No.

Counterpart Steering Committee
Mongolia

Japan International Cooperation Agency (JICA)

Special Assistance for Project Implementation (SAPI) for Two-Step-Loan Project for Small- and Medium-scaled Enterprises Development and Environmental Protection

Final Report

July 2009

JAPAN INTERNATIONAL COOPERATION AGENCY

KRI International Corp.

ECC
CR(10)
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Special Assistance for Project Implementation (SAPI) for

Two-Step-Loan Project for Small- and Medium-scaled Enterprises Development and Environmental Protection

Final Report

Table of Contents

List of Tables

Part I

Part II

Part III

List of Figures

Part I

Part II

Part III

List of Abbreviation

ADB	:	Asian Development Bank
BAT	:	Best Available Technology
BDS	:	Business Development Service
BOD	:	Biochemical Oxygen Demand
BOM	:	The Bank of Mongolia
BTMU	:	Bank of Tokyo-Mitsubishi UFJ, Tokyo
CAMELS	:	Capital, Assets, Management, Earnings, Liquidity
CC	:	Credit Committee (in the commercial banks)
CCB	:	Clean Coal Briquette
COD	:	Chemical Oxygen Demand
CSC	:	The Counterpart Steering Committee
CSR	:	Corporate Social Responsibility
DSCR	:	Debt Service Coverage Ratio
EBRD	:	The European Bank for Rehabilitation and Development
EC	:	European Commission
EGSPRS	:	Economic Growth Support and Poverty Reduction Strategy
EIA	:	(*General or Detailed*) Environmental Impact Assessment
EPLs	:	Environmental Protection Loans
ESCOs	:	Energy Service Companies
FDI	:	Foreign Direct Investment
FIFTA	:	Foreign Investment and Foreign Trade Agency
FIRR	:	Financial Internal Rate of Return
FRC	:	Financial Regulatory Commission
GAPs	:	Government (Mongolian) Action Plans
GASI	:	The General Agency for Specialized Inspection
GCGF	:	Green Credit Guarantee Fund
GDP	:	Gross Domestic Products
GOJ	:	The Government of Japan
GOM	:	The Government of Mongolia
GTZ	:	Deutsche Gesellschaft für Technische Zusammenarbeit
HAMHEM	:	The National Agency for Meteorology, Hydrology and Environmental Monitoring
HOB	:	Heat-Only Boiler
IAS	:	International Accounting Standard
IBRD	:	International Bank for Reconstruction and Development
I(C)T	:	Information (And Communication) Technology
IDA	:	International Development Associations
IDF	:	Investment and Development Fund
IFAD	:	International Fund for Agricultural Development
ILO	:	International Labor Organization
IMF	:	International Monetary Fund
JBIC	:	Japan Bank for International Cooperation
JICA	:	Japan International Cooperation Agency
JSCs	:	Joint-Stock Companies
KfW	:	Kreditanstalt für Wiederaufbau
L/A	:	Loan Agreement
LGF	:	Loan Guarantee Fund (*by GTZ*)

LIBOR	:	London Inter-Bank Offered Rate
LLC	:	Limited Liability Company
MASM	:	Mongolian Agency for Standardization and Metrology
MCCI	:	Mongolian Chamber of Commerce and Industry
MOJC	:	Mongolia-Japan Center for Human Resources Development
MOF	:	Ministry of Finance
MOFA	:	Ministry of Food and Agriculture (formerly)
MOFALI	:	Ministry of Food, Agriculture and Light Industry
MOIT	:	Ministry of Industry and Trade (formerly)
MOME	:	Ministry of Minerals and Energy
MONE	:	Ministry of Nature and Environment (formerly)
MONET	:	Ministry of Nature, Environment and Tourism
MONEF	:	Mongolian Employers' Federation
MOSWL	:	Ministry of Social Welfare and Labor
NUM	:	National University of Mongolia
NBFIs	:	Non-Bank Financial Institutions
NDS	:	The Millennium Development Goals-based Complex National Development Strategy
NPL	:	Non-Performing Loan
NPV	:	Net Present Value
NSO	:	National Statistical Office
OSS	:	One-Stop-Shop Center
PFIs	:	Participating Financial Institutions
PHRD	:	(Japan) Policy and Human Resources Development Fund
PPP	:	Public-Private-Partnership
PO	:	The Project Office (of the ODA loan consultant)
PSDC	:	Private Sector Development Credit
PSDS	:	Private Sector Development Strategy
PSTF	:	PFI Selection Task Force
RCCI	:	Regional Chamber of Commerce and Industry
REDP	:	Regional Economic Development Programme (*by GTZ*)
RF/A	:	Revolving Fund Account
ROA	:	Return on Asset
ROE	:	Return on Equity
S/A	:	Special Account
SAPI	:	Special Assistance for Project Implementation
SCCs	:	Savings & Credit Cooperatives
SMEs	:	Small- and Medium-scaled Enterprises
SOEs	:	State-Owned Enterprises
TA	:	Technical Assistance
TDB	:	Trade and Development Bank
TSL	:	Two-Step-Loan
UNDP	:	United Nations Development Program
UNEP	:	United Nations Environment Program
USAID	:	United States Agency for International Development
VAT	:	Value-Added Tax

EXECUTIVE SUMMARY

Counterpart Steering Committee, Mongolia
Japan International Cooperation Agency (JICA)

Special Assistance for Project Implementation (SAPI)
for
Two-Step-Loan Project
for
SME Development & Environmental Protection
(MON-P7)

Final Report

July 2009

KRI International Corp.

Contents

Contents (contd.)

Part I Recent Sector Development

Chapter 1: Macro Economy

1. Achieved high economic growth,
- Averaged GDP growth in 2004 - 2008: 9.1%
- Per Capita GDP in 2008: USD 1,960

2. Heavily dependent on mining, and still little on manufacturing,
- Mining in GDP: 9.0% (2000), 27.8% (2008)
- Manufacturing in GDP: 4.1% (2000), 4.0% (2008)

3. Rapidly grown trade (import grows more than export),

4. BOP supported by remittance, FDI and donor aid,

5. Exchange rate kept stable, reserve was increased,

6. Wider economic gap between urban and rural,

7. Seriously hit by "Economic Crisis" (since mid-2008),

8. Obtained Financial Support from IMF, WB, ADB & Japan.

Chapter 1: (contd.)

Trend of Macroeconomic indicators in Mongolia

	2004	2005	2006	2007	2008	04/08 average growth %	2009
Nominal GDP ($ mn)	1,816.0	2,306.0	3,150.0	3,930.0	5,258.0		4,320.0
Real GDP growth (%)	10.6	7.2	8.6	10.2	8.9	9.1	2.7
Unemployment (%)	3.6	3.3	3.2	2.8	2.8	3.1	
Consumer price index (%)	10.9	9.6	5.9	14.1	23.2	12.7	9.0
Exports of goods ($ mn)	872.1	1,066.1	1,543.9	1,950.7	2,532.5		1,863.0
Growth (%)	39.0	22.2	44.8	26.4	29.8	32.4	-26.4
Copper export (yoy change %)		14.7	94.8	27.7	3.0	28.0	
Current account balance ($ mn)	24.1	29.7	221.6	264.8	-502.7		-261.8
Growth (%)	1.3	1.3	7.0	6.7	-9.6	1.3	-6.5
Foreign direct investment ($ mn)	128.9	257.6	289.6	360.0	682.5		316.5
Foreign exchange reserves, gross ($ mn)	207.8	333.1	718.0	1,000.6	656.7		822.1
M2 ($ bn)	847.0	1,140.1	1,536.4	2,401.1	2,235.9		
GDP per capita	717.0	900.0	1,214.0	1,491.0	1,960.0		

(Source: National Statistics Office, MOF, World Bank Mongolia Monthly Economic Update April 2009)

Chapter 2: Financial Sector

1. Financial Structure

Mongolia's financial sector has rapidly developed, however, is still small and underdeveloped. The size of the stock exchange is still small in comparison with bank lending.

2. Banking Sector

15 commercial banks dominate the system with its 95.3% share.

3. Comparatively Low Money Supply

M2 has been expanding steadily and attained 52.7% of GDP in '07.
The share of US dollars as circulated still remains at around 30%.

4. High Interest Rate

The CBB rate was kept at the low level of around 5% in 2005 and 2006.
The rate, however, has risen since then and hovered at a high 15.4%.
Deposit rates have been kept high during the years of 2004 - 2008.

5. Tight Monetary Policy

Tight money policy was strengthened by raising its policy rate from 9.75% to 14.0% on March 11, 2009 upon advice of the IMF.

6. Financial Crisis

NPL ratio jumped to 7.2% in 2008 due to Anod Bank's bankruptcy.
The banks, however, had to keep increasing finance demand by supplying funds, causing tight liquidity position.

Chapter 2: (contd.)

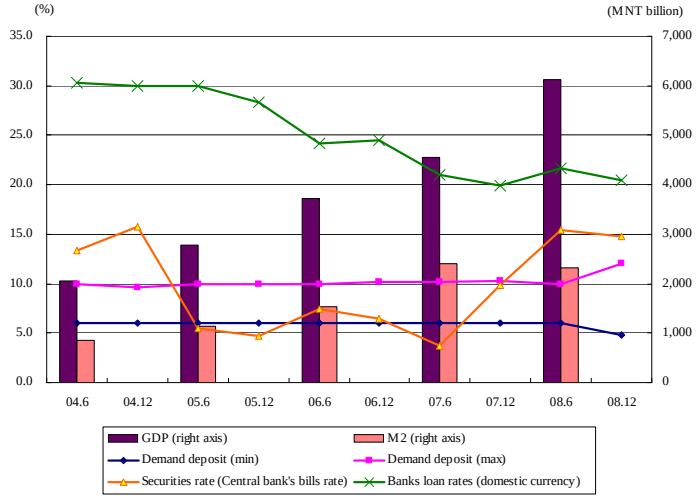
Mongolian Financial System Structure

	Dec 04			Dec 05			Dec 06			Dec 07			Dec 08		
	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets
Banks	17	892	92.2	17	1,371	97.3	16	1,899	94.7	16	3,279	95.7	15	3,630	95.3
NBFIs	514	76	7.8	522	38	2.7	1096	107	5.3	379	147	4.3	379	179	4.7
Insurance companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19	22	1.1	15	28	0.8	15	35	0.9
SCC	400	47	4.9	400	na	2.7	955	16	0.8	192	36	1	192	46	1.2
Finance companies	114	29	3	122	38	n.a.	122	69	3.4	137	66	1.9	137	72	1.9
Securities companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35	16	0.5	35	26	0.7
Total financial system	531	968	100	539	1410	100	1112	2006	100	395	3425	100	421	3,809	100

(Source: IMF, BOM and FRC)

Chapter 2: (contd.)

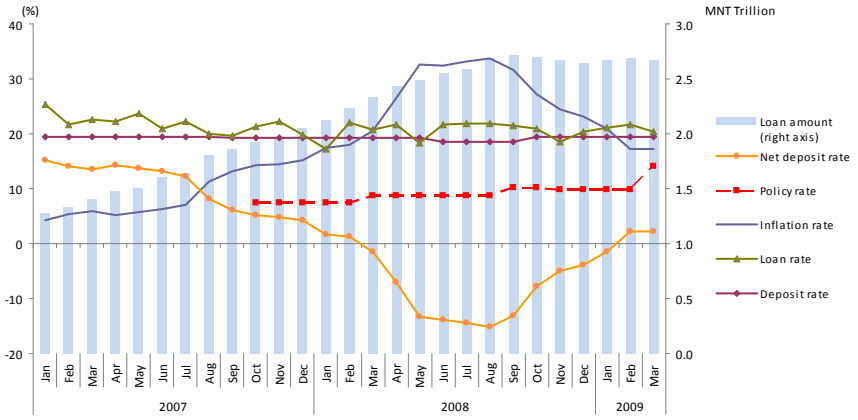
Deposit and lending rates



(Source: BOM Monthly Bulletin 2009-02)

Chapter 2: (contd.)

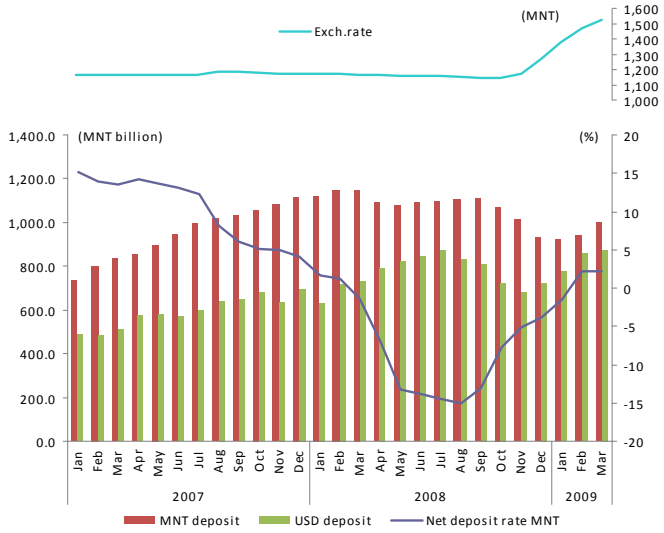
Inflation and various interest rates (monthly)



(Source: BOM Monthly Statistical Bulletin 2009-02)

Chapter 2: (contd.)

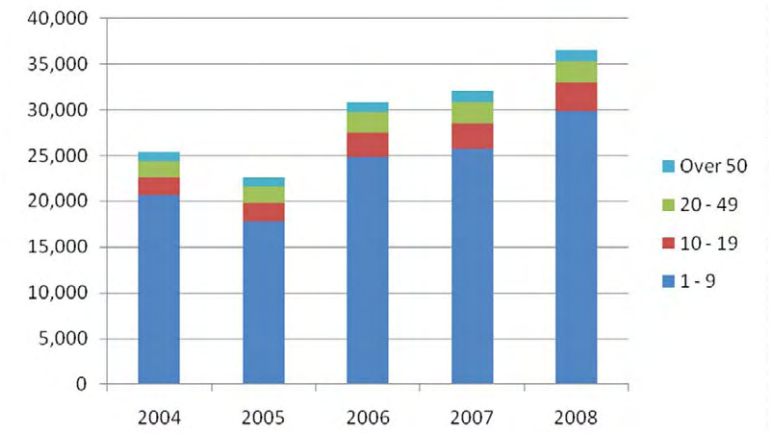
Deposit rates and exchange rate



Note: USD deposit amount is converted to equivalent one in MNT at current exchange rate.
(Source: BOM Monthly Statistical Bulletin 2009-02)

Chapter 3: SME Sector

Number of Active (Registered) Business Units by Size of Employment



- As of 2008, no. of active business unit amounts to 36,498, stably increased from 22,547 as of 2005.
- Small- & medium-scaled business units (defined as those with less than 50 employees) accounts for 96.7% of total.

Chapter 3: (contd.)

- GOM in 2005 prepared the Program for Support for SMEs, announcing
  i. Policy directions and measures for SME development, and
  ii. Improved access to term-loan.
- New SME Law was enacted in 2007, and revised the definition of SMEs with no. of employee altered.
- Important industries:
  i. Processing industries which utilize agricultural and livestock resources with export / import-substitute orientations, and
  ii. Agriculture / animal husbandry (as resource supplier).
- Common issues to SMEs
  i. Obsolete production facilities and equipments
  ii. Limited access to term-loans with the lower interest rate,
  iii. Lack of collateral, and
  iv. Lack of skills in investment / business planning and market analysis.

Chapter 4: Environmental Protection

1. Major Man-made Environmental Disturbance

(1) Air Pollution
- Pollutant: Particulate Matter, CO_X, NO_X, SO_X
- Primary sources:
  Coal-fired power plants (3 large CHPs in Ulaanbaatar)
  Heating facilities (89 HBOs and 1,005 heat stoves in Ulaanbaatar)
  Rapidly-increasing motor vehicles (160,000 at 2007 in Ulaanbaatar)

(2) Water Pollution
- Pollutant: Chrome, Mercury, Cyanide, Organic Matter
- Point sources: Leather and wool processing, Gold mines, Food processing, wastewater treatment plants
- Nonpoint sources: Agriculture and livestock breeding

(3) Deforestation
- Overconsumption of fuelwood

(4) Soil Degradation
- Overgrazing

Chapter 4: (contd.)

2. National Action Plan 2008 - 2012 and MONET Implementation Program

- Energy saving and environment-friendly technology
- Restriction of raw coal consumption targeted from 2011
- Improvement of water treatment facilities for water pollution prevention
- System for classification, reuse and recycling of solid wastes
- Establishment of waste disposal facility for hazardous wastes
- Restriction on logging, financing for reforestation, initiatives for wooden product substitutes
- Strengthening of state control over the nature and environment

3. Reorganization of General Agency for Specialized Inspection (GASI) in 2008

GASI's new mandate: Formulation of regulation enforcement policy

4. Private Sector Initiatives: "Green Initiatives" by MCCI

- Technical Assistance in Cleaner Production and ESCO activities supported by EC
- "Green Credit Guarantee Fund" (2006 – 2009) supported by the Netherlands: a loan guarantee program for environmental activities (mostly cleaner production) of SMEs

Part II Review of Two-Step-Loan Project Phase I

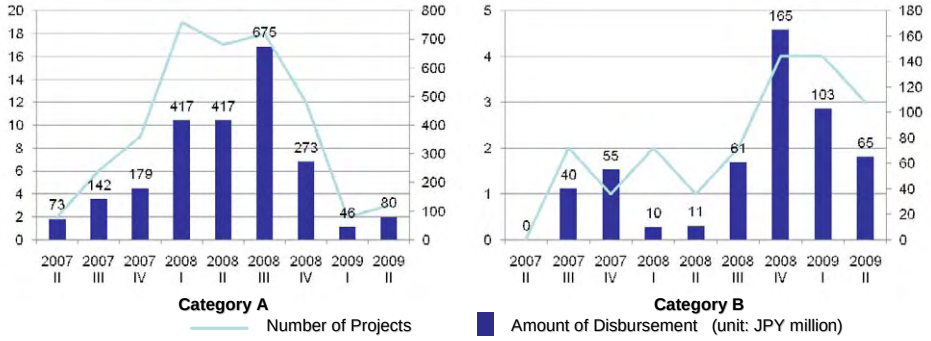
Chapter 5: Description of the Project

Outline of Sub-loan: Common to SME & EPL components

1. Lenders	7 PFIs (TDB, Golomt, Khan, Zoos, Capitron, Xac, Anod)
2. Borrowers	SMEs meeting the following conditions 1) Established and operating in Mongolia 2) Majority privately owned 3) Pre-tax profit of MNT 100 mil or less (applicable corporate tax rate at 10 percent) 4) Number of employees 50 or less 5) No previous default
3. Use of Loan Proceeds	All but real estate, military, and consumer finance (main targets are agricultural and industrial sector)
4. Currency	USD or MNT
5. Amount	USD 10,000 - 600,000 or equivalent
6. Terms & Conditions	
- Terms	3-10 years (grace 1-3 years)
- Interest Rate	To be determined by agreement between Lender and Borrower* (* In practice, the range of PFI margin is determined by GOM.)
- Interest Payment	Monthly
7. Security	In practice, all loans are secured.

Chapter 6: Review of Operational Performance

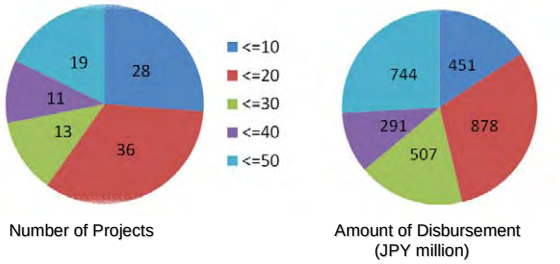
Quarterly disbursement



- For Category A, total amount disbursed is JPY 2,302 M equivalent. In addition, JPY 51 M equivalent was disbursed out of Revolving Funds.
- The number of projects financed is 88.
- For Category B, total amount disbursed is JPY 509 M equivalent. In addition, JPY 10 M equivalent was disbursed out of Revolving Funds.
- The number of sub-projects financed is 19.

Chapter 6: (contd.)

Sub-loan Borrowers

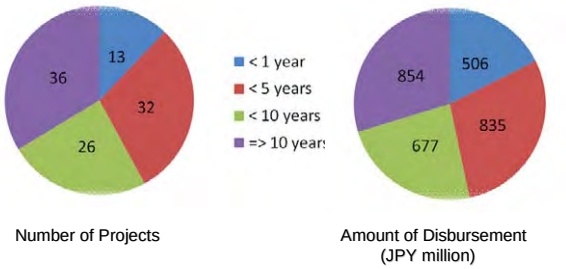


Number of Projects

Amount of Disbursement (JPY million)

Number of Employees

More than 60% of the sub-borrowers are smaller with core staff of 20 or less, although this group occupies less than half of the sub-loan amount.



Number of Projects

Amount of Disbursement (JPY million)

Length in Business

34% of sub-borrowers have continued business for more than 10 years, 26% for 5 to 10 years, and 32% have experiences of less than 5 years. About 12% are newly established companies.

Chapter 6: (contd.)

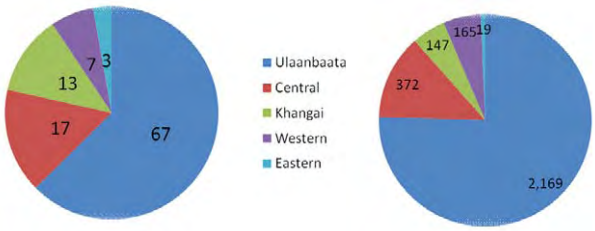
Sub-projects

Number of Projects

Amount of Disbursement (JPY million)

Industrial Sector

In Phase I, sub-loans have been disbursed mainly for manufacturing and agriculture projects (including milk cow and pig farming).



Number of Projects

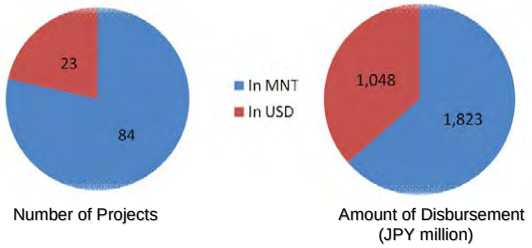
Amount of Disbursement (JPY million)

Project Location

The location of sub-projects are scattered in over 19 provinces, while more than 60% are located in Ulaanbaatar.

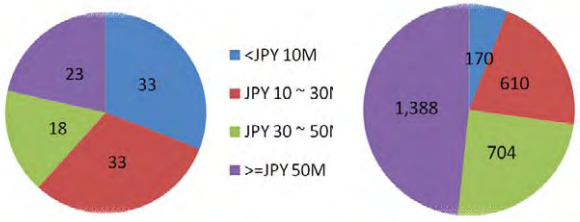
Chapter 6: (contd.)

Loan Operations



Loan Currency

About 80% of sub-borrowers contract in MNT, and about 20% in USD. Some sub-borrowers contracting in USD may face with difficulty.



Loan Size

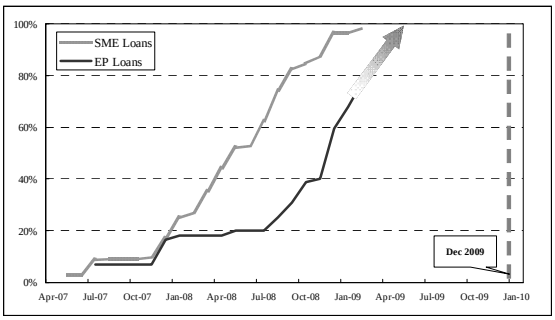
31% each for smaller group (less than JPY 10 million and less than JPY 30 million), 17% for medium group of less than JPY 50 million, and 21% for larger group of larger than JPY 50 million.

Chapter 6: (contd.)

Environmental Protection Loans

(1) Disbursement Progress

- 19 EPLs (JPY519 mil) as of Apr 2009
- Slow start is observed, but it is not necessarily delayed compared to planned completion date (Dec 2009).
- Lower awareness on EPLs among CSC and PFIs at first stage
- Lack of clear eligibility criteria is the biggest obstacle for EPL formulation



(Source: JICA Study Team)

(Cumulative percentage to the respective ODA Loan allocations, as of Feb 20, 2009)

Chapter 6: (contd.)

(2) EPL Project Type Classification

1) Energy Saving Investments

4 HOB replacement projects, responding to Ulaanbaatar HOB privatization

2) 3R ("reduce" "reuse" "recycle") Initiative

3 coal briquette production and 1 used lubricant oil recycling

3) Environmental Regulation Compliance

Dust prevention material, sewerage treatment facility installment, etc.

4) Environmental Awareness Approaches

Plantation, tree nursery and apiculture

(3) Implications

- No EPLs for direct investment in pollution prevention measures in production process - Such investment cannot be prioritized by SMEs in the short term unless the government takes more reliable regulatory framework and enforcement measures.
- All EPL projects are investments directly connected to for-profit activities for: (i) production cost reduction or (ii) marketing of goods that bring in the environmental benefit to their customers.

Chapter 7: Review of Sub-loan Processing

(1) Manual for PFIs

The manual consists of more than ten separate parts, primarily because of a number of attachments in addition to the sub-loan application formats.

(2) Application formats

The Operational Manual with application formats are fully utilized by PFIs.

(3) Flow of application

Borrower => PFI => PO => CSC => JICA

(4) Main internal reasons to cause delay in appraisal and approval

i. Environmental screening (obtaining EIA report);
ii. Poor information on the sub-projects provided by sub-borrowers; and,
iii. Time for refinement of original proposal.

(5) Reporting to JICA

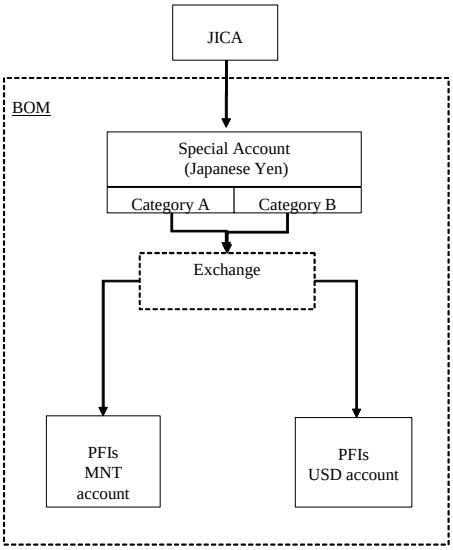
i. Outline of each sub-project financed out of the loan proceeds; and
ii. Project status quarterly report.

(6) Policy measures to improve the processing time

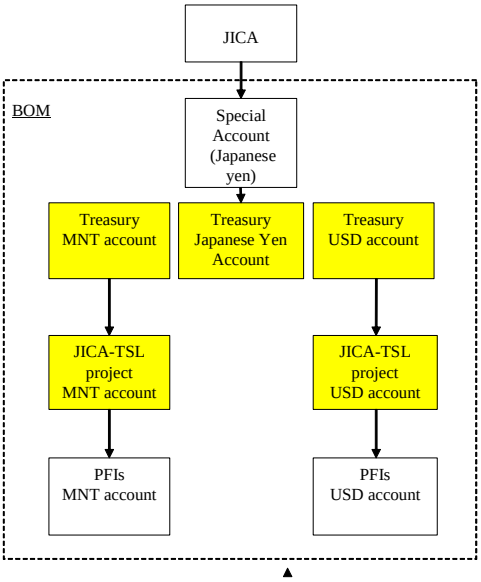
i. Revision of application format;
ii. More frequent CSC meetings;
iii. Reporting system on the progress of project; and
iv. A well-controlled information on the availability of the proceeds

Chapter 8: Review of Fund Flow

Existing Disbursement Process

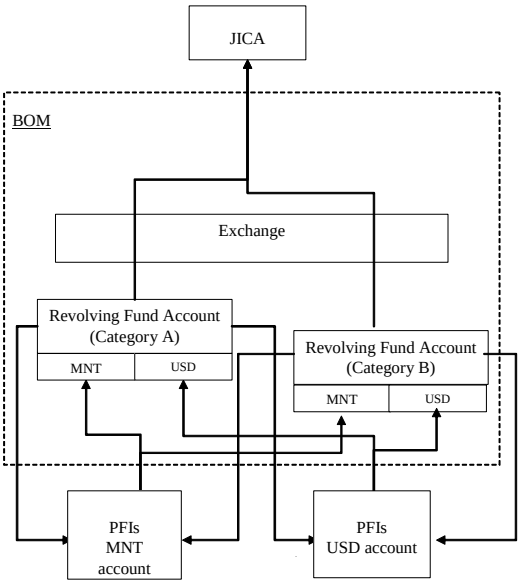


(Proposed Disbursement Process)



Chapter 8: (contd.)

Revolving Fund Process



- The repayment of principals and interest payment are received by PFIs, which, in turn, transfer such funds to RF/As. Although PFIs transfer interest portion to RF/As upon receipt from sub-borrowers, the transfer of repayment is made only six months after repayment by sub-borrowers.
- Significant issue is the unclear definition of who is responsible for the daily control of loan fund management.

Chapter 9: Review of Performance of PFIs

1.PFIs in the Phase I

6 PFIs : Khan Bank, Golomt Bank, TDB, Zoos Bank, Xacbank, Capitron Bank (Anod Bank joined PFI in Jan. 2008, but went bankrupt in Dec. 2008.12).

2. JICA-TSL performance of PFIs

(disbursement base 2009.04)

(MNT million)

	Khan	Golomt	TDB	Zoos	Xac	Capitron	Anod	Total
No. of loans	29	23	4	12	5	30	4	107
Loan amount	5,807	7,604	693	3,926	1,300	15,019	1,298	35,647
Amount per loan	200	331	173	327	260	501	325	333

Chapter 9: (contd.)

3. Financial Capacity of 6 PFIs

(1) Financial performance of 6 PFIs (as of Dec. 2008)

(MNT billion)

	Khan	Golomt	TDB	Zoos	Xac	Capitron	Avg. 15 CBs
Total assets	839.0	697.2	659.3	230.6	208.0	103.3	233.3
a.Total loans	608.7	447.8	440.3	168.5	149.6	84.5	163.8
of which,							
b. Loans over 1 yr.	194.0	174.5	215.7	56.1	65.1	23.8	n.a.
c. Ratio (b/a)	31.9%	39.0%	49.0%	33.3%	43.5%	28.2%	n.a.
Net profit	22.3	12.2	16.3	3.3	3.2	0.6	4.3

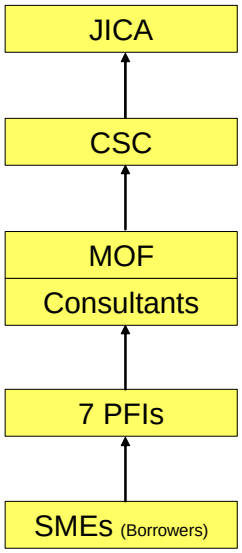
(2) Financial ratios of 6 PFIs (as of Dec. 2008)

(%)

	Khan	Golomt	TDB	Zoos	Xac	Capitron	Avg. 15 CBs
CAR*	12.4	12.8	14.7	15.9	15.4	10.0	15.3
Liquidity	21.9	37.0	37.0	15.6	21.2	12.2	25.4
ROE	34.2	24.3	26.2	9.9	21.6	10.4	17.6
NPL ratio	2.9	3.9	1.5	2.1	2.0	6.8	3.3

* Capital adequacy ratio

Chapter 10: Review of Implementation Organization



- Approval for Policy Implementation
- Approve for the First to 3rd Sub-Project
- Reporting from 4th Sub-project onwards

- Determination of Policy and Principles
- Determination of Sub-projects

- Project Implementation
- Establishment of Policy and Principles
- Appraisal of the Sub-projects

- Preparation and Submission of Loan Application to CSC / JICA
- Determination of Appraisal and Loan

- Application of the Sub-project

Chapter 11: Impacts and Benefits

1. Major impacts onto SME and financial sectors

- Out of total 86 respondents (SMEs), 42 SMEs have completed their sub-projects or passed one year since disbursement.
- *Out of such 42 SMEs:*
  - *83.3% increased their annual turnover;*
  - *78.6% increased their profits; and*
  - *88.0% increased their employments.*

  Compared to the average growth in the entire industrial sector, the sub-borrowers have grown more rapidly.
- Respondents have generated almost 650 in net of employment, accounting for 1.2% of total employment in industrial sector.
- Almost half of sub-loan amount (49.4%) has been directed for export development or import-substitution oriented investments.
- Term-loan issuance by JICA-TSL has accounted for 24% of total issuance. The contribution is more (37.7%), if limited to the industrial sector.

Chapter 11: (contd.)

2. Environmental Impacts and Benefits by EPLs

Assessed by technical estimates since all EPL projects are not in operation

(1) Improvement of Heat Supply Facility (4 projects)
- Energy saving effects and compliance with gas emission standards through coal-fired unit replacements

(2) Propane gas distribution (1 project)
- Energy saving effects in transportation system through creation of propane distribution network

(3) Coal briquette production (3 projects)
- Higher caloric value and lower pollutant emission that benefit consumers of the products

(4) Small-scale sewerage treatment facilities (1 project)
- Regulation compliance expected through installment of facilities in housing buildings

(5) Dust prevention at mining facilities (3 projects)
- Restoration of residue dumps by forestation, adhesive materials for dust prevention, waste rock reuse as construction materials

(6) Used oil recycling (1 project)
- Recycling of used oil regenerated as lubricant oil by distillation

(7) Apiculture production in protected area (1 project)
- Biodiversity preservation through pollination effect

(8) Forestation in semiarid area (1 project)
- Biomass increase by plantation of hippophae (Sea buckthorn)

Chapter 11: (contd.)

3. Impacts and Benefits on Financial Sector

1) Supply of Long-term Funds

- JICA-TSL loans accounted for 24% on average of over 5-year long-term loans extended during 2007 and 2008.

→ 65.7% for 4th Qtr. of '08.

2) Introduction of project finance know-how

- Operational Manual
  i. How to analyze projects
  ii. How to process loans
  iii. Concept of NPV, FIRR and DSCR
- Application Format
  i. What necessary data and information to be collected

3) Contribution of JICA-TSL for Enhancement of Customer Base

	Khan	Golomt	TDB	Zoos	Xac	Capitron	Total
a. No. of loans	29	27	4	12	4	29	105
b. No. of loans to new clients	19	9	2	2	2	24	58
c. b / a (%)	65.5	33.3	50.0	16.7	50.0	82.8	55.2

Note: Application (to CSC) base as of March 2009 excluding Anod Bank.

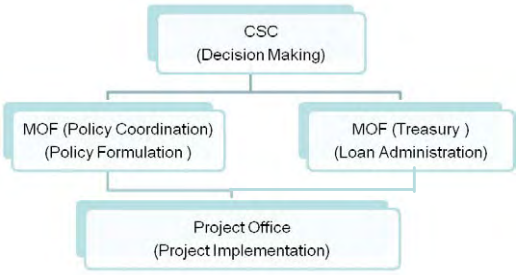
Chapter 12: Sustainability of the Project

Status of Repayment and Bad-debts

- Repayments of principals have been received on schedule.
- So far, only 6 projects have started repayment, and,
- Its repayment amount of MNT 187 mil. and USD 6,500 have been received.
- One project of Khan bank failed to pay interest but the bank paid it to MOF

Monitoring of Repayment

- CSC's efforts also should be directed to loan administration.
- Treasury Department's involvement in JICA-TSL is very limited.
- Therefore, an efficient and effective loan administration system, including money flow projection, should be established.
- Proposed project management set-up is as below:



Chapter 12: (contd.)

Revolving Fund Accounts

The total inflow to RF/As

Year	Category A		Category B		Total
2009	MNT1,054M	USD 388 T	MNT 70 M	USD 94 T	JPY 142 M
2010	2,478	1,666	112	195	343
2011	3,106	2,353	196	243	459
2012	3,470	1,945	221	342	453
2013	3,216	1,034	242	358	395
2014	1,892	724	134	287	235
2015	1,379	358	97	277	161

Presently, it is the good time to consider how effectively the funds will be controlled and managed to be used for economic development of the country.

Chapter 13: Recommendations and Lessons Learnt

Overall Scheme of JICA-TSL

- Information on loan proceeds in the lending currency as well as in JPY is important for appropriate management of the Project.
- CSC needs to ensure that TSL loans would not depend on few PFIs.
- Organizational arrangements should be made for fund management, covering both Phases I and II.
- Project processing time was unexpectedly taken long due to:
  - i) environmental impact assessment made by MONET;
  - ii) slow preparation of documents required by sub-borrowers; and
  - iii) poor presentation of proposal.
- It is important to further train and guide the PFIs and SMEs on project formulation, including undertaking of feasibility studies.
- The disbursement scheme adopted at initial stage of Phase I would be reinstalled to avoid or minimize foreign exchange risk.
- A periodical project monitoring set-up should be agreed between PFIs and CSC/ PO.

Chapter 13: (contd.)

SME Development Loans

- Eligibility of sub-borrowers should revised in accordance with the new SME law.
- The JICA-TSL fund should be earmarked for such projects directly affecting the economic development of the country.
- The increase in the maximum sub-loan amount up to USD 1 million is recommended.
- Flexibility in applying terms and conditions is recommended to allow the PFIs to make their own decision;
- On the other hand, it is also considered necessary to set up guidelines as PFIs tend to judge based on commercial aspects only.
- PFIs should advise sub-borrowers on the exchange risks involved in US dollar borrowing.
- High demand for training on project is identified, and it is recommended that sufficient budget for TA be included in Phase II.

Part III Proposal for Revision of Phase I / Planning of Phase II

Chapter 14: Revision of Phase I Operation

Revision of Phase I Operation

- Practically, the implementation of JICA-TSL Phase I is almost complete. As such, revision of Phase I operation may be required only for loan administration and use of the revolving funds.
- CSC should establish an efficient and effective loan administration system including money flow projection.
- The Treasury Department of MOF is responsible only for loan administration including repayment of principal / payment of interest on on-lending loan. It may be more appropriate to keep the current Project Office staffed with consultants for daily operation mentioned above.
- In addition, the Project Office will be required to undertake following:
    i. monthly loan administration; and
    ii. quarterly use of revolving funds.

Chapter 14: (contd.)

Revolving Fund Operation

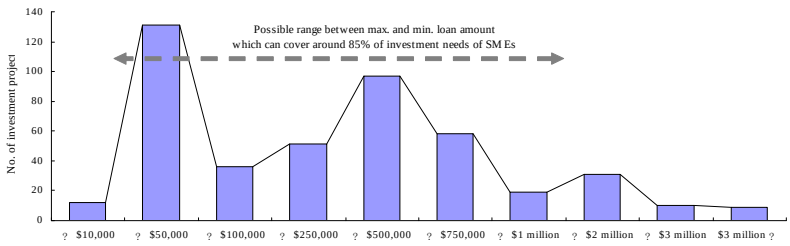
- Considering the availability of revolving funds, the limits to sub-loan amount to be financed out of RF/As may better be instituted to be a maximum of USD 200,000 or MNT equivalent, for the time being.
- In addition, on-lending loans shall be provided on quarterly basis, and the following procedures are proposed for this purpose:

  i. Initially, the priority order of PFIs to receive loans is set up. Those PFIs receiving loans will be listed to the end of the order for the next quarter;
  ii. CSC (Project Office) informs to PFIs of the available amount in the following quarter;
  iii. All the PFIs report potential sub-projects to CSC (Project Office) every quarter;
  iv. According to the order of PFIs, CSC (Project Office) determines the PFIs to receive a loan for the quarter within the available amount, and inform PFIs of its decision; and
  v. The selected PFIs prepare application for sub-loans to be presented at CSC meeting.

Chapter 15: Preparatory Analysis for Phase II (SME)

Identified investment needs

- Needs of around 450 investment projects with an estimated value of USD 209 million are identified from three consulted sources. Investment needs per project average USD 460 thousand with a range of amount from USD 10,000 to USD 4 million.
- Identified capital investment needs cover a range of sectors such as agriculture / animal husbandry, food-processing, textile & apparel, leather / skin processing, wooden product & furniture, tourism, medical care.
- Phase II better expand the max. loan amount at least up to USD 1 million while maintain the min. amount of USD 10,000 to ensure better coverage of SME needs for investment.



Chapter 15: (contd.)

Eligibility of Sub-loan

- Any PFIs will not be allowed to enjoy loan proceeds exceeding 1/3 of the total loan amount available.
- New PFI will have to submit its first three sub-project proposals to JICA for its review and concurrence.
- Present 6 PFIs will not have to do the above. Instead, those PFIs will submit full appraisal reports in English in the agreed format for proposed sub-projects for JICA's review and advice for improvement in appraisal.
- The newly enacted "SME Law" is proposed to be applied to the size of sub-borrowers in principle.
- Those sub-projects to use more than half of the loan proceeds for procurement of land or real estate will not be acceptable.
- Ineligible loans are proposed to be basically the same as the negative list in JICA-TSL Phase I, but a loan for entertainment industries is added.

Chapter 15: (contd.)

Terms and Conditions

- The minimum and maximum limits to sub-loan amount are proposed to be:
  - Minimum sub-loan amount USD 10,000 or MNT equivalent;
  - Maximum sub-loan amount USD 1,000,000 or MNT equivalent.
- The term is to be set at 3 – 10 years with grace period (same as Phase I).
- It is recommended to let PFIs advising sub-borrowers on exchange risks.
- It is strongly recommended to let PFIs determine the sub-loan rates based on:
  i. the prevailing market situation; and
  ii. assessment of sub-project / sub-borrowers.
- It is recommended to change on-lending L/A to repay on-lending loans in both JICA-TSL Phase I and Phase II upon receipt of sub-loan repayment, if PFIs are willing to participate in JICA-TSL Phase II.

Chapter 16: Preparatory Analysis for Phase II (Environment)

1. Relevance

- Industrial activities are continuously a major source of pollution
- National Action Plan prioritizes environmental protection by taking multifaceted approaches
- New GASI is about to formulate regulation enforcement policy including enhancement of its environmental monitoring capacity
- Financial support for investment need expected for regulation compliance must be amplified (and is justifiable) to cover larger enterprises; No such investment among SMEs is expected in short-term.

2. Potential EPL projects with short-term financing needs

(1) Environmental Awareness Approaches

Cleaner production (and forestation, organic farming, etc.)

(2) Energy Saving Investments

Improvement of Heat-Only Boilers and Heating Stoves, etc.

(3) 3R ("reduce" "reuse" "recycle") Initiative

Clean Coal Briquette, Insulating Materials, etc.

