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มองโลกยุคต้นของสถาบันการเงินสหรัฐฯ
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Should Thailand Have Bank Based or
Stock Market Based Financial System ?

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the BA model leave the investment in corporate investment to other institutions and convert short-term deposits into mortgages, consumer loan and commercial banking. Hence, what can we learn from the two models for Thailand financial development ?

It is vital to recognize that because Thailand financial economy is far from complete and perfect, capital market is not an immediate best institution available. I argue that both capital market and bank have its own overlap important roles in building up Thailand newly agro-industrialized economy from past to future. On one hand, Thai oligopolistic banks have long played a key role to nurture the emergence of credit worthy high net worth mercantile class people and have provided financial stability as pre-conditions for country economic development (see figure 1). Thai households who are largely unsophisticated have long enjoyed *inter-temporal* risk sharing provided by the banks to smooth an unexpected exogenous shock to the economy. As backbones of Thai economic structure, entrepreneurs who are mainly small to medium parochial firms have extensively been served for liquidity and payment service by the banks even during severe worldwide financial distress environment. Obviously, banks themselves have always gained abnormal profits owed to their natural monopoly characteristic, while the regulators have easy time to monitor and lead through caramelized banking clubs. The critical question is how the regulators can monitor this market failures. Despite of threaten in disintermediary, the future of Thai banks relying on cultivating their distribution, networking and proprietary information would remains in low degree of monitoring industry characterized as static, proven low technology, labor intensive, simple evaluation business (e.g. agricultural product, food processing, textile, shoe industry, assembly products, hotel, utility, consumer loan, mortgage, etc.)

On the other hand, no one can deny that the 1990's growth in SET has assisted a competitive financing resources for Thailand to transit from emerging country to newly agro-industrialized country (NAIC)⁴. SET also facilitates an allocation role for cross sectional or *intra* risk sharing opportunity for domestic as well as foreign investors and speculators. The variety of markets and instruments means less risk averse individual or institutes would have more opportunities to optimally diversify according to its risk appetite. The trading price would act as price discovery information and positive externalities for resources allocation. The continuous checking via trading price would be suitable for new complex business environment. In addition, the cartelized brokerage memberships in SET have long been collecting economic rents from membership fee, listing privileges and propriety trading transaction information, but have all the incentive compatibility with the public to nurture the market and prevents it from collapse. But the

⁴ Because of its large agricultural sector in comparison to other newly industrial countries : Korea, Taiwan, Hong Kong and Singapore, Thailand should be called a newly agro-industrialized country (NAIC) according to Leehtam [1991]

recent incidents such as Sia Song scandal, very high concentration of all mutual funds stock holding, etc., indicate some imperfections in SET. Apart from adding noises to financial system, SET should facilitate for *high* degree of monitoring industry characterized as dynamic, high growth, rapid obsolete technology, high research and development, long life span, complex business evaluation (e.g. services, state owned enterprises, telecommunication, software programming, hardware computer peripherals, biotechnology, etc.) In short, depending on the stage of economy and its structure, capital market and bank may play very meaningful role in building up Thailand financial system in small and opened economy.

The plan of the paper is as follows: the next section is for theoretical perspectives and regulatory issues for banks; Section III is for theoretical perspectives and regulatory issues for stock markets; Section IV gives policy maker some implication; Section V concludes.

II. Theoretical Perspectives and Regulatory Issues for Banks :

If a financial market is complete in Arrow [1953] and Debreu [1959] sense and perfect in Modigliani-Miller [1958] spirit, the economic decisions (e.g. to raise fund, risk allocation, etc.) are not depended on financial structure and financial intermediaries are irrelevant. From standard theoretical finance text book, this competitive capital (e.g. stock and bond) market would yield Pareto optimal⁵ in long run steady state equilibrium.⁶ But in reality, since the market, particularly an emerging market like Thailand is far from complete and perfect, the importance of financial intermediary like bank can not be overemphasized. These are as follows :

