Separation versus Integration: On the Efficiency and Effectiveness of Regulation of Commercial Banks

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Symposium on the Reform of State-Owned Commercial Banks
School of Economics and Management, Tsinghua University
Beijing, April 17, 2004

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A Preview

- The necessity of public regulation and supervision of banks
- Separation versus Integration (Fenye jingying versus huenye jingying)—What are the benefits and costs of separation (fen) versus integration (he)?
- Separation can occur at two levels—inter-sectoral versus intra-sectoral:
  - Separation among commercial banking, investment banking/securities brokerage, and insurance
  - Separation within the commercial banking sector itself--separation/specialization can simplify the needed public regulation and supervision and also reduce moral hazard
  - Separation enables differentiated regulation and supervision of the different types of banks
- Concluding remarks

Why Do Commercial Banks Need Public Regulation and Supervision?

- What is the public interest in the regulation and supervision of commercial banks?
  - The public interest arises from the large negative externalities that misbehavior and failure of individual banks may generate and that may potentially affect the solvency and liquidity of other banks and eventually the stability of the entire financial system.
  - Such externalities may involve the starting of a panic on the part of depositors of other banks, whether justified or not, potentially leading to runs on otherwise sound financial institutions; failure of clearing and settlement of payments and transfers through the failed banks; the domino effects of the sudden disappearance of liquidity on the part of the customers (firms and households) of the failed banks; and generally undermining the confidence of the common citizens in the financial system as a whole.
  - Historical experiences of the contagion of bank failures lead to the rise of bank regulation and supervision.

Public Regulation and Supervision are Necessary Because of:

- **Asymmetric information** between the depositors and the banks. Depositors, especially small retail ones, are unwilling (too costly) and unable (lack of access and transparency) to acquire adequate information to evaluate the safety and soundness of the competing banks and are susceptible to rumors with or without substance. There is a need to protect the public through at least licensing (pyramid schemes are very common in developing countries) and standards for information disclosure and transparency.

Public Regulation and Supervision are Necessary Because of:

- **Moral hazard** induced by the **low capital ratio** (or equivalently, high leverage) of the banks. There is said to be moral hazard when the negative consequences of (possibly hidden) actions, including excessive risk-taking, is borne in whole or in part by others (risking "other people's money"). A capital requirement of 8% of assets, as recommended by the Bank for International Settlements (BIS)—an increase from the original 3%—is still far too low, in and of itself, to provide an adequate buffer for potential loan losses and to discourage moral hazard (investing in highly risky assets) on the part of the owners and managers of the banks.

Public Regulation and Supervision are Necessary Because of:

- **Moral hazard** induced by the existence of explicit or implicit **deposit insurance**. Deposit insurance encourages moral hazard on the part of the depositors—they have no incentive to differentiate between good banks and bad banks adequately. Deposit insurance effectively enables an insured financial institution to attract deposits with sovereign credit, regardless of its own financial conditions. Thus, deposit insurance also implies the existence of significant contingent liabilities resulting from bank failures to be borne by the government and ultimately the taxpayers. If there were no deposit insurance, either explicit or implicit, then the depositors will have to watch out for themselves and the government will have little or no contingent liabilities, the case for public regulation and supervision will be significantly weakened. Of course, for financial institutions without retail deposits, such moral hazard does not exist.

Public Regulation and Supervision are Necessary Because of:

- The status of the central bank or the government as **the lender of last resort**. The central bank and/or the government may have to rescue banks and/or their depositors. The central bank and the government therefore have an interest to establish and enforce rules of bank behavior that reduce the probability of bank failure.

The Meaning of Efficiency

- Efficient regulation and supervision imply regulatory requirements that are simple, inexpensive and easy to implement, readily enforceable, and minimally disruptive of the normal operations of a bank, but are sufficient to detect and identify problems well before they grow to threaten the safety and soundness of the bank and possibly cause a widespread systemic failure.
- Efficiency is subject to the ability to maintain a given level of overall safety and soundness of the entire banking system.
- For any given structure of availability of information, efficiency depends on the precise **design** of the structure of the financial system—**some systems can be more efficiently regulated than others**.