(4) Environmental Regulation Compliance

Effluent treatment facilities (and gas emission control, etc.)

Chapter 16: (contd.)

3. Eligibility

(1) Project Eligibility

- EPL projects shall be investment for environmental benefits
- To facilitate project formulation, evaluation and monitoring, "*Guidelines for Formulation and Evaluation of EPLs*" are proposed.
- EPL projects may be production of goods for environmental benefit of their customers (except for "Energy Saving Investment").

(2) Use of Loan Proceeds

- EPL eligibility is partially given to a project component related to environmental activities, especially in case of "Environmental Regulation Compliance"

(3) Borrower Eligibility

- Exceptional consideration to remove borrower size limitations, etc., accepting larger-scale and state-owned companies is proposed for "Environmental Regulation Compliance" EPLs that directly invest in pollution prevention.

4. Terms and Conditions

- Preferential treatment is proposed to Environmental Regulation Compliance EPLs (direct investment in pollution control).
- Preferential Interest Rates on on-lending loans
  - MNT: Average demand deposit rate minus1.0 percent
  - USD: LIBOR flat rate (1.0 percentage point discount)

Chapter 17: Project Description / Implementation Plan

(1) Background

Upon request of the GOM, JICA will extend ODA Loan in the form of TSL Phase II amounting to JPY 5.0 billion to Mongolia to promote SMEs development and to support environmental protection in cooperation with local banks.

(2) Outline of proposed TSL Phase II

Outline of proposed TSL Phase II is as follows;

Lender	: JICA
Borrower	: The Government of Mongolia
Amount	: JPY 5.0 bil (USD 50 mil equiv, excluding consulting services)
Interest	: to be determined
Term	: to be determined
Implementation: 3 years	
Components (current allocation) :	
1) Category A (SMEs Development)	: JPY 3.5 billion
2) Category B (Environmental Protection)	: JPY 1.5 billion

(Consulting Services amounting to JPY 300 mil is expected to be provided additionally.)

Chapter 17: (contd.)

(3) Outline of proposed On-lending Loans

Outline of proposed on-lending loans is as follows;

Lender	: Ministry of Finance (MOF)
Borrower	: To be selected according to the eligibility of PFIs
Amount	: Lump sum requested amount
Currency	: USD or MNT
Term	: 3-10 yrs (incl grace period 1-3 yrs)
Interest Rate	: USD: LIBOR + 1% MNT: Average rate for MNT demand deposits

(Specially categorized environment project would have preferential condition including interest rate.)

Chapter 17: (contd.)

(4) Outline of Sub-loan

Lenders: Selected PFIs

Borrowers: SMEs meeting the following conditions

1. Established and operating in Mongolia
2. All but real estate, military, and consumer finance (main targets are agricultural and industrial sector)
3. Majority privately owned
4. Pre-tax profit of MNT 100 mil or less (applicable corporate tax rate at 10%)
5. Number of employees 199 or less
6. No previous default

Currency: USD or MNT

Amount: USD 10,000 - 1,000,000 or equivalent

Terms & Conditions:

- Terms: 3-10 years (grace 1-3 years)
- Interest Rate: To be determined by agreement between Lender and Borrower
- Interest Payment: Monthly / Quarterly / Semi-annually (to be decided upon sub-project)

Security: Up to PFIs

(Specially categorized environment project might have preferential condition including interest rate and loan amount.)

Chapter 17: (contd.)

(5) Project Cost and Financing Plan

1. The JICA Study Team proposes that total loan amount will be JPY 5.0 billion (excluding expected TA for consulting services) of which JPY 3.5 billion is for SMEs development (namely Category A) and JPY 1.5 billion for environmental protection (namely Category B).
2. The reason why such a big loan amount is proposed could be explained in followings;
   i. Huge financial demand anticipated in private sector,
   ii. Enhanced implementing capacity of PFIs through experience in Phase I,
   iii. Increased environmental concern,
   iv. Strong government request.
3. Financial demand on firm basis would be difficult to grasp in figure, however the JICA Study Team felt that good operational result of Phase I is disseminated to the corners in Mongolia.

(6) Implementation Schedule

Phase II will be implemented in the period of three years. Time requirement for each step is projected as follows. Phase II could be carefully reviewed for the possibility of Phase III.

Stage		Scheduled duration
Selection of consultants	:	6 months
Project implementation (Phase II)	:	2 years and 6 months

Chapter 17: (contd.)

Selection of PFIs for TSL Phase II

(1) Formulation of PFI Selection Committee (PSC):

During the 2nd mission in April 2009, the formulation of PSC was agreed upon among GOM (MOF), BOM and the Study Team.

(2) Selection method:

PSC, with the support of BOM, will follow almost the same process to select PFIs by consulting the evaluation result of commercial banks made through CAMELS method, as was in the case during Phase I.

(3) Selection criteria proposed by the Study Team:

(i) stability of banking operation-observance of prudential requirements
(ii) management capability
(iii) experience in long-term project loans
(iv) growth capacity of banks

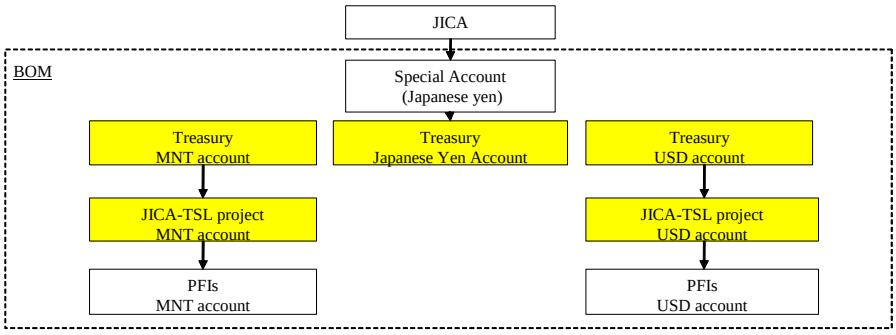
(4) The number of PFIs in Phase II:

The study team proposes to select 6 PFIs of Phase I, plus two to three more depending on the increase of the amount of Phase II.

Chapter 17: (contd.)

Fund Management and Flow

- How the fund in special accounts shall be transferred to PFIs:



- The operation system should accommodate the following functions:
  i. Book keeping of fund flow;
  ii. Book keeping of sub-projects financed by PFIs;
  iii. Interest calculation;
  iv. Repayment schedule; and
  v. Projection of fund inflow from PFIs.

Chapter 17: (contd.)

Monitoring and Evaluation Indicators

SME development loan: Indicators of Project M&E are proposed as follows;

Outcomes: Sales & profit increase of SMEs / sub-borrowers

Impacts: Contribution to export promotion, Import substitution, and Employees increase

Environmental protection loan: Indicators are proposed as follows;
To be set by EPL project type

Environmental Awareness Approaches
- Cleaner Production: Indicators for other classifications are used depending on the project
- Organic Farming: No usage of agrochemicals in planting and hazardous materials for packaging
- Reforestation & biodiversity protection: Compliance with laws and regulations on protected areas and endangered species

Energy Saving Investment
- Change in energy balance on a before/after-project basis

3R Initiative
- Change in material balance evaluated through Life Cycle Assessment (LCA) methodology

Environmental Regulation Compliance
- Compliance with relevant environmental regulations (gas emission standards, effluent standards, law on protected areas, etc.)

Chapter 18: Proposed Technical Assistance

1. Consulting Services for Overall Project Management

Objectives	- To provide daily services and professional advices for Project implementation
Targeted beneficiaries	- Government of Mongolia represented by CSC - PFIs and SMEs implementing the Project
Contents	- General secretariat functions for CSC - Screening and presenting applications for sub-loans for CSC - Disbursement of the Loan proceeds for sub-projects - Operation for collection of interest and principal repayment - Book keeping of the Project accounts - Administration of Revolving Fund accounts - Sub-loan administration and reporting to JICA - Monitoring impacts of sub-projects - Guidance Seminars for Potential Borrower SMEs - Promotion and dissemination activities on EPLs and the relevant concepts for subject enterprises (mostly industrial sector)
Implementation	- National consultants (Project coordinator, Projects appraisal, Operational management, Operational processing, Environment) - International consultants (Project advisor, Project finance expert, SME expert, Environment expert, Project administration expert)

Chapter 18: (contd.)

2. Capacity Building

(1) Capacity Building of PFIs

- Mongolia-Japan Center (MOJC) is expected to help capacity building of PFI officers through provision of training regarding project finance.
- JICA-TSL Consulting Service will provide assistance for screening and preparation of sub-projects through on-the-job basis.
- JICA-TSL will also provide the high-level training on project finance.

(2) Capacity Building of SMEs

- MOJC is expected to render the continuous training opportunities on; (long-term) business planning, including market analysis, sales and profit projection, and repayment planning
- JICA-TSL may;
  - i) cooperation with MOJC through preparation of the curriculum and materials of its training, dispatch lectures
  - ii) disseminate and PR the TSL project
  - iii) train how to formulate sub-projects (for potential sub-borrowers)

Chapter 18: (contd.)

3. Additional Technical Assistance

(1) Capacity Development of GASI on Water Quality Monitoring

For enhancement of environmental regulation compliance in the long term perspective

Objectives	- To transfer technology on water quality monitoring to GASI thereby enhancing environmental regulation compliance in the long term perspective
Targeted beneficiaries	- GASI Inspectors
Contents	- Technology transfer on ecological behavior of the pollutants in water environment - Technology transfer on on-site monitoring with simple measurements
Implementation	- International experts in water quality monitoring

(2) Other issues related to T/As on Environmental Protection

- Potential collaboration with MCCI “Green Initiatives” technical assistance and loan guarantee scheme
  - Intensive and direct T/A to SMEs in cleaner production and energy saving investment for EPL project formulation and implementation
  - Sub-loan guarantees by Green Credit Guarantee Fund
- Expert Dispatches in Environmental Protection
  - Assistance for Regulatory Framework of EIA Process
  - Assistance for Environmental Protection Activities in Public Sector (Needs survey, etc.)

PART I RECENT SECTOR DEVELOPMENT

PART I RECENT SECTOR DEVELOPMENT

CHAPTER 1 MACRO ECONOMY

1.1 Overview of Mongolian Economy

Since the transfer of its political system to democracy in the early 90s, the Government of Mongolia (GOM) has made significant efforts to achieve macro-economic stability and to establish market economy by undertaking fundamental structural reforms with the assistance of international donors mainly, International Bank for Reconstruction and Development (IBRD), Asian Development Bank (ADB), and the Government of Japan (GOJ). Owing to the GOM's efforts, Mongolia's economy has been gradually stabilizing, and its growth rate recorded at 10.6% in 2004 is the highest in its history.

Based on the stabilized economic system, especially on reasonably developed financial systems, the Mongolian economy has shown high and steady growth, which averaged at 9.1% real growth rate from 2004 through 2008, and its GDP reached USD 5,258 million in 2008. This growth can be attributed to expanded export earnings in mining particularly, and other greater capital inflows through FDIs and remittances. GDP per capita has also risen steadily from USD 717 in 2004 to USD 1,960 in 2008 at current prices. Stable exchange rates and comparatively lower inflation rates also contributed to this growth.

From the social development point of view, employment has been promoted by high and continuous economic growth. Meanwhile, the Mongolian economy has increased the gap between the urban and rural economic levels. Ulaanbaatar by itself accounts for almost half (49.8%) of the national GDP. Except for the largest mining province of Orkhon, the gap of GDP per capita between Ulaanbaatar (USD 1,826 in 2007 at current prices) and the rest of the provinces (USD 811) has remained huge.

The global downturn has also hit Mongolia hard. This downturn, which is mainly brought by the collapse of mineral prices, copper in particular, immediately caused serious declines in export earnings and tax revenues. According to the latest estimates by the World Bank, Mongolia's economic growth is projected to slow down considerably from 8.9% in 2008 to 2.7% in real terms in 2009 (please refer to section 1.10 for more details).

Table 1.1.1 Macroeconomic Indicators in Mongolia

	2004	2005	2006	2007	2008	Ave. growth % '04-08	2009 Projected
GDP (USD million, nominal)	1,816.0	2,306.0	3,150.0	3,930.0	5,258.0	-	4,320.0
Real GDP growth (%)	10.6	7.2	8.6	10.2	8.9	9.1	2.7
Consumer price index (%)	10.9	9.6	5.9	14.1	23.2	12.7	9.0
Exports of goods (USD million)	872.1	1,066.1	1,543.9	1,950.7	2,532.5	-	1,863.0
Growth (%)	39.0	22.2	44.8	26.4	29.8	32.4	-26.4
Copper (year-on-year change, %)		14.7	94.8	27.7	3.0	28.0	n.a.
Current account balance (USD mil.)	24.1	29.7	221.6	264.8	-502.7	-	-261.8
Growth (%)	1.3	1.3	7.0	6.7	-9.6	1.3	-6.5
Foreign direct investment (USD mil.)	128.9	257.6	289.6	360.0	682.5	-	316.5
Foreign exchange reserves (USD, mil.)	207.8	333.1	718.0	1,000.6	656.7	-	822.1
Money supply (M2) (USD billion)	847.0	1,140.1	1,536.4	2,401.1	2,235.9	-	n.a.
GDP per capita	717.0	900.0	1,214.0	1,491.0	1,960.0	-	n.a.

Source: National Statistics Office, MOF, World Bank Mongolia Monthly Economic Update April 2009

1.2 Government Policy and its Program

Mongolia faces significant challenges emerging from its geographical disadvantage of being a landlocked nation. Notwithstanding the recent economic growth, there remain several constraints to the sustainable economic growth. These include infrastructure bottlenecks which cause high transport costs, limited access, and costly sources of finance. Poverty incidence still remains high, and the inequality between the urban and the rural areas remains wide.

The Government's strategy for these challenges was formulated in the two four-year plans namely, the Fourth (4^{th}) Action Plan set in 2004 for 2004-2008 and the Fifth (5^{th}) Action Plan set in 2008 for 2008-2012. In addition, the Government adopted in February 2008 the Millennium Development Goals-based Complex National Development Strategy (NDS). The 4^{th} Action Plan modestly targets 6% annual growth for the period and one-digit inflation (9%) by emphasizing five priorities: transparency of public entities, setting up the legal framework, enhancement of private sector, promotion of infrastructure and financial infrastructure, and capacity building. On the other hand, the 5^{th} Action Plan is aggressively targeting higher economic growth of 12% during the period 2008-2012, reflecting its on-going stagnation by emphasizing nine priorities in a wider range of fields including the promotion of mining/ tourism/ agriculture/ industries, social welfare including allowances, and promotion of PPPs and BOTs.

The global millennium targets were also re-appreciated in Mongolia and NDS reemphasized the long-term development priorities. NDS, in re-setting the overall goal of joining the middle-income countries by 2021, aims at: i) strengthening Mongolia's human resources by improving education, health, science, and technology, ii) achieving dynamic economic growth led by private sector and promoting export/import-substitution, iii) establishing an intellectual-based and ecologically sustained economy, and iv) protecting the human rights and freedoms while reducing corruption in the bureaucracy. NDS indicated the twin goals of

achieving over 14% of annual GDP growth and USD 5,000 per capita GDP during the period 2007 and 2015.

1.3 Budget

The scale of the government's (both central and local) expenditure budget has largely increased to MNT 2,462.0 billion in 2008, compared to MNT 764.6 billion in 2005, owing to the increase in tax and royalty revenues from the mining sector and to customs revenues through better collection efficiencies from enhanced import activities and improved tax base. After enjoying a budget surplus in 2006 and 2007, Mongolia recorded a MNT 305.7 billion budget deficit in 2008, equivalent to approximately 5% of GDP due to sharp increases in expenditures. The fiscal expenditure expanded rapidly from 2006 to 2008 as a result of a higher wage bill and the introduction of a number of new social care programs[1]. Expenditure reached 40.5% of GDP in 2008, and was projected to remain at a similar high level for 2009. Nearly 40% of government revenues come from the mining sector and therefore, with the downturn in commodity prices, the revenues from minerals have declined in January 2009 at less than one-third of planned levels.

Table 1.3.1 Revenue and Expenditure of Government (Both Central and Local)

(in MNT billion)

	2004	2005	2006	2007	2008 (plan)	2008 (actual)
I. Revenue and grants	713.1	837.9	1,360.4	1,851.2	2,507.9	2,156.4
a. Current revenue	706.3	832.6	1,354.1	1,843.7	2,488.6	2,136.1
a) Tax revenue	583.1	692.2	1,128.1	1,500.7	2,137.1	1,888.9
b) Non-tax revenue	123,2	140.4	226.0	342.9	351.5	247.2
b. Capital revenue	0.8	1.0	1.6	2.5	3.5	4.4
c. Grants and transfers	6.1	4.3	4.7	5.0	15.8	15.8
II. Expenditure and net lending	752.5	764.6	1,237.0	1,749.2	2,529.2	2,462.0
a. Current expenditure	538.7	600.3	982.4	1,361.5	1,823.3	1,749.5
a) Goods and services	128.8	142.8	196.6	292.5	1,062.0	1,030.7
b) Interest payments	22.1	20.7	18.1	18.3	20.4	19.8
c) Subsidies and transfers	160.4	192.9	271.8	679.6	740.9	699.0
b. Capital expenditure	104.9	89.8	175.7	287.0	631.6	624.9
c. Net lending	108.9	74.5	79.0	100.7	74.2	87.6
III. Budget surplus (deficits)	-39.4	73.3	123.4	102.0	21.3	(305.7)

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

Copper and other mineral prices, which have been major assumptions for budget planning in the last few years[2], have started collapsing from their peak in August 2008. Although this development has not affected the 2008 budget so much, the drop in mineral prices has compelled the government to drastically cut its spending in subsequent years. Under these circumstances, the budget for 2009 has been re-drafted a few times during the period mid-2008 and the first quarter of 2009.

[1] The Government provides almost 50% of the population with social assistance, including allowances for newborns, children, and newly married couples, lunch allowances for school pupils, and pensions for elders.

[2] MOF calculated almost 30% of total government revenue was financed by mining-related revenue in FY2008.

While the original budget for 2009 prepared in September 2008 was prepared on the basis of 14% real economic growth (in contrast to 2.7% projected growth by the World Bank) assuming the copper price of USD 6,700 per ton (against already lowered price of USD 3,125 per ton in January 2009), the budget prepared in early 2009 and approved by the parliament assumed a 12% GDP growth which could result in 6% GDP deficit.

1.4 Finance

GOM's financial sector is described in detail in Chapter 2.

1.5 Inflation

Annual inflation rate was relatively stable at 8.0% on average from 2001 until 2007, owing to the restructuring of Mongolia's banking system, increase in domestic interest rates, and enforcement of a tight fiscal policy. However, inflation started soaring since the latter half of 2007, and reached 23.2% in 2008. Inflation is caused mainly by increasing oil prices, following increased transportation cost, price increases of imported foods like rice and wheat and non-tradable food like meat, and increase in government expenditures particularly for wages and transfer payments.

The increases in the prices of food products especially bread, flour, meat, and grocery items has significantly influenced the rise in inflation. Despite its tight policy, the inflation rate in Mongolia started its decline only in September 2008 and is now kept at a rather high level (17.2 % in February 2009).

The World Bank forecasts inflation to decline considerably in 2009 and the second round effects of inflation through rising demand for larger nominal wage increase. Such second round effects may well keep inflation elevated over the medium term, unless the authorities take strong actions to control any build-up of inflation.

Table 1.5.1 Inflation Trends

(%, at the end of period)

2000	2001	2002	2003	2004	2005	2006	2007	2008
8.1	8.1	1.6	4.7	11.0	9.5	6.0	15.1	23.2

2007				2008				2009
QI	QII	QIII	QIV	QI	QII	QIII	QIV	Feb.
5.9	6.3	13.2	15.1	20.6	32.4	31.7	23.2	17.2

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

1.6 Change of Industrial Structure

In the early 90s up to 2000, agriculture / animal husbandry dominated Mongolia's economy. At present, four major sectors contribute largely to its economy, and these are agriculture / animal husbandry (18.8% in 2008), mining (27.8%), wholesale / retail trade (7.8%), and service industry such as transport / communications. These four sectors account for as much as 95.7% of GDP (before adjustment). By contrast, Mongolia's manufacturing sector accounted for still a lesser part of its economy at 4.0% (see Table 1.6.1).

Table 1.6.1 GDP by Sector

(in current billion MNT/%=share)

	1990		1995		2000		2000		2004		2008	
Agriculture	1.6	15.2%	209.1	38.0%	296.5	29.1%	338.5	28.9%	478.4	22.2%	1,151.2	18.8%
Industry	3.7	35.6%	142.1	25.8%	204.3	20.1%	190.9	16.3%	511.0	23.7%	2,082.0	34.0%
Mining	-	-	-	-	-	-	116.2	9.9%	365.7	17.0%	1,704.9	27.8%
Manufacturing	-	-	-	-	-	-	47.9	4.1%	76.3	3.5%	245.4	4.0%
Utilities	-	-	-	-	-	-	26.8	2.3%	69.1	3.2%	131.7	2.1%
Construction	0.5	5.0%	9.2	1.7%	19.3	1.9%	19.7	1.7%	50.2	2.3%	88.9	1.5%
Whole/retail trade	2.3	22.0%	97.4	17.7%	258.2	25.3%	114.2	9.7%	200.2	9.3%	479.5	7.8%
Service	1.2	11.5%	62.8	11.4%	153.3	15.0%	534.5	45.6%	977.0	45.4%	2,534.2	41.3%
FISIM*/Adjustment	0.1	1.2%	-5.5	-1.0%	-24.8	-2.4%	-24.8	-2.1%	-64.9	-3.0%	-205.5	-3.4%
Total	10.5	100.0%	550.3	100.0%	1,018.9	100.0%	1,172.8	100.0%	2,152.1	100.0%	6,130.3	100.0%

Note: GDP data for 1990-2000 were prepared on the basis of an older calculation system, while data for 2000-2008 were calculated based on a new system that was introduced in 2000.

Note: FISIM (or Financial Intermediation Services Indirectly Measured) is an adjustment that avoids double calculation of income of financial intermediaries.

Source: National Statistics Office

This structure indicates that the Mongolian economy is still heavily dependent on mining commodities. If the Oyu Tolgoi and Tavan Tolgoi mining projects were implemented, the mining sector would likely dominate the economy further. At the same time, if developed, it will invite the development of other related sectors such as manufacturing, transportation, energy, construction, etc.

The manufacturing sector, although still having a smaller share in the economy, has been observed to post an increasing growth ratio in the last few years. Manufacturing output has grown to 36.1% per annum between 2005 and 2008 (21.3% in real terms). Mongolia's manufacturing sector is largely comprised of light industry sub-sectors such as food processing (37.4% share in gross manufacturing output in 2008), textile and apparel (21.5%), non-metallic mineral products (7.9%), and basic metals (21.9%). The largest group in the food processing sub-sector is the manufacture of beverage/ alcohol, followed by grain processor/ animal feeds, meat/ vegetable processor, and dairy products. The textile and apparel sub-sector is largely concerned with wool/ cashmere products. Non-metallic mineral products include construction materials such as brick and concrete products, which have grown due to the recent construction boom in Ulaanbaatar.

As estimated by the World Bank in its "Mongolia Quarterly, February 2009", the drivers of economic growth from 2009 onward are still expected to be agriculture/ animal husbandry and transport/ communication, followed by trade and manufacturing sector to a lesser extent. The mining sector will show stagnation in real term, continuing its downward trend. Its contribution to economic growth is forecast to remain nil in 2009.

Table 1.6.2 Industrial Output by Sub-sector

(in MNT billion at current prices)

	2004	2005	2007	2008	(share)
Total industrial sector	1,537.8	1,465.6	2,586.0	2,859.0	100.0%
Mining, Quarrying	927.4	978.3	1,737.9	1,845.7	64.6%
Manufacturing	431.1	300.4	644.4	757.5	26.5%
Food products, beverage	*102.8*	*104.2*	*179.8*	*283.8*	*9.9%*
Textiles	*131.3*	*66.4*	*148.7*	*149.1*	*5.2%*
Apparel, garment, etc.	*102.1*	*31,3*	*29.4*	*15.1*	*0.5%*
Wood, wooden products	*8.3*	*7.9*	*4.6*	*8.1*	*0.3%*
Publishing, printing, etc.	*9.5*	*8.3*	*10.3*	*15.3*	*0.5%*
Non-metallic mineral products	*10.3*	*14.6*	*28.5*	*60.6*	*2.1%*
Basic metals	*47.8*	*50.4*	*193.1*	*165.0*	*5.8%*
Other manufactures	*19.0*	*48.6*	*50.0*	*60.5*	*2.1%*
Electricity, thermal energy and water supply	179.2	186.9	203.6	255.8	8.9%

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

1.7 Employment

Owing to the strong economic performance in the last few years, the number of unemployed in Mongolia has steadily decreased. According to the national survey, unemployed persons decreased to 114,500 (unemployment ratio 11.3%) during the 2006/07 period from 142,300 (14.2%) during the 2002/3 period (see Table 1.7.1).

It may however be noted that in Mongolia, around 37% of economically active population is deemed as "self-sustained" or "unpaid as family worker" mostly in the agriculture/ animal husbandry sector. In addition, those employed in industrial sector (mining, manufacturing, and public utility enterprises) only amount to 54,200 as of the end of 2008. In the industrial sector, mining employs around 15,600 (or 1.5% of the total labor force), which is less than that of the manufacturing sector which employs 24,300 (2.3% of the total labor force) mainly because mining is very capital intensive.

Table 1.7.1 Employment Trends

(in thousands)

	Active workforce	*Of which,* employed					*Of which,* unem-ployed	Unem-ployment rate
		Total	Paid worker	Employer	Self-sustained	Family worker		
2002-03 period survey	1,004.8	862.5	338.6	5.5	303.4	215.4	142.3	14.2%
2006-07 period survey	1,013.5	898.9	336.8	6.0	306.4	249.7	114.5	11.3%

Source: National Statistics Office, Statistical Yearbook, the latest

1.8 Trade and Foreign Direct Investments

(1) External Trade

In the last five years, Mongolian exports and imports have grown at almost the same pace at 32.4% and 31.4%, respectively and amounted to USD 2.5 billion and USD 3.2 billion, respectively in 2008. Trading results, therefore, have been balanced at the beginning of the

period, but suddenly fell to a big deficit at the end of 2008 due to the worldwide financial crisis.

Exports have been mainly driven by mining and animal-based products. Major export commodities in terms of value include mineral products (mainly copper, zinc, iron ole, coal and crude oil), natural and processed stones, precious metals and jewelry (mainly gold and molybdenum), and textiles and garments (mainly wool and cashmere products). Of the total export value, these commodities accounted for 93% of total exports in 2008.

Despite sustained export growth, the trade deficit recently widened sharply due to a rapid expansion of imports. The value of imports in 2008 grew to USD 3,245 million, which sharply increased from USD 1,177 million in 2005. Mongolia mainly imports petrol, diesel fuel, vehicles, construction heavy machinery, wheat, and flour. Such a rapid expansion of trade deficit is explained by factors such as i) higher world oil and food prices, ii) excess liquidity in the domestic economy which pushes aggregate demand, iii) relatively rigid nominal exchange rate, and iv) large imports of mining equipment associated with growing FDI in this sector. Trade deficit has widened since 2007, and became quite large at USD 716 million in 2008.

Table 1.8.1 Exports and Imports by Major Commodities

(in USD million)

	2004	2005	2006	2007	2008	2009*
Export						
Total	869.7	1,064.9	1,542.7	1,947.4	2,528.9	232.4
Mineral products	354.0	454.7	894.0	1,301.4	1,525.5	82.2
Textiles & their articles	197.4	191.7	246.7	262.5	225.4	15.1
Stones, precious metal, jewellery	243.5	331.2	270.2	234.8	600.2	115.9
Raw/processed hides, skins, fur, etc.	23.5	30.9	45.0	42.1	40.6	5.7
Import						
Total	1,019.3	1,177.3	1,435.1	2,061.8	3,244.6	205.8
Food products	91.0	100.0	108.6	121.6	229.9	22.1
Mineral products	70.7	100.9	119.0	132.0	965.6	36.1
Chemical / chemical industry	50.6	59.7	81.0	108.2	150.7	13.7
Base metals / articles	67.6	100.0	90.0	93.7	266.7	8.1
Machinery, equipment, electric products	162.9	100.0	150.2	267.8	607.5	47.0
Vehicles, transportation equipment	91.0	100.0	89.9	108.2	458.4	36.5
Trade Balance						
Balance	-149.6	-112.4	107.6	-114.4	-715.7	26.6

Note: Figure in 2009 is up to February.
Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

The largest trading partner for Mongolia is China to which exports accounted for 72.5% in 2007 and 64.9% in 2008 and imports accounted for 31.0% and 33.0% in the same years. Other major trading partners of Mongolia are Russia, Canada, US, and Korea. Their shares, however, are very variable and depend on the deals agreed upon relating to mineral exports. Imports from Korea are gradually increasing, which could be a reflection of the geographical advantages of trading with this country.

Partly affected by the global financial crisis, copper prices fell reflecting weak demand, especially from sagging global construction activities and higher inventories. The total drop of copper price exceeded 65% (from USD 8,685 per ton in April 2008 to USD 3,125 per ton in January 2009). If copper prices stagnate in the coming years, even if export of other commodities such as coal, zinc, oil, cashmere, and other livestock-based commodities are kept at normal levels, Mongolia's external trade outlook would worsen. Current trade deficits would widen because imports would continue to grow mainly supported by domestic demand.

(2) Foreign Direct Investments

As of the end of 2007, over 7,700 foreign companies from 93 countries have been registered in Mongolia[3], and total FDIs of USD 2.3 billion has been committed during the period 2000-2007. In 2007 alone, FDI commitments reached almost USD 500 million with about 1,600 investors, and increased over twice the level in 2004 (USD 237 million). In 2007, the mining sector (including geological prospecting) accounted for over half (52.2%) of total FDIs, followed by trade (18.7%), financial services (4.9%), light industry comprising wool, leather processing, and textile (3.9%), construction (2.7%), and processing of livestock-based materials (2.4%). China and Canada have been the largest origins of investment, providing about 51.3% and 10.8% of total FDIs, respectively as of the end of 2007.

Table 1.8.2 FDIs to Mongolia on a Commitment Basis

(in USD million)

	1995	2000	2001	2002	2003	2004	2005	2006	2007
FDIs	37	91	125	172	205	237	316	366	499

Source: Foreign Investment and Foreign Trade Agency of Mongolia

As may be observed in Table 1.9.1, the actual inflow of net FDIs to Mongolia also sharply increased to USD 683 million in 2008 from USD 290 million in 2006. However, since FDI has also been severely affected by the global financial crisis, the actual inflow in the third quarter of 2008 saw a halt of the growth (USD 201 million from USD 208 million in the second quarter), followed by a decline to USD 135 million in the fourth quarter of 2008. The World Bank estimated[4] that such inflows of FDIs in 2009 would decrease further to the levels achieved in 2007 (over USD 300 million), due to possible delays or cancellations of committed mining development operations.

1.9 Balance of Payments

(1) Trend

As mentioned before, continuous trade deficit except 2006 has been successfully covered by non-trade current revenues and therefore the current balance of payments has been positive except last year when the worldwide financial crisis hit Mongolia. FDIs and external borrowings were added, further resulting in a tremendous increase in foreign exchange reserves amounting to USD 1.0 billion at the end of 2007, which was equivalent to five

[3] Foreign Investment and Foreign Trade Agency of Mongolia.
[4] Mongolian Quarterly February 2009, the World Bank.

months of imports. Mongolia's exchange rate, therefore, has been quite stable for five years before the onset of the financial crisis.

Table 1.9.1 Balance of Payments

(in USD million)

(in USD million)	2004	2005	2006	2007	2008
Private remittances*	146.3	133.8	77.1	83.9	100.0
a. Credit	195.4	174.2	153.6	174.3	214.8
b. Debit	49.1	40.4	76.6	90.3	114.8
Trade balance	- 99.2	- 99.5	136.2	- 52.4	- 596.5
Exports of goods	872.1	1,066.1	1,543.9	1,950.7	2,532.5
Growth (%)	39.0	22.2	44.8	26.4	29.8
Copper concentrate	284.3	326.2	635.4	811.5	835.6
Non-monetary gold	243.2	331.4	270.1	234.9	599.9
Other	344.5	408.5	638.4	904.3	1,094.9
Imports of goods	971.3	1,165.6	1,407.7	2,003.1	3,128.9
Growth (%)	17.5	20.0	20.8	42.3	56.2
Current account balance	24.1	29.7	221.6	264.8	- 502.7
(% of GDP)	1.3	1.3	7.0	6.7	- 9.6
Net FDI (inflow)	128.9	257.6	289.6	360.0	682.5
Foreign exchange reserves (gross)	207.8	333.1	718.0	1,000.6	656.7
Exchange rate (MNT/USD, eop)	1,209	1,221	1,165.0	1,170	1,268

Source: The World Bank: Mongolia Monthly Economic Update, April 2009, BOM: Balance of Payment Statistics

(2) Debts

Because of the government efforts, the ratio of external debt/GDP has fallen significantly from 85.8% in 2003 to 30.6% in 2008. Debt service ratio (debt/export) has been kept at very easy level during recent years to undertake debt services. Therefore, further borrowings will have no adverse effect on balance of payments unless the expected loan is at commercial rates.

Table 1.9.2 External Debts

(in USD million)

	2003	2004	2005	2006	2007	2008
External debt	1,240	1,312	1,360	1,414	1,529	1,610
GDP (nominal)	1,446	1,816	2,306	3,150	3,930	5,258
Debt to GDP ratio (%)	85.8	72.3	59.0	44.9	38.9	30.6
Debt-service ratio (% of export)	31.8%	5.3%	1.1%	1.2%	1.2%	1.6%

Note: estimated for 2008

Source: The World Bank, Mongolia Quarterly, February 2009

(3) Exchange Rate and Foreign Exchange Reserves

The currency of all mining-dependent countries comes under pressure due to the drop in mineral prices. In response, many of these countries allowed their currencies to depreciate against the US dollar starting mid-2008. In contrast, the policy of the Bank of Mongolia (BOM) has been to strongly defend the currency and let it appreciate by selling US dollars, in exchange for MNT, to the commercial banks.

Table 1.9.3 Exchange Rate and Foreign Exchange Reserves

	2004	2005	2006	2007	2008	2009*
Exchange rate (MNT / USD)	1,209	1,221	1,165	1,170	1,268	1,640
Foreign exchange reserves, gross (in USD million)	207.8	331.1	718.0	1,000.6	656.7	822.1
(Month of imports of goods and services)	1.8	2.5	4.6	5.0	2.1	3.7

Note: Figure in 2009 is up to February.
Source: The World Bank, Mongolia Monthly Economic Update, April 2009, BOM, Balance of Payment Statistics

During the first half 2008, when high global food and fuel prices led to record-high inflation, this made sense. However, as the drivers of inflation shifted to domestic causes, and the price of copper collapsed, the continuation of the existing BOM policy led to a drop of USD 365 million in Mongolia's foreign exchange reserves between July and December 2008. The demand for foreign currency at the official rate quickly outstripped supply. As a result, a parallel market for foreign exchange developed, where the US dollar started trading at higher levels than the inter-bank rate, reaching MNT 1,520 per USD in February 2009. Currently, foreign exchange is rationed in all markets. The private sector is struggling to deal with the increased currency risk.

1.10 Recent Economic Crisis

According to the World Bank, the Mongolian economy has been *overheating* from the middle of 2007 to the middle of 2008. Total stock transaction amounts and stock prices reached their peaks in September 2007, but after that, it spiraled downwards. On the other hand, the banking sector started to tie down their lending from the fourth quarter of 2007 especially to the construction and real estate sectors.

Prices of Mongolia's major export commodities such as copper declined sharply in 2008, causing a severe reduction in export earnings and tax revenues. Therefore, the Mongolia's economy immediately experienced a serious crisis. At the same time, the government spending was 44.6% higher than in the previous year, as budgetary allocations and imports hovered at a high level. As a result, both the fiscal revenue and trade surplus deteriorated rapidly. With the bankruptcy of Lehman Brothers Holdings Inc. on 15 September 2008, the crisis spread the worldwide. Remittances from the Mongolian people working abroad to Mongolia decelerated and consequently, the balance of payments deteriorated further.

To overcome these severe situations, GOM tried to cover fiscal revenue by increasing lending from the banking sector, and to stop the depreciation of local currency of Tugrug, by spending the foreign currency reserves. However, another decline in copper prices led to further depreciation of the Tugrug (60% decline from peak). In December 2008, after the press released news of Anod Bank's bankruptcy, liquidity shortage became crucial along with accelerating withdrawals of the Tugrug currency by Mongolian depositors. Entering into the year of 2009, the economic situation has started to change. Import has shown a sharp decreasing due to tight money situation and seasonal reason. Import amount in the first quarter of 2009 is estimated USD 393.9 million, which is 34.3% less than USD 599.3 million in the first quarter of 2008.

GOM seems to have had meetings regularly with International Monetary Fund (IMF), and started to discuss a request for emergency support sometime in the spring of 2008. Faced with

the serious economic situation, GOM and IMF met more often and more closely, but could not reach an agreement up to February 2009. Both sides disagreed on the level of the budget deficit vis-à-vis GDP and GOM's expenditure targets. Subsequently, by making concessions, GOM reached an agreement with IMF in April 2009, and was able to get stand-by USD 229 million from IMF with two conditions namely, reduction of social benefits to children and reduction of the fiscal deficit to less than 6% of GDP. Additionally, IMF expected GOM to enforce tight financial policy by raising policy rate together with other effective measures to tackle inflation, and strengthen the credibility of the banks.

Figure 1.10.1: Outline of Mongolia's Economic Situation

CHAPTER 2 FINANCIAL SECTOR

2.1 Overview of Financial Sector

Mongolia's financial sector has rapidly developed and has reached a certain level of positive stability in the middle of 2008 with the assistance of International Financial Institutions (IFIs), which largely contributed to the country's high economic growth in recent years. Particularly it is noteworthy that during the last few years the BOM has been strengthening its performance in pursuing monetary policy and in supervising commercial banks. Commercial banks have grown rapidly and their assets have reached MNT 3,650 billion in 2008 which is 59.5% of GDP.

Mongolia's overall financial system, however, is still small and underdeveloped considering its economic level and in comparison with a bit more economically advanced Asian countries like Thailand, Malaysia and Indonesia. Its economy is volatile because of various financial risks.

Recently, the global economic recession has brought adverse impact to the Mongolian economy, and the GOM has exerted great efforts to establish suitable recovery measures in terms of budget and foreign currency reserves with the assistance of IMF. On March 11, 2009, the GOM successfully reach on the agreement with IMF in receiving a Stand-by Assistance of USD 229 million. Details of this assistance are discussed in section 2.5 below.

In this chapter, the development of the banking sector in Mongolia is described in terms of financial structure, money supply and monetary policy, banking sector, and the recent financial crisis.

2.2 Financial Structure

(1) Ministry of Finance (MOF)

The main roles of the Ministry of Finance (MOF) are planning and executing economic and fiscal policies including budget preparation, collecting taxes, and coordinating international assistance programs. The donor programs from several overseas donors including IFIs are under the responsibility of the Department of Policy and Coordination for Loan and Aid ("Aid Coordination Department" as indicated in Figure 2.2.1)[1]. This department successfully obtained the TSLs from JICA in 2006 as well as the KfW's SME Project and the World Bank's PSDC in 2002 and 2003, respectively. After the signing of agreements, implementation of the programs is handled by the Financial Policy and Coordination Department which is solely responsible for the financial sector including financial institutions.

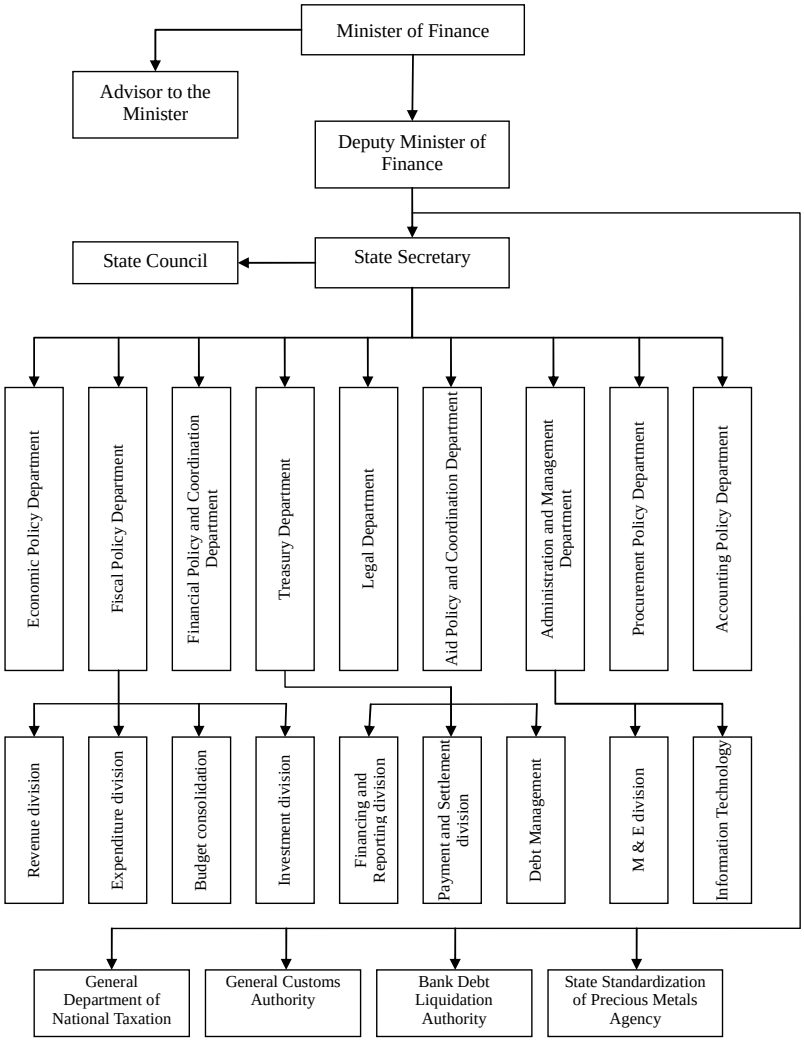
In this connection, the first Chairman of the Counterpart Steering Committee (CSC) was selected from the latter department. However, the second chairman was nominated to Mr. Dorjkhand, Deputy Director of the Aid Policy and Coordination Department, who was more familiar with the TSL loan because of his involvement in the negotiations. Since then, any

[1] The name of "Department of Policy and Coordination for Loan and Aid" is the expression by translating from Mongolia to English which is same as "Aid Coordination Department" as shown in MOF's English website.

policy matter or negotiations relating to the JICA-TSL is under the responsibility of that department. Therefore Financial Policy and Coordination Department is not directly involved in the JICA-TSL at this moment.