A. Bank's Theoretical Perspective : Why do banks exist ?

Though banking institutions originated in the city of Genoa, Italy in the 12th century AD, not until recently that theories of banking as financial intermediary are well understood.⁷ As argued by Davis and Mayer [1991] and Merton and Bodie [1995], there are at least four distinguished main theories on the rationale for banks as intermediation based on their functional perspective as supposed to Hellwig [1990] viewed as the structure of the financial institutions. Aside from identifying regulatory and policy issues for discussion in subsequent section, the theoretical issues are presented as follows :

1. Liability Services - Delegated Monitoring to Deal With Incentive problems :
Extended from Townsend [1979] original paper, Diamond [1984] modeled analytically banks

⁵ A Pareto optimal allocation is an allocation such that no consumer can be made better off without making another consumer worse off.

⁶ See for example, Ingersoll [1987] and Merton [1992] for text book

⁷ A comprehensive survey of recent theories may be found from Bhattacharya and Thakor [1992]

acts as delegated monitors of borrowing firm from credit rational sake. Essentially, the theory based on minimizing the cost of monitoring or checking information usefulness on writing debt contract for resolving incentive problem between borrower and lender. To avoid duplication of monitoring problems for adverse selections and moral hazard concerns, it is clearly efficient for one party – bank institution to perform as a “delegated monitor” of borrowers on behalf of the depositors – multiple small parties. Banks can specialize and develop an expertise in assessing the economic condition of prospective borrowers. This arises the issue of banks as natural monopoly and efficiency in propriety information acquisition. Diamond [1989, 1991] has later extended his paper to include the borrowers’ reputation effects to solve incentive compatibility problem in multiperiods context.⁸ The longer a borrower has been servicing its loans, the more likely it is a viable business and its owner is trustworthy. This brings the topic of banks’ ability to make credible long-term relationship commitment which would be discussed along with natural monopoly issue in next section.⁹

2. Asset Services – Liquidity Provider in Pool Resources and Subdivide Shares : At microeconomics level, Diamond and Dybvig [1983] is the first to study on liquidity consideration for bank rational existence in one generation model. Basically, banks transform illiquid assets (bank loans for borrower’s long term capital investment) into liquid liabilities (banks’ deposit). The product of these services is a diversified portfolio of loans that can not be evaluated easily by third parties. This creates the classic “lemons” problem for the sale or securitization of a bank loan to a third party.¹⁰ Moreover, providing both asset services and liability servicing resulting in holding illiquid assets and liquid liabilities obliges the rationales both for the existence of banks and for their vulnerability to run. The subject of inherent bank run phenomena which is very critical at macroeconomics level would be dealt in subsequent section. It is interesting to note that Von Thadden [1991] conferred that bank holding of illiquid assets should be regarded as a joint product of the asymmetric information problems in financing borrowers’ project and comparative advantages in screening and monitoring borrowers. And Schreft and Smith [1994] have examined an economy where monetary and financial market factors determine the level of capital accumulation and real development.

3. Liability Services : Corporate Control – Managing Risk : Since it is impossible to write a complete financial contract specifying the actions of borrower in every events, the agency problems in Jensen and Meckling [1976] and Fama [1980] sense do exist. Banks as the lenders of long term debt are vulnerable to exploitation by borrowers. Hellwig [1977] advised the threat

⁸ for more discussion see Townsend [1990]

⁹ An interesting study on ‘pyramid of delegated monitoring’ may be seen by Diaz-Gimenez et al [1992].

¹⁰ See Akerlof [1970]

Goodhart [1994] using corporate control argument favors strong bank based financial system to transform the huge, monopolistic state owned enterprises to private enterprise in transitional country like Vietnam or Poland by financing and becoming insider equity holder. Second, for advanced economy country, banks may play a role in many areas. Allen [1992] analyzed that banks are more appropriate in traditional financial intermediary for competitive, mature, slow growth, short business cycle, proven production technology and consensus in management industry like agriculture, textile, shoe manufacture, food processing, foundry, wholesale and retail trades. The industry may be classified as *low-intensity monitoring*. Alternatively, banks could become specialized bank, particularly in commercial bank and investment bank competing with security house globally. According to Hayes III [1993], as the result of financial deregulation, banks income may be increasingly on underwriting and proprietary trading (e.g. on foreign exchange and derivative market). Third, in emerging market banks relative important would depend largely on the future of its macro economic structure and the current stages of economy. These issues are related to policy issues presented later on.

