial restraint* utilizes simple and relatively transparent policy rules (modest deposit rate controls and restrictions on entry) to achieve policy objectives in the financial sector.

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