The Debt Management Division under the Treasury Department of MOF is in charge of money flows using a Special Account (S/A) and a Revolving Fund Account (RF/A) that have been set up in the BOM for the JICA-TSL. Disbursement of loans to PFIs is done by BOM through debiting funds from the S/A, on the basis of the instructions given by the Treasury Department.

Regarding overall management of financial institutions, the responsible unit in the MOF is the Financial Policy and Coordination Department, but the BOM with the support of IMF is taking the initiative in the supervision of the banks (except non-bank financial institutions which are supervised by Financial Regulatory Commission : FRC).



Source: MOF's website

Figure 2.2.1 Organization Chart of MOF

(2) Bank of Mongolia (BOM)

The Bank of Mongolia (BOM), the central bank of Mongolia, acts independently of the government under the Law on Central Bank and reports directly to the Parliament. While the MOF mainly handles fiscal and economic policies and also oversees the finance sector as a whole, the BOM's role is to formulate monetary policies in order to stabilize commodity prices (inflation), adjust money flows in the market, manage foreign currency reserves, and supervise commercial banks.

The main objective of monetary policy is to control inflation measured by the consumer price index (CPI) within certain levels of inflation rate stated in the Monetary Policy Guideline that is issued every year. The BOM tries to achieve the objective primarily by manipulating three monetary policy instruments: i) open market operations, ii) reserve requirements, and iii) policy rate setting. The bank also handles the foreign currency reserves of the country by buying or selling foreign exchange in the market and/or by making swap transactions with commercial banks and others.

Policy rate setting is a newly introduced monetary policy measure (by revision of the regulations of the central bank bill in July 2007). The policy rate aims to control the inter-bank rates and subsequently, lending and deposit rates to stabilize the economic situation. In addition to the three monetary policy instruments mentioned above, the BOM also introduced currency swap transactions between the US dollar and the MNT in the inter-bank market to maintain foreign exchange reserves and to respond to liquidity shortages of commercial banks.

(3) Financial Regulatory Commission (FRC)

The FRC was newly established in 2006 as a regulatory body that supervises more than 400 non-bank financial institutions (NBFIs) comprising insurance companies, securities companies, non-bank financial companies, and savings and credit cooperatives[2]. As it is a new government organization, its human resources and budgetary allocations are seriously in shortage. The FRC, however, is now being assisted by the ADB to pave the way towards the strengthening its institutional capacity.

(4) Financial Institutions

As shown in the table below showing the structure of Mongolia's financial system, the financial institutions comprising the financial sector of Mongolia are commercial banks and NBFIs including insurance companies, savings and credit cooperatives, and securities companies. In terms of assets, 15 commercial banks dominate the system with its 95.3% share, while NBFIs account for only 4.7% share. NBFIs are generally small but many in numbers. Total assets of the banking sector quadrupled, while those of NBFIs grew by 2.4 times only, widening the gap between commercial banks and NBFIs.

Among financial institutions, the banking sector is overwhelming in financial activities and is functioning as intermediates of TSLs. A detailed description of the banking sector is presented in Section 2.4.

[2] The supervision function of NBFIs was made by the BOM before 2006.

Table 2.2.1 Mongolian Financial System Structure

	Dec 04			Dec 05			Dec 06			Dec 07			Dec 08		
	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets	Number	Assets (bn MNT)	% of total assets
Banks	17	892	92.2	17	1,371	97.3	16	1,899	94.7	16	3,279	95.7	15	3,630	95.3
NBFIs	514	76	7.8	522	38	2.7	1096	107	5.3	379	147	4.3	379	179	4.7
Insurance companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19	22	1.1	15	28	0.8	15	35	0.9
SCC	400	47	4.9	400	na	2.7	955	16	0.8	192	36	1	192	46	1.2
Finance companies	114	29	3	122	38	n.a.	122	69	3.4	137	66	1.9	137	72	1.9
Securities companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35	16	0.5	35	26	0.7
Total financial system	531	968	100	539	1410	100	1112	2006	100	395	3425	100	421	3,809	100

Source: IMF, BOM and FRC

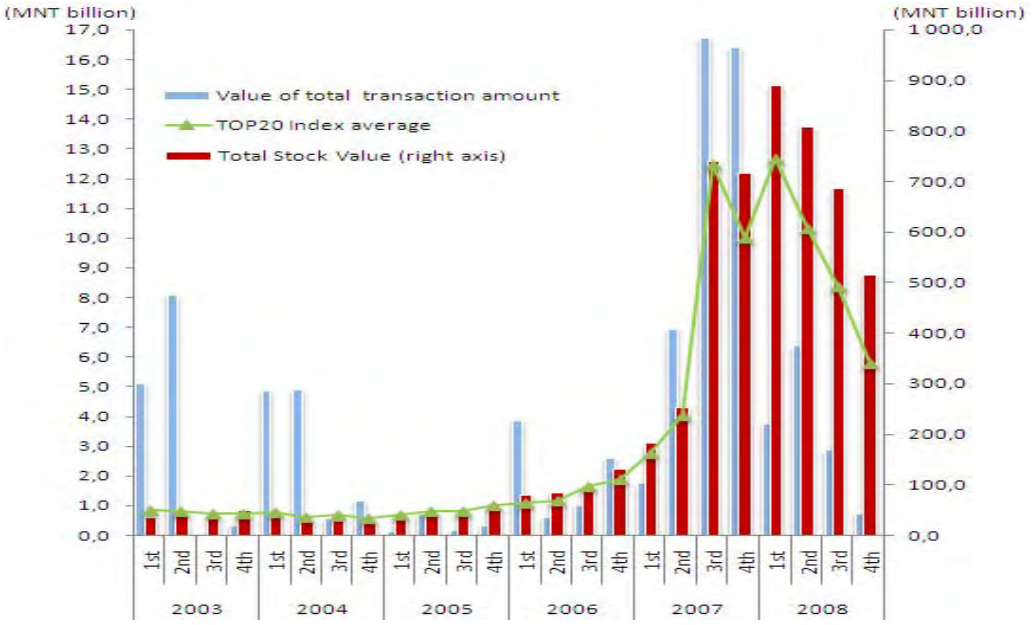
(5) Capital Markets

The Mongolian Stock Exchange

The Mongolian Stock Exchange (MSE) was established in 1991 by the GOM as a public non-profit organization. At the initial stage, it was mainly engaged in the trading of shares of the government-owned entities, which were distributed by vouchers and were issued by the GOM to all entitled individuals on the occasion of privatization of public enterprises. Later in 1995, the MSE became a legal entity owned by the government that could deal with securities exchange and secondary market operations on the basis of the Securities and Exchange Law in 1994 and the Corporate Law in 1995. Further development of the capital market resulted in the adoption of the Securities Market Law in 2002, which regulates the relations concerning securities and its related activities and the re-organization of MSE into a shareholding company with the government sharing ownership.

Capital Markets

Despite government efforts to develop the capital markets, the size of the stock exchange is still small in comparison with total banks' loan, and direct financing through the stock exchange has not become a viable financial source for the business sector. For example, while the average total stock value (gross basis) was at its highest level amounting to MNT 890 billion at the first quarter of 2008, increasing by ten times over the average figure in 2006, it is only 18.2% of the banks' total assets of MNT 3,650 billion. The number of listed companies and traded amounts representing the size of the stock exchange are also small (see Figure 2.2.2).



Source: BOM Monthly Statistical Bulletin 2009-02

Figure 2.2.2 Quarterly Movements of Mongolia's Stock Exchange

2.3 Money Supply and Monetary Policy

(1) Money Supply

Money supply (M2) in Mongolia has been expanding steadily with slightly over the economic growth since 2004 (average growth rate of money supply from 2004 to 2007 is 36.5%) and attained 52.7% of GDP in 2007. It was, however, downscaled considerably in 2008 at 37.8% of GDP falling below the 2004 line, reflecting the recent economic recession. The level of the ratio of money supply to GDP remains at the lower level, if compared with neighboring countries (121.9% for Malaysia[3], 90.5% for Indonesia[4]). The main reason for this situation is that the financial market has not been well-developed yet, and the financial institutions continue to be distrusted in this country. Therefore, greater structural enhancement in the financial structure of Mongolia is necessary (Table 2.3.1).

It is remarkable that the share of US dollars as circulated currency in the Mongolian financial market still remains at around 30%, and this situation makes the Mongolian economy vulnerable to US dollar fluctuations. In fact, abrupt buying of US dollars took place during the third quarter of 2008, and it was attributed in accelerating disorder in the financial markets of Mongolia. With due consideration of this situation, the BOM has emphasized the balanced growth of the two currencies in terms of exchange rate and interest rate stability to avoid disorders in the short run and to guide possible downtrend of interest rates. In this sense, it is imperative that the financial sector recover its credibility among the people of Mongolia through the stabilization of the MNT and enhancement of supervision of the financial institutions (Table 2.3.2).

Recent interest rate trends in the last five years indicate that the Central Bank Bill (CBB) rate was kept at the low level of around 5% in 2005 and 2006 compared with 15.7% in 2004. The

[3] The number is calculated based on the International Financial Statistics (IMF) and statistics from Bank Negara Malaysia.
[4] The number is calculated based on International Financial Statistics (IMF) and statistics from Bank Indonesia.

rate, however, has risen since late 2007 and hovered at a high 15.4% in the middle of 2008, which is at the same level as in 2004. It is noted that despite this intended change of CBB by the BOM, deposit rates have been stable during the years of 2004 through 2008.

Table 2.3.1 Annual Change of Money Supply in Mongolia

(in MNT billion)

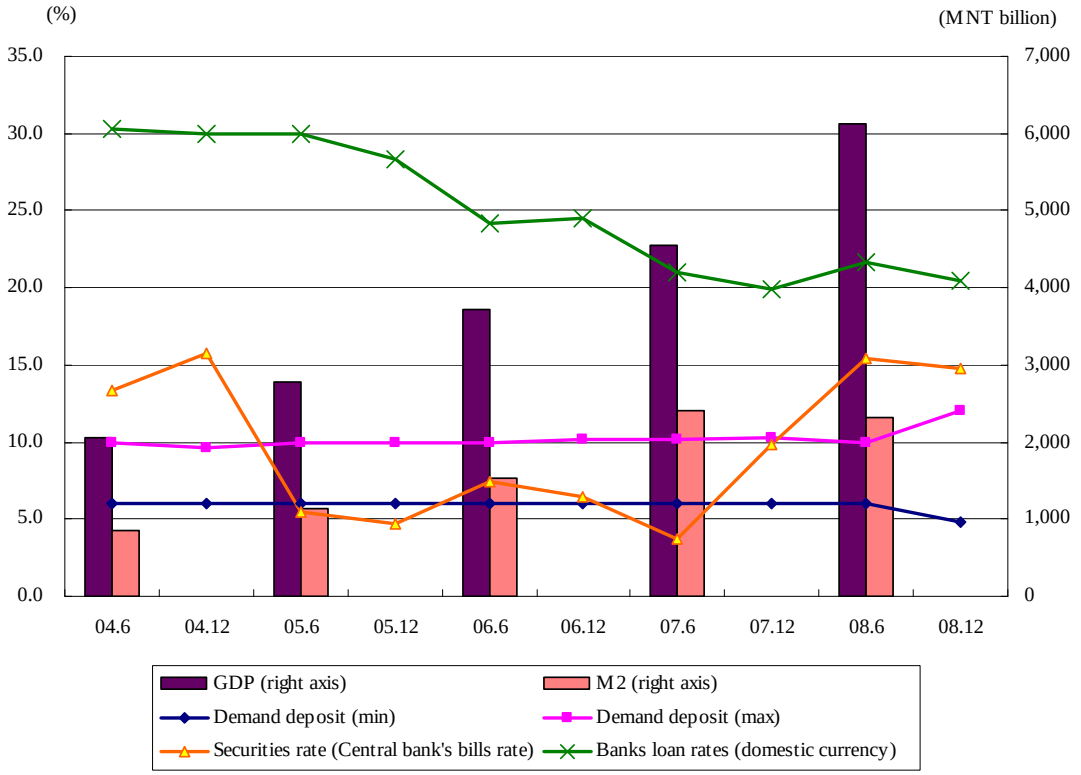
	2004	2005	2006	2007	2008
GDP (current prices)	2,152.1	2,779.6	3,715.0	4,557.5	6,130.3
Growth (%)	33.6	29.2	33.7	22.7	34.5
Inflation	11.0	9.5	6.0	15.1	23.2
M1 (1)	221.3	269.1	331.9	590.4	577.7
Growth (%)	3.9	21.6	23.3	77.8	-2.1
Quasi Money (2)	625.7	871.0	1,204.5	1,810.7	1,658.2
Growth (%)	27.5	39.2	38.2	50.3	-8.4
MNT Deposit	300.9	426.0	692.4	1,113.7	934.0
Growth (%)	25.2	41.5	62.5	60.8	-16.1
USD Deposit (2-1)	324.6	444.9	512.0	696.9	724.0
Growth (%)	29.7	37	15	36.05	3.8
M2 ((1)+(2))	847.0	1,140.1	1,536.4	2,401.1	2,235.9
Growth (%)	20.4	34.6	34.8	56.3	-3.4
M2/GDP (%)	39.4	41	41.1	52.7	37.8
USD Circulation Ratio (%) ((2-1)/M2)	38.3	39.0	33.3	29.0	32.4

Source: BOM Monthly Statistical Bulletin 2009-02

Since the middle of 2008, however, the two new movements of interest rates have arisen. One is that the difference in the deposit rates offered by the banks has been enlarged. The other is that the deposit rate spread between the upper and lower limits has been also wider. These would be reflecting the degree to what extent these banks are suffering the shortage of liquidly, namely shortage of the deposit.

On the other hand, loan rate has been declining from 30.3% at the end of 2004 to 20.8% in March 2008, mainly because the escalation of lending competition for the good-standing companies during the high-growth period.

As each interest rate level is mentioned above, the interest levels in Mongolia remain at the higher levels. Therefore, inducing the lower levels of interest rates would be necessary for the robust growth of the Tugrug. In particular, there is serious concern that dependency on US dollars triggers many risks, since prevailing interest rates of US dollars in Mongolia are higher than other foreign market.



Demand Deposit: rates shown in the figure is the upper rate. Lower rates in each period is 6.0 (2006.1–2008.6), 0.2 (2008.9) and 4.8 (2008.12). Weighted rate: weighted rate of interbank rate, repo, central bank bills (over 1 week).

Source: BOM Monthly Statistical Bulletin 2009-02

Figure 2.3.1 Change of Deposit and Lending Rates

(2) Monetary Policy

The BOM is responsible for carrying out the monetary policy of the country under the monetary policy guideline which is drafted and subsequently approved by the parliament every year. The main objective of the monetary policy is to curb inflation and to defend the value of the local currency.

Its utmost concern is to keep inflation within a certain level. The guideline for 2008 was issued in November of 2007 indicating that inflation should be kept to a single-digit number (9%). But actual inflation rate in 2008 was 23.9%, which was much higher than projection made by the GOM. The targeted inflation for 2009 is expected to be 6% based on the guideline for the year.

The guideline for 2009 also emphasizes the importance of maintaining foreign currency reserves to be able to cover 17.7 weeks of imports. The expected level looks ambitious, but it is appropriated as the target under the circumstances.

Tight money policy was strengthened by raising its policy rate from 9.75% to 14.0% on March 11, 2009 upon advice of the IMF. The BOM explained that its objectives were to protect the Tugrug and to lower inflation by absorbing money supply. It is also expected that market rates would subsequently rise. The banks, however, are generally opposed to this for fear that it affects adversely their lending activities.

2.4 Banking Sector

(1) Attained Higher Growth

During the period 2004-2008, Mongolia's banking sector has shown faster development than economic growth. Bank assets grew by more than four times while GDP grew only 2.8 times. Therefore the ratio of assets to GDP increased from 41% in 2004 to 74% in 2007 (despite receding to 60% in 2008). Although the fast increase itself is appreciated, the level of the ratio is still considered low if compared with middle income Asian countries.

Bank loans grew 4.1 times, implying a strong demand for capital in the financial markets. However, because the capital market, which normally provides long-term funds required by the economy, is undeveloped and contributes only in a small way in Mongolia, the demand for capital has to be primarily provided by the banks.

On the other hand, deposits grew only 2.7 times during 2004 and 2008. As the fast growing of loans outstripped deposit growth, loan-to-deposit ratio which was less than 100% (97%) in 2004 had become close to 100% in 2006 and increased to 157% in 2008, generally resulting in tight liquidity position of the banks.

Table 2.4.1 Growth of the Mongolian Banking Sector (1)

(in MNT billion)

	2004	2005	2006	2007	2008
GDP (current prices)	**2,152.1**	**2,779.6**	**3,715.0**	**4,557.5**	**6,130.3**
growth (%)	29.6	29.2	33.7	22.7	34.5
Real GDP growth (%)	10.6	7.3	8.6	9.9	8.9
Bank assets	**892.0**	**1371.0**	**2314.6**	**3385.9**	**3650.0**
growth (%)	16.3	53.7	68.8	46.3	7.8
Bank assets/GDP	41.4	49.3	62.3	74.3	59.5
Bank loans (gross)	**606.8**	**859.9**	**1,223.3**	**2,056.1**	**2,635.6**
growth (%)	37.3	41.7	42.3	68.1	28.2
Bank loans/GDP (%)	28.2	30.9	32.9	45.1	43.0
Bank deposits	**625.7**	**871.0**	**1,204.6**	**1,810.8**	**1,680.9**
growth (%)	27.6	39.2	38.3	50.3	-7.2
Bank deposits/GDP (%)	24.0	24.2	26.8	32.7	27.4

Source: BOM

During the same period, Non-Performing Loan (NPL) ratios of the banks steadily declined to 3.3% in 2007. But this ratio suddenly jumped to 7.2% in 2008 due to Anod Bank's bankruptcy. According to the BOM, if Anod Bank is excluded, the NPL ratio would have been the same at 3.3% for the 15 commercial banks. The improvement of the ratio is self-explanatory as to the development of the banking sector.

(2) Lending Activity

Bank loans have been growing at an average of 43% in the last five years, reaching MNT 2.6 trillion in 2008, which is 43% of GDP. It is especially remarkable that it attained 28% growth in 2008 even though deposit amounts declined sharply. This indicated that the private sector had a strong demand for funds, and the banks supported them continuously.

Recent quarterly trends for bank loans by the private sub-sector in 2007 and 2008 are shown in Table 2.4.3. Among the expansions of bank loans seen in each sub-sector that averaged to the growth by 1.9 times (compared between the first quarter of 2007 and forth quarter of 2008), real estate and construction sectors reached the higher growth by 4.8 and 2.7 times, respectively. In contrast, mining / quarrying sector and wholesale / retail / repair of household goods sector had the lower than average growth of 1.5 and 1.4 times, respectively.

Table 2.4.2 Recent Outstanding Bank Loans by Sector (End of the Quarter Figures)

(in MNT billion)

	2007				2008			
	I quarter	II quarter	III quarter	IV quarter	I quarter	II quarter	III quarter	IV quarter
Total Loan	1,403.8	1,603.2	1,858.2	2,055.3	2,335.6	2,558.9	2,714.6	2,635.1
Industrial:	578.1	728.3	888.1	906.7	1,011.5	1,078.3	1,049.2	1,030.8
Agriculture, forestry, fishing and hunting	123.6	126.4	153.1	156.1	177.4	155.6	91.0	67.7
Electricity, steam, and water supply	19.1	20.5	30.3	31.7	38.7	37.4	34.9	28.3
Construction	141.4	226.8	277.3	321.6	294.1	337.7	396.8	383.2
Mining and quarrying	116.2	143.8	187.9	130.0	163.1	159.4	160.5	169.8
Manufacturing	177.8	210.8	239.5	267.3	338.2	388.1	366.1	381.8
Non Industrial:	825.6	874.8	970.1	1,148.6	1,324.1	1,567.4	2,385.5	1,665.3
Wholesale, retail trade and repair of household goods	422.5	461.3	500.0	600.5	631.8	666.1	622.9	598.6
Real estate	29.9	33.8	38.2	50.6	80.6	115.2	137.5	142.1
Health and Education	13.0	11.9	13.4	13.8	17.9	35.8	35.7	37.6
Others	360.3	367.8	418.5	483.6	593.8	750.4	1,589.3	887.0

Source: BOM Loan Report 2009

Table 2.4.3 shows the recent growth of outstanding bank loans on a quarterly basis. It is indicated that credit crunch started in the mining / quarrying sector during the fourth quarter of 2007 and was followed by the construction sector (first quarter of 2008), the agriculture sector (second quarter of 2008), and the manufacturing sector (third quarter of 2008).

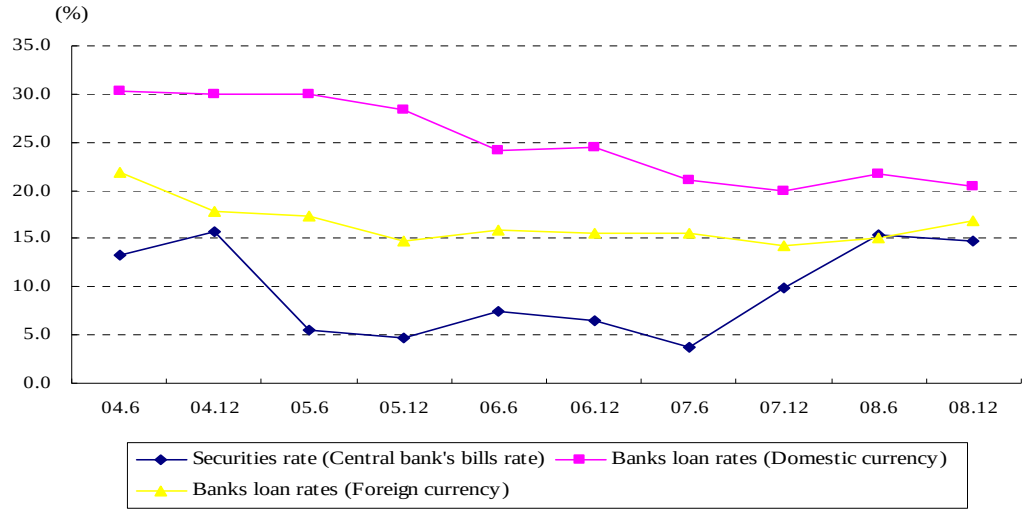
Table 2.4.3 Recent Growth of Outstanding Bank Loans by Sector

(%)

	2007				2008			
	I quarter	II quarter	III quarter	IV quarter	I quarter	II quarter	III quarter	IV quarter
Total Loan	14.8	14.2	15.9	10.6	13.6	9.6	6.1	-2.9
Industrial:	20.4	26.0	21.9	2.1	11.6	6.6	-2.7	-1.8
Agriculture, forestry, fishing and hunting	22.8	2.3	21.1	2.0	13.6	-12.3	-41.5	-25.6
Construction	26.7	60.3	22.3	16.0	-8.5	14.8	17.5	-3.4
Mining and quarrying	21.1	23.8	30.7	-30.8	25.5	-2.3	0.7	5.8
Manufacturing	12.4	18.5	13.7	11.6	26.5	14.8	-5.7	4.3

Source: BOM Monthly Statistical Bulletin 2009-02

On the other hand, loan rate trends in the last five years have been consistently on a downward trend from 30% to 20% on the upper limit of the annual interest rate. For comparison, its lower limit stays around 15% after declining from 20% to 15% in 2005. The lower limit of loan rates remained only slightly higher when the CBB rate was lifted in 2007, but its interlocked range was not wider.



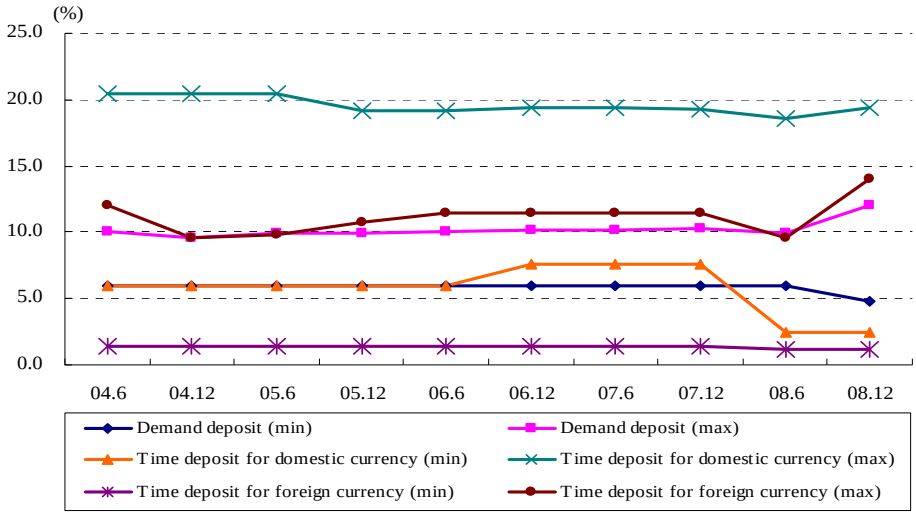
Source: BOM Monthly Statistical Bulletin 2009-02

Figure 2.4.1 Loan Rate Trends

(3) Funding Activity

As mentioned above, although the banking sector occupies an overwhelming share of the financial sector, its funding capacity as a whole remains at a low level. The share of total bank assets to GDP stayed at 74.3% even at its peak in 2007. This is mostly because deposit growth cannot follow total assets growth, and the ratio of deposits to total assets has been declining in the last five years. Since the deposit to asset ratio fell down to 46.1% in 2008, the banks unavoidably had to increase borrowings from outside (see Table 2.4.4). As a result the loan-deposit ratio has exceeded more than 100%, which indicates the escalation of the lack of deposits. Especially there is concern that the loan-deposit ratio has jumped sharply after the middle of 2008 when economic recession has taken place in Mongolia.

The recent trend of the interest rate is affected not only from financial demands of the entire economy but also by speculative demand. Since US dollars is highly utilized in the market (around 30%), the deposit amount for both currencies (US dollars and MNT) is sensitive to MNT/US dollar exchange rate. In Figure 2.4.2, recent deposit rate trends in both US dollars and MNT showed a little increase by the end of 2007. The figure also showed that in the first half of 2008 all kind of deposits both in US dollar and MNT was falling reflecting less new lending activities, and that in the second half of the year the those rates were going up particularly in the upper limit rates of both currencies reflecting liquidity shortage (especially US dollar). This is not so definitive from the figure itself, because each bank might have changed its funding policy quite independently in accordance with its own liquidity condition.



Source: BOM Monthly Statistical Bulletin 2009-02

Figure 2.4.2 Deposit Rate Trends

(4) Credibility of Banks

Table 2.4.4 below indicates annual changes of creditability of the banks showing a generally deteriorating trend in the five indices, particularly in 2008 except capital adequacy ratio (CAR, the most important ratio in prudential ratios), which is actually the most important and is at more than satisfactory level. This is attributable to the strong guidance of BOM.

Table 2.4.4 Growth of the Mongolian Banking Sector (2)

	2004	2005	2006	2007	2008
Deposits/Assets (%)	70.1	63.5	52.0	53.5	46.1
Loans/Assets (%)	68.0	62.7	52.9	60.7	72.2
Loans/Deposits (%)	96.9	98.7	101.5	113.5	156.8
Non-Performing Loans (MNT billion)	39.1	49.5	60.0	68.1	188.7
Growth	84.4	26.6	21.2	1.4	177.1
NPL ratio (NPL/Gross Loan) (%)	6.4	5.8	4.9	3.3	7.2
Prudential Ratio:					
Capital Adequacy (%)	20	18	18	14.2	15.9
Liquidity	n.a.	n.a.	n.a.	n.a.	n.a.
Single borrower (%)	n.a.	n.a.	n.a.	n.a.	n.a.
Forex exposure (%)	n.a.	n.a.	n.a.	n.a.	n.a.

Source: BOM Monthly Statistical Bulletin 2009-02

Prudential ratios are set out in “the Regulation on Setting and Monitoring Prudential Ratios to Commercial Banks”[5]. There are four main ratios as follows: i) capital adequacy ratio (CAR), ii) liquidity ratio, iii) credit concentration risk ratio and, iv) foreign exchange risk ratio. These ratios except CAR were not obtained from BOM despite the request by the study team, so those data should be facilitated officially at the time when PFIs are selected.

[5] The regulation was published by BOM in 30 October 2007, to set the prudential ratios composed of capital adequacy, liquidity, credit concentration risk and forex risk to estimate risk events of commercial banks.

Table 2.4.5 Main Prudential Ratios and its Requirements

Ratios (risk items)	Required level (as of March 2009)
Capital adequacy ratio (CAR)	> 12%
Credit concentration	
Overall lending to related person	< 20% banking capital
Single borrower	< 10% banking capital
Forex risk	
Total open position	< 40% banking capital
Single currency	< 15% banking capital
Liquidity ratio	(not available)

Source: BOM

(5) Tight Liquidity Position of Banks

During last few years, there was a strong financial demand for capital investment which caused high inflation. The BOM tried to implement a tight monetary policy in order to curb inflation by raising policy lending rate and increasing reserve requirements.

The banks, however, as provider of capital funds, had to keep responding to the increasing fund demand of their clients by supplying funds. The loan-to-deposit ratio increased to a level as high as 157% in December 2008, inviting tight liquidity position for the banks. Furthermore, due to serious competition among banks, there was mismatching in lending and funding in terms of maturity namely, long-term lending by short-term funding has been taking place, and this helped tighten liquidity.

(6) Widened Credibility Gap among Banks

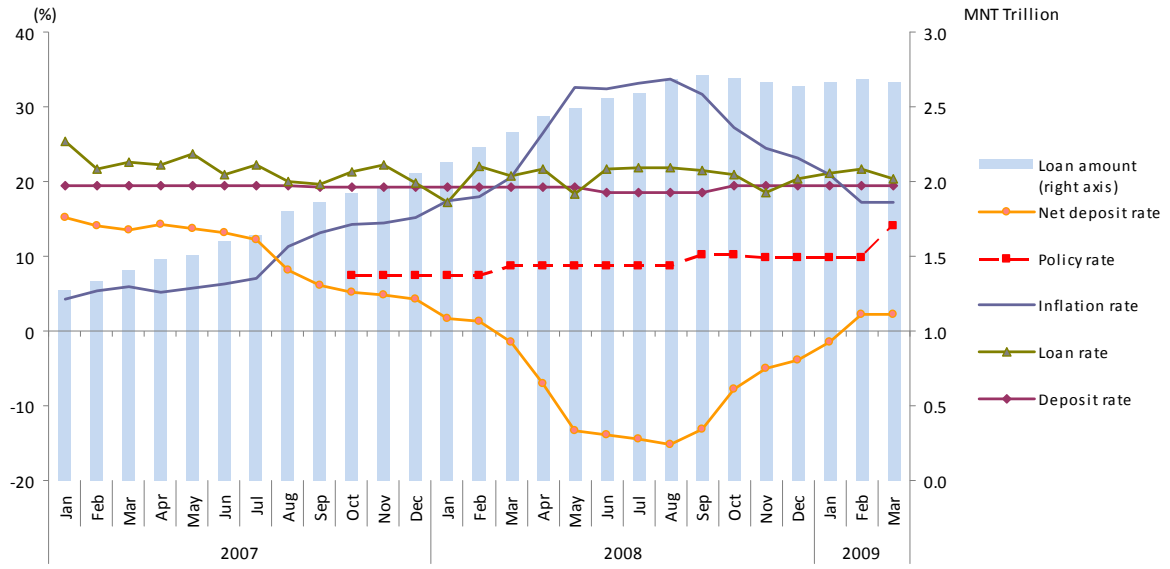
Although the banking system as a whole has performed well in terms of growth in the last few years, individual bank performance varies widely, and a credibility gap among banks is widened. In the second half of 2008, deposits in some medium and smaller banks were transferred by depositors to the bigger banks, which are deemed as much safer. This resulted in widening the difference in the amounts of their total assets. It affected also NPLs. As a result, the ratios of NPL over total loans of the three major banks were significantly smaller than those of medium-sized and smaller banks.

IMF appreciates in its study “Mongolia: Financial System Stability Assessment” in May 2009 that despite high domestic interest rates and the profitability of the major banks, there seems to be adequate competition in the banking sector. Intense competition for good customers means that lending rates and spread between deposit and lending rates are both declining. Looking ahead, bank profits are likely to fall down under increasing pressure as competition continues to increase, and some realignment in the sector may be expected.

2.5 Recent Financial Crisis

The World Bank divides Mongolia’s economy into three periods after 2004; i) the period of sustainable growth from 2004 up to the middle of 2007, ii) the period of overheating from the middle of 2007 to the middle of 2008, and iii) the period of loss of confidence starting from the middle of 2008. In this context, the World Bank considers that the economic crisis in Mongolia started in the middle of 2008.

As previously mentioned, the current economic crisis in Mongolia is directly attributed to the fall in the price of mineral resources such as copper in the middle of 2008. This has resulted in a considerable decline in foreign currency earnings and tax revenues thereby creating funding difficulties for the entire nation. Additionally, the depreciation of the Tugrug versus the US dollar has depleted the foreign exchange reserves of Mongolia, because GOM spent foreign exchange to import booking and exchange stability. Consequently, the people of Mongolia lost confidence in its Tugrug, and this situation accelerated difficulties of fund management in Mongolia.



Source: BOM Monthly Statistical Bulletin 2009-02

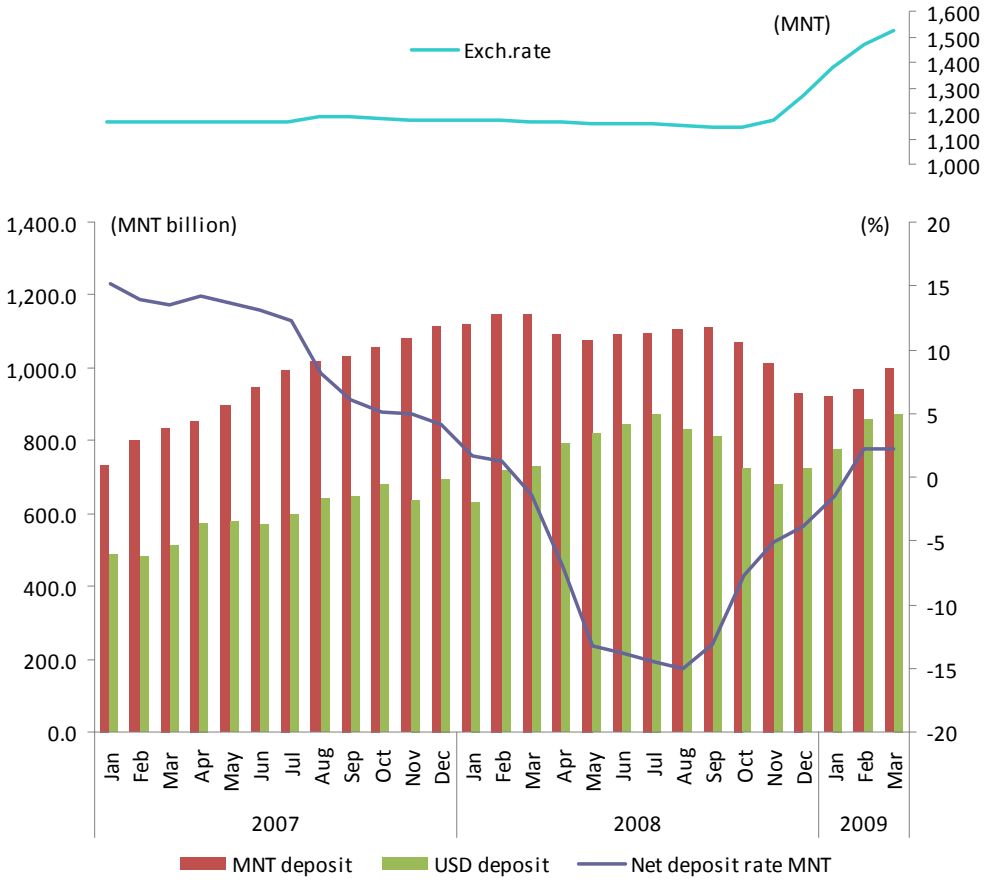
Figure 2.5.1 Recent Inflation Trends and Various Interest Rates (Monthly)

Meanwhile, the micro-economic trends at the firm level show that capital investment still has been active, and imports have hovered at the higher levels. Hence, a demand for funds by firms has been robust. The banking sector became afraid of the economic boom at the end of 2007 and then started to control lending to the private sector, especially to the mining and quarrying, construction, and agriculture sectors (see Table 2.4.3). However, the total loan outstanding has been kept at the higher level during a half-year since September 2008, even though it shows a slight decrease during the fourth quarter of 2008. It can be observed, therefore, that the banks have to maintain their loan balance at the higher level due to continuous strong financial demand, even if the economy suffers from economic depression.

Inflation on the other hand hit its peak of 33.7% (annual base) in August 2008 and fell to 17.2% in both February and March 2009. During the above period, market interest rates have been rather stable and therefore net interest rate has risen from the bottom of negative 15.1% to the level of positive 2.2% in both February and March. However, the net MNT deposit rate level was not enough attractive to call back the deposit into MNT account.

Figure 2.5.2 shows the movements of deposit amounts for MNT and US dollars, real deposit rates, and exchange rates on a monthly basis. It is indicated that MNT deposits started to slow down since March 2008, when real interest rate become negative. However, it showed slight increase during the period of April through September, when real interest rate has shown further sharp downtrend. It is a bit hard to understand this movement, but it can be understood that depositors put too much confidence in MNT, of which exchange value has been

successfully stable. On the other hand, due to sharp MNT depreciation taken place in the few months at the end of 2008 and beginning of 2009, depositors have changed their deposits from in MNT into US dollar. Entering into 2009, while US dollar deposit outstanding has reached the highest level in March, MNT deposit has slightly increased and its outstanding in March has recovered to the level of October 2008.



Source: BOM Monthly Statistical Bulletin 2009-02

Note: USD deposit amount is converted to equivalent one in MNT at current exchange rate.

Figure 2.5.2 Deposit Amounts (MNT, USD), Net Deposit Rates and Exchange Rates (Monthly)

On 11 March, 2009, the GOM reached an agreement with the IMF on an 18-month Stand-By Arrangement to provide USD 229 million to safeguard its foreign exchange reserves. USD 75 million of this amount is expected to be disbursed soon as the first tranche. With this agreement, the IMF emphasized on four major points as the objectives of the undertaking as follows:

- To restore health to the government's finances;
- To allow the exchange rate to adjust flexibly towards its equilibrium level while calibrating monetary policy to safeguard international reserves;
- To bolster confidence in the banking system; and
- To protect the poor, particularly during this period of economic adjustment.

Subsequent to the agreement with the IMF, the World Bank is organizing a financial package with an aggregate amount of USD 140 million to tap the shortage of financial support to which ADB and Japan have committed USD 50 million respectively. The fund will be available sometime in early summer.

With these financial supports and through full compliance with the IMF conditions, GDP growth in Mongolia is expected to attain 2.7% in 2009 and 4.3% in 2010, and the GOM's budget deficit will be less than 6% in 2009 and 4% in 2010.

CHAPTER 3 SMALL- & MEDIUM-SCALE ENTERPRISES SECTOR

3.1 Overview of Mongolia's SME Sector

(1) Number of SMEs and Their growth

Mongolia's private sector has grown rapidly. In terms of GDP contribution, the private sector accounts for 68.4% in 2007 (compared to 57% in 1996), and dominates the following sectors: agriculture/ animal husbandry (100%), trade (100%), construction (85%), manufacturing (83%), and mining (44.3%). The presence of SMEs in Mongolian private sector can be shown in terms of business unit numbers. The number of business units has been on an increasing trend. Those in small- and medium-scale category (defined as business units with less than 50 employees before July 2007) have increased with growth rate of 18% per annum.

Table 3.1.1 Number of Active (Registered) Business Units by Size of Employment

	2004	2005	2006	2007	2008	Share
1-9	20,693	17,780	24,848	25,703	29,879	81.9%
10-19	1,913	2,001	2,701	2,830	3,123	8.5%
20-49	1,751	1,782	2,139	2,351	2,286	6.3%
Sub-total (below 50)	*24,357*	*21,563*	*29,688*	*30,884*	*35,288*	*96.7%*
Over 50	999	984	1,129	1,221	1,210	3.3%
Total	25,356	22,547	30,817	32,105	36,498	100.0%

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

The share of small- and medium-scale business in terms of unit numbers reached 96.7% of total as of 2008. Among this, the smallest units with 1 to 9 employees account for largest share. Out of more than 35,000 active units of small- and medium-scale businesses (over 54,000 units including the non-active), it is estimated that almost 70% are private enterprises (i.e, SMEs), followed with co-operatives/ partnership entities[1] (12%), NGOs (10%), and the rest are state enterprises and budget-based organizations.

(2) SMEs by Sector and Region

In Mongolia, SMEs have been largely concentrated into the trade sector and other service-oriented sectors. Manufacturing SMEs account for some 6% of the total, and agriculture/ animal husbandry SMEs follows with 4.5%. The large number of trading units is a reflection of their small size in nature and the characteristic that many newly established businesses start as training companies in Mongolia. On the other hand, the large-scale units have more presence in sub-sectors such as medical care, education, mining, and utilities.

According to the MOFALI study on the recent conditions and prospects for nationwide SMEs, the SMEs in the manufacturing sector are largely distributed throughout agro-based sub-sectors covering wool / cashmere primary processing, knitting, sewing, felt and felt products; tanning and leather processing; wood processing; flour processing; dairy processing; meat processing; and construction materials processing.

[1] Most cooperatives and partnerships are engaged in animal husbandry and crop production in the rural area.