2. Bank Run¹⁵ : Though banks are the heaviest regulated industry, bank run is always the worst nightmare to all regulators because of possible domino effect threatening to the whole financial system collapse. Indeed, the severe economic crisis has been always preceded with the banks' failures, not the stock market crash.¹⁶ Basically, bank runs could be seen into two aspects : pure run event and information based run. First, in Pareto-ordered Nash equilibria setting, Diamond and Dybvig [1983] and extended by Waldo [1985] and Qi [1994] asserted bank run as *pure run* event which caused by sunspot or random economic shocks for liquidity consideration. Given the possibility of bank runs, depositors maximize ex ante expected utility to hold currency to mitigate the impact of "prisoner's dilemma" or "being the last in the line." In other words, the main threat to a bank is bad luck as suggested by Black [1993]. Consequently, banks has to underinvest some liquid asset for safety leading to inefficiency in operations. Thus, "too-big-to-fail" policy, the deposit insurance and central bank as liquidity providers of last resort may be good preventive measures to cope with the panic problems and banks' inherent instability. Second, Jacklin [1989] has distinguished *information-based bank runs* from pure bank run. Since the loans or asset portfolios which banks create are most cases non-marketable and difficult to value by outsiders, debt holder or depositors may believe banks are riskier than before in the midst of changing in economic environment and uncertainty of a possible information externality or "contagion" effects. In this case, setting an insuring mechanism like deposit insurance would

¹⁵ See comprehensive review on bank run by Kaufman [1994] and Dewatripont and Tirole [1994]

¹⁶ See more completed discussion by Feldstein [1991]

mutual assistance during crisis since the confidences on banking industry as a whole would be affected by bank runs or failure.²¹ Second, Diamond [1984] argued that moral hazard problem within the bank decreases as the bank size increases because the equity manager would have no incentive to induce the bank to fail. This poses a questionable balance on the diversified bank ownership and professionalism in bank management policy. Similarly, Yanelle [1988, 1989] had shown that a bank with lots of depositors and diversified loans would enjoys a smaller probability of failure. As the network externality, bank size is self-fulfilling. Return to scale lead to the optimality of a single active bank, but after monopolized deposits, the bank would tend to abuse its market power against small depositors and entrepreneurs. Thus, regulator have a crucial role to play in this market failure.

III. Theoretical Perspective and Regulatory Issues for Stock market :

Equities and bonds were first developed during the sixteenth century long after banking industry.²³ The separation between ownership and managerial arose since then. Equity or stock holders would have a residual right to claim on the company's value. Due to the limited liability nature of the stock holders, the stock holder payoff would be either zero or the residual value. Subsequently the capital market has been the central paradigm in financial exchange economy because financial markets facilitate the transfer of funds between borrower and lenders. Thus, the stock exchange market serves at least three theoretical functions as suggested by Merton and Bodie [1995] as follows :

A. Stock Market's Theoretical Perspective : Why do stock market exist ?

1. Allocation of Resources - Asset (Exchange) Services as Pooling Resources and Subdividing Shares²⁴ : In the *certainty* world, the complete and perfect financial exchange market would improve the allocation of resources in the economy since an individual's saving need not equal his investments on a period by period basis. In equilibrium, the market prices (e.g. interest rate) serves as the determination of the consumption-saving choice for individual in Von Neumann and Morgenstern [1947] maximizing utility framework to equate the individual time preference to the market rate of return. In other words, the simple riskless financial market facilitate the efficient allocation of resources through time. At the same time, the market equilibrium would

²¹ See more discussion on coordination among banks by Gorton [1985,1989], Calomiris [1989,1990,1991]

²² Since bond markets are relatively small in Thailand, the focus of theoretical as well as regulatory issues discussion would be on bank and stock market only.

