Economic and Social Development and

China Development Bank

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- ◆ China Development Bank is a policy bank with its own unique role and function in the Chinese financial sector.
- ◆ The role of China Development Bank is to provide financial products and services that are needed by the economy but not otherwise available in the market.

◆ Different types of needed financial products and services are not available in the market for different reasons. For example: long-term (say 30 or 35 years) fixed-rate residential mortgage loans are not generally available in China because the commercial lenders do not have longterm fixed-rate deposits of similar maturity to fund these loans. If they fund these loans with short-term variable-rate deposits, they will invariably run into the same maturity mis-match and negative interest-rate spread problems faced by the Savings and Loan Associations in the U.S. in the 1980s. The Savings and Loan Associations no longer exist in the U.S. today. Lawrence J. Lau

- ◆ Similarly, long-term fixed-rate loans for large infrastructural projects, such as airports, communication networks, highways, mass transit systems, pipelines, ports, power generation and transmission, railroad lines, and water works, are not generally available from commercial lenders.
- ◆ Loans for public goods, such as environmental preservation, protection and restoration, very high risk projects, such as nuclear power plants, and projects the principal benefits of which consist of externalities, such as conversion of coalfired to gas-fired power plants, can also benefit from long-term loans from the China Development Bank that allow amortisation and repayment a long period.

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- ◆ China Development Bank has the unique advantage that it can raise funds in the capital markets in China and elsewhere at sovereign or quasi-sovereign rates of interest and in different currencies as needed.
- ◆ China Development Bank is therefore in a unique position to promote the long-term economic and social development of China through its financing activities.
- ◆ Several possible financial products that China Development Bank is uniquely qualified to offer are described below.

Long-Term Fixed-Rate Owner-Occupied Residential Mortgage Loans

- ◆ A long-term (say 35 years) fixed-rate owner-occupied residential mortgage loan greatly reduces the interest-rate risk and lowers the monthly payment to make owner-occupied residential housing affordable and attractive to almost everyone with a regular job.
- ◆ China Development Bank can issue long-term fixed-rate bonds to finance these mortgage loans, which it can purchase using the proceeds of the bonds from other originating lenders provided that the borrowers (regular employment, no bad credit history), the loans (e.g., interest rate, minimum equity requirement, maximum loan limit) and the underlying properties (e.g., owner-occupied, sound construction, maximum floor area) meet certain standards.

Long-Term Fixed-Rate Owner-Occupied Residential Mortgage Loans

- ◆ In addition, in order to reduce moral hazard, the originating lender must bear some residual liability for the loan in the event of default. For example, it can be required to retain a residual interest, say, between 5 and 10 percent, in the mortgage loan originated by it for the life of the loan.
- ◆ China Development Bank will pay the originating lenders for their servicing of the loans and will otherwise set an interest rate on the loans that is only slightly higher (less than 100 basis points) than its cost of funds, which will be at or near sovereign rates. Thus, the monthly mortgage loan payments of the borrowers can be kept as low as possible. The financial burden will be similar to that of renting, but the occupant has ownership.
- ◆ This should lead to much higher demand for and supply of owner-occupied residential housing, which in turn should contribute significantly to social harmony and stability.

Long-Term Fixed-Rate Owner-Occupied Residential Mortgage Loans

- ◆ But who will be the buyers and holders of these long-term bonds issued by China Development Bank? The buyers of these bonds will be mostly institutions with long-term funds to invest. They will include insurance companies, retirement and pension funds, and permanent endowments of foundations, universities and other similar organisations.
- ◆ Thus, there are ready demands for these long-term bonds; there are also ready demands for affordable owner-occupied residential mortgage loans on the part of potential borrowers. China Development Bank will meet both demands by issuing the bonds and offering to purchase qualified residential mortgage loans with the proceeds, motivating commercial lenders to supply these mortgage loans.

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- ◆ A financial product that can also be very popular with households, especially households headed by retirees, is a long-term bond (or fixed-term bank deposit) the return on which is linked to the rate of inflation.
- ◆ In many countries, including the United States and the United Kingdom, these bonds are issued by the respective Ministries of Finance or the Departments of the Treasury. They allow the common people an inexpensive long-term hedge against inflation.
- ◆ The Chinese Government offered inflation-linked bank deposits in 1949, 1988 and 1993, but have not offered them recently.

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- ◆ How can China Development Bank, which has no control over the rate of inflation in the country, offer such a financial product without potentially incurring huge losses?
- ◆ It can do so by financing infrastructural projects that are capable of generating revenues that are indirectly but effectively linked to the rate of inflation. For example, it can finance oil and gas pipelines by building them and charging for the use of the pipelines a small percentage of the value of the oil and gas flow (for a given distance). Thus, effectively, though indirectly, revenue from the pipelines will be tied to the price of oil and gas, a principal driver of the rate of inflation pice J. Lau

- ◆ The pipelines can be funded with inflation-linked bonds issued by China Development Bank. The revenue from the pipelines will then enable China Development Bank to fulfill its obligations for the repayment of principal and interest, which is tied to the rate of inflation, on these bonds.
- ◆ Similarly, other infrastructural projects such as electric utilities and toll roads can also be financed this way because the fees and tolls collected are expected to rise with the rate of inflation as well.
- ◆ It is important that these inflation-linked bonds are long-term, because in any given year, the revenue of a particular project may not catch up with the rate of inflation, but over a long period of time, the revenue is bound to catch up with the rate of inflation, more or less.