Table 3.1.2 Number of Active (Registered) Business Units by Sector

	2006	2008	Small/medium	(share)	Large
Total industrial sector	30,817	36,498	35,288	100.0%	1,210
Agriculture, animal husbandry	1,402	1,584	1,575	4.5%	9
Mining, quarrying	305	347	305	0.8%	42
Manufacturing	2,098	2,243	2,110	6.0%	133
Utility service	231	214	159	0.5%	55
Construction	1,059	1,313	1,219	3.4%	94
Trade (wholesale, retail)	10,924	15,013	14,953	42.4%	78
Hotels, Restaurants	1,367	1,376	1,353	3.8%	23
Transport, Communication	937	1,025	975	2.8%	50
Financial services	891	774	757	2.1%	17
Real estate	2,241	2,728	2,656	7.5%	72
Other services	9,362	9,863	9,224	26.1%	637

Note: Small / medium scaled business units in the above table is defined as those having less than 50 employees, while large ones have more than 50 employees. Other services include public service, education, medical, community / social services.
Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

Agricultural / animal husbandry SMEs are largely distributed to crop farming (potato, vegetables, and salt), and livestock farming. The distribution of SMEs by region shows the relatively higher concentration in Ulaanbaatar City, although the number of business units has grown steadily throughout all regions.

Table 3.1.3 Number of Active (Registered) Business Units by Region

	2006	2008	Small-scale	(share)	Large-scale
Western Region	2,627	2,976	2,864	8.1%	112
Khangai Region	3,463	3,604	3,454	9.8%	150
Central Region	4,382	4,903	4,733	13.4%	170
Eastern Region	1,457	1,435	1,418	4.0%	17
Ulaanbaatar City	18,888	23,580	22,849	64.7%	731
Total	30,817	36,498	35,288	100.0%	1,210

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

(3) Employment by SMEs

Although employment data in the whole industrial sector is available (currently 54,200 of persons are employed by this sector, including mining, manufacturing and utility services), there are no specific employment data of the SMEs.

(4) Contribution of SMEs to Industrial Growth

Their contribution in terms of industrial output can be estimated from the table below. A share of SMEs (defined as business unit with less than 50 employees before July 2007) stands at low level of 17.3% in 2007, which is slightly lower than the level in 2004.

Although not known for its contribution to export earnings, SMEs are in general deemed to have a low presence in Mongolia's export development. The main exports generated by SMEs include animal raw materials (animal-based products, raw cashmere, hides, skins, fur), processed and semi-processed products (combed goat down, tops of cashmere, textile articles, garments, processed and preserved meat, etc).

Table 3.1.4 Industrial Output by Size of Employment

(in MNT million)

	2004	(share)	2006	(share)	2007	(share)
1-9	72,842.0	9.0%	188,715.4	8.1%	208,876.4	8.1%
10-29	18,782.5	2.3%	54,767.4	2.4%	60,618.4	2.4%
30-49	68,781.2	8.5%	156,593.6	6.8%	173,323.0	6.8%
Sub-total (below 50)	*160,405.7*	*19.8%*	*400,076.4*	*17.3%*	*442,817.8*	*17.3%*
50-99	52,785.3	6.5%	95,323.1	4.1%	105,506.8	4.1%
100-199	35,905	4.4%	68,937.3	3.0%	76,302.1	3.0%
Over 200	561,675.3	69.3%	1,751,947.8	75.6%	1,939,113.7	75.6%
Total	810,771.3	100.0%	2,316,284.6	100.0%	2,563,740.4	100.0%

Note: estimated for 2007

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

3.2 Policy and Programs for SME Development

GOM placed, in its Economic Growth Support and Poverty Reduction Strategy (EGSPRS) formulated in July 2003, a high priority on the development of favorable institutional environment and human resources to promptly shift to market economy and realize "economic growth driven by the private sector".

(1) Program for Support for SMEs

Following EGSPRS, GOM formulated the Program for Support of SMEs (government resolution No. 64, 2005) in April 2005, whose primary goal is to realize the robust growth of SMEs by improving their competitiveness. The SME support program covers the period from 2005 to 2010, and comprises of the following action plans:

Table 3.2.1 Outline of Program for Support for SMEs

Actions and Their Contents	Progress in Brief
Action 1: Creation of a sound legal environment supportive to SMEs	
i) Draft a Law on the legal status of SMEs for adoption, ii) Draft an amendment to the Laws on Taxation, iii) Determine the priority sector for SMEs, iv) Form a regulatory framework of movable registration system in view of improving collateral capacity of SMEs, and, v) Form a regulatory framework of leasing for technology, machinery, equipment.	New Law on SMEs, financial leasing was already enacted. Planning of establishment of credit guarantee institution is on-going. Priority sectors of SMEs are not officially announced.
Action 2: Elimination of administrative barriers in public service delivery to SMEs	
i) Simplify a licensing, permit and registration procedures, ii) Simplify an inspection and monitoring system for SMEs, iii) Increase a participation and transparency of private sector and public in supporting SMEs.	One-Stop-Shop to facilitate the licensing, permit and registration procedure was already launched.
Action 3: Support of SMEs through improved tax regime and access to finance	
i) Support SMEs by improved taxation and social insurance regimes through exemption of corporate tax, VAT, import duty, reduction of health / social security fee incurred by employers, etc., ii) Support SMEs by improved access to credit, through establishment of Investment & Development Fund, provision of term-loan with low interest rate, sourcing of such donor funds, promotion of SME participation in public procurement	Improved access to term-loan has been gradually realized by sourcing donor funding, establishment of Investment & Development Fund.

Action 4: Creation of supporting institutions designed to provide appropriate training, information and consulting services to SMEs	
i) Establish Business Incubator, ii) Establish Technology Transfer Center in regional center, iii) Conduct specialized trainings which upgrade SME's management staff, engineers, technicians through vocational training schools, ii) Promote activities of NGOs and consulting services to support SMEs	SME incubation center was already launched. A number of training programs have been provided in cooperation with MCCI, donors. Strengthening of BDS providers has been also conducted by utilizing donor's assistance.

MOAFLI has not officially determined the priority sectors of SMEs yet[2], but regards producers of import substitutes and export commodities as prioritized to access the supporting measures provided by the government. The program is deemed to have relevance and covers well a range of issues faced by Mongolian SMEs, and addresses the capacity development of public supporting institutions. The degree of implementation has been judged as satisfactory, considering the resource and budget constraints faced by the government. Some of the actions made so far under the program are further reviewed in the following sections.

(2) New SME Law

As programmed by the Program for Support of SMEs, the Law of SMEs was enacted in June 2007, and aimed to "promote in a comprehensive manner measures for development of SMEs". The SME Law clearly defines SMEs as a subject of policy support, and promises the supporting measures for the defined SMEs. The new law revises the definition of SMEs as follows. Previously those business units with less than 50 employees were defined as SMEs for all types of business. The new law increased the number of employees which falls under the category of SMEs in general, and set separate definitions to different types of businesses. The major changes effected by the new law is a considerable increase of "SMEs" in the sectors of manufacturing, wholesale, and retail trade. Small and medium enterprises holder can be a legal entity or an individual.

Table 3.2.2 Definition of SMEs Under the New Law

	No. of employee	Annual turnover
1) Industries (excluding wholesale, retail trade, services)	No more than 199	Up to MNT 1.5 billion
2) Wholesale	No more than 149	Up to MNT 1.5 billion
3) Retail trade	No more than 199	Up to MNT 1.5 billion
4) Services	No more than 49	Up to MNT 1.0 billion
5) Small-scale manufacturing	No more than 9	Up to MNT 1.5 billion
6) Small-scale services	No more than 9	Up to MNT 0.25 billion

Note: Industries include agricultural/ animal husbandry

Source: National Statistics Office, Monthly Bulletin of Statistics, the latest

Although SME statistics consolidated according to the above definition are not yet available, it can be assured that the newly defined SMEs account for almost all business entities in Mongolia. The share of SMEs to total business entities in Mongolia is estimated to be over 99% (96.7% in the previous definition). This change in definition has been welcomed in the sense that some of the previously classified large-scale enterprises can benefit from the supporting measures of the government, including access to concessionary term-loans, but at

[2] According to the interview with the Head of the Department of Strategic Planning and Policy.

the same time questioned in a sense that almost all business units have become SMEs, implying an erosion of the tax base.

Additional setting of small-scale categories implies the creation of the category of medium-scale enterprise. The new category of "small-scaled manufacturing" implicitly targets domestic (home) industries which produce the product such as handicrafts.

(3) Private Sector Development Strategy

Recognizing the private sector as the main driving force for growth in Mongolia, the former Ministry of Industry and Trade (MOIT) prepared the Private Sector Development Strategy (PSDS) in January 2008 with a view to removing constraints faced by the private sector and facilitating Public-Private-Partnerships (PPPs). The PSDS comprises of the following priority directions and major implementation strategies;

Table 3.2.3 Outline of Private Sector Development Strategy

Directions	Implementation strategy
Direction 1: To attain the growth through the structural reform in private sector	
i) To promote reform of mineral and agro-based material sectors;	- Increase of value-added of such materials through the promotion of exports of their final products - Development of export-oriented agro-processing industries (wool, cashmere, leather, meat, dairy, crops, fruits, berries)
ii) To sustain growth of the private sector;	- Promotion of exploration and development of mineral resources, and participation of the private sector in ancillary services to mining - Enhancement of scale of raw material processing and introduction of the latest technology
Direction 2: To enhance workforce productivity through introduction of high-technology and highly skilled labor	
i) To enhance workforce productivity through introduction of high-technology;	- Strengthening of public support for development of bio-tech, IT and nano-tech - Provision of support to the sub-sectors which intend to increase workforce productivity
ii) To enable supply of highly skilled labor force which meet the needs of the private sector;	- Support of higher education which supplies skilled labor - Improvement of the quality of teachers and development of facilities of vocational training institutions
iii) To improve labor and capital relations in the private sector;	- Exercise of legal and economic means to facilitate regular employment and reduce irregular employment
Direction 3: To mitigate business risks through creation of sound business environments	
i) To create sound macro economic environments;	- Efficient utilization of commercial banks and investment funds to generate capital for private sector investments - Establishment of national development bank - Promotion of FDIs through improvements in the economic, legal and regulatory frameworks - Development of incubator facility, and information and training provision system to SMEs
ii) To improve the mechanism for asset protection of the private sector;	- Development of financial leasing for the benefit of SMEs
iii) To develop infrastructures for growth of the private sector;	- Development of connections between provincial centers and capital cities with paved roads - Realization of "Transit Mongolia" plan
Direction 4: To promote private sector in rural area	
i) To create sound business environments for the development of rural private sector;	- Strengthening of support of SMEs in the least developed area - Establishment of industrial zones and techno-parks - Development of Free Trade Zones at three locations

The PSDS is comprehensively prepared, but lacks detailed actions and time frame, compared to the above Program for Support of SMEs. Although the PSDS does not specifically focus on SMEs, it raises agro-processing industries as a target of export development efforts. These include processing industries of wool, cashmere, leather, meat, dairy, crops, fruits, berries.

(4) Public Support Institutions

1) MOFALI

In Mongolia, the Ministry of Food, Agriculture and Light Industry (MOFALI) is mainly responsible for the formulation of policy and programs concerning SMEs, and their implementation[3]. MOFALI now has seven departments under the supervision of the Minister and State Secretary. Since SMEs with strong focus in the Mongolian context are those in agricultural / animal husbandry and agro-processing, all departments in MOFALI are virtually concerned with SMEs. The departments of MOFALI include: i) Strategic Planning and Policy, ii) Animal Policy Implementation, iii) Crop Production Policy Implementation, iv) Food Policy Implementation, v) Light Industry Policy Implementation, vi) Foreign Relations and Cooperation, and vii) Administration. The Department of Strategic Planning and Policy is responsible for planning works of sub-sector policy and programs. Other line departments follow the policy and implement the programs.

MOFALI also has separate service units, which directly report to the Minister. These include the Veterinary and Animal Breeding Service, National Center for Animal Genetic, Extension Service, and others. In March 2009, the Parliament approved the establishment of an additional unit in MOFALI, the SME Agency (called tentatively), which is to specialize in the implementation and coordination of programs for SME support. As of this JICA study, the staffing, operational and budget planning are not yet made.

MOFALI has just completed a comprehensive study that reveals the recent conditions and prospects for nationwide SMEs, in preparation for the year of industrialization in 2009. In this study, MOFALI surveyed investment needs of SMEs to identify the promising investment projects to be backed in the coming years up to 2012. The sector covered agricultural, animal husbandry, light industries (food-processing and other manufacturing).

2) SME Development / Incubation Centre

MOFALI operates the SME Development / Incubation Center in two districts in Ulaanbaatar City since February 2008 in order to provide incubator functions to entrepreneurs (start-up business) and to the existing businesses. Instructors regularly render the training courses of business start-ups and development and business consultations. Training participants have a chance to develop and present their own business plans, and use incubation facilities (one year with free-of-charge, 7-8 tenants are accommodated in one center) if their business plans are judged as excellent. However, the incubator function does not cover food processing and machinery-oriented manufacturing with a large number of employees since its facilities can not accommodate their operation.

[3] Formerly, the Department of Light Industry in the Ministry of Industry and Trade was mainly responsible for SME sector, but this department was separated and merged with the Ministry of Food and Agriculture. Other ministries have also some degrees of stakes in SME matters since SMEs ranges over other sectors such as mining, trade, and services. This section focuses on MOFALI, since agriculture and light-industry are the usual focus of SME development in the Mongolian context.

There are several good cases where training participants have successfully obtained the investment loans from the SME Development Fund (later explained), following submission of business development plans. MOFALI currently plans to extend the operation of the center to the rest of the districts in Ulaanbaatar City.

3.3 Financial Access of SMEs

(1) General Picture

Accessibility to finance of Mongolia's private sector, at least to the medium-term loans, is deemed as improved. This is evidenced by the fact that 52.7% of commercial standard loans (outstanding as of the end of 2008) extended to private sector have 1-5 years maturity. Short-term loans with less than 12 months accounts for 43.8% of the total as of the end of 2008, which has decreased from the level of almost 90% during the early 2000's. Term-loans with five years and more presently reached 3.6%. Not only the efforts to obtain deposits and external funds by commercial banks, financial assistance by donors to extend long-term funds have also contributed to improved access of private sector including SMEs to the term loans.

Outstanding loans directed for the private sector has also been increased as of the end of 2008, reaching MNT 1,556 billion from 1,184 billion at the end of 2007, including those in arrear, doubtful and loss. However, the borrowings of majority of the SMEs have been largely limited to working capital with short-term nature (1-2 years or below) and over 20% of interest. The World Bank surveyed that across the private sector, 36% of loans were directed to the 20 largest borrowers, while 55% were to the 50 largest. SMEs still face difficulties in accessing finance and term loans with reasonable interest rates. High interest rates (22% on the average for enterprise sector, as of January 2009), the short-term nature of the loan, and an emphasis on collateral-based lending are among the major concerns of Mongolian SMEs.

Table 3.3.1 Outstanding Loans to the Private Sector

(MNT billion)

As of the end of 2008	Total	Agriculture	Mining	Manufacturing	Utilities, Const.	Services, others
Standard loans	**1,336.1**	**34.9**	**113.7**	**312.2**	**294.2**	**581.1**
Within 1 year	584.6	6.5	63.4	85.1	133.1	296.5
1-5 years	703.7	24.5	46.8	205.4	158.0	269.0
5 years and more	47.9	3.9	3.4	21.7	3.0	15.9

Source: Bank of Mongolia, Loan Report, the latest

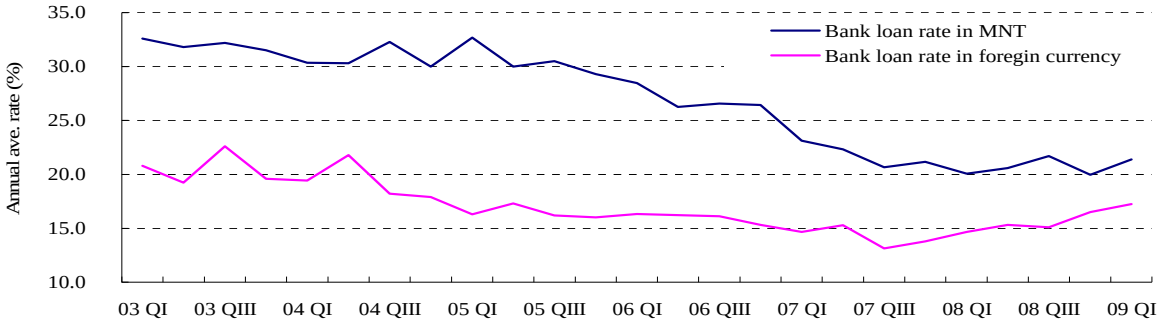
(2) Constraints and Issues on the Demand-Side

While commercial banks do not avoid serving SMEs, access to finance remains an impediment to SMEs in reality. The main impediments include tight terms and conditions of credits, lack of collateral, limited market information, and weak capacity for business planning.

1) High Interest Rate / Short-Term Lending

This is the most critical constraint for SMEs' access to investment loans. Although GOM liberalized it in the early 1990s, interest rates have remained high. Annual interest rates of nominal bank loans during 2003-2008 averaged 27% in local currency, although the same figure declined to 21% in the last two years. Looking at the possible factors derived by the

demand (or borrower's) side, the following causes can be pointed out: i) high lending risks associated with high leverage ratio of borrowing, ii) implicitly high NPL level, and iii) less reliable financial information[4].



Source: Bank of Mongolia, Monthly Statistical Bulletin, the latest

Figure 3.3.1 Average Bank Loan Rates Trend

Many sources[5] indicate that private sector demand for long-term capital has increased mainly due to accelerated economic growth, but remains largely unmet by the domestic financial sector due to the short-term nature of bank deposits, and lack of skills in project / credit assessment. Although many banks have started to target SMEs, they largely rely on funding by donors. In order to sustain active lending to SMEs, banks in the long-run are expected to further diversify their sources of funding.

2) Lack of Own Capital

In case SMEs have access to term loans from banks, many may still face difficulties in preparing sufficiently their own capital that are requested by banks, since Mongolian SMEs in general are still considered to accumulate low equity. This factor may also prevent SMEs from materializing investment loans. Even if the investment loans are acquired, these tend to be financed with a high leverage ratio. Highly leveraged finance can have negative implications to borrowers and may increase moral hazard, as their risk very much less than their own capital.

3) Lack of Collateral

Lack of collateral is another issue to Mongolian SMEs. Commercial banks generally require borrowers to collateralize their assets far more than loan value, thus making it difficult for SMEs to access to investment loans. Asset formulation level is usually deemed as low in Mongolia. Industrial associations visited by the study team state that many SMEs in Ulaanbaatar City lease their workshops, thus lacking one of major assets to be collateralized. Mongolian SMEs in general are considered to have limited business experience and establish a low asset base, since most of them started their businesses only in 2000[6].

The credit guarantee scheme would serve to correct this constraint. However, the credit guarantee service has not been institutionalized yet in Mongolia, except for the guarantee

[4] Report and Recommendation of the President to the Board of Directors, Mongolia: Agriculture and Rural Development Project, Asian Development Bank.

[5] From the interviews with commercial banks (PFIs under JICA-TSL), industrial associations, the Chamber of Commerce & Industry, visited during the site study.

[6] Also evidenced by the establishment year of JICA-TSL sub-borrowers. Nearly 60% of them were established after 2000.

funds provided by donors including GTZ. They are all pilot-tested and of small in size with focus on smaller enterprises in the provinces. GOM and Mongolian financial sector realized the significance of the guarantee system and formed the working committee with a view to establishing an institution specializing in credit guarantee. GTZ plays a facilitating role in the working committee.

4) Inaccuracy of Financial Information

It is reported by PFIs that financial statements submitted upon loan application are inaccurate, increasing the costs of appraisal that banks have to incur. Financial information is deemed as unreliable due to SMEs' lack of knowledge in accounting standards and sometimes, existence of false statements for taxation purposes. Since more processing costs and time for appraisal are required, banks are less motivated to offer loans to SMEs or tend to demand more risk premium (higher interest and shorter term with excessive collateral).

5) Lack of Business Planning Capacity

In order to access to investment loans, SMEs need to prepare business or investment plans with persuasive analysis of its markets, financial and technical feasibility, creditworthiness and associated risks. In general, SMEs rarely have skills in business planning and market analysis, and access to necessary information and data. Although banks are expected to help SMEs prepare business plans through consultation, good access to the opportunities to learn about business planning skills also needs be available to SMEs.

Institutions such as the Mongolian Chamber of Commerce and Industry (MCCI), Mongolian Employers' Federation (MONEF), Mongolia-Japan Center for Human Resource Development (MOJC), and SME Incubation Center are quality service providers in this field, but their services are usually temporary or project-oriented, and are unable to deliver on demand by SMEs. Financial institutions are also expected to improve the delivery of such business development services.

(3) Public Support for SME Finance

Complementing a lack of term loans fine-tuned to the needs of most SMEs, the GOM has established a few special funds to direct capital resources to SMEs.

1) SME Development Fund (SME Fund)

MOFALI has succeeded SME Fund, originally established in 1992 from MOIT. Utilization of this fund used to be inactive, but has been gradually activated with annual capitalization of MNT 1.0 billion since 2006. Funds are to be lent to SMEs through PFIs. Currently, Zoos, Xas, and Post banks participates, and sets additional funds equivalent to 30% of allocated deposit (co-financing with the bank is required). The terms and conditions are as follows:

Interest rate	:	12% per annum
Term of repayment	:	2 years
Maximum loan amount	:	- USD 20,000 for enterprises in Ulaanbaatar City - USD 10,000 for enterprises in other provinces
Eligibility	:	- Business experience of more than one year - Stable financial performance with sufficient collateral - Capable manager and employees - Excluding mining, tobacco, alcohol, gambling and agriculture sectors

The Loan Appraisal Committee is formed by the Department of Light Industry in MOFALI, MONEF, and PFIs. Usage of the loan is open to investment capital, but mostly limited to working capital due to the short repayment term and small loan limit. The above loan conditions were opted because of small volume of the fund and the strategy to roll out access opportunity to many SMEs. As of this JICA study, the SME fund has been disbursed to almost 500 enterprises. But in 2008, almost no loan applications were made or processed due to the lack of depositary assets in this fund.

2) Investment and Development Fund (IDF)

MOF also established a special fund of MNT 9 billion called Investment and Development Fund (IDF) in 2007. IDF is used to channel two-year loan with 9.96% interest rate and MNT 500 million loan limit through four commercial banks. IDF is eligible for every enterprise. However, the fund was underutilized, again due to small fund size.

IDF was subsequently changed to subsidize interest, scaling up in fund size to MNT 30 billion in 2008. New schemes would subsidize 50% of original interest against banks for the loans with less than 15% interest rate and 5 years of repayment term (with no limit to loan amount) in view of having banks correct higher interest rate applied to SMEs. Around half of fund is to be directed to agriculture/ animal husbandry sector with the rest to the energy and food processing industries.

3.4 Major Sectors of SMEs

This section summarizes the current conditions in respect to key productive sectors, identified from the interviews with the officials of MOFALI and staffs of MCCI and by reviewing what government focuses on in its policies and programs (such as PSDS). The key sectors mentioned below are also those regarded as the subjects of the latest survey on investment needs conducted by MOFALI. These major sectors include the industries of cashmere and wool (textile, garment), meat, leather and dairy products, and their associated agriculture / animal husbandry. These key productive sectors are agro-processing industries in nature, and majority of the enterprises in these sectors are SMEs, although there are some large-scale enterprises.

Mining, although having a larger presence in Mongolia's economy, is outside of this review since this sector is comprised mostly of large enterprises. The construction materials sector has been increasing in its growth in the last few years because of the recent construction boom. However, many commercial banks stopped lending to construction-related businesses for fear of the cooling of demand for construction projects. The services sector such as tourism, leisure, transport, and medical care are also among the key drivers of the national economy, but are also outside of this review since this sector is hardly focused on government programs for SME development.

(1) Cashmere and Wool Industry

1) Cashmere

Mongolia is the second largest producer of raw cashmere accounting for about 25% of world production compared with China's 70%. Mongolia's production increased from an estimated 1,000 tons of raw cashmere in 1990 to 5,500-6,000 tons currently. Industrial outputs by the manufacture of textiles and apparel (dominated by cashmere) amounted to MNT 164.2 billion

in 2008, accounting for 21.6% of manufacturing total. Those enterprises involved in cashmere processing and garment productions have de-hairing, spinning, dyeing, weaving, and knitting equipment. The industry comprises of three types of enterprises each with their own characteristics and markets.

First are the local primary processors, and foreign ones with varying degrees of foreign ownership. Most of them were established following the ban on raw cashmere exports in 1993 (but subsequently lifted in 1996), and SMEs in size of employment. There are currently 40 primary processors, which conduct washing and de-hairing processes. They buy raw cashmere from herders, scour and process it into de-haired cashmere for export to China and Europe (as de-haired cashmere), and Japan (as tops).

The second group comprises of integrated processors and garment manufacturers that have their own network for raw material collection, and scouring, de-hairing, spinning, dyeing, and automated knitting and weaving manufacturing capacity. Relatively larger enterprises such as Gobi, Altai Cashmere, Eermel, and Sor Cashmere belong to this group. They export de-haired cashmere and garments depending on the relative prices in international markets.

The third group comprises some 30 to 40 local and foreign SMEs that produce knitted cashmere garments from hand-knitting machines in most cases for the quota-free United States market, using domestically processed yarns from the second group, and imported cheap yarns from China.

The government prepared resolution No. 64 in 2008, titled as Action Plan to Develop Cashmere Sector until 2012. However, cashmere's prospects should be viewed with a little caution. Prices of cashmere (and its coarse) have sharply declined. The government should reassess its efforts to raise cashmere output, encourage domestic processing of raw cashmere, and support production of cashmere garments. Lower quality coarse cashmere becomes the norm for Mongolia. Improving the quality of the national herd is deemed as challenging since the country does not have a strong animal breeding industry.

The shortage of working capital in processors to purchase raw material is a commonly observed issue. While almost 1,500 tons of raw cashmere is exported, domestic cashmere industries can buy only 500 tons. As a result, spinning capacity in the second group has been largely underutilized, and this has further brought about increased dependence of third group (knitters) on imported woven cashmere from China.

2) Carpets and Other Wool Products

Mongolia produces large quantities of coarse wool. Almost all (94%) of Mongolia's clip comprise coarse fibers suitable only for carpets, blankets, felt footwear, and insulating products, with 4% of semi-coarse and only 1% of fine or semi-fine fibers for garment production. The domestic supply chain is deemed as quite similar to that of cashmere, comprising of a few large-scale integrated processors and final product manufactures, and a number of small enterprises specialized in primary processing or final production.

Out of total raw wool production of 22,000 tons per year, the large industries (Erdenet Carpet) process almost 4,000 tons, and the small industries process 5,000 tons. The rest are exported after washing as primarily processed form. The combined production capacity for scouring, spinning, knitting, and felt-making is far in excess of the current production (estimated to

operate with 60% capacity with the possibility of increasing production if raw material is available), and production technology for carpet production is outdated and inflexible.

(2) Meat Processing Industry

Annually, 5.6 million of livestock are slaughtered for consumption and production of 186,300 tons of meat, comprising of 3.8% of camels, 13.9% of horses, 24.2% of beef, 35.4% of mutton and 22.7% of goats. Out of the total meat production, some 22% is for exports as prepared meat and the rest is domestically consumed. Industrial output by the manufacture of processed and preserved meat amounts to MNT 31.4 billion in 2008, accounting for 4.1% of manufacturing total. This sub-sector now has 38 large and medium to small-sized meat processors (including 26 slaughterhouses). All meat processors are privately owned, except one large processor which is state-owned. Out of these processors, only 10 are currently exporting. Annual meat processing capacity of the sub-sector amounts to 90,000 tons. However, actual production stands at 30,000 tons. The main reason is the shortage of working capital for the purchase of animals.

One of the challenges for the slaughtering and meat processing industries is concerned with seasonality of supply. From October to December each year, slaughterhouses operate at maximum capacity, some doing shift work to handle seasonal peak. But these facilities remain inoperative for the rest of the year. The situation is made more complex because as high as 70-80% of animals are slaughtered outdoors. The government is concerned with the hygiene of meat processed in this manner.

Besides the above meat processors, there are nearly 80 small to micro meat processing factories which mainly produce sausage products. Most of them buy imported pork and lard (700,000 tons per year) from China, because they are cheaper than locally produced ones. There are around 160 pig farms in Mongolia, but their farming operation is just small-scale.

Historically, Mongolia has been a significant exporter of beef and mutton. Mongolian meat has been very competitive at half the price of China's and one third that of Russia. However, Russian demand declined after the imposition of 20% duty on unprocessed meat and 40% duty on processed meat. With the outbreak of foot and mouth disease in 2002, Chinese markets became virtually closed. However, a concerned industrial association states that such trends of overseas market have little impact on the meat industry of Mongolia in view of domestic market development.

(3) Leather Industry

Industrial outputs by the manufacture of tannery and leather products amount to MNT 2.3 billion in 2008, accounting for 0.3% of manufacturing total. Annually 6,685,000 of hides and skins is produced, comprising goat skins (37.6%), sheep skins (48.7%), cattle hides (8.7%), horse hides (4.2%), and camel hides (0.8%). Most Mongolian hides and skins are exported to China either as raw or semi-processed wet hides. Domestic demand for leather jackets, boots, and other products is now supplied by imports from Korea and Turkey whose products enjoy virtually duty-free access in Mongolia.

Since 1990, more than 60 SME processors have been established, including those for primary processing of tanning (20 units), those for fur processing (4 units), those for sewing footwear (30 units), and those for manufacturing other leather products (several units). These processors face difficulties in procuring raw materials because their access to capital at

reasonable interest rates seldom coincides with the peak buying period for livestock, and plants are run well below their capacity.

Another issue faced by Mongolian leather processors are wastewaters discharged through the process of tanning. Concerned industrial associations (of leather processors) mentioned that members are in need of additional resources to lessen their involvement in the tanning process and widen their scope of business to manufacturing final products (like coats, boots, and bags).

(4) Dairy Industry

The Mongolian people have traditionally enjoyed a high per capita consumption of milk compared to that in developed countries due to traditional dietary practices. Following the collapse of the domestic dairy industry due to hasty privatization, the large domestic demand for milk and dairy products in urban areas has been met largely by imports. Liquid milk imports have increased five-fold in recent years; however, due to their high prices, milk consumption is only half of that in 1990. The amount of domestically processed milk production amounts to 10.4 million liters, while 18.8 million liters of milk were imported in 2008. Industrial outputs from the manufacture of dairy products amounted to MNT 15.0 billion in 2008, accounting for 2.0% of manufacturing total.

Domestic production of fresh milk is highly seasonal, and surpluses are usually generated for a short period of the year. Many domestic milk factories have substituted fresh supplies by reconstituting imported milk powder. Some liquid consumption is met from small dairy plants using domestically produced milk - mostly un-pasteurized - being sold in markets and on the street in unhygienic conditions. Small-scale dairy processing plants produce a range of dairy products including yogurt and cheese.

Before 1990, the largest dairy plant operating in Ulaanbaatar produced 60 million liters of milk a year, supplied mainly by state-owned dairy farms in the city outskirts via a network of collection points. After privatization of the national cattle herd, this collection system collapsed. It is therefore beneficial to reestablish a milk collection system with intensifying dairy farms. Currently, the goals of the dairy sub-sector are to promote domestic production of milk, increase the level of dairy processing, and substitute imports and promote exports.

The national dairy program was prepared in 1999 and was called the White Revolution (through government resolution No. 230, 2006). In accordance with this resolution, penetration of domestically produced milk is gradually enhanced by SME processors. In parallel, private collection and cooling centers have been re-established.

(5) Agricultural / Animal Husbandry Sector as Suppliers of Raw Materials

In 2008, agriculture / husbandry accounted for 18.8% of GDP and 37% of employment. Agriculture / animal husbandry are the most important sources of income in the rural area. The growth of this sector has been driven mostly by the increasing number of livestock (goats, sheep, cattle, camels, and horses). A range of Mongolian industry relies on agricultural, animal-based raw materials. However, the current production of these processed products (except for cashmere) is a fraction of what they were before the transition to a market economy. Value-addition to such raw materials is still deemed low with processing activities going through the most primary stage.

Mongolia's agro-processing industries generally face harsh competition with their Chinese counterparts because of their surplus capacity, the low scale in securing the supply of raw materials, and the worsening quality of raw material that confronts them, which affects the processing efficiency and quality of final products. One of the challenges of agro-processing industries lies in securing a stable supply and improved quality of raw materials.

Concerning livestock materials, the decline in quality is due to the rapid increase in numbers. Quality is sacrificed for quantity resulting in cases such as coarser cashmere and wool fibers. Since the centralized supply system of raw materials collapsed, many enterprises have ceased their operation leaving gaps in supply chains. Since then, such gaps have been filled largely by small or individual businesses which trade a range of agricultural materials. However, a number of producers and traders are scattered over a large area, and little awareness of the needs of final markets have further worsened the quality of raw materials.

The ability to provide funds to suppliers when they need it most helps to build strong relationships between suppliers and buyers. Traders from China often tour supply areas of raw materials with cash at the time when suppliers need cash most. In turn, they gain a right to procure raw materials at fixed prices. Cash-strapped Mongolian processors cannot compete with this liquidity, and therefore fail to build relationship with suppliers of raw materials. Furthermore, they do not guarantee to pay premiums for quality. Although agro-processors have in general needs to enhance and improve their production system, an issue of low quality of raw materials would prevent them from optimizing their productions.

As also seen in the sub-projects under the JICA-TSL, some agro-processors are aware of the need to step into their supply channel of raw materials with a view to directly controlling their quality, quantity, and availability. The focus would be on the commercialization of this sector. Investments for improving supply channels of quality raw materials by demand side needs to be further promoted for agro-processors to assure optimized production and improved quality of products.

(6) Crops / Horticultures

The production of cereals, principally wheat, which is the main food staple for Mongolians, has been observed although on a limited scale. Wheat production is affected by inadequate rainfall, high cost of irrigation, short-growing season, and availability of inexpensive imports from Russia and China. However, there are several flour processors in Mongolia procuring wheat materials from small domestic production and imports. Considerable needs exist for domestically processed flour, creating an investment potential for flour processing factories and irrigated wheat farms.

Horticulture production including potatoes and vegetables has been increasingly carried out in small commercial greenhouses. Private investments in vegetable growing, where the government does not intervene and capital requirements are relatively modest, have grown rapidly. Potential needs also exist for production facilities (greenhouses) of potatoes and vegetables, which can substitute the current imports from China. This would be further assisted by the increasing awareness on food safety in Mongolia.

3.5 Donors in the SME Sector

A range of financial and technical assistances has been rendered by donors, such as provision of term loan to SMEs, micro-finance and credit guarantee, and strengthening of business development services, industrial cluster, etc.

(1) Financial Assistance

1) Private Sector Development Credit II (PSDC-II)

PSDC-II by the World Bank has commenced to provide financial intermediary loan to the private sector since June 2005 with similar scheme as JICA-TSL Phase I. The project objective is to support commercial banks' efforts to develop the term-lending market for the private sector through: i) increased longer-term funding for viable investment projects, ii) strengthened institutional capacity of PFIs, and iii) improved enforcement of prudential regulation and supervision by BOM. The project cost amounts to USD 15.8 million in total, and is comprised of the following components:

Project component 1	**:**	**Line of credit = sub-loan (USD 14.6 million)**
Eligibility of sub-borrower	:	No sector or market-limits except negative list, with the following: i) Established and operating in Mongolia, ii) Privately owned, iii) Having a debt service coverage ratio of >1.3:1 throughout the life o f the sub-loan, iv) No previous loan default
Eligibility of sub-project	:	i) Technical, commercial and financial viability with due regard to local laws and regulations, ii) A loan to project value ratio of<80 percent, and, iii) FIRR of >13%
Terms & conditions	:	*Sub-loan:* may finance the cost of equipment, civil works, services, leasing arrangements, and incremental permanent working capital, either in USD or MNT. - Single borrower exposure : USD 600,000 - Maximum loan size : USD 600,000 - Final maturity: 2 to 7 years - Grace period for principal repayment: 1 year (2-3 years maturity) and 2 years (3-7 years maturity) - Interest payments: market-based *On-lending loan* - US$ lending: LIBOR for six-month US$ deposits + 1 percent - Togrog lending: average rate for Togrog demand deposits
PFIs	:	Trade and Development Bank, Zoos Bank (original); Khan Bank, Golomt Bank (added)
Project component 2	**:**	**TA Programs**
		To strengthen institutional capacity of PFIs and BOM, covering the following: *For PFIs* : i) Credit analysis, risk assessment, loan monitoring and structuring, ii) Human resources management, iii) Advanced cost accounting system, iv) Procedures and technique for risk-based internal audits, and v) System customization of treasury operations and internal audit *For BOM's Supervision Department* : i) Financial and consolidated supervision, ii) Credit, market, operational and inherent risk assessment, iii) Policy analysis, and iv) Anti-Money Laundering activity

Progress was deemed as rather slow during the early stage of implementation, thus, two new banks were added as PFIs. However, the relatively longer time required for loan processing and higher interest rate (compared to JICA-TSL) continued to cause delays in project

implementation despite the addition of two new banks. Disbursement status was still deemed as slow, about USD 4 million as of June 2008, leaving two more years for implementation[7].

2) Promotion of SMEs and Strengthening of Financial Sector (PSSFS)

KfW also implemented a two-step-loan (TSL) lending project since 1996, with similar scheme as the PSDC and the JICA-TSL. KfW-TSL had two phases. The first phase (Euro 5 million) was implemented with 7.75% of interest rate, 10 years of repayment, and Euro 500,000 of loan limit per sub-project. The second phase (Euro 3.5 million) was done with 7.25% interest rate, 5 years repayment period, and Euro 250,000, loan limit. Although originally targeted for export-oriented SMEs in the first phase, eligibility, terms and conditions of the sub-loan was revised (and relaxed in a sense) to accommodate a wide range of capital needs from the smaller enterprises.

The total line of credit (Euro 8.5 million) was already disbursed, and revolving fund (managed by BOM) is presently utilized by allocating equally the amount to three PFIs. These PFIs are Post, Capitron, Trade and Development Bank (TDB). The TA covered skills improvement of credit / risk analysis, risk management, and internal audit through dispatch of long-term foreign experts to PFIs. The present focus of KfW has been shifted from SME loan to housing loan.

3) Agricultural and Rural Development Project (ARDP)

In August 2008, ADB approved a new financial assistance project to agribusiness enterprises, collaborating with commercial banks. The project aims to develop value chains to deliver uniquely valued products to niche markets through the following components: i) value-chain development of major agribusiness through guarantee back-up for commercial bank loans, and ii) grant for infrastructure development to develop rural infrastructure and veterinary services. The agribusiness in focus includes wool / cashmere, leather, meat, dairy, herbal, fruit/ vegetable processing.

In preparing for this project, ADB screened almost 150 business plans of agribusiness enterprises (mostly large companies), and endorsed 23 investment proposals as eligible to receive project funds. Project funds for each investment proposal are to be fully financed by commercial banks (Khan Bank). but 50% of the amount guaranteed by the funds deposited by ADB (with no deposit rate, then commercial banks can manage this funds to in order to lower interest rates offered to the end-borrowers). The project, by directing term loans to large agribusiness, aims to develop or improve the delivery system of agro-based raw materials, adopt technologies to improve raw material quality, and develop unique products to niche markets. Thus, it is expected that positive spillover impacts to rural agriculture / animal husbandry sector will occur.

4) Loan Guarantee Fund (LGF)

GTZ provides a Loan Guarantee Fund (LGF) in three pilot regions (Zavkhan, Darkhan and Erdenet provinces) in order to increase the access to loans and broaden services provided by commercial banks to SMEs and cooperatives (fallen under the category of manufacturing / processing industry). LGF commenced in October 2007 with a size of MNT 500 million, and has the following conditions:

[7] Status of projects in execution FY08 Mongolia.

Coverage of guarantee	:	- Up to 50% of loan risk per project - Maximum guarantee amount of MNT 30 million per project
Eligibility	:	1) Officially registered SMEs at the State Registry and Tax office, 2) Engaged in production activities 3) A start-up or new business that has a sound business plan 4) An existing business that has a good record of business 5) A start-up and/or existing business that provides at least 50% of collateral 6) A start-up and/or existing business that has no delinquent loan
Others	:	- Interest rate and term for loans shall be negotiated between the lending bank and borrower. - MCCI, MONEF, Cooperative Training and Information Center shall assist SMEs and cooperatives on business planning.
PFIs	:	Five banks including Trade and Development Bank, Zoos Bank, Khan Bank, Khas Bank, Post Bank

Under this scheme, SMEs shall submit a business plan to GTZ (project office) to ask guarantee support. GTZ shall assess the application and issue a recommendation letter for PFIs confirming the provision of additional collateral (prepared by GTZ as guarantee) if the SME client has insufficient collateral. The application with recommendation letter shall be sent back to SMEs, so that they can choose a lending PFI based on the best terms and conditions of the loan, following a review of business risk and collateral assessment. Once the lending PFI decides to grant a loan, PFI would discuss to agree on the amount of collateral to be guaranteed by GTZ, and sign a collateral agreement. No charge or fee is imposed on the guarantee arrangement. When default occurs from borrowing SMEs, GTZ shall disburse the agreed guaranteed amount to PFIs.

As of December 2008, the LGF's committed guarantee has amounted to about MNT 370 million, and it has realized loan issuance of about MNT 950 million for some 60 projects of processing industries such as wool, leather, hide and skin, fruit and vegetable, wood, milk, and construction materials. GTZ is currently working to expand the LGF by extending the project area with an additional budget of MNT 1 billion, and intending to closely collaborate with an SME loan program like JICA-TSL. The critical points for cooperation that are left outstanding include the limited location of LGF, the size of maximum guarantee amount, and the number of PFIs. USAID has been also rendering a similar guarantee scheme under its Rural Agribusiness Support Program in twelve provinces targeting small or micro herders' group and agribusiness.

(2) Major Technical Assistance

The technical assistance described below is considered to have a big significance to the outcomes of the JICA-TSL.

<u>Mongolia-Japan Centre for Human Resources Development (MOJC)</u>

JICA, in jointly cooperation with the National University of Mongolia (NUM), has been running the Mongolia-Japan Centre for Human Resources Development (MOJC) since January 2002. One of the pillars of activity is business human resource development, rendering on-hand business course of SME management and diagnosis. The curriculum covers Japanese business management, corporate strategy, five S (a method for workplace management and improvement), financial analysis and management, customer management, production, cost and quality management, personnel and labour management, and marketing.

One of the current concerns of MOJC is securing and training of local lectures of business courses.