The Separation of Commercial and Investment Banking (Glass-Stegall)

- The exploitation of "insider information." The investment banking/securities brokerage operation can take unfair advantage of information available to the commercial banking operation and vice versa. Will the firewall work?
- Potential conflicts of interest between the investment banking and commercial banking sides of the business (see the WorldCom example below).
- Possibility of asset transfers among units in the different sectors to avoid detection of non-performing loans and other hidden liabilities by the regulators. (E.g., non-performing bank loans can be transferred to the insurance arm or a partnership organized by the investment banking operation). There are greater possibilities of hidden information and intra-group transactions without Glass-Stegall type separation..

The Separation of Commercial and Investment Banking (Glass-Stegall)

- The bundling of financial services provides opportunities of unfair exercise of market power (although sometimes bundling of services can also hurt the firm itself as well).
- One can also envision the commercial banking operation promoting loans aggressively to enable investors to purchase securities being underwritten by its investment banking operation.
- There will be more "non-arms-length" transactions. Are they good or bad for the financial system as a whole?

The Enron Case

- In the famous Enron case, the commercial banking arm of J. P. Morgan Chase, in order to help its investment banking arm win the mandate to restructure Enron's finances, extended a "bridge loan" to Enron, which was defaulted. (By contrast, Citibank declined to extend a "bridge loan" and hence "lost" the deal to J. P. Morgan Chase and saved itself more than US$1 billion.) If investment banking were separate from commercial banking, J. P. Morgan Chase would not have made this last "bridge loan" and suffered its loss.

The WorldCom Case

- A worse prospect is for the investment banking arm to underwrite and promote securities for a firm that it knows is deteriorating financially in order to repay and rescue the loans made by its commercial banking arm. For example, in early 2001, J. P. Morgan Chase, Citigroup (through Salomon Smith Barney), Bank of America and Deutsche Bank sold US$12 billion of debt for WorldCom to outside investors even as they saw increased risks and privately downgraded the company without warning the public of the risk of deterioration in its offering documents. A former Treasurer of WorldCom reportedly told the Citigroup that if its commercial bank would commit US$800 million to the US$3.75 billion line of bank credit for WorldCom, it would make Salomon Smith Barney a Co-Manager of the debt issue, enabling it to earn an extra US$20 million in fees (New York Times, March 17, 2004).

Regulation with and without Glass-Stegall

- Regulation and supervision are already difficult enough in China, even with Glass-Stegall type separation of commercial banking, investment banking/securities brokerage, and insurance.
- Regulation and supervision are likely to be even more difficult in the absence of Glass-Stegall type separation.
- The question is whether having a one-bank holding company or universal banking set-up makes internal risk control easier or harder in China, and hence decreases or increases the probability of bank failure in China.
- In the current Chinese environment it is likely that the probability of an eventual bank failure will be increased if separation is abolished, especially in the presence of (currently implicit) deposit insurance.

Functions of a Commercial Bank

- A depository of funds
- Settlement of transactions
- A depository of savings
- Provision of credit (short-term and long-term), including guarantees
- Origination of loans—where risk resides (with or without recourse)
- Provision of custodial and safe-keeping services
- Maturity transformation (and matching)
    - Can these functions be separated?

The Information and Communication Technology Revolution

- Reductions in the costs of information
- Increases in timeliness of information
- Reductions in transactions costs
- Increases in precision, resolution and quality
- Reductions in costs of market formation
- De-verticalization, specialization and out-sourcing

Specialization versus Joint Production

- The ICT revolution has lowered very significantly transactions and coordination costs and made possible the "economically efficient" **separation of deposit-taking and lending** activities. The growth of the capital markets in many developed countries has shrunk the role of bank financing—many enterprises go directly to the capital markets by issuing their own debt instruments (commercial paper, bills, notes, bonds, etc.); many loans are packaged together and sold in the markets to individual and institutional investors (securitization). Better, more timely, and standardized flow of information has reduced the need for financial intermediation by the banks.

Specialization versus Joint Production

- Historically, there are synergies between deposit-taking and loan-making—information on the history of deposits and payments of customers can be extremely useful for determining whether they should be granted credit. Before the ICT revolution, the transaction costs for outside lenders to acquire this information were too high. However, with the decline in transactions costs and the commoditization of credit information, the synergies that may have existed for a bank to make loans to its own depositors have been largely eroded. Moreover, credit analysis also requires specialized skills, especially for certain types of loans, which implies advantages in using an outside, specialized lender rather than the bank where one holds one's own deposits.