²³ The Russia Company found in 1553 was the first to issue joint stock companies (see Morgan and Thomas [1969, p. 12]); the first true bond was the 'Grand Parti', issued by the French government in 1555 (see Walmsley [1988, p.3]).

²⁴ See more discussion in standard corporate finance text like Copeland and Weston [1992]

provide Fisher separation [1930] where the investment decision and consumption decision can be optimally done into two independent steps. The important implication is the investment decision can be delegated to managers. However, if the financial market pricing is distorted, then the delegated decision between owners and managers would not be possible optimally.

2. Allocation of Risk - Liability (Exchange) Services as Managing Risks²⁵ : In the *uncertainty* world, Arrow [1953] and Debreu [1959] were the first to consider both resources and risks to be allocated efficiently whereas Markowitz [1952] developed a theory of portfolio selection. Individual's portfolio choice of state securities may be interpreted not only by an investment objective, but also by the degree to which individual prefers to bear various risks. After Tobin [1958] provided insight in "two funds separation", Sharpe [1964], Linter [1965] and Mossin [1966] provided classical Capital Asset Pricing Theory (CAPM) later extended by numerous researchers.²⁶ One of the chief implications is the risk component which can be classified into 1) non-diversifiable or systematic risk and 2) diversifiable or un-systematic risk. Since investor should hold diversified portfolio, the price of securities should be reflected only on the systematic risk at the given available information consistent to the notion of informational efficiency market by Fama [1970, 1991].²⁷ Stock market would crosssectionally allow efficient risk sharing because representative economic agents (e.g. investors, speculator, broker) have incentives to gather information which becomes reflected in stock price as suggested by Diamond [1967]. These information prices provide signals for the efficient allocation investment as claimed in noisy rational expectation framework originated by Grossman and Stiglitz [1980], Grossman [1976, 1978] and allow effective managerial incentive schemes as mentioned by Holmstrom and Tirole [1990]. Risk-averse individuals are better-off by allowing opportunities to tailor made their portfolio according to their risk appetite. In essence, in comparison to banking infrequent checking, stock market facilitate the continuous checking or monitoring role on the true value of the firms as a public good, informational externality. This implicates on which companies ought to be listed in the stock market and the role of regulators in the existence of corporate insiders and market manipulators.²⁸

3. Transaction Service - Clearing and Settlement : The transaction service allows risk to be exchanged. An organized market place like stock market benefits from economy of scale or

²⁵ See more discussion by Mason [1995]

²⁶ See comprehensive reviews from Ferson [1994]

²⁷ See comprehensive reviews from Ball [1993]

²⁸ See opinion poll surveys by World Economic Forum [1995] and discussion by Le land [1992] and Chatterjea, Cherian and Jarrow [1993]

of the world would cause prices to change in such a way as to increase the allocation of risky capital to that sector. The allocational price change facilitate a capital flow and create noise in the signal extraction process. Grossman added that because of the failure to sell claims off income stream and the failure to buy claims to future consumption stream, the incomplete equitization³⁰ of risks occurs and causes trade at the expense of inefficiency of passive strategies. In general, since countries have non-synchronized business cycles and are subject to different political risks and to different shocks to their investment opportunities, allocational price moves are relatively more important in global market. Cross-country reallocation of capital is usually more important than within-country reallocative capital flow. Hence, though the answer for the stock market crashes may lie in between the two extremes, the fact remains that stock market is subjected very much to wild swing price movement due to exogenous economic and political events. The prudent regulators ought to provide tools for risk management against systematic or *undiversified* risks for all investors³¹ and/or may prepare for occasional downturns by providing liquidity of last resorts as necessity. It is worth noted that the fall in risky asset price is normally started by a feedback effect, perpetuated in part by forced sales by illiquid investors, and precipitates into financial crashes. The worldwide or country specific recession would historically begin with, not the stock or currency market crash, but the fall of banking system which stops providing liquidity to the whole economic system as noted by Feldstein [1991].