In 2007, the centre commenced the new courses in view of tightening collaboration with other on-going programs by donors. One of them included a training course on business development planning in order to promote the JICA-TSL Phase I, targeting manufacturing SMEs which completed the above financial analysis and management courses. Participants totalled 40, spanning five days. The contents covered the necessary skills in long-term business planning such as market analysis and sales / profit projection. MOJC also held the same course for loan officers in commercial banks, in response to requests from banks. The MOJC will continue this training course of business planning in November 2009 with almost same scale as in previous years.

CHAPTER 4 ENVIRONMENTAL PROTECTION

4.1 Overview of Mongolia's Environment

(1) Climate and Ecosystems[1]

The salient features of the climate and ecosystems of Mongolia are as follows:

- Topography is mostly flat landlocked area of 1,565,000 km^2 with rolling hills and several significant mountain ranges.
- It has extreme continental climate with seasonal and daily temperature differences and low precipitation.
- Its ecological regions consist of alpine, taiga, forest-steppe, steppe, desert-steppe, and desert.

(2) Natural Resources

Mongolia has total surface water resources of 63 million m^3; however, only half of them are available for industrial, agricultural, and human use. They supply only 20% of the total water consumed, whereas 80% is supplied by abundant groundwater.

Forest resources account for about 11.6% of land area. Closed forest is 12.9 million hectares (8.1%), which is a substantial resource compared to that in many countries.

Mongolia has abundant mineral resources mainly copper, gold, and coal. They accounted for 68% of total FDI in 2005. Erdenet Mining Corp., the sole copper producer, has average output of copper ore of more than 27 million tons per year. Its production of concentrates is more than 130,000 tons of copper and 1,500 tons of molybdenum. Output from gold mining increased significantly in the past decade. Boroo Gold is the leading gold producer. Coal production has continued to increase in recent years.

(3) Environmental Issues

The following are Mongolia's environmental issues widely considered as threatening its economic opportunities and human life which require urgent countermeasures:

1) Air Pollution[2]

Air quality is a significant environmental problem in urban areas of Mongolia. Its primary sources are coal-fired facilities for heating and industrial uses as well as motor vehicles. Particularly in Ulaanbaatar, the surrounding high mountains prevent dispersion of pollutants. In addition, stable atmospheric inversion forms during the winter season. As a result, ambient

[1] Sources on the description of climate, ecosystems and natural resources: UNEP. *Mongolia: State of the Environment 2002*; the World Bank. *Mongolia Environment Monitor 2004*; and United States Geological Survey, *2007 Minerals Yearbook Mongolia*, February 2009, with updates of current study team's survey.

[2] Sourced from the UNEP, *Mongolia: State of the Environment 2002*; the World Bank, *Mongolia Environment Monitor 2004;* Guttikunda S. the World Bank Consultant Report *Urban Air Pollution Analysis for Ulaanbaatar*, June 2007; with updates of current study team's survey.

pollutant concentrations often remains for days or weeks at a time and exceeds Mongolian and international ambient air quality standards. Coal and wood burning in households in urban areas is identified as another air pollution source that affects ambient air quality.

Energy Sector

Three large coal-fired combined heat-and-power plants (CHP) in Ulaanbaatar consume 3.5 million tons of coal per year releasing 33,300 tons of particulate matter, 35,700 tons of NO_X, and 19,800 tons of SO_2. The energy sector accounts for around 64% of Mongolia's greenhouse gas emissions. Heat-Only Boilers (HOB) and smaller-scale heat stoves for buildings burn over 400,000 tons of coal every year. Some 48% of the city population lives in gers or wooden houses with manual heating, and consumes over 650,000 tons of coal and over 160,000 $m^3$of fuel wood each year[3]. During winter, the atmospheric content of carbon monoxide exceeds the permissible norm by 2-4 times.

Transportation

The number of motor vehicles has increased rapidly in big cities and settlements recently. From 2002 to 2007, the number of engine-driven vehicles in Ulaanbaatar has grown from 52,000 to 160,000[4], and it continues to increase rapidly. It is urgent to prevent combustion gas emissions and use of leaded gasoline imported from Russia.

Industry

It is estimated that approximately one fourth of greenhouse gas emissions in Mongolia is caused by the industrial activities.

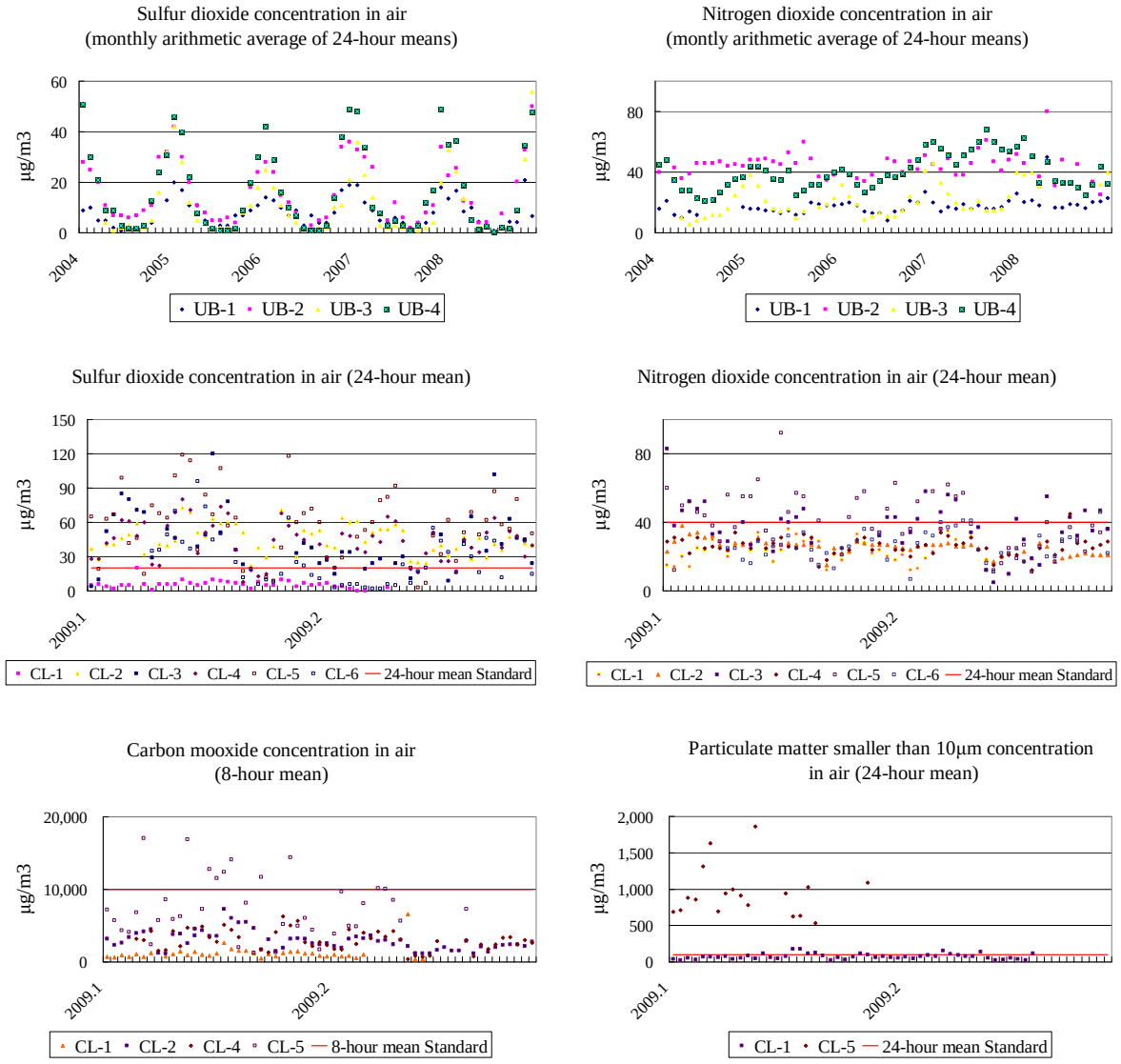
The following graphs show the air quality measurement results of Ulaanbaatar City, presenting recorded data of (i) the evolution of SO_2 and NO_2 concentrations from 2004 to 2008 (monthly arithmetic average of 24-hour means), and (ii) daily averages of SO_2, NO_2, CO and PM_{10} for January and February 2009.

In the upper two graphs, the results of SO_2 and NO_2 concentrations correlate with the seasonal operation of heating systems in Ulaanbaatar. The NO_2 concentration also suggests its increasing tendency during the period 2004-2008.

The lower four graphs show the measurement results of averages on a daily basis of SO_2, NO_2, CO and PM_{10} for January and February of 2009, compared with the corresponding air quality standards of Mongolia. Among all the parameters exceeding the standards frequently, it is noticeable that the particulate matter is 18-fold higher than the standard. It is also important to mention that the current standard value for PM_{10} is twice as high as that of WHO air quality guidelines.

[3] Because gers population is highly fluctuating and diverse depending on the source, these data were estimated using as source, The World Bank Consultant Report, with further consultation with The Air Quality Department of the Capital City on its reliability.

[4] Sourced from the National Statistical Office of Mongolia, *Mongolian Statistical Yearbook 2007*, 2008



Note: Data sets CL-1 to CL-6 are monitoring stations of Central Laboratory of Environment and Metrology (CLEM) and UB-1 to UB-4 are those of National Air Quality Office (NAQO)

Sources: a. Central Laboratory of Environment and Metrology. b. National Air Quality Office

Figure 4.1.1 Air Quality in Ulaanbaatar City

2) Water Pollution[5]

Domestic sewage, industrial effluents, agricultural run-off, and untreated solid and dry waste are polluting surface and groundwater in Mongolia. In addition, improper storage and use of chemicals and fertilizers, and violations of regulations on sanitary zone protection further worsen the problem.

Sixty percent of the total population is currently served by the public water system, and 25% of it has access to sanitation. Most urban centers possess a centralized wastewater collection and treatment facility; however, the majority of the infrastructure is in poor condition and does not function at full capacity. There is no sewerage or wastewater collection system in the

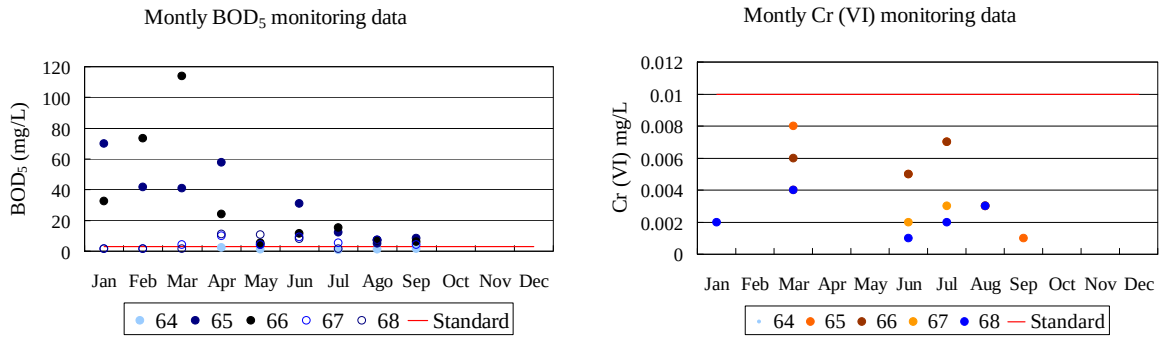
[5] Sourced from the Ministry of Nature, Environment and Tourism. *Environmental Overview,* Unpublished Document; the World Bank. *Mongolia Environment Monitor 2004*; with updates of current study team's survey

ger areas. Each plot has pit latrines, which are usually crudely constructed, resulting in odors, flies, and possible groundwater contamination.

The natural purifying capabilities of rivers in Mongolia are limited by seasonal variations in flow, and freezing winter temperatures. The Terelj River, especially in its upper reaches, as well as the Tamir and Zelter rivers, are consistently rated "extra clean fresh surface water resource" with high levels of dissolved oxygen (DO). The upper stream of the Tuul River is rated "very clean fresh surface water resource", while its lower stream is rated "minimally clean freshwater resource" attributable to the concentration of human and industrial activities around the Ulaanbaatar metropolitan area. The Khangal River is also rated "minimally clean freshwater resource" due to its proximity to one of Mongolia's most significant copper mining and processing sites. The waters of these rivers have high or very high levels of biochemical oxygen demand (BOD) and total coliform bacteria. The water quality of the Orkhon River, which passes through mining and logging areas, the Kherlen River near Baganuur, the country's largest supplier of lignite coal, and the Kharaa River near Darkhan have deteriorated over time. With increasing BOD, heavy metals concentrations, and decreasing DO, these rivers are rated "medium clean fresh water resources".

In the past 20 years, the quantity and quality of groundwater have also been adversely affected by pollution. Increasing groundwater use and slow or declining aquifer recharge have led to saline intrusion and pollution of groundwater from domestic sewage, factory waste, and agricultural chemicals.

The following figure illustrates the monthly measured values for biological oxygen demand (BOD_5) for five days incubation method and hexavalent chrome concentrations (Cr (VI)), measured in the sampling points of Tuul River in Ulaanbaatar City, compared to the standard values.



Note: The sampling points are: No.64: upstream in Songino; No.65: downstream in Songino; No.66: behind Shuvuun factory; No.67: behind big rock of Khadan Khysaa; and No.68: Altanbulag soum, following the Tuul River from the upstream to the downstream of its watershed. The values of October and November are not available due to the freezing of Tuul River.

Source: National Agency for Meteorology, Hydrology and Environmental Monitoring

Figure 4.1.2 Water Quality in Ulaanbaatar's Tuul River in 2007

The figure shows that BOD_5 surpasses the standard value as evidence of organic pollutants. There is high concentration especially from winter to spring season. This is explained by the accumulation of organic pollutants during the winter season, and its release with the melting of ice in early spring. On the other hand, in spite of relative high concentrations of Cr (VI), especially in Songino area, the values are in levels under the water quality standard.

Comparing Japanese water quality standards with those of Mongolia, the BOD_5 standard is the same level as the third class water source for potable water that requires high performance treatment technique; and Mongolia's Cr (VI) standard is five times as stringent as the standard quality of water for the protection of human health.

3) Solid Waste Nuisance[6]

Increased migration from rural areas to Ulaanbaatar and the rapid growth of secondary cities have made solid waste a serious source of pollution in urban areas. Ulaanbaatar produces an average of 600,000 m^3 of solid waste annually. Only 30% of this waste is collected, and 40% of households have access to solid waste collection services. Although waste management companies are supposed to collect solid waste twice a week, it is often collected only once a week, thereby causing serious odor and cleanliness problems.

In ger areas, solid waste is deposited in a designated open space and collected on a monthly basis, unless road access is limited. A majority of the roads are in poor condition, so that garbage trucks encounter difficulties in collecting waste. As a result, individuals dump all waste near neighborhoods. Coal ash from stoves makes up more than half of this waste.

There are 447 waste collection points throughout the country, of which 220 are in Ulaanbaatar. However, waste collection and disposal are not well organized. Since there is no sanitary landfill, solid waste accumulates in heaps on the outskirts of cities and other populated areas before being transferred to one of the three open dumpsites. Open burning of garbage is still resorted to reduce garbage volume or to get heat for scavengers during the winter.

There are no separate facilities for the disposal of hospital waste. Therefore, it is burned openly in special sections of the dumpsites. This practice poses a health hazard and results in groundwater pollution and soil contamination.

Toxic waste management is also poor. Some 20% of toxic waste is stored in non-standard storage facilities, while another 20% is stored in open sites. As no health and environment risk classification system currently exist for transporting, handling, and storing toxic waste, concerns are increasing about possible water pollution and soil contamination resulting from inappropriate management and disposal of toxic waste.

4) Land Degradation[5]

Land degradation is caused by either human activities or natural phenomena. Natural causes include droughts with frequency of 2-3 years, natural drying, deficit in soil moisture, thin layer of fertile soil, specifics of mechanical composition of soils, and strong wind during spring and autumn, and dust storms. Human causes include effects from rapid development of farmland, mining industry, changes in traditional livestock husbandry, and overgrazing.

Farmland degradation in Mongolia is one of the serious issues, which should be urgently tackled. A considerable amount of farmland has been degraded or abandoned because of slow action in the transfer of farmlands to individuals and economic entities for their long-term use or possession. As of today, most of the farmlands is out of use and abandoned.

[6] Sourced from the JICA the Study on Solid Waste Management Plan for Ulaanbaatar City in Mongolia, Supporting Final Report, March 2007; the World Bank, Mongolia Environment Monitor 2004, with updates of current study team's survey

Producing over 50% of the country's total exports, mining is one of the rapidly growing and leading industrial activities in Mongolia. Mining is causing substantial soil degradation. No proper rehabilitation measures are being taken by enterprises during or after closure.

5) Deforestation[5]

The total remaining forest in Mongolia covers 10.4 million hectares in the north, 2.0 million hectares of saxual forest, and 3.6 million hectares of depleted forest mainly near transport corridors. Deforestation is caused by legal and illegal unsustainable logging, wildfire, insect and disease infestation, animal grazing, and climate change. From 1960s to 1990, the average official harvest figures were approximately 1,500-2,000 million m^3 per annum, very roughly 50% roundwood and 50% fuel wood. In 2002, official figures recorded a harvest of 620 million m^3, almost all fuel wood.

6) Desertification[5]

Mongolia experiences serious drought and desertification. More than 40% of the territory is composed of arid and desert areas. There are estimates that 90% of Mongolia's territory is vulnerable to desertification, and about 70% is already degraded to various extents.

Desertification is characterized by i) decrease of vegetation coverage, ii) desiccation of wetland ecosystems, and iii) increase of sand area. Natural disasters caused by changing climate with human factors will lead to accelerated degradation. For instance, desertification in the Gobi ecological zone is reported as being caused primarily by increasing aridity of climate and grazing by livestock.

7) Loss of Biodiversity[5]

Climate change, desertification, harvesting and industrialization are threats to the biodiversity. Increasing economic activity such as mining, land cultivation, and crop farming, and the production of wild and domestic animal products for internal consumption and export, have resulted in the disturbance of natural areas and the loss of wildlife habitat. Inadequately controlled or illegal hunting and predator eradication programs, also contribute to pressures on wildlife and on the natural balance in many areas.

4.2 Environmental Policies

(1) Action Plan of the Government 2008-2012[7]

The GOM shows its strong commitment in the promotion of environmental sustainability by stating it as one of the five principal policy sets of its Action Plan for 2008-2012. It further develops 19 comprehensive policies covering such environmental issues as awareness building, pollution prevention, natural resource management, biodiversity protection and reforestation as well as the required legal and institutional frameworks.

(2) Implementation Program of MONET

The Ministry of Nature, Environment, and Tourism (MONET) is the primary government agency given the mandate of formulating and implementing environmental policies. In

[7] Sourced from the State House-Ulaanbaatar City, *Resolution on Approval of the Action Plan of the Government for 2008-2012*, Nov. 2008

accordance with the said 19 policies of the government Action Plan, MONET has developed its Implementation Program (IP) as summarized and sorted in the table below (see Annex I for the complete details). The IP of MONET is deemed to have a wide coverage and specific enough in terms of the range of activities. Its activities are mostly in line with the major environmental issues in Mongolia such as air and water pollution, solid waste and soil contamination, deforestation, desertification and biodiversity loss. However, it is anticipated that the limited resources of MONET may pose difficulties in the execution of the program, for which requires external assistance. The IP has also set the objective of enacting environmental regulations in order to promote the actions for environmental protection by providing some privileges to the private sector and to facilitate the acquisition of reliable technology on cleaner production processes and energy saving. During the formulation and appraisal process of Environmental Protection Loans of JICA-TSL, PFIs and CSC are expected to consult the IP and prioritize the sub-loan applications of relevant projects.

Table 4.2.1 GOM Action Plan 2008-2012 and MONET Implementation Program (Summary)

Environmental Issues		Action Plan 2008-2012	MONET Implementation Program Activities (Selected by relevance to JICA-TSL)
(1)	Awareness Raising, Efficient Resource Consumption	3.1 Preservation of Natural Resources - Efficient use of resources - Promotion of eco-friendly clean technologies	- Introduction of environment-friendly technology e.g. preferential taxation
			- Standards for proper treatment and industrial waste - Legal framework for Cleaner Production
			- Provision of criteria in line with international standards for the application of "eco-labelling"
			- Dissemination of principles of sustainable consumption and production
			- Strengthening supervision and inspection capacity for regulation compliance
			- Implementation of energy saving and environment-friendly technology
		3.12 Creation of database on natural resources and its disclosure	N/A
(2)	Air Pollution	3.2 Reducing air pollution - Restriction of raw coal use - Housing with heating for population in ger areas, etc.	- Formulation and implementation of air pollution mitigation
			- Restriction of raw coal consumption for heating
			- Implementation of program to reduce air dust from industrial activities
		3.3 Reducing air pollution	- Strengthening environment control and monitoring
(3)	Water Pollution, Water Resource Management	3.3 Reducing water pollution	- Renewal of technologies and equipment of the water treatment facilities in highly populated area
			- Strengthening environment control and monitoring
		3.5 Integrated Water Resource Management	- Expansion and renewal of Ulaanbaatar wastewater discharge system
			- Promotion of water conservation, wastewater treatment and introduction of water recycling systems
(4)	Solid Waste	3.4 Introduction of waste management systems and waste recycling systems	- Reformulation of national waste program
			- Formulation and implementation of the master plan for waste management in all aimags
			- Formulation of system for classification, reuse and recycling of industrial wastes
			- Establishment of recycling plants in the regional centers
(5)	Land Degradation	3.3 Reducing land degradation	- Establishment of centralized waste disposal facility for hazardous waste management
(6)	Deforestation	3.8 Reformulation of national program to combat desertification	N/A
		3.15 Implementation of sustainable management and restoration programs for forest resources Promotion of substitutes to wooden materials	- Initiatives for the replacement of wooden materials in railway and construction sectors
			- Establishment of logging limitations
			- Financing of reforestation and restoration activities

(7)	Desertification	3.9 Legal framework for soil protection	- Revision of Law on Soil Protection
		3.8 Reformulation of the national program against desertification	N/A
(8)	Biodiversity Loss	3.6 Biodiversity protection and restoration in Gobi region	- Financial and technical assistance of projects for forestation, plantation conducted by SMEs and individuals
			- Formulation of policy and strategies for economic sectors
		3.7 Irrigation of pastureland area in Gobi region	N/A
		3.16 Improvement of management for the protection of flora and fauna	N/A
(9)	Mineral Resource Management	3.10 Prohibition of geological survey for mineral resources in concerned areas	- Revision of laws and regulations regarding restriction in gold mining
			- Implementation of reduction of negative impacts of mining activities
(10)	Institutional Framework	3.11 Desistence from environmentally-affecting projects	- Economic and environmental feasibility study on mining projects
		3.13 Introduction of criteria and guidelines for EIA	- Revision of laws on EIA and introduction of principles of strategic environment assessment
			- Legal framework for the implementation of strategic environmental assessment
		3.14 Strengthening local network of special protected area	N/A
		3.17 Formulation of the integrated policy on environmental protection	N/A
		3.18 Legal environment for tourism industry	N/A
		3.19 State control over the Nature and Environment	- Strengthening control system for environment - Establishment of pollution monitoring system
			- Revision of legal framework for environmental regulation compliance enforcement - Formulation of restoration and rehabilitation standards
			- Improvement of enforcement system by application of “polluter’s pay” principle - Enhancement of public awareness

Note: Numbers put with Action Plan 2008-2012 policies correspond to its clauses (3.1 through 3.19)
Source: JICA study team based on MONET's unpublished document

4.3 Institutional Framework Concerning Environment

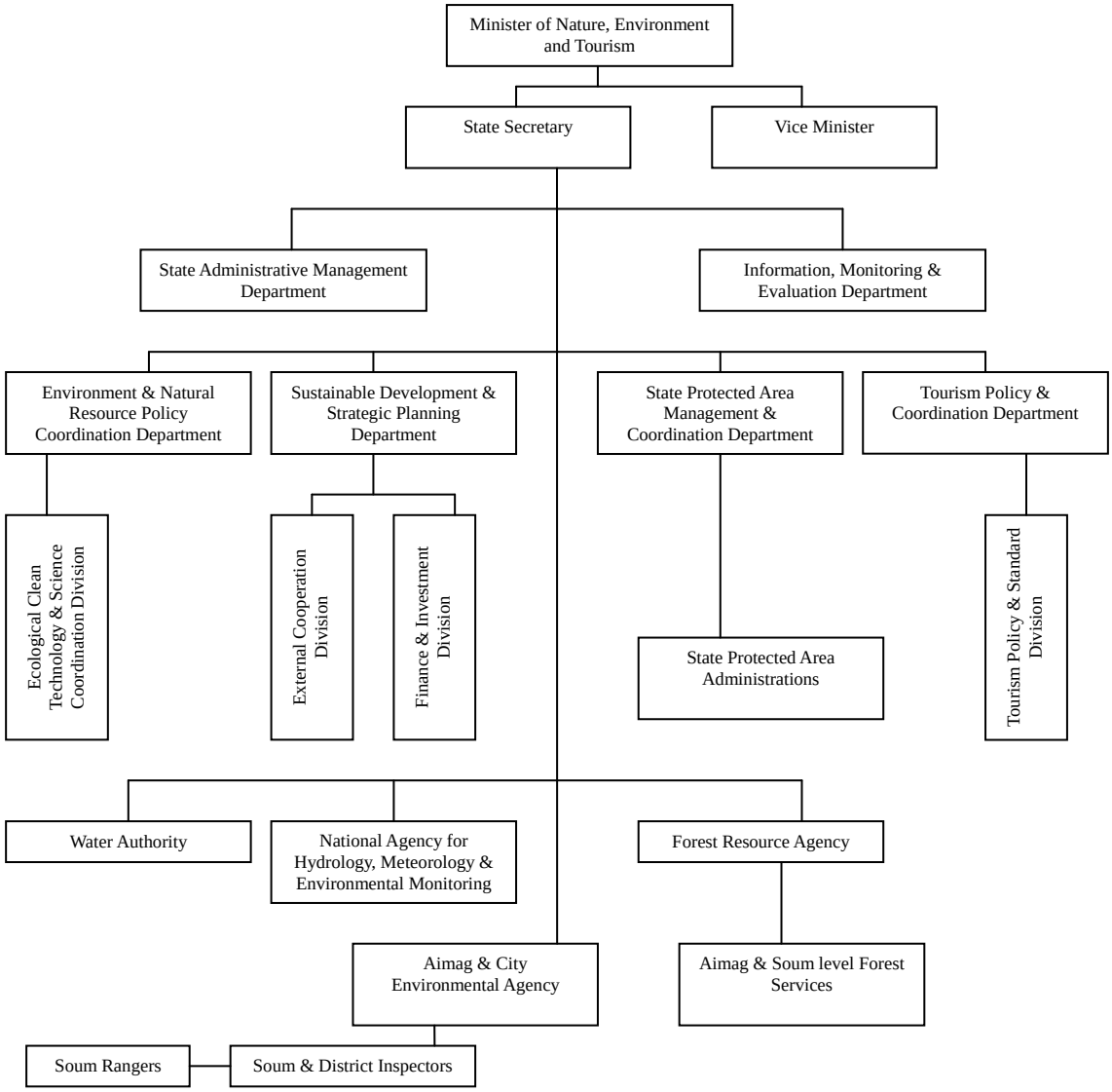
(1) Ministry of Nature, Environment and Tourism

1) General Function

The former Ministry of Nature and Environment was reorganized into the Ministry of Nature, Environment and Tourism (MONET) in October 2008, merging the administration of the tourism sector. MONET’s environmental policies are based on its mandate to promote assurance of human health and good livelihood, preservation of nature, use of natural resources in a proper manner in line with the concept of sustainable development, and the implementation of activities related to the rehabilitation and restoration of disturbed areas, in collaboration with concerned organizations, corporations and citizens.

2) Organizational Structure

The following figure shows the organizational structure of MONET. The Department of Information, Analysis, and Assessment of MONET follows the legal framework on the conduct of the environmental impact assessment (EIA). Under the Ministry, the National Agency for Meteorology, Hydrology and Environmental Monitoring (NAMHEM) is in charge of the air and water quality measurements for the entire country.



Source: JICA study team based on MONET Information

Figure 4.3.1 Organizational Structure of MONET

3) Expenditure

The following table shows the amount of expenditures spent by the MONE (or MONET) in the last five years. Compared to the total expenditure of the general government (both central and local), it is evident that the budget appropriation of the ministry has been increased most recently in 2008 though it is still at the smallest level among the government ministries.

Table 4.3.1 General Government Expenditure-MONE (at current prices)

	2004	2005	2006	2007	2008*
Minister of Nature and Environment Expenditure (million MNT)	5,477	5,695	7,573	11,772	26,223
% to general government total	*0.72%*	*0.74%*	*0.61%*	*0.67%*	*1.07%*
General Government Total Expenditure and Net Lending (million MNT)	752,486	764,597	1,237,008	1,749,168	2,462,047

* Preliminary data

Source: National Statistical Office, Statistical Yearbook 2007 and Monthly Bulletin of Statistics December 2008

Recent trends of capital investment by the government in natural resource protection and restoration also shows its increasing commitment to environmental protection activities. As shown in the following table, the government started in 2007 investing in the enhancement of surveillance activities of rangers in protected areas (national parks, etc.). In addition, there was a substantial increase in Environmental Protection Fund in 2007.

Table 4.3.2 Capital Investment for the Protection and Rehabilitation of Natural Resources

(in MNT million)

Types of Activities	2004	2005	2006	2007*
Protection of Nature	401.8	548.2	524.3	*940.8*
Environment Protection Fund	-	-	234.2	661.3
Protection of Special Protected Areas	530.8	599.2	593.0	1073.8
Reforestation, forestry activities	903.0	803.0	903.0	863.0
Land protection and rehabilitation	182.8	136.1	365.0	-
Function of environment protection and environmental protector	-	-	-	1,052.6
Total	2,262.7	2,086.5	2,619.5	4,591.5

* Preliminary data

Source: National Statistical Office, Mongolian Statistical Yearbook 2007

(2) General Agency for Specialized Inspection

The General Agency for Specialized Inspection (GASI) was reorganized in 2008 from the former State Specialized Inspection Agency, which was established under control of the Prime Minister of Mongolia by merging 13 inspection departments formerly belonging to various ministries and agencies. The latest reorganization gave GASI an additional mandate of preparing and implementing policies enhancing its regulation enforcement and inspection activities. The former merger and reorganization of the State Specialized Inspection Agency created the joint inspection system, which continues to be exercised by GASI.

With the recent reorganization of the agency, the monitoring and supervision over the industrial sector are prioritized especially for the fulfillment of environmental regulations such as gas emissions and effluent standards.

(3) Ministry of Minerals and Energy

The Ministry of Minerals and Energy (MOME) was created in October 2008 integrating partially the former ministries of industry, trade, food, agriculture, fuel, and energy. Its structure is still in the reforming process. The current basic structure of MOME is formed by the sub-sector departments of i) mining and heavy industry, ii) geology, iii) energy, and iv) fuel, in addition to the Departments of Monitoring, Investment and Finance, and Administration. The mission of this ministry is to formulate and conduct the policies and strategies for the promotion and supervision of the respective sub-sectors in charge. The main

environmental issues that concern the ministry are: i) the reclamation of the state-owned abandoned mines causing dust from waste rock damps and tailing impoundments, ii) cyanide from gold mineral processing plants, iii) effluent drainage from copper mineral processing plants, and iv) mercury amalgam originated at micro-scale informal gold mining sites.

(4) Local Authorities

The Ulaanbaatar City administration is in charge of the air pollution prevention measures, specifically concerning the use of raw coal for heating and cooking purposes. The city exchanged the minutes of understanding with MOME that will prohibit the use of raw coal starting in 2011. The effort is under preparation to be effective starting in September 2009. The city is also in charge of the supervision of HOB stations to ensure compliance with the emission standards.

4.4 Donor Assistance

The following table summarizes the current projects and programs for the environment and relevant donor assistance. Most of the donors' supports are directed to technical cooperation and capacity building activities in environmental management, conservation, climate change issues, water resource management, forestry, and desertification problems. As a whole, donor assistance to MONET and its subordinate agencies is not directly connected with private sector activities for environmental protection.

JICA currently focuses on the environmental issues in Ulaanbaatar and has made project preparation assistance for air pollution reduction and solid waste management in cooperation with Ulaanbaatar City. Another forthcoming assistance for the air pollution issue relevant to the JICA-TSL is the proposed Ulaanbaatar Clean Air Project (UBCAP) prepared by World Bank, which contains such components as public HOB replacements, policy and legal framework for clean coal use, and financial support in clean coal subsidizing mechanism.

Table 4.4.1 Current Projects and Programs for Environmental Activities

Project/ Program title	Funding Source/ Donor/ Amount	Period	Mongolian Implementing/ Counterpart Agency
Environmental Management			
National Geo information Center for Natural Resource Management	The Netherlands Euro 1,150,000	2006 - 2009	MONET
Capacity Building and Institutional Development for Participatory Natural Resources Management and Conservation in Forest Areas of Mongolia	The Netherlands, FAO USD 4,686,000	2007 - 2012	MONET Regional Environment Agencies
The Netherlands-Mongolia Trust Fund for Environmental Reform, Phase II (NEMO II)	The Netherlands, World Bank USD 5,000,000	2007 - 2010	MONET
Strengthening Environmental Governance in Mongolia	The Netherlands, UNDP USD 1,012,291	2007 - 2010	MONET
Conservation and Sustainable Management of Natural Resources	GTZ Euro 8,800,000	2005 - 2012	MONET, GASI
Participatory Learning for the Co-management of Natural Resources in Mongolia	Canada 497,800 Canadian dollars	2008 - 2010	MONET
Environmental Conservation			
Community-based Conservation of Biological Diversity in the Mountain Landscapes of Mongolia's Altai Sayan Eco-region	The Netherlands, GEF, UNDP USD 4,785,672	2005 - 2011	MONET
The River Basin Management Model Project for the Conservation of Wetland Ecosystem and its Sustainable Use in Mongolia	JICA JPY 102.32 million	2005 - 2010	MONET, provinces

Project/ Program title	Funding Source/ Donor/ Amount	Period	Mongolian Implementing/ Counterpart Agency
Conservation of the Eg-Uur River Watershed	GEF, IFC USD 1,188,000	2003 - 2008	NGO
Climate Change			
Preparation of the Second National Report on UN Framework Convention on Climate Change	GEF, UNEP USD 405,000	2006 - 2009	MONET
Implementation of Management Plan for Reducing Ozone Decomposition Substances in Mongolia	GOJ, UNEP USD 75,000	2006 - 2009	National Ozone Authority
Strenthening of Management and Organization for Montreal Protocol Implementation	UNEP USD 60,000	2006 - 2008	National Ozone Authority
Capacity Building for Development and Implementation of Carbon Finance Projects	Japan (PHRD), World Bank USD 475,472	2008 - 2009	MONET
Mongolia Assessment Report on Climate Change	UNEP	N/A	MONET
Climate Change and Sustainable Livelihood of Rural People in Mongolia	The Netherlands	N/A	MONET, NAHMEM
Air Pollution			
Capacity Development Project for Air Pollution Control in Ulaanbaatar City	JICA	2009 -	Ulaanbaatar City, NAHMEM and relevant government agencies
Ulaanbaatar Clean Air Project	World Bank	Preparation: 2009 - Implementation: 2011 -	Ulaanbaatar City, MOME
Solid Waste			
Basic Design Study for the Project for Improvement of Waste Management in Ulaanbaatar City	JICA	2006 - 2007	Ulaanbaatar City
Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City	JICA	2009 -	Ulaanbaatar City
Water Resource			
Strengthening Integrated Water Resource Management in Mongolia	The Netherlands Euro 6,501,000	2006 - 2007 2008 - 2012	MONET
Water Resources Management in Central Asia: Model Region Mongolia	Germany USD 4,000,000	2006 - 2009	University, MONET
Assessment of Environmental Dangers Caused by Mercury during Mining of Mineral Deposits in the Selenge River Basin.	Czech Republic 9,820,390 Krone	2006 - 2008	University
Forestry			
Strengthening Monitoring, Assessment and Reporting on Sustainable Forest Management	Japan, FAO USD16,500	2007 - 2008	MONET, Institute of Geo-ecology
Forest Landscape and Conservation	Japan (PHRD), World Bank USD 410,000	2007 - 2009	MONET
Korea- Mongolia Green Belt Project	Korea Forest Service USD 9,500,000	2007 - 2017	MONET
Desertification			
Sustainable Land Management for Combating Desertification in Mongolia	The Netherlands, UNDP USD 4,100,000	2008 - 2012	MONET, MOFALI
Coping with Desertification Project	Swiss	2007 - 2012	MONET
Others			
Ulaanbaatar Environmental Outlook	UNEP USD 30,000	2007 - 2008	NGO
Project for Development of Human Capacity for Weather Forecasting and Data Analysis	JICA JPY 496 million	2005 - 2008	NAHMEM
Persistent Organic Pollutants	N/A	N/A	NUM

Source: MONET and Updates by JICA study team

4.5 MCCI Green Initiatives[8]

The Mongolian Chamber of Commerce and Industry (MCCI), with the assistance of European countries, manages several projects that directly promote environmental activities of the private sector with focus on cleaner production and energy service companies (ESCOs).

(1) The Netherlands' Assistance for Cleaner Production and ESCO Promotion

Introduction and Promotion of Cleaner Production (2000-2006)

MCCI started cleaner production promotion of the private sector with the assistance of the Netherlands government in 2000. The project aimed at introducing cleaner production principles devised by UNEP for Mongolia's industries and developing practical methodology applicable to the local setting. Eleven model business entities of various industries (meat processing, dairy foods, textile, bakery, leather processing, etc.) were selected and given technical assistance in assessment and consultancy services to improve their production process and comply with the principles. The selected companies for this phase were medium- to large-scale factories. Besides the technical assistance, to cope with the Tuul River pollution that was the common issue of the 10 Ulaanbaatar-based model companies, approximately USD 1.0 million investment was made to rehabilitate the Central Wastewater Treatment Plant of the city with grant assistance.

Promotion of Energy Efficiency Investments through the Establishment of ESCO (2002-2007)

This ESCO incubating project intended to facilitate the creation of this new industry in Mongolia to promote energy efficiency investments among private sector companies. Its objectives are: i) to establish a favorable legal environment for the development of ESCO business; ii) to raise the business community's awareness on energy efficiency and the ESCO concept, including implementation of ESCO demo projects; and iii) to develop funding sources for financing ESCO projects. Three potential ESCO companies were selected (MCS International, Yavuu Impex and ESCO Mongol), and their personnel were trained in the conduct of energy audits, preparation of energy performance contracts for profit sharing with clients, and the conduct of a marketing survey to prepare potential client list.

Table 4.5.1 List of ESCO Demo Projects

Trained ESCO	Client Business	Project Description	Energy Efficiency Achieved	Project Cost
ESCO Mongol	Bakery factory	Modification of air compressor system	➢Reduction of electricity consumption from 630MWh to 116MWh ➢Reduction of CO_2: 430 tons	US$65,000
MCS International	Cement manufacturing	Modification of air compressor system	➢Reduction of electricity consumption from 720MWh to 116MWh ➢Reduction of CO_2: 450 tons	US$72,000
Yavuu Impex	Government Building	Modification of ventilation system	➢Saving of energy consumption of approximately 30% to 40% (60MWh) ➢Reduction of CO_2: 75 tons	US$40,000

Source: MCCI

(2) "Green Credit Guarantee Fund" for SME Finance (2006-2009)

As a continuation of the ESCO promotion project, MCCI implemented a program called Green Credit Guarantee Fund (GCGF) since 2006 with technical and financial assistance from the Netherlands government. The GCGF, funded with USD 400,000 donor assistance, provides loans and guarantees through Golomt Bank to SMEs who implement energy

[8] Based on information materials provided by MCCI and surveys by JICA study team.

efficiency or cleaner production projects (see Table 4.5.2 below for the Fund's features). GCGF guarantees are made as cash collaterals deposited in the Special Account with Golomt Bank to supplement borrowers' own pledged collaterals.

Table 4.5.2 Salient Features of GCGF

Primary Project Eligibility Criteria	- Energy efficiency or cleaner production oriented industrial activities - Positive appraisals made by Cleaner Production Center, MCCI - More energy efficiency than that of Mongolia and other transition country. / shall have 3% higher than normal energy efficiency
Average Loan Amount	MNT47.9 million
Loan Term	Up to 3 years
Loan interest rate	16.0% per annum
Guarantee from the Fund	Up to 80% of loan amount (Average 37%)
Up-front Loan Processing Fee	0.5% of loan amount payable to the Bank

Source: MCCI and Golomt Bank

The GCGF has issued a total of MNT 355.5 million in loans and MNT 132.2 million in guarantees to seven SMEs for their energy efficiency and cleaner production activities (see Table 4.5.3 below). The seven projects were selected by GCGF/MCCI from about 90 candidate projects that applied upon the public invitation notice. These candidate projects went through intensive technical appraisal and consultancy that was handled by Cleaner Production and Energy Efficiency Center in MCCI to determine its bankability. Now that the entire fund is already allocated as loans and cash collaterals and GCGF is to be closed in October 2009, MCCI is about to start discussions with the Netherlands government for the next financial assistance program planning.

Table 4.5.3 Loan Projects Under GCGF

No.	Project	Loan Amount (MNT million)	Location
1	Expansion of polyvinyl chloride (PVC) doors & windows manufactory and production of PVC grains	20.00	Kherlen Soum, Dornod Aimag
2	Reduction of chrome usage in skin tannery	80.80	Khan Uul District, Ulaanbaatar
3	Import and sales of materials for press industry	19.70	Sukhbaatar District, Ulaanbaatar
4	Waste recycle	75.00	Darkhan, Darkhan Uul Aimag
5	Boiler rehabilitation	40.00	Kherlen Soum, Dornod Aimag
6	Boiler replacement	100.00	Chingeltei District, Ulaanbaaatar
7	Food processing and package factory	20.00	Bayanzurkh District, Ulaanbaatar
Total		**355.50**	

Source: Golomt Bank and MCCI

(3) Recent EC Assistance Focused on SME Development

As continuation of the former initiatives, MCCI has recently developed upgraded versions of the cleaner production and ESCO promotion in partnership with the European Commission (EC) but with more emphasis on SME development.