Specialization versus Joint Production

- Even before the ICT revolution, the maturity mis-match can negate much of the synergies between deposit-taking and loan-making. For example, a bank depositor may desire a long-term fixed-rate owner-occupied residential mortgage loan, but the bank, even though it knows that the customer is a good credit, may not be able to accommodate him or her. Ultimately the bank customer may obtain a loan from a mortgage loan company which in turns packages and sells the mortgage loans on the market.
- Bank loans to enterprises in countries with well developed capital markets are now limited to those that are not able to access the public markets directly themselves--the segment of business that is the most risky. This raises the question of whether the capital requirements of banks making such loans as traditionally determined are adequate.

The Information Technology and Communication Revolution

- Makes possible new ways of organizing the activities of the financial sector, in particular: the further specialization, division of labor, and out-sourcing. New configurations (institutional designs) of the banking system and new forms of financial institutions (e.g., the "narrow banks" suggested by the late Nobel Laureate in Economic, James Tobin, that only take deposits and settle transactions and invest in almost riskless assets as short-term domestic government securities but do not make any loans) are now possible with the improvements in the availability, cost and timeliness of information and the ability for its exchange and sharing, and for inter-enterprise coordination.

The Information Technology and Communication Revolution

- Examples of specialization include the provision of securities custody and fund management services (E.g., State Street Bank in the U.S. is completely specialized in this niche market and no longer makes loans or accepts retail deposits). Securitization of loans is another manifestation of specialization that has been greatly facilitated by the ICT revolution in the documentation, standardization, and the collateralization of the assets backing these securities, and in their trading in secondary markets. Securitization further enables the separation of different lines of loan business. Without the ICT revolution, the transactions costs of securitization would have been very high.

Separation, Specialization, Division of Labor and Out-Sourcing

- Just as in the real sector, the financial sector has also been undergoing "de-verticalization." Different links of the financial supply chain can be out-sourced. Some banks begin to specialize in niche markets and grow to dominate their particular links of the financial supply chain.
- Third-party provision of services, e.g., auditing, appraisal, credit rating and reporting, credit card processing, loan processing, management information systems (MIS), are now very common.
- Reliance on the inter-bank market for funding (e.g., Japanese banks in overseas markets) can be thought of as "out-sourcing" of deposit-taking.

The Information Technology and Communication Revolution

- The resulting modification and re-distribution of the loci of risks enable simpler but at the same time more effective regulation and supervision.
- Provides more precise and differentiated instruments for inducing desirable behavior on the part of the banks (e.g., investing in less risky assets; increasing reserve requirements on the margin; increasing the rate of interest on the margin; increasing the reserve requirement for banks that do not meet capital requirements).

The Lessons of the Savings and Loan Association Debacle in the U.S.

- Huge maturity mis-match—savings and loan associations made long-term (thirty-year) fixed-rate loans but had mostly short-term deposits.
- The capital requirement was too low—3%.
- Deposits were insured by the Federal Savings and Loan Insurance Corporation.
- Towards the end, the Savings and Loan Associations, most of which were owned by real estate developers, were effectively lending to themselves.
- If the savings and loan associations only made owner-occupied residential mortgage loans but funded them by issuing long-term bonds backed by the mortgages in the market, they would still be here today.

Creation of Specialized Commercial Banks/Financial Institutions

- Non loan-making but deposit taking transactions and savings banks, which invest primarily in short-term and medium-term government securities respectively.
- Non-retail deposit taking but loan-making financial institutions (e.g., finance companies).
- Banks that specialize in originating owner-occupied residential mortgage loans but finance them through direct and indirect securitization.
- Non-deposit-taking "Small Business Investment Corporations" to provide finance for small and medium enterprises.
- Venture capital firms to provide finance for start-ups.