3. Market Manipulation - Transparency, Integrity in questions : According to World Economic Forum [1995, pp 550-1], Thailand has been ranked among the bottom five stock markets which are prone to insider trading despite of the enactment of the Security and Exchange Act in 1992. The price of the stock are also said to be barely reflect the real value of companies on average. This distorts the basis principle of corporate finance where managers may be delegated to maximize share value on the behalf of all investors. Principal-agency problems in Jensen and Meckling [1976] sense would naturally arise because complete incentive contracts can not be done.³² Persistent in severe asymmetric information market may lead to market collapse and chronic liquidity problems in the market since uninformed foreign as well as domestic investors would be V2 away from this "lemon" market due to adverse selection problems. In addition, Allen and Gale [1993] has shown that this limited participation can amplify the effect of liquidity trading relative to full participation consistent with well-documented empirical finding that thin market are more volatile than thick ones.³³ Without corrective and preventive measures into these

³⁰ Complete equitization is not the same as the complete contingent claim market. Complete equitization of risks is the situation where all individuals have sold claims to all their future consumption and investment needs. See more discussion by Grossman [1994, pp 6-9].

³¹ See Hoontrakul et al [1994] for opion poll on SET put option among Thai investors.

³² See more discussion on security design by Boot and Thakor [1993] and Allen and Gale [1994b]

³³ See more discussion by Pagano [1986] and Williamson [1991]

problems, the bigger the SET the more disaster is waiting to destabilize the Thai financial economy. As the consequence, the regulators should constantly monitor material information disclosures in financial market to ensure transparency, integrity and fairness for all investors to make better decisions in exposing to unsystematic or diversifiable risks for return instead of being proactive in the economic event.

IV. Discussion and Implications for Policy Maker :

Decision making in policy is balancing acts among constituencies. Apart from political considerations, a prudent policy maker must recognize adverse as well as desirable consequences, particularly in modeling financial system for the country. The policy issues for stock market and bank based financial system are as follows :

1. Financial Liberalization Gradualism³⁴ : must continue for the sake of prudence and stability. This is the only viable alternative to enable Thailand to cope with rapid market fluctuation. First, as a small opened agro-industrialized economy, Thailand should treasure the health and stability of financial systems provided by Thai banking industries against increasingly high volatile exogenous macro economic shocks outside of Thailand. This year Mexican crisis, last year fall of Baring investment banks and the 1992 Gulf War are just vivid examples of such shocks. Second, not only the growth but also the quality and (operational and informational) efficiency of the stock or capital market development is the solution to compete internationally for fund to finance Thailand economic growth in long run. The only mean is to relax all institutional constrains (e.g. fixed commission, widening price limit, reduce barrier to entry and exit, encouraged foreign participation, etc.) as soon as possible because unlike banking system, the fund flow into stock market is very fluid and competitive worldworld. Third, interestingly most of the direct investment money and trade are significantly increasing among the Asian members where economic structure are compatible.³⁵ The urgent need for rapid and total liberalization may be resilient from World Trade Organization pressures, but the self-complacence for Thai financial system can not be tolerated because of increasing financial market globalization.

2. Short or Long Termist : The theoretical literature reviewed above prominently stock market participants as short termists³⁶ and banker as long termists.³⁷ On one hand, because the stock market is naturally filled with noises from inherent uncertainties, all participants are short termists. First, stock analysts rarely can predict companies performance future more than one year without subjective assumptions. Second, regardless of nationality, while individual investors react

³⁴ See more discussion by Vichyanond [1994, pp 81-86]

³⁵ See more discussion by Harris [1995]

³⁶ See more discussion by Demirag [1995] and Keane [1995]

against the second market are normally side affect from market delinkages and secondary poor quality listing. But I argue that with or without additional exchanges the quality firms always have a cross border listing option as witnessed by recent listing of Total Access Communication Pte. in Singapore market. In addition, though the transparency problems in trading process seem to be corrected since the implementation of computer trading, the problems of quality stock listing are clear evidenced by high concentration in stock holding by institutional investors as studied by Leksrikul [1995]. About 80 percent of all mutual fund investment, for instance, is concentrated in less than 30 stocks cross only five sectors⁴⁵ out of nearly four hundred listed companies. A partial answer would be the quality of the securities in SET for investment is limited. Static or sunset industry like agricultural, hotel and textile sectors are the least active with no or negative growth in their index return; the dynamic industry like telecommunication is very active with high growth index return. This is quite alarming for regulators to step up the selection process to be compatible to the nature of stock market before SET would be a dumping ground for unwanted companies. Perhaps, the market restructure in brokerage business (eg. merger and acquisition) may solve this informational production process and stock listing process in the market to improve trading activity since half of the SET board is brokerage members.