Ecoprofit for Sustainable Entrepreneurship Project for Cleaner Production (2006-2008)

The Ecoprofit project, technical assistance provided by the EC as a project in its "Asia Invest" program, was designed to support capacity building of Mongolian SMEs in order for them to prepare entry into the European Union market. Seven SMEs in various industries (milk processing, brewery, cashmere processing, skin tannery, etc.) were involved in the project and awarded international green certificates. Cleaner production investments by participating companies reached USD 150,000, and economic benefits created are estimated at USD 200,000. As for the effects on savings in natural resources, water consumption was reduced by

20%, energy efficiency improved by 25%, and waste was reduced by 30%. MCCI currently has a plan to manage another cleaner production project with EC's support as in "Switch Asia Programme" from 2009 to 2011.

Capacity Building of ESCO in Mongolia and Inner Mongolia (2008-2010)

Another attempt by MCCI for ESCO business promotion has the main objectives of reinforcing the private sector for new ESCO business development opportunities and contributing to the gradual improvement of Mongolian and Inner Mongolian SMEs' production efficiency and environmental performance. Ten potential ESCOs (energy equipment importers, consultancy, and maintenance service companies) are involved in the project and have not participated in the "New 21" project mentioned before. Expected outputs of the project are: i) training materials on ESCO service; ii) ESCO website in English and Mongolian; iii) ESCO business guide in Mongolian, Chinese and English; and iv) setting up of pioneering ESCOs in Mongolia and Inner Mongolia.

Lastly, a more amplified approach is taken in the "Green Products Development and Labelling in Mongolia" Project (2008-2010), in which awareness raising on the development and marketing of environmentally friendly (green) products among Mongolian SME community is emphasized through its activities, e.g. trainings and stakeholder meetings for 2,500 SMEs in five selected industries (leather tanneries, wood products, food processing, wool and cashmere processing, and handicrafts).

4.6 Laws and Regulations

Laws in Mongolia that are in effect and are concerned with the JICA-TSL are described as follows.

(1) Law on Environmental Protection

The law is the fundamental legal base for environmental subjects. This law was enacted in 1995 and revised in 2006 and 2008. The purpose of this law is the regulation to guarantee: (i) sound and safe environment; (ii) ecologically balanced social and economic development; (iii) the protection of the environment for present and future generations; (iv) the proper use of natural resources; and (v) the restoration of available resources. The law introduces the environmental impact assessment and monitoring, and mechanisms for the environmental information management under the concept of decentralization.

(2) Law on Environmental Impact Assessments (EIA)

This law was enacted in 1998 and revised in 2002 and 2007. The law requires General Environmental Impact Assessment (GEIA) for new projects as well as the renovation and expansion of existing industrial, service, and construction activities and projects which use natural resources. The basic procedure is summarized as follows:

- The project implementer shall submit the required information such as technical and economic feasibility study to MONET or the local government.
- The expert of MONET shall, within 12 working days, conduct the GEIA and will issue one of the conclusions: (i) approval for project implementation; (ii) approval on specific conditions; or (iii) the required Detailed Environmental Impact Assessment (DEIA).

- DEIA Report must be drafted by an authorized entity and must include the following items:
  - Environmental baseline data and indices;
  - Appropriate project alternative;
  - Recommendations for mitigation measures as well as the elimination of potential and significant adverse impacts;
  - Analysis and calculation of the extent and distribution of adverse impacts and their consequences;
  - Risk assessment;
  - Environmental protection plan;
  - Environmental monitoring program;
  - Opinion of residents; and
  - Other issues.
- The DEIA Report shall be reviewed within 18 working days. MONET shall make the decision whether or not to implement the project.

3) Law on Special Protected Areas

This law was enacted in 1994. The purpose of this law is to regulate: (i) use and procurement of land for special protection; and (ii) the preservation and conservation of its original conditions, in order to preserve the specific traits of natural zones, unique formations, rare and endangered plants and animals, and historic and cultural monuments, and natural beauty.

4) Law on Water

This law was enacted in 1995 and revised in 2004. The purpose of this law is to regulate the protection, proper use and restoration of water. It stipulates the implementation of a water monitoring network and a water databank consisting of measurement data, surveys, and studies concerning water collection areas, water resources, water quality and its trends, water uses, and wastewater removal. It gives MONET a mandate to conduct: (i) a national water resource statistical survey; (ii) consolidation and reporting data on water use, wastewater removal, and water pollution; (iii) development of water use limits and standards; (iv) management for water resource protection, restoration, prevention of water disasters, and elimination of damages to nature resulting from them; (v) approval and enforcement of the procedures for setting wastewater removal points in cooperation with the appropriate professional organizations; and (vii) regulation of the water utilization of trans-province rivers.

5) Law on Air

This law was enacted in 1995. The law stipulates that MONET shall fulfill the following functions on air protection:

- Develop and implement program for air protection;
- Organize testing and research of air quality;
- Draft standards on air protection for approval by the Mongolian Agency of Standardization and Metrology (MASM);

- Establish professional service to determine air quality, measure and test, as well as compile relevant data; and
- Organize a network for the regular monitoring of air pollution, hazardous physical impacts, as well as changes in small contents in the air such as ozone and hydrogen.

The Ministry of Health shall fulfill the following functions on air protection:

- Draft standards on acceptable content of pollutant substances in the air and on the toxic or hazardous physical impacts for approval by MASM; and
- Control of air pollution and the physical hazardous impacts on human health.

MOME, MOFALI, and the Ministry of Roads, Transportation, Construction and Urban Development in charge of the respective industrial branch shall be responsible for the professional control over the discharge of polluting substances into the air and of physically hazardous impacts caused by citizens, economic entities, and/or organizations in cooperation with inspectors of GASI.

6) Law on Protection from Toxic Chemicals

This law was enacted in 1995. The purpose of this law is to regulate the production, export, import, storage, trade, transport, use, and disposal of toxic chemicals. MONET shall be responsible for the following duties:

- Implement legislation related to protection from toxic chemicals, and monitoring its proper use;
- Issue to citizens, economic entities, and/or organizations permits on production, export and import, trade, and disposal of toxic chemicals;
- Control activities on protection from and use of toxic chemicals and develop relevant recommendations;
- Report on use and allocation of toxic chemicals nationwide;
- Conduct state registration of production, export, import, and use of toxic chemicals and create a databank of related information;
- Make a list of agrochemicals used for plant protection, fertilization, and testing purposes and to revise and approve the amount to be used on an annual basis;
- Carry out responsibilities to implement the international conventions on toxic chemicals and chemical weapons to which Mongolia is a signatory;
- Submit to the Government proposals on request for assistance by international organizations to rehabilitate the damages and eliminate dangers in the event of damage or danger to national security, human health, or the environment caused by toxic chemical leaks;
- Carry out training to improve the knowledge and skill of those handling toxic chemicals; and
- Exchange information on toxic chemicals with foreign organizations and provide this information to the citizens.

(7) Environmental Standards

The relevant environmental standards concerning the management of air and water quality in Mongolia is analyzed as follows. Standards for air quality, air emissions, and effluents are presented in Annex II.

1) Air Quality

Mongolia is gradually making its effort to be in line with the WHO air quality guidelines. With the enactment of MNS 5485-2007, sulfur dioxide emissions was adjusted to the 24-hour mean standard recommended value of 20 μg/m^{3}from the former 30 μg/m^3.

Meanwhile, nitrogen dioxide is much more restrictive in Mongolia than the WHO guidelines. WHO's recommended value is 40 μg/m^3 for the annual mean, but for Mongolia, this same value is applied as the 24-hour mean.

With respect to the airborne particulate matter, the standard values adopted in Mongolia are still several folds higher than those recommended in the WHO guidelines. For particles smaller than 10 μm, both the annual and 24-hour mean values are two-folds higher than the recommended values. For the particles smaller than 2.5 μm, the difference between the ones adopted in Mongolia vis-à-vis WHO recommended guidelines is higher.

For the ozone concentration in air, the standard applied in Mongolia is the same as that recommended in the WHO guidelines.

The following table shows the standard values for air quality in Mongolia compared with the corresponding guidelines of WHO.

Table 4.6.1 Principal Parameters of Air Quality Standards of Mongolia

Toxic elements	Period of measurement	Max. acceptable content[1] (μg/m^3)	WHO air quality guidelines[2] (μg/m^3)
Sulfur dioxide (SO_2)	10-minute mean	500	500
	20-minute mean	450	-
	24-hour mean	20	20
	Annual mean	10	-
Nitrogen dioxide (NO_2)	20-minute mean	85	-
	1-hour mean	-	200
	24-hour mean	40	-
	Annual mean	30	40
Ozone (O_3)	8-hour mean	100	100
Particular matter - bigger size (PM_{10})	24-hour mean	100	50
	Annual mean	50	20
Particular matter - smaller size ($PM_{2.5}$)	24-hour mean	50	25
	Annual mean	25	10

Source: [1] MASM, [2] WHO, WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide, Global update 2005, Summary of Risk Assessment. 2006

2) Water Quality

In general, the water quality standards adopted in Mongolia involve a larger list of substances and are more stringent than those adopted in Japan or USA. Nevertheless, the standard is lacking for cyanide, a compound concerned with environmental complaints with regard to the extraction of gold.

The Central Laboratory of Environment and Metrology is in charge of the analysis of water samples. For the validation and calibration of their analytical equipments and for the assurance of data quality is participating in inter-laboratories testing, with satisfactory results.

However, the laboratory has a limitation in the measurement of mercury in water. Improvement of its analytical process is currently underway.

It is considered that the laws are adequately designed in line with the commonly observed ones in other countries. However, these laws still lack the corresponding regulations for their implementation, except for the acceptable standard values. The monitoring and measuring mechanism, penalty and punishment, and public measures in case of violations need to be prescribed in order to make these laws enforceable.

The MONET is currently drafting such implementation regulations for the enforcement of the laws and improved facilitation of actions by the private sector for environmental protection. The MONET is simultaneously revising the existing laws for their improvements. In parallel, GASI initiated strengthening its role of supervision and monitoring (particularly in emissions and effluents) of the industrial sector in 2009.

PART II REVIEW OF TWO-STEP-LOAN PROJECT PHASE I

PART II REVIEW OF TWO-STEP-LOAN PROJECT PHASE I

CHAPTER 5 DESCRIPTION AND RELEVANCE OF THE PROJECT

5.1 Outline of the Project

The Loan Agreement (L/A) concerning the TSL Project for SME Development and Environmental Protection Phase I (TSL Phase I), between the Japan Bank for International Cooperation (JBIC) (presently, Japan International Cooperation Agency: JICA) and the GOM was signed on March 28, 2006 and became effective on July 25, 2006.

(1) Objectives

TSL Phase I aims to promote sustainable growth and poverty reduction in Mongolia through the provision of long-term financing to SMEs and technical assistance to the PFIs and SMEs for private sector development and environmental protection.

(2) Scope of the Project

The scope of TSL Phase I comprises of the following:

1) SMEs Development Loan
2) Environmental Protection Loan
3) Consulting Services

(3) Borrower and Executing Units

The borrower is the MOF, and the executing units includes the Counterpart Steering Committee (CSC), composed of representatives of MOF, MOIT, Ministry of Food and Agriculture (MOFA), Ministry of Nature and Environment (MONE), and BOM, and seven PFIs.

Currently, the Department of Light Industry in MOTI and MOFA are merged to become the Ministry of Food, Agriculture and Light Industry (MOFALI). MONE also merged with Department of Tourism in other ministry, and becomes the Ministry of Nature, Environment and Tourism (MONET).

The seven PFIs include the Trade Development Bank (TDB), Golomt Bank, Khan Bank, Zoos Bank, Capitron Bank, Xac Bank, and Anod Bank (added after the Project commenced).

5.2 Scope, Terms and Conditions of the Sub-loan

(1) Sub-loan Component

Term loans have been provided to SMEs (sub-borrowers) through selected PFIs under the following conditions. PFIs receive the necessary funds from MOF in accordance with the

On-lending Loan Agreement made between MOF and PFIs. Except for a difference in their focus, both sub-loans for SMEs development and environmental protection share the same scope, terms and conditions.

1) Eligible sub-loan borrowers	: Mainly agricultural and industrial sectors (i.e. all sectors excluding trade, real estate, military, and consumer loans) : Private SMEs with the following qualifications - majority Mongolian private (including foreign) investors-owned; - to which the preferential corporate tax rate at 10 percent is applied; and, - with employees 50 or less
Preconditions to application	: Loan-to-value ratio = 80 percent or less; : Debt-service coverage ratio = 1.3 or greater; : Financial internal rate of return of loan project = 13% or greater; and, : No previous default record
2) Type of financing	: Fixed asset financing; and, : Working capital financing
3) Region	: Nationwide
4) Currency	: Either USD or MNT
5) Interest rate (on-lending)	: Market-based (6 months USD LIBOR + 1% for USD lending : Average demand deposit rate for Togrog
6) Interest rate (sub-loan)	: Market-based and fixed over the sub-loan period, depending on discretion of each PFI
7) Size	: Within the range between USD 10,000 - USD 600,000 per sub-project, or Togrog equivalent, of which the upper limit is the same as the IDA's Second Private Sector Development Credit (PSDC II).
8) Repayment period	: From 3 up to 10 years (including up to 3 years of grace period)

(2) Consulting Services

Both international and national consultants with experience in banking business, SME finance, and development project management were hired to conduct the tasks below:

1) Project supervision	: Preparation of a manual for PFIs on the usage of TSL : Review of sub-loan application in line with the eligibility criteria as well as JBIC/JICA guideline for environmental and social impact consideration, and recommendation of the review results to CSC for its approval : Support to CSC for JBIC/JICA concurrence of sub-loans as necessary : Support to CSC for instruction to BOM of sub-loan disbursements to PFIs : Support to CSC for production of necessary reports and external audit report : Support to CSC for request for disbursements from JBIC/JICA : Preparation and implementation of PR plan (including brochure to SMEs) : Monitoring of TSL progress
2) Technical assistance	: Training and advice to CSC on Yen loan procedure : Training and advice to PFIs on the usage of TSL / term loan operation : Training of SMEs on the usage of TSL such as application, project formulation (in close coordination with JICA technical assistance)
3) Study	: On development of domestic term-finance market strategy : On development of private sector development and SME promotion strategy
4) External audit	: Support for TSL auditing by outsourcing internationally reputable auditor

5.3 Implementation Schedule and Cost

(1) Implementation Schedule

The implementation schedule of TSL Phase I is originally planned as follows. Sub-loans have been utilized on schedule in time for the assumed completion date, although the initial disbursement was deferred due to the delay in the procurement of consulting services and the lengthy appraisal process of the first sub-loan application (to be later discussed in depth). As of the time of the SAPI study, no extension of the sub-loan utilization period is assumed.

Item	Original	Actual
L/A	March, 2006	Not changed
Selection of consultants	April, 2006 - October, 2006	August, 2006 - October, 2006
Initial disbursement	October, 2006	May, 2007 (SME loan) July, 2007 (environment)
Sub-loan utilization	October, 2006 - December, 2009	May, 2007 - December, 2009
Project completion	December, 2009	No change assumed

(2) Project Cost

The total cost of TSL Phase I is estimated JPY 3,141 million (USD 27.4 million, approximately), out of which JPY 2,981 million has been financed by Yen Loan from the Government of Japan (GOJ) through JBIC (presently, JICA). GOM provides the rest of JPY 160 million equivalents for administration and other costs. The allocation of funds is indicated in the table below. As of this time of the SAPI study, no change in cost allocation has been made, except for the consulting services (an increase of person/month to adequately meet TSL supervision needs, financed by MOF).

Table 5.3.1: Allocation of Funds

(in JPY million)

Item	Original						Actual (as of SAPI study)					
	F.C. Portion		L.C. Portion		F.C.+L.C.		F.C. Portion		L.C. Portion		F.C.+L.C.	
	Total	JICA	Total	JICA	Total	JICA	Total	JICA	Total	JICA	Total	JICA
SME Loan	2,297	2,297	-	-	2,297	2,297	2,297	2,297	-	-	2,297	2,297
Environmental Loan	573	573	-	-	573	573	573	573	-	-	573	573
Consulting Services	50	50	-	-	50	50	90	90	-	-	90	90
Contingency	61	61	-	-	61	61	21	21	-	-	21	21
Management Cost	-	-	160	-	169		-	-	-	-	-	-
Total	2,981	2,981	160	-	3,141	2,981	2,981	2,981	-	-	2,981	2,981

Source: JICA study team

5.4 Relevance of the Project

In its EGSPRS formulated in July 2003, GOM placed a high priority on the development of a favorable institutional environment and human resources to promptly shift to market-economy and realize economic growth driven by the private sector. Following EGSPRS, GOM formulated the Program for SME Development in April 2005, which most highlighted an improvement of SMEs' access to finance, including long-term capital, an improvement of the legal environment, permit and license system, support for market

information provision and human resources development. The biggest constraint for private sector development and environmental protection in Mongolia was deemed as a lack of term finance available to private enterprises, SMEs in particular, and fund-offering capacity of financial institutions.

Since the early 1990s, the financial sector has experienced a series of restructuring and reform, such as enactment of laws on banking, introduction of market mechanism and market-oriented regulations, strengthening of supervision by the central bank, and privatization of state banks. Both EGSPRS and the Action Program for 2005-2008 by GOM raised the strengthening of financial intermediary functions of the commercial banks. While the commercial banks expanded strongly owing to restructuring efforts by GOM, they could provide only short-term loans at high interest rates. In response, major donors such as the World Bank and KfW commenced the provision of concessionary term-loans through the two-step-loan scheme. However, it was found that large term-loan needs were still unmet and the capacity of commercial banks was in need of strengthening. GOM was also of such a view of developing the long-term capital market through donor assistances to commercial banks.

At the same time, GOM regarded environmental protection as one of most important issues in the EGSPRS, and indicated issues such as air and water pollution, and waste disposal in Ulaanbaatar City, deforestation and desertification, and protection of bio-diversity, which needed to be addressed. Air pollution in Ulaanbaatar, in particular, caused severe health problems to children. GOM, in response, promoted to replace raw coal fuel with processed coal fuel such as charcoal briquette. GOM also had the policy to pursue environmentally sustainable growth through promotion of regulatory compliance by private enterprises, recycling of discharge and waste, cleaner production, and energy-saving activities.

With the provision of market-based long-term finance and technical assistance to commercial banks and SMEs, mainly in the agricultural and industrial sectors, and to projects for environmental protection, the private sector in Mongolia would gain access to term finance for investment and play a significant role for employment creation and economic growth on a sustainable basis.

CHAPTER 6 REVIEW OF OPERATIONAL PERFORMANCE

6.1 Overall Review of TSL Component

A total equivalent of JPY 2,811 million or about 98% of the loan amount available from JICA has been disbursed to PFIs for sub-lending to SMEs up to April 27, 2009. In addition, a total amount of JPY 61 million equivalents was disbursed for a part of several projects financed by revolving funds. The number of sub-projects financed under the JICA-TSL Phase I is 88 for SME development and 19 for environment protection. The quantitative analysis of TSL component in this study is based on these 107 sub-projects disbursed by the end of April, 2009, otherwise specifically noted.

Out of 107 sub-projects under the JICA-TSL Phase I, 20 are on the operational stage. From these, 15 sub-borrowers have already started repayment of sub-loans. These repayment of principals as well as interest payment are received by PFIs, who, in turn, transfer such money to the Revolving Fund Account (RF/A), after deducting their margin. As money received for repayment of principals is allowed to be kept with PFIs for six months, repayment of principal has started for six on-lending loans only.

(1) SME Development Loans

The portion for SME development of the JICA-TSL Phase I has already been fully disbursed. In addition to those sub-loan applications disbursed, eight applications have been withdrawn either before or after being approved due to various reasons. Most of these proposed projects were withdrawn because sub-borrowers refused to wait for longer processing time of approval, and decided to search for other sources of funds. A considerable number of projects with fund requirement for new investment of facilities for SMEs exists even after all of the proceeds of the JICA-TSL have been provided (demand estimate is discussed in Chapter 15).

(2) Environment Protection Loans (EPLs)

Nearly 89% of the portion for environment protection of the JICA-TSL has been disbursed as of April 27, 2009. One sub-loan application amounting to about JPY 40 million is pending for disbursement, which will be the last sub-project to be financed under this category.

Although the implementation of the portion of EPLs of the JICA-TSL had not reached satisfactory in the initial stage, the number of sub-loan applications has increased since late last year. This is attributed to the promotional efforts of the government as well as PFIs. The various sub-projects under this category are as follows:

i) Manufacturing stoves requiring less fuel;

ii) Production of briquettte;

iii) Dust control service;

iv) Recycling technical oils;

v) Renovation of boiler facilities; etc.

6.2 Sub-loan Borrowers and Their Present Status

(1) Corporate Size

Although there is no definition of SME provided by the government when the JICA-TSL was formulated, the size of sub-borrowers has been stipulated in an on-lending loan agreement (L/A). It states that the number of core staff should be 50 or less. More than 60% of the sub-borrowers are smaller in size with core staff of 20 or less, although this group occupies less than half of the sub-loan amount disbursed. This trend is understandable since medium-size corporations may engage in business for longer period and try to invest more than the smaller group.

Table 6.2.1 Sub-loans by Corporate Size

Core Staff	Number of Sub-loans	Loan Amount (JPY million)	Number of Active Establishments
20 or less	64 (60%)	1,330 (46%)	10,057 (87%)
Over 20 to 50	43 (40%)	1,542 (54%)	1,476 (13%)
Total	107 (100%)	2,872 (100%)	11,533 (100%)

Note: Number of active enterprises does not include wholesale & retail trade, financial services, real estate & renting, etc., which are not eligible for JICA-TSL.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Applications for Sub-loan", and National Statistics Office "Monthly Bulletin of Statistics, December 2008"

(2) Length in Business

The share of sub-borrowers in each range of their lengths in business appears to be well-balanced. About 34% of sub-borrowers have continued business for more than 10 years while about 24% operate their business for 5 to 10 years. Another 30% have business experiences of less than 5 years. About 12% of sub-borrowers are newly established companies.

Table 6.2.2 Sub-loans by Length in Business

Business Length	Number of Sub-loans	Loan Amount (JPY million)
Less than 1 year	13 (12%)	506 (18%)
1 to 5 years	32 (30%)	835 (29%)
5 to 10 years	26 (24%)	677 (23%)
More than 10 years	36 (34%)	854 (30%)
Total	107 (100%)	2,872 (100%)

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications"

(3) Corporate Status and Ownerships

The JICA-TSL has provided sub-loans for various types of entities, of which nearly 94% belongs to Limited Liability Company, unlisted smaller firms. As the JICA-TSL mainly aims at agriculture and manufacturing industries, share of Limited Liability Company is naturally higher.

Table 6.2.3 Sub-loans by Business Entity

Type of Business Entity	Number of Sub-loans	Loan Amount (JPY million)	Number of Establishments
Joint Stock Comany	1 (1%)	29 (1%)	38,011 (84%)
Limited Liability Company	101 (94%)	2,785 (97%)	
Partnership	1 (1%)	11 (0.5%)	3,801 (9%)
Cooperative	3 (3%)	11 (0.5%)	3,223 (7%)
Private School	1 (1%)	36 (1%)	123 (0%)
Total	107 (100%)	2,872 (100%)	45,158 (100%)

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications", and National Statistics Office "Statistical Yearbook, 2008"

6.3 Sub-loan Projects for SME Development

(1) Sub-loan Projects by Sector

Like other TSL projects, there is no restriction on industry which a sub-loan project belongs to. In Phase I, sub-loans have been disbursed mainly for manufacturing and agriculture (including milk cow and pig farming) projects.

About 23% of sub-loans have been earmarked for service industries, which include hotel business and various social services. The proportion of service industries in the TSL is considered acceptable as it is far below the proportion of active establishments of this sector.

Table 6.3.1 Sub-loans by Industrial Sector

Industrial Sector	Number of Sub-loans	Loan Amount (JPY million)	Number of Active Establishments
Agriculture, animal husbandry	17 (16%)	266 (9%)	1,575 (14%)
Manufaturing total	65 (61%)	1,906 (66%)	2,110 (18%)
Construction Materials	28 (26%)	895 (31%)	
Food & Beverages	16 (15%)	483 (17%)	
Service & others eligible for TSL	25 (23%)	700 (25%)	7.848 (68%)
Sub-Total	107 (100%)	2,872 (100%)	11,533 (100%)
Trade, Financial services, etc.	Not eligible	Not eligible	23,755 (206%)
Total	n.a.	n.a.	35,288 (306%)

Note: Number of active enterprises does not include those with employees over 50, which are not eligible for JICA-TSL.
Number of active enterprises in Service & Others does not include wholesale & retail trade, financial services, real estate & renting, etc., which are not eligible for JICA-TSL, but include public services, education, medical care, community / social services, etc.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications" and National Statistics Office "Monthly Bulletin of Statistics, December 2008"

(2) Sub-loan Projects by Location

The location of sub-projects are scattered in over 19 provinces, while more than 60% are located in Ulaanbaatar. Comparing with active establishments in each region, JICA-TSL is involved in approximately proportionate to location of active enterprises.

Table 6.3.2 Sub-loans by Project Location

Region	Number of Sub-loans	Loan Amount (JPY million)	Number of Active Establishments
Ulaanbaatar	67 (63%)	2,169 (75%)	22,849 (65%)
Central	17 (16%)	372 (13%)	4,572 (13%)
Khangai	13 (12%)	147 (5%)	3,453 (10%)
Western	7 (6%)	165 (6%)	2,864 (8%)
Eastern	3 (3%)	19 (1%)	1,550 (4%)
Total	107 (100%)	2,872 (100%)	35,288 (100%)

Note: Number of active enterprises does not include those with employees over 50, which are not eligible for JICA-TSL.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications" and National Statistics Office "Monthly Bulletin of Statistics, December 2008"

6.4 Loan Operations

(1) Submission of Sub-loan Applications

The number of sub-loan applications submitted to CSC every quarter seems to be consistently in the range of 7 to 12 except for the 3rd quarter. The number of applications in the 3rd quarter is 25 and 28 in 2007 and 2008, respectively. This is more than double of that in the other quarter periods. However, this higher figure in said quarter period does not necessarily imply seasonal fluctuations, since each PFI does not follow the same trend. Hence, there is no seasonal factor in the submission of sub-loan applications, although some industries are substantially affected by such factors, which particularly becomes inactive during the winter period.

Table 6.4.1 Sub-loans Submitted by each PFI

PFI	Total		Number of Applications submitted to CSC								Amount of Sub-loans requested (JPY million)			
			'07				'08				'07		'08	
	No. of application	Amount (JPY million)	~3	~6	~9	~12	~3	~6	~9	~12	~6	~12	~6	~12
Capitron	31 (27%)	1,235 (39%)	0	3	1	0	3	5	11	8	82	33	394	727
Khan	29 (25%)	526 (17%)	11	2	8	0	6	1	1	0	337	140	39	9
Golomt	26 (23%)	768 (24%)	0	2	11	6	0	0	7	0	112	363	0	294
Zoos	13 (11%)	334 (10%)	0	1	0	1	1	2	6	2	9	36	146	143
TDB	5 (4%)	81 (3%)	0	1	3	0	0	1	0	0	5	53	23	0
Anod	6 (5%)	177 (6%)	0	0	0	0	1	1	2	2	0	0	59	72
Xac	4 (4%)	66 (2%)	0	1	2	0	0	0	1	0	7	36	0	23
Total	114	3,187 (100%)	11	10	25	7	11	10	28	12	552	661	661	982

Note: In addition, Capitron, Golomt and TDB submitted one sub-project each in the 1st quarter of 2009.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table", March 31, 2009

Sub-projects submitted by most of PFIs are located in Ulaanbaatar, followed by Central or Khangai regions. All the sub-projects submitted by Xac Bank are located in Ulaanbaatar. Khan Bank is unique in this sense, as it covers all regions of the country.

Table 6.4.2 Location of Sub-projects Submitted by each PFI

PFI	Total		Region									
	No.of sub-loan spplication	Sub-loan Amount requested (JPY million)	Ulaanbaatar		Central		Khangai		Western		Eastern	
Capitron	31	1,235	25	1,065	5	163	1	7	0	0	0	0
Khan	29	526	9	210	5	66	8	100	5	144	2	6
Golomt	26	768	21	718	2	27	2	10	0	0	1	13
Zoos	13	334	5	214	4	68	2	31	2	21	0	0
TDB	5	81	4	60	1	21	0	0	0	0	0	0
Anod	6	177	4	118	2	59	0	0	0	0	0	0
Xac	4	66	4	66	0	0	0	0	0	0	0	0
Total	114	3,187	72	2,451	19	405	13	147	7	165	3	19

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications", March 31, 2009

(2) Loan Currency

About 80% of sub-borrowers contract sub-loans in Tugrug, and about 20% in US Dollars. Some PFIs have advised sub-borrowers to avoid US dollar borrowing considering possible exchange risk involved, except when sub-borrowers are earning foreign exchange in their business such as export-oriented manufacturing or tourist service for foreigners. In fact, some sub-borrowers contracting US dollars are faced with difficulty in the payment of their sub-loan interest.

Table 6.4.3 Sub-loans in MNT and USD by PFI

PFI	Total		In MNT		In USD	
	Number of Sub-loans	Loan Amount (JPY million)	Number of Sub-loans	Loan Amount (JPY million)	Number of Sub-loans	Loan Amount (JPY million)
Capitron	30 (28%)	1,179 (41%)	19 (18%)	587 (20%)	11 (10%)	592 (21%)
Khan	29 (27%)	526 (18%)	25 (23%)	314 (11%)	4 (4%)	212 (8%)
Golomt	23 (21%)	591 (21%)	17 (16%)	384 (13%)	6 (5%)	207 (7%)
Zoos	12 (11%)	315 (11%)	12 (11%)	315 (11%)	0 (0%)	0 (0%)
TDB	4 (4%)	57 (2%)	3 (3%)	52 (2%)	1 (1%)	5 (0%)
Anod	4 (4%)	104 (4%)	3 (3%)	72 (3%)	1 (1%)	32 (1%)
XAC	5 (5%)	100 (3%)	5 (5%)	100 (3%)	0 (0%)	0 (0%)
Total	107 (100%)	2,872 (100%)	84 (79%)	1,824 (63%)	23 (21%)	1,048 (37%)

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table"

(3) Loan Size

The average loan size shown in the table below is JPY 27 million, which is about half of the maximum loan amount of USD 600,000. If the number of sub-loans in categorized size is focused on, each group of loan size will have a well-balanced share, as demonstrated in the table below. If the share in loan amount is recognized, however, the larger group will benefit with more than half of the total loan, which is quite understandable.

Table 6.4.4 Sub-loan Distribution by size

Sub-loan Amount	Number of Sub-loans	Loan Amount (JPY million)
Less than JPY10million	33 (31%)	170 (6%)
JPY10 ~ 30million	33 (31%)	610 (21%)
JPY 30 ~ 50million	18 (17%)	704 (25%)
More than JPY 50 million	23 (21%)	1,388 (48%)
Total	107 (100%)	2,872 (100%)

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table"

It is noted that 15% of sub-loans have reached the maximum sub-loan amount limit, USD 600,000 specified in JICA-TSL, as shown in the table in Annex III. It is commonly observed that support for bigger projects is requested.

(4) Terms and Conditions

Standardized terms and conditions are applied for all sub-loans at each lending stage, without consideration of industrial sectors or corporate size of sub-borrowers. As a result, those

projects for medical or social services, which are rather less profitable but definitely required for healthy living, have difficulty in accessing JICA-TSL.

A sub-project for acquisition of hospital building and purchase of clinical and laboratory equipment for a new hospital specializing in chronic inflammation of liver and bile of virus and non-virus origins should be pointed out as a typical case. The sub-loan would be utilized for the purchase of equipment, while hospital building was already acquired through utilization of own capital. The application for this project was rejected by JICA as the financial rate of return (FIRR) of this project was estimated at 5%, which is far below the minimum 13% stipulated in loan documentation. However, the cash flow itself was projected at positive level because the hospital building was acquired through own fund which was not obliged to pay back in a limited time. There can be more cases rejected before submission to CSC's consideration due to existence of certain unsatisfactory conditions of sub-loan.

In addition, many requests for modification of terms and conditions have been received.

1) On-lending Interest Rate

Under the current scheme of JICA-TSL, MOF charges interest on on-lending loans based on market-based interest rate (6-month USD LIBOR + 1%) for USD lending, and average demand deposit rate for Tugrug lending. Many PFIs request for lowering on-lending interest rate in order to secure proper margin, while keeping sub-loan interest rate at current level. On-lending interest rate should be discussed in relation with sub-loan interest rate, which is a component in the overall lending market.

2) Sub-loan Interest Rate

MOF restricts maximum margin for PFIs at 4% for Tugrug loans and 3.6% for US Dollar loans. Almost all the PFIs considers the 4% margin too small and apply for a maximum margin for all the sub-loans, resulting in unanimously similar interest rate (9.9% p.a. for Tugrug loans and 7.71% p.a. for US Dollar loans at present) as if regulated (not market-based). However, each sub-project's impacts on economy and society are different. Creditworthiness of each sub-borrower also varies. PFIs consider that such difference should be reflected in sub-loan interest rates.

On the other hand, the sub-loan interest rate seems to favor borrowers, as compared with other borrowing facilities (exceeding 20% p.a. for MNT loans at present), as very few complain or dissatisfaction has been received.

3) Collaterals

In order to obtain sub-loans from PFIs, sub-borrowers are obliged to provide collaterals to PFIs, in the average of 121% of the sub-loan amount after strict evaluation of recoverable value of collaterals by PFIs. While PFIs are successful in securing collaterals, many potential SMEs express their concern with the unavailability of their collaterals to obtain sub-loans. In fact, several applications have not reached disbursement as collaterals initially expected were found unavailable and such applications were withdrawn either before or after being approved.

Table 6.4.5 Sub-loans and Collaterals Provided

PFI	Number of Sub-loans disbursed	Number of Sub-loans secured by Collaterals							Coverage Ratio
		Property for Business	Resudence	Production Equipment, Facilities	Inventories	Accounts Receivable	Equity	Guarantee	
Capitron	30	21	15	21	0	4	0	1	106%
Khan	29	26	17	26	23	1	0	1	126%
Golomt	23	19	7	7	1	0	2	0	122%
Zoos	12	11	6	10	1	0	1	0	155%
TDB	4	1	2	2	1	0	0	0	108%
Anod	4	3	1	0	0	0	0	0	108%
XAC	5	3	4	3	2	0	0	0	209%
Total	107	80	49	66	26	4	3	2	121%

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications"

4) Use of Sub-loan Proceeds

Sub-loans have been disbursed for procurement of various items in Phase I. This is not limited to machinery and equipment but also to other requirements for production such as livestock and bees. Although more than 70% of sub-loan proceeds was used to finance purchase of machinery and equipment (including transportation facilities), more than 20% was used to subsidize acquisition of production facilities such as plants and warehouses. It is noted that 11 sub-projects have element of purchase of livestock, bees or tree seedlings. In addition, about 6% of the total sub-loan proceeds are earmarked for working capital in 21 sub-projects as no restriction on financing for working capital exists.

Table 6.4.6 Use of Sub-loans by Industrial Sector

Industrial Sector	Machinery and Equipments		Plants, Warehouses and Service Buildings		Livestock and Plants, including Bees		Working Capital	
Agriculture, animal husbandry	126	(47%)	80	(30%)	51	(19%)	9	(3%)
Manufaturing	1,456	(77%)	288	(15%)	7	(0%)	148	(8%)
Service & others total	462	(66%)	234	(33%)	0	(0%)	4	(1%)
Health & Social Services	289	(85%)	49	(14%)	0	(0%)	4	(1%)
Hotels & Restaurants	19	(11%)	148	(89%)	0	(0%)	0	(0%)
Total	2,044	(71%)	602	(21%)	58	(2%)	161	(6%)

Note: Figures in JPY million; Percentages indicate composition in each sector.
Source: Compiled by JICA study team based on Project Office for JICA-TSL "Sub-loan Applications"

5) Other Terms and Conditions

No specific changes have been requested on maturity or loan-to-value ratio, although many SMEs may still face a difficulty in preparing sufficient own capitals. Mongolian SMEs in general are considered to accumulate still low equity because of shorter business experience than ten years, as evidenced by the establishment year of sub-borrowers in JICA-TSL Phase I (See Table 6.2.2). It may be appropriate to keep the current leveraged ratio.

On the other hand, co-operation, such as co-financing or guarantee programs, with PFIs or other donors is worth seeking. The proceeds of JICA-TSL will be more efficiently utilized if JICA-TSL financing is co-financed with PFIs, for instance, JICA-TSL for equipment import

and PFI financing for local component. Priority in sub-loan approval may be given to such co-financing scheme.

6.5 Sub-loans for Environmental Protection

The following detailed analysis and description on the respective sub-projects for environmental protection, as well as the description on environmental impacts and benefits in Chapter 11, are based on EPL disbursement progress as of February 20, 2009. Other parts of this report contain updated and general information on EPLs as of April 27, 2009.

(1) Disbursed Sub-loans for Environmental Protection

JPY 444 million has been disbursed for 16 EPLs as of February 20, 2009, reaching 77.4% of the total ODA loan allocation for Category B (See Table 2.2.1). By PFIs, it is remarkable that Khan Bank made the first five EPLs consecutively while Capitron Bank has the largest loan total amount (JPY 197 million) for five sub-loans.

Table 6.5.1 Disbursed Sub-loans for Environmental Protection

(in JPY million)

Disbursement Date	PFI	Sub-loan No.	Sub-project title	Amount
Jul - Sep 2007	Khan	8 (B)	Sea Buckthorn Plantation	36.92
	Khan	3 (B)	Fuel Briquette Manufacturing Plant	2.64
Oct - Dec 2008	Khan	18 (B)	Anti-dust Project	55.11
Jan - Mar 2008	Khan	14 (B)	Green Forest-life	5.72
	Khan	16 (B)	Mongolian Boiler - 21 Century	4.29
Apr - Jun 2008	Capitron	8 (B)	Eco Api Project on Expansion of Bee Farm	10.71
Jul - Sep 2008	Capitron	13 (B)	Recycling of Technical Oil	28.65
	Anod	2 (B)	Construction of Semi-processed Cokes and Briquette Plant	32.14
Oct - Dec 2008	Capitron	27 (B)	Renovation of Individual Boiler Facility	47.17
	Anod	3 (B)	Small Scale Sewage Water Cleaning Water Cleaning System	7.48
	Capitron	28 (B)	Renovation of Individual Boiler Facility	56.17
	Capitron	29 (B)	Renovation of Individual Boiler Facility	54.23
Jan - Mar 2009	Zoos	13 (B)	Waste Gravel Processing Project	24.45
	Xac	4 (B)	Production of Briquette and Light Building Block	22.59
	Zoos	12 (B)	LPG Project	11.78
	Golomt	21 (B)	Expansion of Brick Production Project	43.92
Capitron Bank			5 Projects	196.93
Khan Bank			5 Projects	104.68
Zoos Bank			2 Projects	36.23
Golomt Bank			1 Project	43.92
Anod Bank			2 Projects	39.61
Xac Bank			1 Project	22.59
Total			**16 Projects**	**443.96**

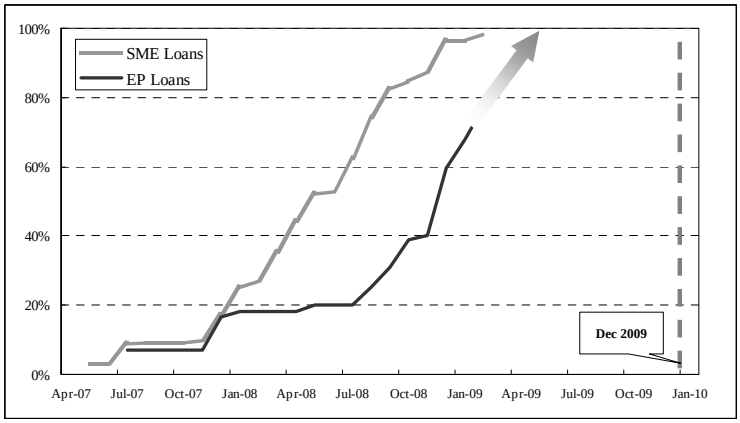
Note: disbursed amounts are based on CSC reporting for replenishment requests to JICA

Source: JICA study team

(2) Progress of Disbursements

Disbursements of EPLs started from July 2007, which is two months later than the first SME loan. In the early stage of Phase I the disbursements were on sluggish pace except for Khan Bank who made the first five EPLs in a row. This relatively slow start of EPL operation in the earlier stage can be explained as i) lower awareness of CSC and PFIs on the EPL formulation rather than that on the JICA-TSL operation as a whole, mainly on the normal SME Loans which has four-times larger fund; and ii) lack of clear eligibility criteria or guidelines of EPL projects for the promotion of EPL formulation.

However, EPL disbursement progress has been accelerated since the third quarter of 2008 and has reached similar pace to that of SME Loans, as shown in the following figure. As compared to the planned project completion date (December 2009), it cannot necessarily be considered showing a delay in the current operation. As for the future sub-project formulation, according to ODA loan consultants, five to six EPL projects are already identified in the pipeline and being prepared by PFIs as of early March 2009. The consultants estimate that six to eight sub-projects (including the aforementioned) in total will be financed with the remaining EPL fund (JPY 129 million) by the second or third quarter of 2009.



Source: JICA study team

Figure 6.5.1 Disbursement Progress

(Cumulative percentage to the respective ODA Loan allocations, as of Feb 20, 2009)

(3) Eligibility of EPL Projects

The Project Memorandum (Project Status Report) between GOM and JBIC (presently JICA) dated May 31, 2006, concluded shortly after the ODA L/A, states only that the same eligibility criteria as those of SME loans shall be applied to EPL projects "except for an additional eligibility requirement, i.e., effectiveness for environmental protection (to be judged by PFI and CSC)". Virtually there is no definition or project classification set forth about what is EPL prior to JICA-TSL implementation. Likewise, none of the other documents for example JBIC's appraisal report or L/A has such information or provisions.

To cope with such situation, CSC had to exercise its broad discretion to decide on EPL applications on a one-by-one basis. For functioning as commercial banks, PFIs lack the ability to assess and screen potential EPL projects in the environmental aspects and have been required to formulate projects from scratch[1].

The lack of guidelines has caused difficulties in the processing of EPL such as vague decision making. Sub-projects in very similar business, brick production for instance, were approved for different categories from time to time. In other cases, some sub-projects that might have positive impacts on environment were classified in the category A[2]. Some EPL application

[1] Exceptional attempt was made by Khan Bank, which analyzed the current government policies on environment and was about to somehow develop rough standards or guidelines for its internal use in screening process.