Creation of New Categories of Specialized Commercial Banks

- Pure transactions banks--demand deposits to be matched with investments in only short-term government securities (no more than 30 days) and no loans—a low reserve requirement (in the aggregate, the total funds should balance). Individuals use bank balances for the settlement of their non-cash transactions. Regulation and supervision of this type of banks can be minimal—requiring only the verification of the inflows and outflows of funds and the quantities and types of assets held. The capital and reserve (liquidity) requirements can be minimal. Deposit insurance is not necessary so long as these banks adhere to their professed investment policy. These transactions banks differ from money market funds investing exclusively in short-term government securities only in terms of the wider accessibility enjoyed by their customers (through ATMs and electronic funds transfer, for example).

Creation of New Categories of Specialized Commercial Banks

- Pure savings banks--deposits to be matched with investments in longer-term government securities (depending on the maturity distribution of the savings deposits) and no loans—minimal capital requirement and no deposit insurance, and an even lower reserve (liquidity) requirement than pure transactions banks (e.g., postal savings banks). There is no credit risk and no interest-rate risk arising from maturity mis-match.
- The Chinese postal savings system can easily evolve into a pure transactions bank or a pure savings bank, that take demand and savings deposits but do not make loans or otherwise risky investments.

Creation of New Categories of Specialized Commercial Banks

- Specialized non-deposit-taking but loan-making banks. These include mortgage banks, banks specializing in consumer durable (e.g. automobiles) financing, and credit card receivables, finance companies, and "small business investment corporations." These banks will by and large rely on their own capital, on the securitization of their loans to the extent that they are backed by the underlying assets, and on issuance of debt instruments in the capital market. Since they are non-retail deposit-taking, they do not require government insurance or guarantee; no reserves and no deposit insurance are required. They will require much less regulation and supervision than deposit-taking and loan-making banks. They will still be subject to audit and disclosure requirements to the extent they raise funds from the public markets. No formal capital requirement is necessary except those required by the market (e.g., the loans these banks sell may have to be with some degree of recourse). However, in all likelihood, the market will demand a capital ratio significantly higher than 8%, perhaps on the order of 20-25%.

Creation of New Categories of Specialized Commercial Banks

- Non-retail-deposit taking banks with funding raised through issuance of (unsecured) bank debt instruments in the capital markets
  - Such banks will need to be much better capitalized, even in the absence of an explicit government requirement, because any funds that they need beyond their own capital must either be raised directly from the capital market by issuing commercial papers, notes and bills, or borrowed from other banks, without the benefit of government guarantee/deposit insurance. It is difficult to imagine that such banks can issue debt equal to 12.5 times its capital (corresponding to an 8% regulatory capital requirement) on the market. The maximum debt to equity ratio for such banks is likely to be around 3, implying a capital ratio of 25%. A capital ratio of this magnitude should be effective in reducing moral hazard on the part of the owners and managers of the bank.
  - Regulation and supervision of this type of banks can be limited to making sure that they do not take public retail deposits illegally. With no deposits, there need not be any reserve requirement or deposit insurance. And since no public funds or guarantees are involved, there is also no need for a capital requirement beyond what is demanded by the market. Capital ratios and the rates of interest are functions of the market conditions and the specific characteristics of the credit of these banks.
  - Contingent liabilities, e.g., enhancements of the debt instruments issued by other enterprises, should be fully disclosed and should count against the debt (or liabilities) to equity ratio.

Specialization and Differentiation of Banks: Capital, Reserve and Deposit Insurance

- For traditional deposit-taking and loan-making banks, the capital requirements can be set at a higher level than 8%, say 20-25%, to provide an adequate buffer for potential loan losses and to discourage moral hazard. There need to be reserve requirements as well as deposit insurance. The deposit insurance premium rates can be linked to the nature and quality of the assets.

Differentiated Regulation and Supervision for Different Types of Specialized Banks

- **Minimization of needed regulation through institutional design**. A financial institution may by design require minimal regulation and supervision. E.g.
  - Banks without public retail depositors need only minimal regulation or supervision.
  - Banks that invest only in short-term government securities and do not make loans or acquire risky assets also need only minimal regulation or supervision.
  - The question is: Can such specialization be economically desirable and viable?
- **Separation and specialization enable differential regulation, including incentive-compatible self-regulation, for different types of commercial banks/financial institutions**. Rules should be devised so that they provide incentives for bank behavior that is desirable from the regulatory agency's point of view—rules that align the interests of the owners and managers of the banks on the one hand and the public and the regulators and supervisors on the other. E.g., a higher capital requirement reduces moral hazard and hence excessive risk-taking; a risk-based deposit insurance premium rate also discourages excessive risk-taking.