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- ◆ But what would be the advantage to the potential users and operators of the pipelines or toll roads or other infrastructure to select this alternative method of financing instead of a straight loan?
- ◆ First, if structured in the form of a lease, the user does not, in general, have to put up any equity. In other words, the financing can be 100 percent, freeing up capital for the user or operator to devote to other, more profitable purposes.
- ◆ Second, an inflation-indexed bond normally carries a lower rate of interest than a straight bond because of its "insurance value against unexpected inflation." (Expected inflation is already reflected in the rate of interest.) Thus, this method of financing may turn out to be less expensive (in an expected value sense) for the user or operator than a straight loan.

- ◆ More generally, loans can be structured in such a way that there is a revenue-sharing feature. For example, interest on a loan can consist of a basic rate as well as a percentage of the revenue from the project above a certain threshold.
- ◆ Leases can also be structured so that the rents are periodically adjusted in accordance with the rate of inflation.
- ◆ Thus, as long as China Development Bank can derive revenue from its loans/leases that can catch up with inflation in the long term, it should have no problem servicing the inflation-linked bonds that it issues.

- ◆ Inflation-linked bonds should be available for sale to both institutional and individual investors.
- ◆ Once inflation-linked bonds are available, a commercial bank can also offer inflation-linked fixed-term bank deposits at the retail level, by matching these deposits with investment in inflation-linked bonds of similar maturities by the bank.
- ◆ In view of the rapid ageing of the Chinese population, the relatively early age of retirement (currently 55 for women and 60 for men), and the absence of any other reliable inflation hedge, the demand for inflation-linked bonds and the derivative inflation-linked bank deposits should be high and growing over time. Lawrence J. Lau 15

Carbon-Reduction-Linked Loans for Interand Intra-City Transportation Infrastructure

- ◆ Among the infrastructural projects that China Development Bank finances are high-speed railroads as well as urban mass transit systems.
- ◆ For these projects, there is a special angle that the Bank can play. Under current global carbon emission trading rules, such projects can be paid for the carbon emission that they manage to reduce incrementally. For example, a high-speed railroad between Beijing and Shanghai will reduce passenger air traffic between the two cities as travellers switch from air to rails, thus saving fuel and in so doing reduce net carbon emission. The net carbon reduction can be sold to another country which has reached its carbon emission limits. Lawrence J. Lau 16

Carbon-Reduction-Linked Loans for Interand Intra-City Transportation Infrastructure

- ◆ Similarly, to the extent that a newly built urban mass transit system reduces actual and potential automobile traffic, and hence gasoline consumption and carbon emission, it will also be compensated monetarily for the net carbon reduction.
- ◆ In addition, the construction of hydroelectric and nuclear power plants and their transmission lines to replace the supply of other fossil-fuel power plants will also qualify for carbon emission trading.
- ◆ China Development Bank can therefore help to reduce carbon emission globally and at the same time lower the cost of the infrastructural projects such as high-speed inter-city railroads, urban mass transit systems and power generation and transmission.

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Infrastructure for Public Goods Provision (Education, Environment, and Health Care)

- ◆ The provision of public goods such as education, environmental preservation, protection and restoration, and health care all require substantial investment and very often in brick and mortar. For example, university campuses and hospital complexes are among such long-lived assets that are typically operated by local governments and institutions.
- ◆ China Development Bank can provide long-term fixed-rate loans to local governments and/or institutions. The repayment of principal or interest can be based on fees collected, and guaranteed by either the central government (Ministry of Education, Ministry of Health, Environmental Protection Agency) or the local governments.

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Infrastructure for Public Goods Provision (Education, Environment, and Health Care)

- ◆ However, in order to discourage moral hazard, an equity investment by the local government or the institution should be required. In addition, the means of repayment of principal and interest must be clearly identified before the loan is made.
- ◆ There must therefore be an appropriate project evaluation process to determine its costs and benefits as well as its long-term financial viability.

Concluding Remarks

- ◆ China Development Bank should maintain its unique status as the leading policy bank of China and its unique ability to finance projects that ordinary commercial banks are either unwilling or unable to finance (either too large, or too risky, or too long a time horizon) and financial products and services that ordinary commercial banks do not offer.
- ◆ In order to meet the huge demands for long-term, fixed-rate financing, CDB cannot rely on the relatively volatile short-term and variable-rate bank deposits or on interbank loans for funding. CDB has the unique advantage that it is able to raise, through the capital markets, long-term fixed-rate funds at a lower cost than commercial banks, given its sovereign or quasi-sovereign credit rating. It should capitalise on this advantage.

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Concluding Remarks

- ◆ It should therefore remain wholly state-owned and not be privatised either in whole or in part. By remaining wholly state-owned, it will continue to enjoy sovereign or quasi-sovereign credit rating and will not be subject to pressure from private shareholders to maximise profits, especially short-term profits.
- ◆ The disastrous experience of the partially privatised and publicly listed Fannie Mae and Freddie Mac in the United States should be a lesson. Policy banks should never be privatised. Once privatised, whether in whole or in part, pursuit of profit will become the most important consideration to the exclusion of the policy goals.

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Concluding Remarks

◆ China Development Bank can contribute to the long-term economic and social development of China by providing long-term fixed-rate owner-occupied residential mortgage loans, inflation-indexed bonds, carbon emission reduction-linked loans and loans on infrastructure for the provision of public goods such as education, environmental preservation, protection and restoration, and health care.