[2] According to ODA Loan Consultants, about ten sub-projects in category A portfolio could be considered eligible for EPLs e.g. construction material/ parts production including so-called vacuum windows (improved double-glazed windows for insulation).

documents by PFIs show their misunderstanding in identification of positive environmental impacts and benefits derived from the subject sub-projects[3].

In a series of interview sessions during the study, PFIs have expressed absolute necessity of clear and common guidelines to help expedite their project formulation and screening process. It has also become more an obvious need of CSC for such guidelines since JICA-TSL has entered the final stage where the only fund available for sub-loans remains with category B allocation.

(4) Classification by Project Type

The 16 EPL projects are diverse in sector as well as in nature of the sub-borrowers' business activities. The following are brief review by tentative classification in accordance with the EPL classification proposed in Chapter 16, Part III. Detailed evaluation of environmental impacts and benefits is presented in Chapter 11, Part II for each respective EPL.

Table 6.5.2 Classification of JICA-TSL Phase I EPLs

Project name		Energy saving investment	3R initiative	Environmental regulation compliance	Environmental awareness approach
Anod Bank's portfolio					
1	Construction of Semi-processed Cokes and Briquette Plant	√√√	√√	√√	√
2	Small-scale Sewage Water Cleaning System			√√	√√
Capitron Bank's portfolio					
3	Expansion of Bee Farm				√√
4	Recycling of Technical Oil		√√√	√	√
5	Renovation of Individual Boiler Facility (1)	√√√	√	√√	√
6	Renovation of Individual Boiler Facility (2)	√√√	√	√√	√
7	Renovation of Individual Boiler Facility (3)	√√√	√	√√	√
Khan Bank's portfolio					
8	Fuel Briquette Manufacturing Plant	√	√√√	√	√
9	Sea Buckthorn Plantation				√
10	Green Forest-Life Project			√√	
11	Mongolian Boiler – 21 Century	√√√	√	√√	√
12	Anti-dust Project			√√	
Xac Bank's portfolio					
13	Production of Briquette and Light Building Block Project	√√	√	√	√
Zoos Bank's portfolio					
14	LPG Project	√	√		√
15	Wasted Gravel Processing Project			√√	
Golomt Bank's Portfolio					
16	Expansion of Brick Production	No relevance observed: Questionable as an EPL project			

Legend: √√√: strong relevance. √√: moderate relevance. √: weak relevance

Source: JICA study team

1) Energy Saving Investments

The investment for reduction of energy consumption is categorized in this classification. Four HOB replacement projects are implemented in Phase I as energy saving projects. The major

[3] For instance, the application document of "Eco Api Project on Expansion of Bee Farm" focuses on the efficacy of its product (organic honey) to consumers' health, rather than the potential positive environmental impact on natural biodiversity derived from the expansion of its apicultural production.

environmental benefit in these projects is the improvement in energy efficiency derived from the replaced HOBs with more heat efficiency than the degraded systems.

Table 6.5.3 Energy Saving Sub-projects

Sector/ Issue	PFI	No.	Project title	Project cost	EPL amount
Heat Supply	Khan	16(B)	Mongolian Boiler – 21 Century	JPY 7.47 mil (MNT 78.3 mil)	JPY 4.29mil (MNT 45.0 mil)
Heat Supply	Capitron	27(B)	Renovation of Individual Boiler Facility	JPY 80.44 mil (USD 810,015)	JPY 47.17 mil (USD 475,000)
Heat Supply	Capitron	28(B)	Renovation of Individual Boiler Facility	JPY 78.18 mil (USD 810,015)	JPY 56.17 mil (USD 582,000)
Heat Supply	Capitron	29(B)	Renovation of Individual Boiler Facility	JPY 73.21 mil (USD 810,015)	JPY 54.23 mil (USD 600,000)
Total				JPY 239.30 mil	JPY 161.86 mil

Source: JICA study team

2) 3R Initiative Projects

The "3R initiative" is defined as the promotion of "reduce", "reuse" and "recycle" of materials to promote sustainable society through the effective use of resources and materials. Four sub-projects are classified in 3R initiative projects, of which three include construction of coal briquette plants. Capitron Bank 13 (B) aims at the application of new-to-Mongolia technology of lubricant oil recycling to compete with the existing recycled oil import from China and other countries.

Table 6.5.4 3R Initiative EPL Sub-projects

Sector	PFI	No.	Project title	Project cost	EPL amount
CCB Production	Khan	3(B)	Fuel Briquette Manufacturing Plant	JPY 4.16 mil (MNT 39.46 mil)	JPY 2.64 mil (MNT 25.00 mil)
Used Oil Regeneration	Capitron	13(B)	Recycling of Technical Oil	JPY 130.72 mil (MNT1,400.00 mil)	JPY 28.65mil (MNT306.80 mil)
CCB Production	Anod	2(B)	Construction of Semi-processed Cokes and Briquette Plant	JPY 49.45 mil (MNT 461.54 mil)	JPY 32.14 mil (MNT300.00 mil)
CCB Production	Xac	4(B)	Production of Briquette and Light Building Block	JPY 54.83 mil (MNT 582.00 mil)	JPY 22.59 mil (MNT351.00 mil)
Total				JPY 239.16 mil	JPY 86.02 mil

Source: JICA study team

3) Environmental Regulation Compliance

Although the basic definition of this group is related to investment in pollution prevention measures to comply with standards and regulations, the Phase I sub-projects in this classification are mostly for production of goods or commodities. This implies that consumers or other stakeholders will environmentally benefit from their compliance with environmental regulations. None of the sub-projects in this category aims at direct investment in pollution prevention measures in the borrowers' own production process. A unique approach in this classification is Zoos 13 (B). This project aims at collecting waste rocks at the dump site near a gold mine, and processes them into construction materials. Thus, both borrower SME's economic interest and the environmental requirements for mining business, i.e. restoration of the dump site, are fulfilled altogether at the same time.

Table 6.5.5 Environmental Regulation Compliance Sub-projects

Sector/ Issue	PFI	No.	Project title	Project cost	EPL amount
Dust	Khan	18(B)	Anti-Dust Project	JPY 143.30 mil (USD 1,300,000)	JPY 55.11 mil (USD 500,000)
Buildings Sewerage Treatment	Anod	3(B)	Small Scale Sewage Water Cleaning System	JPY 9.94 mil (MNT 120.0 mil)	JPY 7.48 mil (MNT 90.0 mil)
Gold Mining	Zoos	13(B)	Waste Gravel Processing Project	JPY 41.73 mil (MNT 637.1 mil)	JPY 24.45 mil (MNT 380.0 mil)
Gas Emission	Zoos	12(B)	LPG Project	JPY 14.73 mil (MNT 232.0 mil)	JPY 11.78 mil (MNT 185.0 mil)
Total				JPY 209.70 mil	JPY 98.82 mil

Source: JICA study team

4) Environmental Awareness Approaches

Environmental conservation work or awareness building in general cannot be a private sector's interest unless (i) the private entity is contracted for such work; or (ii) there is market to sell its products from such activities. In that sense, Khan Bank 14 (B) is the former case in which the borrower SME runs tree nursery businesses contracted with the public sector which is actually responsible for reforestation activities. The other two sub-projects, Khan 8 (B) and Capitron 8 (B), are merely related to agriculture production from the SMEs' point of view.

Table 6.5.6 Environmental Awareness Approaches Sub-projects

Sector	PFI	No.	Project title	Project cost	EPL amount
Reforestation	Khan	8(B)	Sea Buckthorn Plantation	JPY 50.60 mil (MNT 479.7 mil)	JPY 36.92 mil (MNT 350.0 mil)
Reforestation	Khan	14(B)	Green Forest-Life	JPY 8.13 mil (MNT 85.3 mil)	JPY 5.72 mil (MNT 60.0 mil)
Biodiversity Protection	Capitron	8(B)	Eco Api Project on Expansion of Bee Farm	JPY 13.39 mil (MNT 150.0 mil)	JPY 10.71 mil (MNT 120.0 mil)
Total				JPY 72.21 mil	JPY 53.35 mil

Source: JICA study team

5) Questionable EPL

Out of the 16 EPL projects, at least one (Golomt Bank 21 (B)) has questionable eligibility for EPL. This project aims at expansion of brick production. However, as it involves construction material, the bricks intended to be produced by the sub-borrower have no difference from normal products prevailing in the market. Thus, significant positive impact on environment cannot be expected. There is no project component investing in equipment or facility for the compliance with the environmental regulations. Moreover, there are other similar sub-projects that expand the brick production and are approved as SME loans. It is considered that CSC and the PFI made such indefinite decisions because of the aforementioned lack of clear eligibility guidelines for EPLs.

6.6 Major Implications

The following are implications identified from the review of operational performance of JICA-TSL Phase I:

(1) Overall Review of TSL

- CSC requires for improvement of fund management to timely control new applications for sub-loans to be submitted.
- The repayment of principals received from sub-borrowers is allowed to be kept with PFIs for six months after such receipt. It may have been a better fund utlization if the repayment be transferred to RF/As upon receipt from sub-borrowers.
- Capitron Bank concentrates in rather large projects, which resulted to about 40% of the proceeds of the loan distributed by only one PFI. CSC requires for improvement of fund management and not to depend on very few PFIs.
- About 1 of 5 sub-borrowers has contracted in USD. It is vital for PFIs to avise sub-borrowers on exchange risks involving US Dollar borrowing.

(2) SME Development Loans

- The current eligibility for sub-loan borrowers with the number of core staff of 50 or less is not in conformity with "SME Law".
- Although sub-loans have been disbursed mainly for manufacturing and agriculture projects, about 1 out of 4 sub-loans has earmarked for service industries, which include hotels and restaurants. It may be necessary to induce to these projects directly effectuating the economic development of the country.
- More than 10% of sub-loans have reached the maximum limit of sub-loan amount specified in JICA-TSL, which may imply that support for bigger projects is requested.
- Standardized terms and conditions are applied for all sub-loans without consideration of industrial sectors or corporate size of sub-borrowers. It may be preferable to be flexible in applying terms and conditions, and to allow PFIs to make their own decision.

(3) Environment Protection Loans (EPLs)

- Although their slow start is observed, the EPL disbursements are not necessarily evaluated as delayed after all. It is expected that category B fund will be fully disbursed before the planned completion date of December 2009.
- The most serious deficiency in the Phase I project design which caused uncertain operation of EPLs is lack of clear guidelines on eligibility of EPLs.
- There are no EPL projects so far whose principal objective is to comply with environmental regulations through direct investment in pollution control equipment or facilities. This implies that such investment cannot be prioritized by SMEs in the short term unless the government takes stronger and more reliable regulatory framework and law enforcement measures.
- Alternatively, most EPL projects are investments directly connected to for-profit activities aiming at either i) the production cost reduction by efficient resource use; or ii) the production of goods or commodities that bring in the environmental benefit to their customers, which was hardly envisaged before the Phase I implementation. The Phase I EPL list indicates that investment needs in these categories will be greater than those for the direct pollution control measures in the short term.

- Similarly, some other project cases, especially in environmental awareness approaches, indicate that although potential positive impacts on environment may be observed, they are not direct interests of SMEs from their point of view (SMEs' concerns are more on production increase and gaining profits).
- Such diversity of the project types requires appropriate design of project eligibility criteria for EPLs as well as development of methodology for their ex-ante and ex-post evaluation and monitoring suitable to the nature of these project types and general circumstances surrounding Mongolian SMEs.

CHAPTER 7 REVIEW OF SUB-LOAN PROCESSING

7.1 Operational Manual for PFIs

(1) Manual for PFIs

The Operational Manual was originally drafted in December 2006 immediately after the Project Office (PO) was set up in November. The manual was delivered to PFIs in January 2007, with the understanding that it would eventually be revised as the parties concerned to JICA-TSL gain experience in processing sub-loans. The manual consisted of more than ten separate parts, primarily because there were a number of attachments in addition to the sub-loan application formats.

The loan applications were prepared mainly based on a direct approach with Participating Financial Institutions (PFIs) people, where face to face discussions of actual cases appear to be quite effective. Application formats had been revised while preparing the applications for the first three projects at the initial stage of JICA-TSL implementation. Since the guidance of consultants were made based on an on-the-job method in order to prepare the applications, in practice, the Operational Manual, especially its main part, was rarely used. The manual was put in one volume recently and delivered to the PFIs. The PFIs were requested for suggestions to be incorporated in the Operational Manual during this JICA study, however, no comments were practically obtained.

Nevertheless, there is one major point that should be included in the Operational Manual for the next phase of JICA-TSL. Such point is a follow up system for sub-projects / sub-loans after the disbursement is made. PFIs, in general, have an established internal loan monitoring system, hence, there should be no difficulty in preparing such report, say for instance, semi-annually.

(2) Application formats

Application formats to JICA prepared simultaneously with the Operational Manual have been fully utilized by PFIs' staff in charge for the first three sub-projects. PFIs, utilizing the same formats on the fourth and onwards sub-projects for submission to the Counterpart Steering Committee (CSC), are now requesting for the formats to be simplified to expedite processing. The present format needs to be revised in order to i) simplify format structure and ii) avoid duplication of information required. However, basic information required in the present format is considered appropriate. PFIs' documents for credit committee discussions will be analyzed in reference to modifying the application formats of JICA-TSL project. The JICA study team has noted such and would propose simplified formats.

7.2 Formulation of Sub-projects and Application for Sub-loans

(1) Stakeholders concerned with JICA-TSL

Five stakeholders comprise the JICA-TSL project, including the sub-borrowers, PFIs, PO, CSC and JICA. The sub-project was formulated, while the sub-loan application is prepared, appraised and approved by said parties concerned. The function of each stakeholder is summarized as below.

Table 7.2.1 Function of Stakeholders

Stakeholder	Roles and Assignments of each Counterpart	Processing of Loans	
		First to third loans	Fourth forward
Sub-borrower	1) Identification of sub-project 2) Formulation of sub-project 3) Sub-loan application to PFI 4) Project implementation 5) Payment of interest and principal		
PFI	1) Identification of finance needs by sub-borrower 2) Study of the sub-project and preparation of application 3) Approval of loan by Credit Committee 4) Preparation of application for sub-loan under JICA-TSL 5) Translation of sub-loan application from Mongolian into English 6) Revision of sub-loan application according to comments from CSC & consultants (& JICA)	1) Submit sub-loan application to CSC for its consent 2) Submit sub-loan application directly to JICA for approval after CSC's consent obtained	1) Submit sub-loan application to CSC for approval
Project Office (consultant)	1) Review of sub-loan application submitted by PFI 2) Give comments and advice to PFI 3) Give assistance and advice to CSC on various matters		
CSC	1) Study of applications for sub-loan for sub-project - Check whether sub-loan and sub-project are in lines with the state economic programs - Check on criteria for JICA-TSL 2) Decision-making on on-lending loan interest rate and other policy matters	1) Appraise sub-loan application in view of state economic and environment programs, check whether the sub-project / sub-loan is in line with JICA-TSL criteria, and make decision 2) Inform JICA of CSC's consent and together send CSC discussion minutes	1) Appraise and check sub-loan application as was done in 1st 3 loans and give approval 2) Inform JICA of CSC's approval and send sub-loan application and CSC discussion minutes
JICA	1) Review of sub-loan application and other documents from CSC and PFI 2) Make replenishment for sub-loan funds	1) Give approval to sub-loan and sub-project	1) Review documents sent from CSC

(2) Preparation and processing of application

The contents of application

The application is composed of three parts. Contents of each part are given below:

Application One (to be directly submitted to JICA)

PART I_FINANCE FOR SUB-PROJECT

1. Name of sub-borrower
2. Name of sub-project
3. Outline of the sub-project in brief
4. Total project cost (own fund + JICA-TSL loan + PFI loan, if any)
5. Terms and condition of sub-loan
6. List of collaterals
7. Annual repayment schedule (monthly installment not needed)

PART II_SUB-PROJECT

1. Project location
2. Information on the relevant market
3. Technical aspect of sub-project
4. Assumptions for financial projection of sub-project
5. Financial projection of sub-project (financial statements)
6. Environmental assessment
7. Expected economic and social effect of sub-project
8. PFI's evaluation on sub-project

PART III_BORROWER'S INFORMATION

1. Latest total assets, net worth and annual revenue, if available
2. Year established of sub-borrower and the number of employees
3. Business history in brief
4. Management of sub-borrower and PFI's evaluation on it
5. PFI's evaluation of sub-borrower

ATTACHMENTS

1. Location map of project site
2. Supporting data sheet for financial projection of sub-project
3. Financial statements of sub-project (cash flow, balance sheet and income statements)
4. Calculation of FIRR
5. Borrower's financial statements of past two years
6. Debt coverage ratio of sub-borrower in sub-project operation
7. Copy of Environment Impact Assessment

Application Two (to be submitted to CSC)

Basically contents of the application are the same except that the borrower's financial statements are omitted.

PART I_FINANCE FOR SUB-PROJECT

a. Same as Application One in basic
b. Only total value of collaterals and coverage ratio are acceptable.

PART II_SUB-PROJECT

a. Same as Application One in basic
b. Assumptions for financial projection of sub-project are not needed.

PART III_BORROWER'S INFORMATION

a. Only the borrower's latest assets, annual sales and net worth amounts are to be indicated.
b. Enumeration of sub-borrower's eligibility criteria

Flow of application

Basically, sub-loan application and the relative documents are processed for appraisal as follows: the borrower => PFI => PO => CSC => JICA. The first three sub-loans (sub-projects) for each PFI need to be approved by JICA while the subsequent sub-loans / sub-projects are to be approved by CSC. However, PFIs are quite cautious in sharing their clients' information to outsiders, namely the CSC. Therefore, the first three sub-loan applications need to pass through two different means. One set of documents, which contains information about borrower's financial status, are to be sent directly to JICA by PFI. Meanwhile, the other set of documents not containing financial information, is to be submitted to CSC.

With regards to the first three sub-loans, upon approval of the Credit Committee of PFI and completion of review of application documents at PO, PFI forwards one set of application (Application One) carrying the borrower's information directly to JICA. The other set (Application Two), practically without any borrower's information, is to be submitted to CSC for concurrence. CSC then sends the application to JICA with the former recommendation and discussion minutes. The subsequent sub-loans / sub-projects (the fourth onward) are discussed at CSC meeting, once a month in principle, for approval. After their approval during the CSC meeting, relative application and discussion minutes will be sent to JICA for reference.

7.3 Approval and Disbursement Process of Sub-loans

As previously discussed, five parties are concerned with the processing of sub-loan application. The first three loans need to be approved by JICA. However, none of the parties have experience in long-term finance, processing of applications took time. The average days required for approval and disbursement of sub-loans based on replies form PFIs to the questionnaire, compared with internal record in PO, is indicated in the table below. These however vary among PFIs.

Table 7.3.1 PFIs' Reply to the Processing Time of Application

Item	Average days required			
	First 3 sub-loans		Other sub-loans	
	PFI	PO	PFI	PO
1) Internal appraisal in PFIs	5-49	n.a.	5-28	n.a.
2) Loan Committee approval	1-13	n.a.	1-3	n.a.
3) Preparation of application for Project Office	10-42	52	5-30	166
Sub-total	**16-104**	**52+**	**11-61**	**166+**
4) Project Office (PO) screening	9-44	38	7-18	15
5) CSC concurrence after PO screening	1-80	16	1-60	85
6) JICA approval after CSC	30-144	121	n.a.	n.a.
7) Disbursement after approval	7-102	58	5-73	79
Sub-total	**47-370**	**233**	**13-151**	**179**
Total days required	**63-474**	**251+**	**14-212**	**182+**

Source: Compiled by JICA study team based on "PFI Survey Reports" and Project Office for JICA-TSL "TSL Project Status Table"

According to the record, prepared by PO on the processing time of the first three projects, reveals that the longest time taken, from the date of approval at Credit Committee to the date of disbursement to the borrower, was 474 days, which is Zoos Bank's first application. This

case can be considered irregular as the application was held pending due to Zoos Bank's irregular performance pointed out by BOM. The shortest processing time was 63 days but this was Anod Bank's third project which was submitted when parties concerned were already familiar with handling applications. If these two irregular cases are excluded, average processing time is 248 days, about 8 months. The average processing time for the fourth onward applications is 182 days, about 6 months.

Based on questionnaire replies received from PFIs, three main internal reasons are identified to cause delay in appraisal. These are:

i) Environmental screening by the concerned ministry (obtaining EIA report);

ii) Required documents were not smoothly prepared by PFIs due to poor information on the sub-projects provided by sub-borrowers; and,

iii) Original proposal was not so clear and took time for refinement.

Specifically, obtaining EIA report from MONET seems to take about a month, which PFIs consider very long, and some PFIs express their concern on environmental screening needed for further clarification even after approval of the sub-loan by CSC. However, JICA study team considers said duration to be better than that of other countries. Aside from the reasons stated above, a problem on translating Mongolian into English and the time necessary for replenishment are also pointed out.

Although it is not stated in the PFIs' reply to the questionnaire, the matter related to the frequency of CSC meeting was pointed out through hearing from PFIs. In principle, CSC meeting is held once a month. However, when the chairman of CSC is out of the country, meeting is often postponed for a month or so. Another point proposed is to fix the date of the meetings, for instance, every 15th of the month, in order for PFIs to prepare forehead of the meeting. There is a request to remedy such situation. Furthermore, restriction of the number of sub-loan applications per PFI to be submitted to one CSC meeting is requested to be removed. In addition, some PFIs expressed their concerns regarding the unavailability of smooth disbursement after entering the so-called "recovery stage of replenishment", which sometimes resulted in the violation of the principle, "first come, first served". It is required for CSC to show transparency in processing the applications by providing timely information of the situation on the processing to PFIs.

7.4 Reporting to JICA

For the fourth sub-project onwards, CSC requires to timely furnish JICA with an outline of each sub-project financed out of the proceeds of JICA-TSL. At the initial stage of implementation of JICA-TSL, such reporting had not been fulfilled. This was caused by PFIs' refusal to prepare English versions of applications for sub-loans with satisfactory level, after PFIs received the disbursements. This situation was resolved when PO designated an English expert national consultant, urging PFIs to timely furnish sub-loan applications in English.

Loan agreement (L/A) requires that, in order to provide JICA with a basis for supervision and monitoring of JICA-TSL, CSC furnishes a project status report quarterly, during the implementation of TSL. It seems disappointing that only three reports have been furnished to JICA during these two years. The first report covering the start of the project in November 2006 and full year of 2007 was furnished in early 2008. The second report covering the first

quarter of year 2008 was timely furnished. Subsequently, project status report was not furnished until late December 2008.

The major cause of this failure in reporting is the lack of PFIs' reporting obligation to CSC or PO. Unless PFI periodically provide information on current status of each sub-project under implementation, it is not possible for PO to prepare project status report. It is suggested that periodical reporting system should be agreed upon between PFIs and CSC or PO.

7.5 Major Implications

Two years have passed since the first loan application was examined. The parties concerned have now gained experience for processing applications. The following points may be considered to improve the processing time for Phase II of JICA-TSL:

i) Revision of application format so that appraisal of applications can be expedited,

ii) Possibility of conducting more frequent CSC meetings can be explored,

iii) Transparency of processing applications should be secured,

iv) Reporting system on the progress of project should be established; and,

v) Consideration for well-controlled information on availability of the proceeds of JICA-TSL may be given to shorten the period during the recovery stage of replenishment.

CHAPTER 8 REVIEW OF FUND FLOW

8.1 Disbursement Process

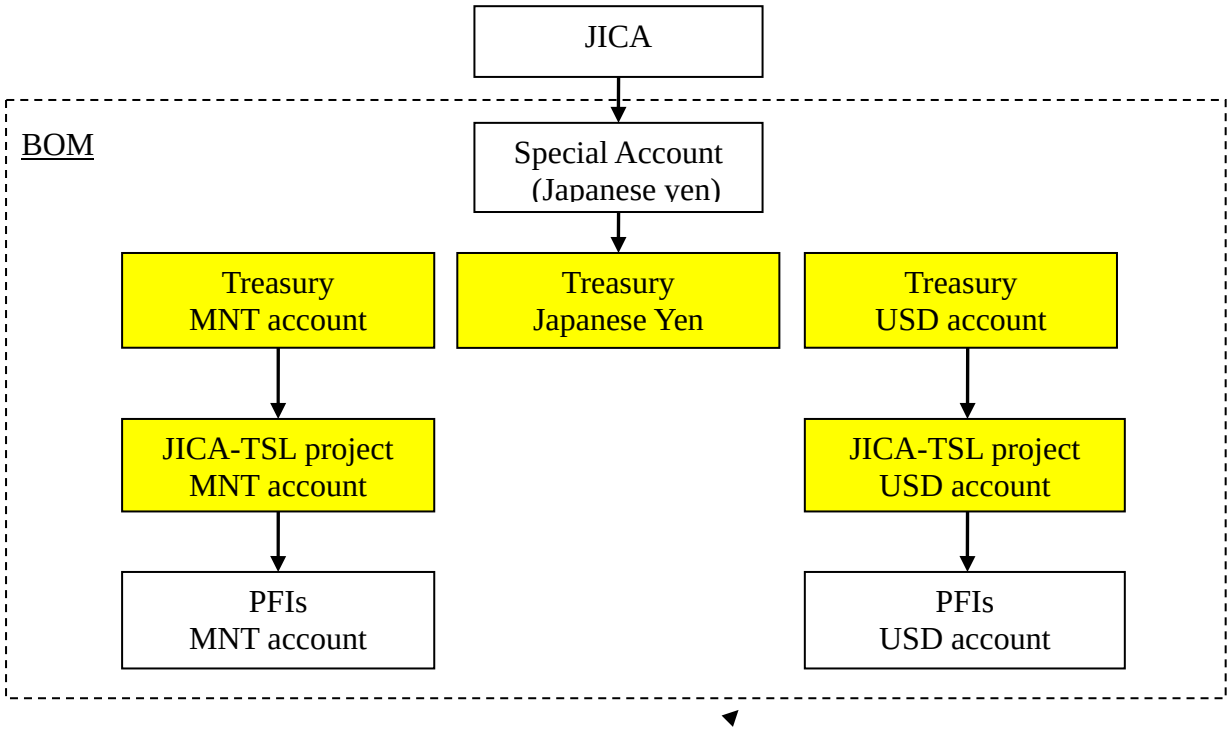
(1) Money Flow

According to the Loan Agreement (L/A) made between GOM and JBIC (currently JICA) and the standard form of on-lending L/A, the disbursement procedure is stipulated as follows:

1) When the government (represented by CSC) requests disbursement or replenishment, CSC is to submit a request for disbursement or replenishment to JICA, together with a summary sheet of payment and the supporting documents in case of replenishment;
2) When JICA finds the documents in order and in conformity with L/A, JICA is to make disbursement or replenishment of the loan in Japanese Yen;
3) JICA is to make disbursement or replenishment by paying into the non-resident Yen account of the Government with the Bank of Tokyo-Mitsubishi UFJ (BTMU), Tokyo;
4) CSC is to transfer the amounts to Special Account (S/A) denominated in Japanese Yen with BOM;
5) CSC is to make the on-lending loans to PFIs; and
6) PFI is to make the sub-loans to the end-users.

The flow of the loan proceeds upon receipt at S/A has been changed several times as implementation proceeds:

1) When the initial disbursement was received in May 2007, the money transferred from BTMU was received in S/A as stipulated in L/A. When disbursement for on-lending loans is to be made, Japanese Yen amount equivalent to the total amount of on-lending loans scheduled was transferred to the treasury's Japanese Yen account specifically maintained for future payment to GOJ. At the same time, the total amount of on-lending loans scheduled in MNT or USD was transferred from the treasury's MNT or USD account to JICA-TSL project's MNT or USD account, then, further transferred to PFI's MNT or USD account (see the outline of flow below);

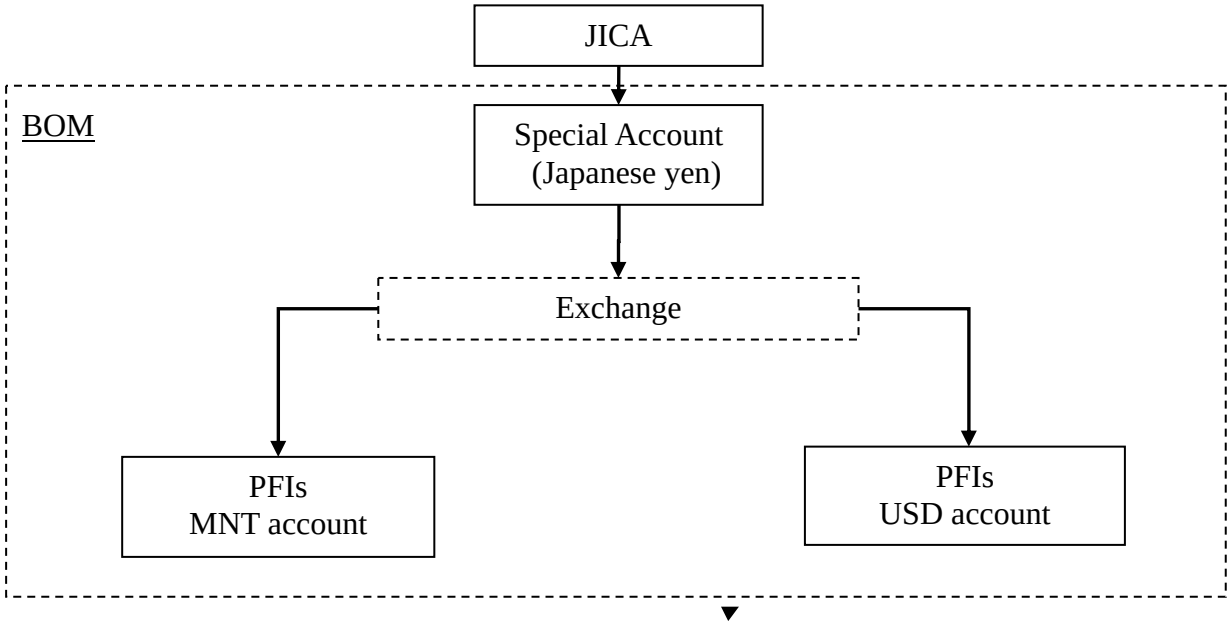


Source: Drawn by JICA study team based on Bank of Mongolia "Statement of Accounts & Transaction Slips"

Figure 8.1.1 Initial Disbursement Scheme

2) The first replenishment received in early December followed the same flow; and,

3) The second replenishment received in late December was converted to MNT or USD through exchange from S/A, and directly transferred to PFIs without going through the TSL project accounts, as instructed by JICA. This strictly follows specifications in L/A, which is continued to date (see the outline of flow shown below).



Source: Drawn by JICA study team based on Bank of Mongolia "Statement of Accounts & Transaction Slips"

Figure 8.1.2 Current Disbursement Scheme

(2) Actual Disbursement Made for Sub-projects

Actual disbursement made for sub-projects to date is shown in the table below:

Table 8.1.1 On-lending Loans Disbursed

PFI	Total		No. of on-lending loans								Loan amount (JPY million)				
	No. of on-lending Loans	Loan amount (JPY million)	'07			'08				'09	'07		'08		'09
			~6	~9	~12	~3	~6	~9	~12	~4	~6	~12	~6	~12	~4
Capitron	30 (28%)	1,179 (41%)	0	0	2	1	4	12	10	1	0	73	204	868	34
Khan	29 (27%)	526 (18%)	2	7	8	7	3	2	0	0	73	335	105	13	0
Golomt	23 (21%)	591 (21%)	0	0	0	16	1	1	1	4	0	0	398	59	133
Zoos	12 (11%)	315 (11%)	0	0	0	2	1	3	2	4	0	0	83	149	83
TDB	4 (4%)	57 (2%)	0	0	0	2	0	1	0	1	0	0	28	23	6
Anod	4 (4%)	104 (4%)	0	0	0	0	0	1	3	0	0	0	0	104	0
XAC	5 (5%)	100 (3%)	0	1	0	1	1	0	0	2	0	7	36	0	57
Total	107	2,872 (100%)	2	8	10	29	10	20	16	12	73	416	854	1215	314

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table"

The initial disbursements in the amount of JPY 230 million for category A and JPY 57 million for category B were received in S/As in May 2007. The loan proceeds out of these were used to finance two PFI's ten projects in the total amount of MNT 1,088 million and USD 830,000, of which 2 projects amounting to MNT 375 million were earmarked for category B.

The first replenishments in the amount of JPY 215 million for category A and JPY 40 million for category B were received in S/As in early December 2007. The loan proceeds out of these were used to finance two PFI's ten projects in the total amount of MNT 753 million and USD 1,478,000, of which one project amounting to USD 500,000 was earmarked for category B.

In summary, in the year 2007, a total amount of JPY 394 million equivalents was disbursed for 17 projects for category A, and JPY 95 million equivalents for three projects under category B. In 2008, a total amount of JPY 1,782 million equivalents was disbursed for 64 category A projects, and JPY 247 million equivalents for nine category B projects. In addition, a total amount of JPY 41 million equivalents was disbursed for two projects under category A financed by revolving funds since S/A fund is insufficient due to the entering of recovery stage for said category. In 2009, a total amount of JPY 126 million equivalents was disbursed for five category A projects, and JPY 168 million equivalents for seven projects under category B. The available loan amount for category A has already fully disbursed and the remaining balance available for category B is only JPY 64 million, which is scheduled to finance a sub-project in an amount of MNT 600 million.

Table 8.1.2 Disbursement Activities in Special Accounts

(in JPY million)

Quarter	Transaction	S/A for category A				S/A for category B			
		Projects	Debit	Credit	Balance	Projects	Debit	Credit	Balance
2007/4~6	Initial disburse			230				57	
	Disbursement	2	73		157	0	0		57
2007/7~9	Disbursement	6	142		15	2	40		17
2007/10~12	Replenishment			394				95	
	Disbursement	9	179		230	1	55		57
2008/1~3	Replenishment			417				10	
	Disbursement	19	417		230	2	10		57
2008/4~6	Replenishment			225				0	
	Disbursement	17	417		38	1	11		46
2008/7~9	Replenishment			641				71	
	Disbursement	18	675		4	2	61		57
2008/10~12	Replenishment			272				111	
	Disbursement	12	273		3	4	165		3
2009/1~3	Replenishment			96				143	
	Disbursement	2	46		53	4	103		43
2009/4~6	Replenishment			27				22	
	Disbursement	3	80		0	3	65		0
Total		88	2,302	2,302	0	19	509	509	0

Source: Compiled by JICA study team based on Bank of Mongolia “Statement of Accounts” as of April 30, 2009

(3) Issues

The sub-loans are available in MNT or USD, while GOM is obliged to repay the loan to JICA in Japanese Yen. Prior to this SAPI for JICA-TSL, MOF has requested JICA to reinstall the disbursement scheme adopted at initial stage of JICA-TSL, i.e., keeping Japanese Yen funds received from JICA in the treasury’s Yen account and disbursing funds for sub-loans out of treasury’s MNT or USD account. MOF prefers the initial scheme for disbursement to avoid exchange risk by keeping Japanese Yen fund in the treasury. Japanese Yen fund will definitely be required for payment of interest as well as repayment of principal in due course. Even under the current scheme, Japanese Yen fund may be possibly kept in BOM, which appears to be same to the entire country. However, MOF recognizes that BOM tends to keep foreign exchange in USD, and not in Japanese Yen. As such, “storing Japanese Yen fund in treasury” and “transferring Japanese Yen fund to BOM” have different effects on exchange risk control. It appears that MOF’s approach gives better ground to avoid possible exchange risk in operation, as far as JICA-TSL is concerned. Nevertheless, it is noted that big amounts of Yen funds will be just kept in the treasury’s account.

Another issue is how to monitor the project implementation in terms of money flow. In JICA-TSL Phase I, the only available information is the bank statements of S/A. Hence, it is difficult to grasp current status of usage of loan proceeds in relation with Yen funds, and MNT / USD funds. It is considered definitely necessary for CSC to administer on-lending loans in the currencies used. The project accounts in MNT / USD as illustrated in the above figure may be needed for this purpose, although such accounts do not appear in L/A stipulation. Such accounts will be quite beneficial for audit purposes as well. Auditors usually use bank transaction tapes and statements as a key part of their evidence for transaction flows. These reports which are externally sourced have a high degree of reliability and are comprehensive. Thus, it is evident that the project accounts denominated in on-lending loans should be maintained by CSC as the outside source records of on-lending loans. This issue will be discussed and solved in due course.

8.2 Revolving Fund Process

(1) Money Flow

The repayment of principals and interest payment are received by PFIs, who, in turn, transfer such funds to Revolving Fund Account (RF/A) under control of MOF, after deducting their margin when interests are received. Although PFIs transfer interest portion to RF/As upon receipt from sub-borrowers, the transfer of repayment is made only six months after repayment by sub-borrowers, as per agreement between MOF and PFIs.

(2) Actual Payment Made by PFIs

So far, about MNT 935 million and USD 364,314 has been received in RF/As. Out of which MNT 550 million have already been utilized to finnance two sub-projects. The balance of each RF/A is MNT 336 million and USD 312,571 (equivalent to JPY 52 million in total) for category A and MNT 49 million and USD 51,743 (eqivalent to JPY 8 million) for category B.

In the in-flows to RF/As, two irregular inflows should be noted. One is the prepayment of MNT 100 million in June 2008 from Khan Bank disbursed for "Plastic Bag Production Project". The company has been running plastic bag factory since 2003, and the project was intended to upgrade labor productivity and produce more plastic bags. This was, however, a family business and when the couple separated, they sold off all their assets and paid off all their loans.

Another prepayment is MNT 50 million in February 2009 from Zoos Bank disbursed for "Renovation and expansion of brick production processing factory", which was only approved 16.5 month after submission to PO. The company has been running construction business since 2002 and brick production since 2006. The project was intended to produce building bricks, in addition to current production of surface bricks. The period the company had been waiting for approval was during the boom for construction industry in Mongolia. The company then reallocated collaterals for other investment purposes. Zoos Bank received disbursement after approval, but found collaterals unavailable. Consequently, the sub-loan amount was reduced to half, and returned to the government.

Table 8.2.1 Collection Activities in Revolving Fund Accounts for Category A

Quarter	Transaction	MNT account in MNT million				USD account in USD '000			
		Projects repaid	Debit	Credit	Balance	Projects repaid	Debit	Credit	Balance
2007/7~9	Interest Paid			15	15			7	7
2007/10~12	Interest Paid			24	39			13	21
2008/1~3	Interest Paid			28				35	
	Repayment	1		1	68			0	56
2008/4~6	Interest Paid			88				52	
	Repayment	2		101	256			0	107
2008/7~9	Interest Paid			147				50	
	Repayment	2		4	408			0	157
2008/10~12	Interest Paid			220				84	
	Repayment	2		4		1		4	245
	Disbursement	2	550		82				
2009/1~2	Interest Paid			187				64	
	Repayment	4		67	336	1		3	312
Total			550	886			0	312	

Source: Compiled by JICA study team based on Bank of Mongolia "Statement of Accounts & Transaction Slips", as of March 3, 2009

Table 8.2.2 Collection Activities in Revolving Fund Accounts for Category B

Quarter	Transaction	MNT account in MNT million				USD account in USD thousand			
		Projects repaid	Debit	Credit	Balance	Projects	Debit	Credit	Balance
2007/7~9	Interest paid			5	5			0	0
2007/10~12	Interest paid			5	10			0	0
2008/1~3	Interest paid			5	15			7	7
2008/4~6	Interest paid			5	20			7	14
2008/7~9	Interest paid			3				8	
	Repayment	1		3	26			0	22
2008/10~12	Interest paid			9				10	
	Repayment	1		5	40			0	32
2009/1~3	Interest paid			8				20	
	Repayment	1		2	49			0	52
Total			0	49			0	52	

Source: Compiled by JICA study team based on Bank of Mongolia "Statement of Accounts & Transaction Slips", as of March 3, 2009

In addition, MNT 1.7 million and USD 813 (equivalent to JPY 185,191) of interest on RF/As had been earned in seven months while RF/As were opened with Capitron Bank. After payment of bank charges, MNT 1.7 million and USD 812 (equivalent to JPY 184,696 in total) are still kept in ex-RF/As with said bank.

(3) Issues

Although L/A does not stipulate the currency to be denominated in RF/As, these accounts are initially assumed to be opened in Japanese Yen with BOM. This arrangement may cause two unexpected problems. The first problem is related to the currency. Sub-loans are mostly expected to be denominated in MNT or USD, and the repayment of principal and payment of interest on the on-lending loans shall be made in these currencies, respectively. It seems complicated to take currency conversion to Japanese Yen every time repayment of principal or payment of interest is made, while subsequent generations of sub-loans remain to be provided in terms of MNT or USD. However, this issue was resolved as JICA had no objection to maintain RF/As in MNT and USD.

Another issue is caused by the policy of BOM, i.e., BOM is not in a position to pay interest on demand deposit accounts. GOM has an obligation to pay interest on ODA loans even while the loan proceeds remain in RF/As. As such, MOF prefers to maintain RF/ As in MNT or USD with a private bank in Mongolia. In fact, RF/As were maintained with Capitron Bank from late September 2007 to May 2008. Its interests of equivalent to about JPY 200,000 had been earned from an average deposit balance of about JPY 9 million in seven month period. Furthermore, accounts for project operation funded under the World Bank or ADB are opened with one of the commercial banks. Maintaining RF/As with one of the PFIs can generate interest earnings on deposits, while it may not be preferable as certain risk always exists. The request by MOF for maintaining RF/As with private banks for Phase II of JICA-TSL under consideration, however, was withdrawn in view of the current situation of commercial banks.

The third issue is the gap of duration of loans existing between sub-loans and on-lending loans. Under the current scheme, PFIs are allowed to keep the funds repaid by sub-borrowers in PFI's account for six months, and to repay relevant on-lending loans six months after the

sub-loan repayment date. It is complicated to comprehend the justification of such six month gap between sub-loans and on-lending loans.

In this context, a clause in the on-lending L/A should be clearly understood and agreed upon between GOM and PFIs. The section 2.01 (b) of the on-lending L/A stipulates that maturity of each on-lending loan shall be equal to the maturity of the sub-loan financed therefore plus six months. The current understanding on this clause is that PFI is allowed to keep the money repaid by sub-borrowers for six months after each repayment was made. Except for the statement in this stipulation, it is hard to justify the gap of repayment dates between sub-loans and on-lending loans. It may be more reasonable if the money paid by sub-borrowers is to be used for the repayment of on-lending loan without substantial time span, which shall be used to finance other subsequent sub-projects. This issue shall be resolved in the near future. It is found that all the parties except PFIs are agreeable to change the current practice for Phase II of JICA-TSL, and hence, PFIs will be obliged to repay on-lending loans upon receipt of sub-loan repayment.