Differentiated Regulation and Supervision for Different Types of Specialized Banks

- **Reduction of excessive leverage in the system.** Reduction of the debt or liabilities to equity ratio of the banks themselves (as well as their borrowers). In general, a lower debt/equity ratio reduces the "domino effect" or the "spillover effect" of insolvency and bankruptcy of one enterprise on other enterprises and financial institutions, which in turn reduces the probability of a failure of the entire financial system. Reduction in the leverage per se also helps to reduce the moral hazard of managers and owners of banks because a higher proportion of the potential loss will be borne by the owners and managers themselves. A low leverage requires less regulation and supervision.
- **Economies of scale** in regulation. Regulation and supervision are easier if there are a small number of large banks rather than a large number of small banks
  - Large banks tend to have a more formalized and rigorous system of internal control and their senior executives have the responsibility and the incentive to supervise their subordinates properly.
  - The internal risks can be pooled and large banks are thus less prone to failure, other things being equal.

The Reduction of Moral Hazard

- If moral hazard can be reduced, the need for public regulation and supervision will be reduced.
- Direct reduction—Decreasing the debt-equity ratio of lenders; establishment of narrow banks; privatization (but privatization does not solve all the problems, e.g., agency problems).
- Indirect reduction—Decreasing the debt-equity ratio of borrowers; risk-based deposit insurance (scale and debt-equity ratio).
- Credit reporting system for large borrowers.

Rationalization of Explicit Deposit Insurance—Feasible Objective Risk-Based Premium Rates

- Differentiation of deposit insurance premium rates by the quality of the assets, principally loans (e.g., the good driver discount, the non-smoker discount).
- Objective, easily implementable and verifiable indicators should be used—ratings by credit rating agencies are unlikely to be helpful before the fact (just recall how few rating downgrades are actually made before the problem becomes obvious rather than afterwards).
- Deposit insurance premium should be tied to:
  - The weighted average debt/equity ratio of the borrowers—the lower the average debt/equity ratio, the lower the insurance premium. Thus the financial institutions will have the incentive to lend to borrowers with lower debt/equity ratios.
  - The actual capital ratio of the bank. The capital or equity of the banks serves as "co-insurance."
  - The total size of the financial institution as measured by its net capital (marked to market). The higher the total net capital is, the lower the insurance premium, thus encouraging the emergence of larger financial institutions that are better able to pool risks themselves (otherwise the existence of deposit insurance enables the proliferation of small financial institutions).
  - The degree of concentration by borrower, by industry and by type of assets in the loan portfolio. The higher the concentration is, the higher the insurance premium, thus encouraging diversification and discouraging over-exposure to particular borrowers, industries and types of assets on the part of the financial institutions.

Will Privatization Help?

- The Chinese Case—Privatization per se does not necessarily solve the problem of regulation and supervision
  - State-owned banks lend only to state-owned enterprises; most of these loans have become non-performing loans—the question is whether privately owned banks can resist the pressure to lend to state-owned enterprises.
  - However, it is not clear that by lending to private borrowers the banks, state-owned and otherwise, will be able to achieve better results in the absence of an adequate system of credit review and control and a credit culture. Arguably private borrowers are more willing and able to try to influence the credit decisions of bank managers.
  - The private banks have a different set of potential moral hazards—lending to related enterprises, reciprocal lending to non-bank enterprises owned by respective bank owners, excessive risk-taking (especially given the low capital requirement of only 8%).

Concluding Remarks

- Separation enables specialization and the acquisition of institutional capabilities through learning by doing and otherwise.
- Appropriate separation can minimize moral hazard and hence the need for external regulation and supervision.
- Separation facilitates regulation and supervision where it is still needed.
- China can leap-frog and become a pioneer in the organization, regulation and supervision of the commercial banking sector.
- There is no need to follow the same path of development (and repeat the same mistakes) of other countries