V. Conclusion :

Though a narrow set of selective issues are focused, I hope this paper will contribute to the broader debate on governmental policy of the organization of financial system in Thailand. Theoretical perspective, issues of risk sharing and information, concern of systematic risk and welfare properties are reviewed and discussed. In order to compare with other countries, functional categories rather than institutional categories are examined. On one hand, at economic rent cost Thai oligopolistic banks has long nurtured Thai fragile financial system by providing *inter-temporal* risk sharing, asset and liabilities services. Aside from continuing to support Thai financial stability, Thai banks future may be lied on cultivating their distribution, networking and proprietary information in static, proven technology, simple evaluation business (e.g. agriculture, low technology industry, etc.) Conclusively, I argue that Thai banking system must be preserve to nurture Thai fragile financial economic system and to cultivate the emergence of small entrepreneurs as the backbones and the precondition for economic development, particularly in rural areas. On the other hand, also at economic rent cost, monopolistic Security of Exchange Thailand (SET) may virtually give *cross sectional* risk sharing investors, may effectively improve efficiency in resources allocation and may continuously facilitate monitoring services by price recovery as positive externality. Apart from adding noises to financial system, SET listing policy

⁴⁵ The five sectors are as follows: 1) Bank, 2) Finance and Security, 3) Telecommunication, 4) Building and 5) Property Development.

should be for dynamic, complex evaluation business (e.g. services, state-owned enterprises, high technology industry, telecommunication, etc.). It is noted that because the degree of monitoring industries is continuously changing over time in responding to technology innovation, economic and social structure, the listing criteria policy should be continuously updated. In short, as a small, opened and agro-industrialized economy, Thailand needs to balance the importance of both banking system and capital (and/or stock) market. The merits of both bank based and stock market based financial system for each stage of economy must be recognized and integrating financial liberalization plan together with macroeconomics national plan should be implemented.

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Figure 1 : Theoretical Source of Capital for Firm

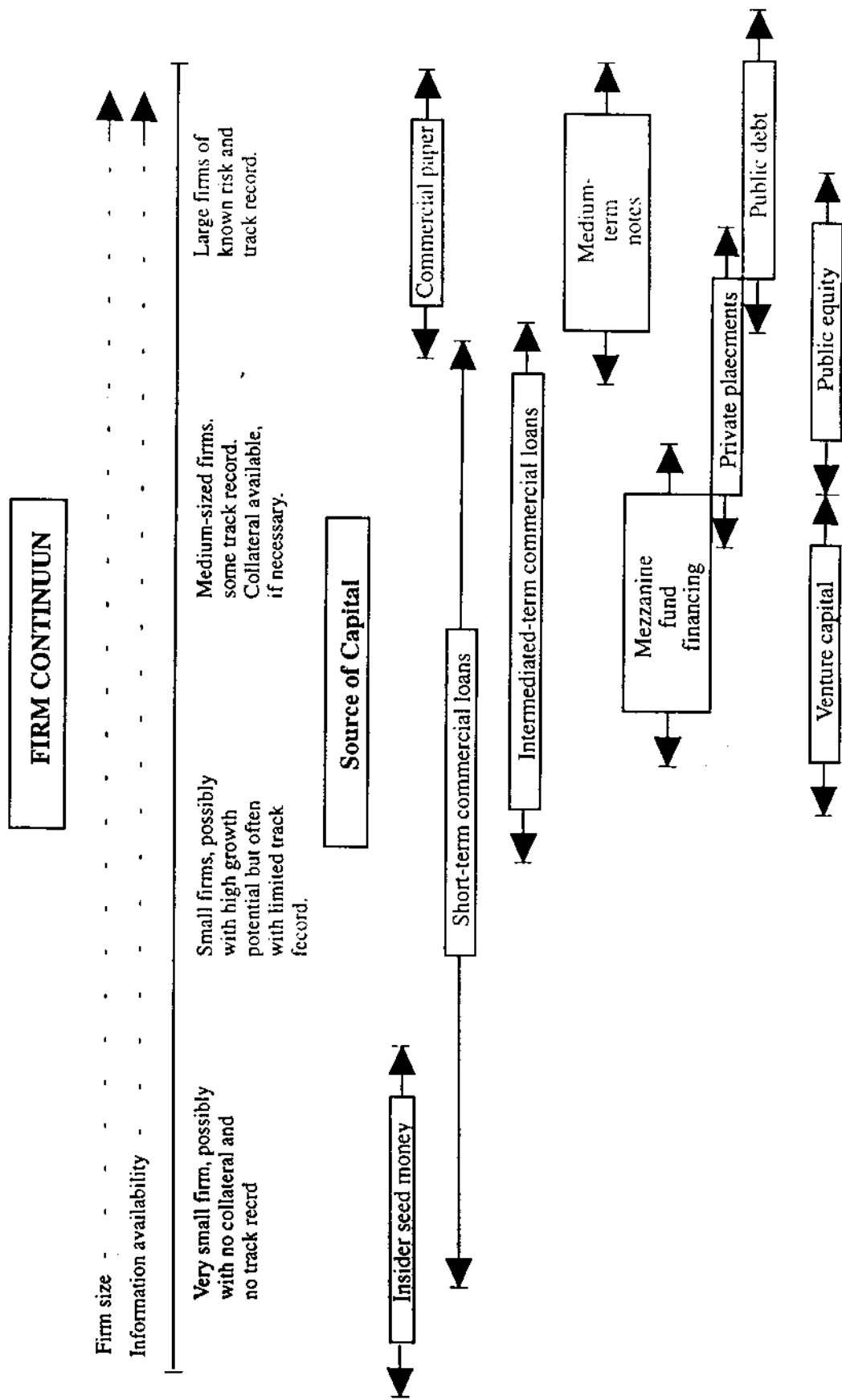


Table 1 : Relative position of banking assets, equity and bonds (1994)

	Bank assets		Stockmarket cap		Bond market	
	\$ billion	% of GDP	\$ billion	% of GDP	\$ billion	% of GDP
China	388	76	44	9	33	7
Hong Kong*	257	195	270	205	11	9
Indonesia	90	57	47	30	9	6
South Korea	283	75	192	51	161	43
Malaysia	70	100	199	283	40	56
Philippines	34	54	56	87	25	39
Singapore	115	186	135	217	45	72
Thailand	153	110	132	94	14	10
Total	1,390	92	1,073	71	388	22
Germany	3,255	169	471	25	1,719	90
Japan	7,106	152	3,720	80	3,443	74
Britain	2,257	216	1,210	116	366	35
United States	3,620	54	5,082	75	7,429	110

* Includes only HK\$ denominated assets

Source : World Bank

Table 2 : The Revocations of Licenses, Mergers and Acquisitions of Finance and Securities Companies

Number of Companies			
Year	Finance Companies/Finance and Securities Companies	Securities Companies	Total
1982	112	15	127
1983	109 ^{1/}	15	124
1984	104 ^{2/}	15	119
1985	100 ^{3/}	15	115
1986	98 ⁴	11 ^{6/}	109
1987	94 ^{5/}	11	105
1988	94	11	105
1989	94	11	105
1990	94	11	105

Notes : 1/ 3 revocations of licenses
2/ 5 revocations of licenses
3/ 4 revocations of licenses
4/ 1 finance company and 1 finance and securities company merged to form a new finance and securities company ;
 1 revocation of licenses

5/ 2 finance companies, 3 finance and securities companies and 1 credit foncier company merged to form a new finance and securities company; 1 finance company and 2 credit foncier companies merged to form a new finance and securities company

Source : Bank of Thailand

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