The fourth issue is also caused by the stipulation of on-lending L/A. GOM is obliged to pay interest on ODA loan semi-annually (not mentioned as 360-day year basis). On the other hand, PFIs are obliged to pay monthly interest calculated on the basis of 1/12 of annual interest regardless actual number of days in each month. If all the parties concerned agree to this calculation, no more doubts would arise, although it should be noted that this method of interest calculation is slightly not usual. Furthermore, monthly interest to be paid has been calculated by PFIs side only, and no staff in PO confirms whether the calculation is correct.

Another significant issue is the unclear definition of who is responsible for the daily control of loan fund management. L/A stipulates that CSC shall maintain or cause to be maintained records and accounts adequate to reflect the expenditures financed out of the proceeds of the ODA loan. PO currently keeps these records in the forms of summary sheet of payments for the accounts and statement of accounts.

On the other hand, PFIs cannot make any payment without paper-based invoices. In order to ensure repayment of principal and payment of interest as scheduled, GOM is required to issue invoices for principal and interest receivable for all the outstanding on-lending loans every month. Now that the outstanding on-lending loans are over 100, it is required to establish a well-controlled operation system for JICA-TSL. This process should be well-programmed so that an efficient operation on the government's side is materialized.

8.3 Major Implications

The following are implications identified from the review of fund flow of JICA-TSL Phase I:

(1) Disbursement Process

- MOF has requested JICA to reinstall the disbursement scheme adopted at the initial stage of JICA-TSL Phase I, i.e., keeping Japanese Yen funds received from JICA in the treasury's Yen account to avoid exchange risks and disbursing funds for sub-loans out of treasury's MNT or USD accounts. The JICA study team would further clarify in Chapter 17 merits and demerits in all of the aspects involved, which the MOF may take into account when determining the conclusion on fund flow scheme.

- Another issue is how to monitor the project implementation in terms of money flow. It seems that CSC definitely needs to administer on-lending loans in the currencies used. The project accounts in MNT / USD with BOM may be needed for this purpose.

- As irregular implementation of sub-projects was found in a couple of cases, it may be better to set up rules to cope with such cases.

(2) Revolving Fund Process

- Although L/A does not stipulate the currency to be denominated in RF/As, these accounts are currently maintained in MNT and USD with BOM. It may be worth consideration that RF/As in Japanese Yen be maintained if exchange risks borne by GOM become a big issue.

- MOF prefers to maintain RF/As in MNT or USD with a commercial bank in Mongolia, which seems to be withdrawn in view of the current situation of commercial banks.

- The third issue is the 6-month gap of duration of loans existing between sub-loans and on-lending loans, which could not be easily justified. It should be clarified whether current practice will continue or change on-lending L/A to stop current practice for new sub-loans in both Phase I and Phase II of JICA-TSL.

- PFIs are obliged to pay monthly interest calculated on the basis of 1/12 of annual interest regardless actual number of days in each month, which does not seem to be a common basis. Furthermore, monthly interest to be paid has been calculated by PFIs side only, and no staff in PO confirms whether the calculation is correct.

- A far more important issue is the unclear definition of who is responsible for the daily control of loan fund management. PO currently keeps records in forms of summary sheet of payments for the accounts and statement of the accounts.

- On the other hand, in order to ensure repayment of principal and payment of interests as scheduled, GOM is required to issue invoices for principal and interest receivable for all the outstanding on-lending loans every month. It may be required to establish a well-controlled operation system for JICA-TSL.

CHAPTER 9 REVIEW OF PERFORMANCE OF PFIS

9.1 Background of Selected PFIs

(1) Selection of Participating Financial Institutions (PFIs)

In 2005, out of the 17 commercial banks, six banks were selected as PFIs for the TSL Project by the PFI Selection Task Force (PSTF) composing MOF, BOM and the then JBIC study team. Aside from analyzing the financial statements of all commercial banks, the PSTF gave close attention to the BOM's evaluation result of commercial banks through the CAMELS (Capital, Assets, Management, Earnings, Liquidity: & Sensitivity) method based on its on-site and off-site inspections. The selection was done based on four criteria: i) the growth of the bank, ii) its management capability, iii) observance of prudential principles, and iv) experience in corporate finance. Each item was given 1 to 5 points (1: highest point, 5: the lowest point) under CAMELS method. The PSTF weighted the points of four items with 30%, 30%, 25% and 15%, respectively. Therefore, if the aggregate point of the bank is lower, the bank's creditability is higher.

GOM expressed its preference to select as many commercial banks as possible, at least six banks, including PFIs for the World Bank PSDC I. As a result of evaluation made for the 17 commercial banks using the above-mentioned method, six banks, namely, TDB, Golomt Bank, Khan Bank, Zoos Bank, Capitron Bank and Xac Bank were selected.

In late 2007, Anod Bank formally applied to MOF as the seventh PFI of JICA-TSL Phase I. The selection of the bank was done by MOF, and subsequently by CSC, on the basis of a similar way to the previous PFI selection, and additionally using a relatively different method to assign points (100 in total) the four criteria; growth (35 points), prudential ratio (30 points), management (25 points) and corporate loan (10 points). Growth was further broken down to assets 10, equity 10, and profit 15.

(2) Overview of PFIs' Performance

The six PFIs (excluding Anod Bank) dominate the banking sector, with total assets and loans accounting for 78% and 77%, respectively, of that of the consolidated 15 commercial banks (excluding Anod Bank) in 2008. PFIs also have an overwhelming share in deposits accounting for 84%. On the other hand, the 63% share of total equity of the banking sector is somewhat lower than the other items indicated above. The relatively low share can be attributed to the fact that some of the non-PFI banks are investment-type and have high capital adequacy ratio (CAR) of over 40%. The share of earnings of the PFIs of more than 90% is even more impressive. Therefore, Return on Equity (ROE) and Return on Asset (ROA) are much higher than the average of the 15 commercial banks. It is understood from these data that the PFIs were the driving force of the banking sector and the JICA study team considered the selection of the six PFIs as appropriate.

During the fast economic growing years of 2006 and 2008, the growth of the PFIs was rapid. Assets grew by 1.9 times, loans by 2.3 and deposits by 1.7. Loans of commercial banks increased along with the strong demand for capital investment in the economy. The growth of

loans apparently exceeded deposit growth, and in 2008, the loan-to-deposit ratio, which was 77% in 2006, exceeded 100%. The strong investment demand in the market was responded to by the banks through increasing term loans which were primarily funded by short-term deposits. Long-term loans were mainly provided by international donors in the absence of capital market.

As indicated in Chapter 2, Section 2.4 of this report, a gap was generated in the growth and financial performance among the PFIs during these last three years, which differentiated the strength of banks. Capitron Bank did not grow as much as the other banks did. TDB, which was the number one in 2006, also did not grow as much as the other two major big banks. TDB is now positioned in the third place behind Khan Bank and Golomt Bank (Table 9.1.1).

Table 9.1.1: Summary of Financial Statement of 6 PFIs and 15 CBs (2008)

(in MNT billion)

	Khan	Golomt	TDB	Zoos	Xac	Capitron	Total (a)	15 CBs (b)	(a)/(b)
Total Assets	839.0	697.2	659.3	230.6	208.0	103.3	2,737.4	3,499.6	78.2%
Loans	608.7	447.8	440.3	168.5	149.6	84.5	1,899.4	2,456.4	77.3%
Customers' deposits	679.2	505.2	383.3	148.7	77.0	43.4	1,836.8	2,183.4	84.1%
Borrowings from FIs	2.6	8.0	35.0	22.6	106.1	47.0	221.3	n.a.	
Other liabilities	77.1	120.4	172.5	25.7	3.0	3.5	402.2	n.a.	
Total Equities	80.1	63.5	68.5	33.5	21.9	9.4	276.9	438.3	63.1%
Total revenue	141.6	80.2	71.2	35.4	32.0	14.5	374.9	n.a.	
Net profit	22.3	12.2	16.3	3.3	3.2	0.6	57.9	64.1	90.3%
No. of branches	491	45	26	40	76	17	695	1,050	66.2%
No. of staff	4,000	750	600	560	950	208	7,068	n.a.	n.a.

Note: Anod Bank is excluded from figures for 15 CBs.
Source: Prepared by SAPI team based on information from PFIs and BOM

As mentioned in Chapter 2, Section 2.4, all PFIs in general, regardless of their size, are currently suffering from liquidity problem due to the rapid increase of their loans in the last three years and stagnation in growth of deposits in 2008. Their lending activity is being restrained by shorter loan maturities and decreasing loan amounts. On the other hand, donor programs such as JICA-TSL, for which long-term funds are accompanied, did not affect the liquidity of PFIs and, therefore, were well received by the banks.

PFIs are now required to clear a new capital adequacy requirement of 12% (previously 10%) as of March 31, 2008. Some medium-sized PFIs, of which the share capital is small, will face some difficulty.

9.2 Khan Bank

(1) Profile

In the recent three years, Khan Bank has successfully kept its position among the four major banks in asset size and profit level. Khan Bank has a long history as a public agricultural bank with a widespread branch network all over the country.

Upon request from GOM and USAID, the present CEO of the bank, Mr. P. Morrow, took hold of the management in 2000. The bank was privatized through international bidding in March 2003. As a result, a Japanese company, HS Securities Co., Ltd. bought the bank (100%) and its affiliate, HS Investment Co., Ltd. became the owner of the bank. Then, HS Investment Co.,

Ltd. was subsequently absorbed by the Sawada Holding Co., Ltd., which is now the top shareholder.

As of 2009, the bank is predominantly owned by foreign capital with 64.8% of the shares held by Sawada Holdings Co. Ltd. (52.9%), IFC (9.1%), Development Alternatives, Inc. (1.9%) and the Morrow Family Trust (0.9%), while 35.2% is held by one domestic shareholder, Tavan Bogd Trade Co. Ltd.

Mr. Morrow has brought up the bank to the top level among the commercial banks and still leads the management of the bank with a few foreign advisors. He is fully supported by shareholders including IFC and the bank management is being kept stable. The bank got a Baa3 credit rating from Moody's in 2007. The bank, aside from JICA-TSL, participates in international donor programs for SMEs such as PSDC I&II of the World Bank as well as the KfW-TSL.

(2) Financial Performance

Khan Bank became the largest bank in Mongolia with an assets size of MNT 839 billion in 2008. During the last three years, assets, loans and deposits grew almost proportionately by about two times (see also Annex IV, Table IV.2), with average three years growth of 60.6%, 69.3% and 60.9% respectively.

Funding

The bank increased its customer deposits to MNT 679 billion in 2008 with a three-year average growth rate of 61%. Khan Bank changed its strategy to also collect deposits from customers in urban areas aside from the rural customers that it used to collect. Thus, the bank increased deposit money through its creditability and achieved the highest growth of 38% in 2008 among the commercial banks.

Table 9.2.1: Financial Statements (Khan Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Loans (net)	242.6	70.4	81.7	490.1	81.6	102.0	608.7	72.5	24.2	69.3
Total assets	**344.7**	**100.0**	**67.9**	**600.6**	**100.0**	**74.3**	**839.0**	**100.0**	**39.7**	**60.6**
Deposits from customer	291.3	84.5	75.5	493.4	82.1	69.4	679.2	81.0	37.7	60.9
Total liabilities	**312.2**	**90.6**	**64.1**	**542.8**	**90.4**	**73.9**	**758.8**	**90.4**	**39.8**	**59.3**
Total equity	**32.5**	**9.4**	**116.2**	**57.8**	**9.6**	**77.9**	**80.1**	**9.6**	**38.6**	**77.6**
Total liab. & equity	**344.7**	**100.0**	**67.9**	**600.6**	**100.0**	**74.3**	**839.0**	**100.0**	**39.7**	**60.6**
Income Statement										
Total gross income	**60.6**	**100.0**	**50.3**	**96.8**	**100.0**	**59.8**	**141.6**	**100.0**	**46.3**	**52.1**
Total net income (=operating income)	**37.9**	**62.6**	**62.5**	**59.8**	**61.8**	**57.6**	**88.3**	**62.4**	**47.6**	**55.9**
Operating expenses	-19.2	-31.7	40.0	-31.2	-32.3	62.7	-48.4	-34.2	55.0	52.5
Profit bfr tax	**17.9**	**29.6**	**152.2**	**25.5**	**26.4**	**42.2**	**29.7**	**20.9**	**16.2**	**70.2**
Net profit	**12.0**	**19.8**	**157.9**	**19.4**	**20.0**	**61.8**	**22.3**	**15.7**	**14.7**	**78.1**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	13.1		6.5	11.4		-13.0	12.4		8.8	12.3
Loan to deposit	83.3		3.5	99.3		19.3	89.6		-9.8	90.7
NPL	2.0		-76.7	1.1		-45.0	2.9		163.6	2.0
RoE	57.4		298.6	45.9		-20.0	34.2		-25.5	45.8

Source: Khan Bank Annual Report

As the bank have the biggest network throughout the country, government social insurance, pension and children money funds are distributed to recipients through the bank's network and a part of the funds remain in deposits. In Mongolia's financial market, deposit funding is

generally deemed as the cheapest way to raise funds, and this solid deposit base through its widest network is the strong merit for the bank.

Additionally, the long-term borrowings in the total amount of USD 45 million are made from IFC, ADB and Planet Finance, with average maturity of six years and interest rate of 6.6%-8% in 2008.

Lending

The bank's lending is primarily to SMEs and individuals accounting for about 30% each of the loan portfolio. The interest rate of MNT loans is higher than the commercial bank's average rate (Annex IV, Figure IV.1 (b)), because of its higher operational cost and risk involved in SME and micro-finance in the rural area.

Generally, clients are small and spread in rural areas. Since 2005, the bank has been trying to increase its lending to big corporations in the cities, and corporate lending reached close to 19% of the total loans in 2008. However, the lending capacity of the bank in the rural areas is still the highest among the commercial banks.

According to maturity analysis of financial assets and liabilities (Annex IV, Table IV.9), there is a gap between funding and lending in terms of maturity period. The long-term loans were mainly covered by funding with short-term sources. Since the late 2008, the bank changed its lending policy in order to diminish the gap between lending and funding by terminating provision of term-loans with maturity over one year.

Profitability

The average growth of total revenues during the last three years was 52% and profit before tax was 70%. The bank's profitability is the highest among the commercial banks with average ROE of 34% and ROA of 3.2%. NPL ratio is kept low at 1.1% to 2.9% between 2007 and 2008.

The bank is performing well with its CAR of 12.4% in 2008, which is well above the required standard of 10%. Together with its established shareholders, there will be no problem meeting the new CAR requirement (to be effective as of March 2009) of 12%.

The strength of the bank, including growth and profit generating capacities, excels other PFIs. Lending with high rates and funding at low cost is the base of the bank's profit. The JICA study team considers that the operation of the bank is stable and sound.

(3) Performance under TSL

Khan Bank was the first PFI to apply for the loan in early January 2007. The first application was submitted to, and reviewed by the Project Office in late January and was concurred by CSC in February. Subsequently, it was approved by JICA in April 2007. The loan was on-lent to the bank and was disbursed to the borrower in mid-May.

Up to April 2009, Khan Bank has processed 29 loans, all of which had been successfully disbursed to borrowers. As the bank specialized in agriculture sector, 12 loans were agro-based projects accounting for 31% of the total loan amount. The manufacturing sector which had 11 sub-loans and accounted for 45% of total loan amount included food processing and production of construction materials.

Table 9.2.2: TSL Performance of Khan Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	12	41%	¥160,768,951	30%	¥0	¥160,768,951
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	11	38%	¥236,572,539	45%	¥183,840,593	¥52,731,946
Electricity/gas/water supply	1	3%	¥4,289,800	1%	¥0	¥4,289,800
Construction	0	0%	¥0	0%	¥0	¥0
Hotels and restaurants	1	3%	¥9,478,673	2%	¥0	¥9,478,673
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	0	0%	¥0	0%	¥0	¥0
Health and social work	4	14%	¥114,503,117	22%	¥28,218,210	¥86,284,907
Total	29	100%	¥525,613,079	100%	¥212,058,803	¥313,554,276

Source: JICA study team

Size of each project is generally small to medium-sized with an average loan size of MNT 200 million and average term of six years. The total amount of JPY 525.6 million (MNT 5,807 million) marginally accounts for about 0.9% of the total loan portfolio of the bank in December 2008.

Environment Protection Loan (EPL)

Khan Bank proposed five EPL projects, including fuel briquette productions, plantation and forestry, and boiler replacements, all in provincial areas. The average EPL loan size was only MNT 230 million and its loan term was six years.

Loan Monitoring

The Credit Risk Department at the Khan Bank headquarters oversees all loan portfolio of the bank, together with the Rural Credit Units in rural areas. At the branch level, a credit officer of the branch and the branch manager (a senior loan officer) performs separate independent check of borrowers and projects at 3-6 months interval. Khan Bank's non-performing loan ratio is low and it is considered that the bank's management of loan monitoring system is sound.

Staff Training

Training of staff is being carried out by the Training and Development Department. Of the total 355 training sessions, 30 are for loan staff. Other training sessions are for bank management, for new staff, on IT system, lending operation and others. The bank staff also participates in outside programs set by BOM and other organizations such as the Mongolian-Japan Center for Human Resources Development (MOJC).

Regarding project finance, it is observed that only a few staffs at the Head Office (HO) have experience in project finance. The bank considers it necessary to increase officers with the knowledge of project finance. The study team recommends that a project finance seminar be conducted for both the bank's HO as well as to core rural branch offices.

9.3 Golomt Bank

(1) Profile

After Khan Bank, Golomt Bank ranks the second in terms of assets size and total revenue among the 15 commercial banks. The bank was founded in 1995, with the assistance of a UK consultant. Mr. Bayasgalan, the Chairman of the bank, is one of the three shareholders of Bodi International.

The shareholder of the bank is Bodi International LLC, the sole owner and a successful holding company of 22 subsidiaries including the bank, an insurance company, a leasing company, a computer sales company, a car dealer, and other varied businesses. In 2008, the Bodi group ranked No.9 in the top 100 companies in Mongolia[1]. On the other hand, the bank has about 40% share of the holding company.

The bank has been selected for various donor programs and is one of the PFIs for the World Bank's PSDC I and II, JICA-TSL and ADB. It is also the sole designated bank to execute loans and guarantees under the Green Credit Guarantee Fund (GCGF), founded by the Government of Netherlands and Mongolian Chamber of Commerce and Industry.

The bank has majority of its branch offices in the capital city and its neighboring Tuv province. More than 80% of the entire loan portfolio of the bank is for big corporations and SMEs.

(2) Financial Performance

During the last three years, the growth of assets was rapid with the average annual rate of 63%. Its total assets of MNT 697 billion primarily consist of loans of MNT 448 billion (64%), and liquid assets such as cash and short-term assets totaling MNT 238 billion (34%). The sufficient liquid assets are reflected in the bank's liquidity ratio of 37% in 2008, which is the highest among six PFIs, along with that of TDB (see also Annex IV, Table IV.3).

Lending

The bank is aggressive and strong in its lending operation. Loans increased even faster than that of its total assets at an average growth rate of 68% per annum during the last three years. About 61% of the loans in 2008 were short-term and the remaining 39% long-term of more than one year. The long-term loans include those from international donor programs mentioned above. The loan to asset ratio was kept between 50% (2006 and 2007) and 64% (2008), which were a bit lower than other large banks. Of the loan balance in 2008, 81% was lent to big corporations (71%) and SMEs (10%).

During the first half of 2008, the bank's average loan rate of USD and MNT were below the average of commercial banks (CB). The bank raised US dollar lending rates to almost the same level as that of CB rate in the third quarter (Annex IV, Figure IV.1 (a) & (b)). Moreover, the bank shortened loan maturity in the autumn of 2008. These moves indicated that the bank started to restrain new credits to the private sector under the financial crisis.

[1] Sourced from the Top-100 companies of Mongolia by Mongolian Chamber of Commerce & Industry., April 9, 2009.

Table 9.3.1 Financial Statements (Golomt Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Loans (net)	174.7	49.5	79.6	323.0	49.5	84.9	447.8	64.2	38.6	67.7
Total assets	**353.2**	**100.0**	**96.5**	**652.1**	**100.0**	**84.6**	**697.2**	**100.0**	**6.9**	**62.7**
Deposits from customer	283.7	80.3	94.2	512.5	78.6	80.6	505.2	72.5	-1.4	57.8
Total liabilities	**321.9**	**91.1**	**96.1**	**597.2**	**91.6**	**85.5**	**633.6**	**90.9**	**6.1**	**62.6**
Total equity	**31.3**	**8.9**	**100.3**	**54.9**	**8.4**	**75.3**	**63.5**	**9.1**	**15.8**	**63.8**
Total liab. & equity	**353.2**	**100.0**	**96.5**	**652.1**	**100.0**	**84.6**	**697.2**	**100.0**	**6.9**	**62.7**
Income Statement										
Total gross income	**31.7**	**100.0**	**28.9**	**53.0**	**100.0**	**67.5**	**80.2**	**100.0**	**51.2**	**49.2**
Total net income (=operating income)	**12.4**	**39.1**	**438.5**	**21.6**	**40.7**	**74.3**	**34.7**	**43.2**	**60.7**	**191.2**
Operating expenses	-10.1	-31.8	689.2	-10.1	-19.0	0.0	-15.2	-18.9	50.6	246.6
Profit bfr tax	**3.6**	**11.5**	**255.7**	**9.2**	**17.3**	**153.3**	**15.5**	**19.4**	**69.0**	**159.3**
Net profit	**2.5**	**8.0**	**147.1**	**7.4**	**13.9**	**192.8**	**12.2**	**15.2**	**65.4**	**135.1**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	16.7		35.8	14.4		-13.8	12.8		-11.1	14.6
Loan to deposit	61.6		-7.5	63.0		2.4	88.6		40.6	71.1
NPL	6.7		-22.1	4.2		-37.3	3.9		-7.1	4.9
RoE	10.7		-25.7	17.3		61.7	24.3		40.5	17.4

Source: Golomt Bank Annual Report

Funding

Deposits have shown the higher growth at the average rate of 58% between 2006 and 2008. Although the average ratio of deposits to assets was kept at as high as 77%, a gradual decline in the ratio is noticed reflecting financial crisis. The deposits decreased in 2008 by 1.4% from the previous year, causing tight liquidity to the bank. The deposits decreased in 2008 by 1.4% from the previous year, causing tight liquidity to the bank.

On the other hand, the loan to deposit ratio has increased from 62% in 2006 to 89% in 2008. It is one of the only two PFIs (the other is Khan Bank), which still remain less than the ratio of 100% as of 2008. Of the long-term loan of MNT 175 billion in 2008, only MNT 65 billion was matched by the borrowed funds and subordinated loans with the same maturity. The unmatched gap of MNT 110 billion was covered by short-term funds of MNT 66.5 billion and the rest by the equity fund of the bank (Annex IV, Table IV.9).

Profitability

The total revenue of MNT 80 billion is the second among PFIs after Khan Bank. The ROE and ROA of the bank, which rank as one of the top four PFIs (others being Khan, TDB and Xac), have increased in the last three years due to the gradual increase in net interest margin[2] (4.2% in 2008) in the same period and also to the decrease in cost-income ratio and NPL ratio.

With regard to prudential ratios of the bank, the CAR of 12.8% in 2008 is above the required rate of 10.0%. However, the CAR of the bank gradually declined in the period of 2006 - 2008 due to intensified lending activity which, in turn, were the source of profit. The profitability is satisfactory and prudential requirements are met, JICA study team considers that the bank's operation is stable and sound.

[2] Golomt Bank leaflet "Annual result 2007-2008"

(3) Performance under TSL

Golomt Bank is one of the three active players in JICA-TSL, along with Khan Bank and Capitron Bank, with 27 loans submitted to CSC as of April 2009. Of the 27 loans, 3 were withdrawn and 23 were disbursed to sub-borrowers. The remaining one loan is waiting for availability of funds (this loan was disbursed on May 20, 2009).

Table 9.3.2 TSL Performance of Golomt Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	1	4%	¥11,769,834	2%	¥0	¥11,769,834
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	15	65%	¥422,476,802	72%	¥203,338,733	¥219,138,068
Electricity/gas/water supply	0	0%	¥0	0%	¥0	¥0
Construction	0	0%	¥0	0%	¥0	¥0
Hotels and restaurants	5	22%	¥106,858,919	18%	¥3,664,467	¥103,194,452
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	1	4%	¥36,363,637	6%	¥0	¥36,363,637
Health and social work	1	4%	¥13,077,594	2%	¥0	¥13,077,594
Total	23	100%	¥590,546,786	100%	¥207,003,200	¥383,543,585

Source: JICA study team

Almost 72% of the loan amount disbursed is concentrated in the manufacturing sector which includes food processing, textile production and production of construction materials for housing. Location-wise, since the branch offices are concentrated in and around the capital city, 20 sub-projects out of 23 are either in Ulaanbaatar or Central region.

The size per loan of MNT 331 million (JPY 26 million) is about the average of PFIs. Sub-loan amount of MNT 7,604 million (JPY 590.5 million) accounts for 1.6% of the total loan portfolio of the bank as of December 2008.

Out of 23 sub-projects, six sub-projects amounting to USD 1,932 thousand are made in US dollars which are exposed to foreign currency risks. These sub-projects are either for production of construction materials or food processing, which will not have any US dollar income to repay loans. As repayment of these loans will commence in one or two years time, these loans have to be carefully monitored by the bank.

Environment Protection Loan (EPL)

Golomt Bank has only two EPL projects (both in relation to production of construction materials) with a total loan amount of MNT 1,291 million with a term of seven to ten years. The bank states that if definition and eligibility criteria of EPL become clear in Phase II, the bank is confident of increasing the number of EPLs.

Loan Processing and Monitoring

The Risk Management Division and Corporate Banking Division are in charge of processing and monitoring of loans. The Risk Management Division plays the primary role to analyze the borrower's risk. The Project Finance Department of the Corporate Banking Division analyzes the feasibility of the project. After the approval by the Credit Committee, the loan is passed to the Corporate Banking Division, which will monitor the project loans, and if a legal advice is necessary, the Legal Department under the Operations Division will be involved.

Staff Training

The bank carried out 40 internal training programs extensively in 2008, including such topics as financial analysis, risk management, loan contract, laws for loan processing, and training of new loan officers. A total of about 850 officers participated in these programs. In addition, there are outside training programs at BOM and JICA. The training programs focus primarily on credit risk of borrowers and legal aspects. In this regard, the bank also requests the JICA study team to consider providing TA for project finance.

9.4 Trade Development Bank (TDB)

(1) Profile

TDB is one of the most well-established banks in Mongolia, with focus on its lending activity to larger corporations and on foreign exchange transactions. With respect to its profitability as well as its asset quality and size, the bank is regarded as a one of the top banks in the country. The bank has had a strong corporate banking record with customers of over 340 corporations and a major share of 50% in the foreign exchange payments of the country.

The Management Board includes Mr. D. Erdenebileg, and four other board members. The Executive Committee consists of five members led by Mr. Randolf Koppa as President, Mr. Balbar Medree as CEO and three Deputy CEOs. Now the bank employs about 600 staff and has 26 branches and 50 automatic teller machines. At present, 72.2% of the bank's shares are held by foreign investors, including Globull Investment and Development SCA (65.8%) and US Global Investment LLC (6.4%), and the remaining 27.8% by domestic investors such as TDB-Treasury Stock (9.5%) and individuals (18.3%).

TDB actively participates in long-term lending programs such as the World Bank PSDC I and II, JICA-TSL and KfW-TSL. In order to get further long-term funds overseas, the bank obtained its rating from Moody's Investors Services in 2006 with a rate of "Ba2" for long-term foreign currency issuer ratings. Eventually, the bank established a Euro Medium-Term Notes facility of USD 300 million and successfully went for public placement in January 2007 for the 3-year senior unsecured bonds of USD 75 million, as the first Mongolian bank in Singapore.

(2) Financial Performance

TDB has assets of MNT 659 billion in 2008, which grew annually by 30% in the last three years. Assets of the bank were loans (67%), cash and cash equivalent (21%), and investment securities (5.9%), and others. About 27% of total assets were liquid assets, which may be comparable with the other two top cash-rich banks, namely Khan bank with 22% and Golomt Bank, 34% (see also Annex IV, Table IV.4).

Lending

Loans sharply grew by an averaged of 43% in the last three years, reaching MNT 440 billion in 2008. The loan to asset ratio, which was 56% in 2006, increased up to 67% in 2008, reflecting the sound lending policy of the bank. The bank focuses its lending activity on big corporations to which 75% of total loans were extended in 2008. Industrial sector-wise, 80% of loans in 2008 were for four main sectors, namely manufacturing (30.0%), construction (21.1%), wholesale and retail trade (18.8%), and mining and quarrying (10.8%).

Loan interest rate of TDB, in general, has been kept at the lower than CB average rates from January 2008 to February 2009 with an exception of MNT lending rate in few months in the second half of 2008 (Annex IV, Figure IV.1 (a) & (b)). It is assumed that the increase in bank's lending rate was to limit the disbursement of new loans and focus more on loan repayment because of the liquidity issue.

Funding

TDB looks rather weak in deposits mainly because its network is limited in Ulaanbaatar. The ratio of deposit/assets is 58.1% in 2008 which is far below that of Khan Bank (81%) and Golomt Bank (72%). This means that liquidity shortage in TDB is relatively more serious than the other major banks.

The loans to deposits ratio of the bank increased to 115% in 2008. However, the maturity analysis of financial assets and liabilities (Annex IV, Table IV.9) indicates that the gap (net financial assets) between term-loan and term-funding in 2007 and 2008 were greatly reduced. This is attributed to an increase of long-term deposits and long-term borrowing, including the debt securities issued in January 2007. The change of liabilities structure in the last two years is considered an appropriate way to alleviate the tight liquidity position of the bank.

Profitability

Profitability of the bank is high compared to other PFIs as well as among the 15 commercial banks. ROE of 26.2% and ROA of 2.8% is the second highest after Khan Bank. However, if the ratios of net profit to total revenue is compared, TDB stands out with 22.9% as against 15.7% of Khan Bank and 15.2% of Golomt Bank. The reasons can be found in the relatively low operating expenses and contingent risk expenses of the bank, which in turn is reflection of low NPL ratio.

Table 9.4.1 Financial Statements (TDB)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Loans (net)	240.1	56.3	53.2	382.3	67.8	59.2	440.3	66.8	15.2	42.5
Total assets	**426.3**	**100.0**	**40.8**	**563.5**	**100.0**	**32.2**	**659.3**	**100.0**	**17.0**	**30.0**
Deposits from customer	324.7	76.2	43.5	373.0	66.2	14.9	383.3	58.1	2.7	20.4
Total liabilities	**376.6**	**88.3**	**42.1**	**503.2**	**89.3**	**33.6**	**590.8**	**89.6**	**17.4**	**31.1**
Total equity	**49.7**	**11.7**	**31.3**	**60.3**	**10.7**	**21.3**	**68.5**	**10.4**	**13.7**	**22.1**
Total liab. & equity	**426.3**	**100.0**	**40.8**	**563.5**	**100.0**	**32.2**	**659.3**	**100.0**	**17.0**	**30.0**
Income Statement										
Total gross income	**44.9**	**100.0**	**55.0**	**57.7**	**100.0**	**28.6**	**71.2**	**100.0**	**23.3**	**35.7**
Total net income (=operating income)	**30.3**	**67.5**	**33.7**	**31.1**	**53.8**	**2.5**	**37.6**	**52.8**	**21.0**	**19.1**
Operating expenses	-12.2	-27.1	18.9	-13.7	-23.7	12.4	-15.9	-22.3	15.8	15.7
Profit bfr tax	**16.5**	**36.7**	**59.8**	**19.9**	**34.5**	**21.0**	**19.9**	**28.0**	**-0.2**	**26.9**
Net profit	**11.8**	**26.2**	**59.6**	**16.4**	**28.4**	**39.3**	**16.3**	**22.9**	**-0.4**	**32.8**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	18.6		-19.5	13.8		-25.8	14.7		6.5	15.7
Loan to deposit	74.0		6.8	102.5		38.6	114.9		12.1	97.1
NPL	4.4		-38.9	2.0		-54.5	1.5		-25.0	2.6
RoE	27.2		39.5	32.1		18.0	26.2		-18.4	28.5

Source: TDB Annual Report

The bank has a high CAR of 14.7% in 2008, which exceeds the other two big major banks. The bank will have no problem in meeting the new CAR requirement of 12%. The other ratios such as high liquidity ratio, low NPL ratio, together with high profitability, prove that TDB is deemed as one of the quality bank in Mongolia.

(3) Performance under TSL

Considering that TDB is one of the major commercial banks, its performance in JICA-TSL is not quite as active as expected. As of April 2009, they submitted only 6 loan applications and two of them were withdrawn from the list, leaving only 4 loans to be processed and disbursed.

Table 9.4.2 TSL Performance of TDB (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	0	0%	¥0	0%	¥0	¥0
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	4	100%	¥57,146,195	100%	¥4,959,748	¥52,186,447
Electricity/gas/water supply	0	0%	¥0	0%	¥0	¥0
Construction	0	0%	¥0	0%	¥0	¥0
Hotels and restaurants	0	0%	¥0	0%	¥0	¥0
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	0	0%	¥0	0%	¥0	¥0
Health and social work	0	0%	¥0	0%	¥0	¥0
Total	4	100%	¥57,146,195	100%	¥4,959,748	¥52,186,447

Source: JICA study team

The bank informed that the reluctance for active participation has been coming from its lower margin of the project. The bank usually expects an average margin of 6% to 8% whereas the TSL project allows margins of only 4% for MNT loans and 3.6% for US dollar loans.

Loan Processing and Monitoring

TDB's loan processing and monitoring is well managed in its conventional way with assistance of foreign banks. It would be explained by the low NPL ratio.

Staff Training

Through its experiences as a PFI in the World Bank's PSDC I & II and JICA-TSL, the bank has a number of experienced account managers to cope with long-term lending. The bank thinks that their staff needs training on how to formulate projects. In 2008, TDB organized 54 training sessions for its staff. Only one session had relevance to project finance. The study team considers that, as requested by the bank, a TA on formulation of projects may be appropriate for the bank.

9.5 Zoos Bank

(1) Profile

Established in 1999, Zoos Bank now ranks 4th place as a medium-sized bank among the 15 commercial banks (excluding Anod Bank). The bank has one characteristic which should be the most appreciated, i.e., the amount of equity. Its ratio of equity to assets of 14.5% in 2008 is the highest among the PFIs.

The bank's governing board is represented by Mr. Batbayar, Chairman of the Board. The management team consists of Ms. Chundanjii as CEO and seven directors. The bank has 40 branch offices and 562 employees.

The bank was the first publicly listed one in Mongolia's securities market in 2006. Then, the European Bank for Rehabilitation and Development (EBRD) became a shareholder in 2008. About 30% of the shares are now held by foreign investors, including EBRD and one Japanese. The bank was rated by Moody's Investor Service as "Ba2".

(2) Financial Performance

As shown in the table below, Zoos Bank's assets, loans, deposits and equity grew substantially between 2006 and 2008. The bank is now regarded as the fourth largest bank with total assets of MNT 231 million in December 2008 (see also Annex IV, Table IV.5).

Lending

In 2008, loan portfolio of MNT 168.5 billion accounts for 73% of the bank's total asset, which is about the average among the PFIs. Like other PFIs, loans doubled during the last three bumper years. Major customers of the bank are big corporations with share of 51% of total loans and SMEs, 19%. More than 75% of its loan portfolio is lent to construction, wholesale and retail, agriculture, manufacturing, and real estate.

Because of the rapid growth of loans out stripping growth of deposits, loan to deposit ratio has reached 113% in 2008. Consequently, the bank was placed in a tight liquidity position. The liquidity ratio of 15.6% seems to be low in comparison with other PFIs and that of the 15 commercial banks' consolidated ratios.

Table 9.5.1 Financial Performance of Zoos Bank

(in MNT billion)

	2006	Shares (%)	Growth (%)	2007	Shares (%)	Growth (%)	2008	Shares (%)	Growth (%)	Avg. Growth (%)
Balance Sheet										
Loans (net)	80.5	63.0	30.4	150.1	63.9	86.4	168.5	73.1	12.3	43.0
Total assets	**127.9**	**100.0**	**25.3**	**235.0**	**100.0**	**83.8**	**230.6**	**100.0**	**-1.9**	**35.7**
Deposits from customers	100.5	78.6	31.1	162.5	69.1	61.6	148.7	64.5	-8.5	28.1
Total liabilities	**115.7**	**90.5**	**24.9**	**214.1**	**91.4**	**85.0**	**197.0**	**85.5**	**-7.9**	**34.0**
Total equity	**12.2**	9.5	**29.7**	**20.3**	**8.6**	**67.2**	**33.5**	**14.5**	**65.1**	**54.0**
Total liab. & equity	**127.9**	**100.0**	**25.3**	**235.0**	**100.0**	**83.8**	**230.6**	**100.0**	**-1.9**	**35.7**
Income Statement										
Total revene	**16.7**	**100.0**	**26.6**	**26.6**	**100.0**	**59.2**	**35.4**	**100.0**	**33.2**	**39.7**
Total net income (=operating income)	**7.1**	**42.8**	**9.1**	**11.8**	**44.2**	**64.6**	**11.2**	**31.5**	**-5.1**	**22.9**
Operating expenses	-4.6	-27.7	20.5	-6.4	-24.1	38.5	-5.7	-16.0	-11.7	15.8
Profit bfr tax	**1.2**	**7.2**	**-32.6**	**3.8**	**14.2**	**214.2**	**3.8**	**10.6**	**-0.7**	**60.3**
Net profit	**0.4**	**2.2**	**-70.3**	**3.3**	**12.3**	**791.8**	**3.3**	**9.3**	**1.1**	**240.9**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	13.8		15.0	12.8		-7.2	15.9		24.2	14.2
Loan to deposit	80.1		-0.5	92.4		15.3	113.3		22.7	95.3
NPL	4.5		-4.3	3.7		-17.8	2.1		-43.2	3.4
RoE	2.6		-80.3	13.7		426.9	9.9		-27.7	8.7

Source: Zoos Bank Annual Report

Funding

At the end of 2008, deposits of MNT 149 billion decreased by 8.5% from the previous year, which was the biggest drop among PFIs. Based on maturity analysis of finance assets and liabilities (Annex IV, Table IV.9), as of end March 2009, 36% of the total loans of the bank were long-term loans amounting to MNT 61 billion. Close to 57% of the term loan was funded by short-term funds. Moreover, because of decrease of deposits, the bank's liquidity position became very tight in December 2008. At the moment, the large business loans have been suspended, and only small loans as well as project loans are available for its customers.

Profitability

The profitability of the bank with ROE of 9.9% and ROA of 1.3% is one of the lowest among PFIs. Likewise, the net profit to total gross income ratio of 9.3% is low compared with other PFIs. The low profitability is expected to be improved through EBRD's TA made together with its investments.

The CAR of 15.9% is well above the 10% requirement of BOM. In fact, it is the highest among PFIs (equity to asset ratio of 14.5% is also by far the highest among PFIs). The bank seems to have no problem clearing the new requirement of 12% set by BOM, effective as of end of March 2009. The capital base is even more strengthened with the participation of EBRD as a major shareholder as well as the provision of subordinated loan by the institution.

(3) Performance under TSL

Zoos Bank has submitted 13 sub-loans to CSC as of April 2009. One loan has been withdrawn from the loan list due to non-availability of collaterals. Out of the remaining 12 loans, all have been disbursed to the borrowers.

The total amount disbursed to Zoos Bank is JPY 315.2 million (MNT 3,926 million). Seven sub-projects are located in the provinces, and five are in the capital city. Sector wise, 78% of loan amount is concentrated in manufacturing such as food processing, construction materials and wooden furniture, and 8% is for the agriculture sector. The bank has identified two EPL projects.

Table 9.5.2 TSL Performance of Zoos Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (Total)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	2	17%	¥24,407,583	8%	¥0	¥24,407,583
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	8	67%	¥247,288,700	78%	¥0	¥247,288,700
Electricity/gas/water supply	1	8%	¥11,777,778	4%	¥0	¥11,777,778
Construction	0	0%	¥0	0%	¥0	¥0
Hotels and restaurants	1	8%	¥31,746,032	10%	¥0	¥31,746,032
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	0	0%	¥0	0%	¥0	¥0
Health and social work	0	0%	¥0	0%	¥0	¥0
Total	12	100%	¥315,220,093	100%	¥0	¥315,220,093

Source: JICA study team

Out of 12 sub-projects, 10 are submitted in 2008. One good characteristics of Zoos Bank is its conservative approach in terms of currency of lending; i.e. all loans are in local currency as advised by the bank. In the current circumstances when MNT is depreciating against foreign currencies, the advice was very appropriate and should be appreciated.

Because the bank is currently squeezing credits to customers, the bank expects to have more projects in TSL Phase II, which would alleviate the tight liquidity position of the bank.

Zoos Bank has been focusing its lending activity to the big corporations, allocating 38% to 50% of the total loans. Up to 2008, the share of SME lending to the total loan balance ranged only between 12% and 26%, which is relatively low compared to other PFIs. Within its

comprehensive TA from EBRD, the bank is planning to embark on extensive restructuring activities and become more SME-oriented by adopting an active lending policy toward them.

Environment Protection Loan (EPL)

The bank has identified two EPL projects of energy saving and waste gravel processing projects. The two loans are relatively small (MNT 290 million on average) and term is medium terms of five to seven years.

Loan Processing and Monitoring

Applications from borrowers are examined by the branch office and sent to the head office's Loan Department for further appraisal and for preparation of documents for the Credit Committee.

A loan is usually monitored, under the advice of the Loan Dept., every month or every quarter, depending on the loan, by visiting the borrower on-site. In view of the conservative approach of banking of Zoos Bank, the study team considers that the monitoring system of the bank is appropriate.

Staff Training

Staff training is actively carried out according to training programs in order to improve staff capacity. In 2008, a total of 90 trainings and seminars were conducted internally as well as externally. In particular, training of loan officers is prioritized by utilizing various opportunities held at the internal training center, banker's association's program, BOM training center and overseas seminars. With the guidance of EBRD, the bank management expects major changes and positive results of the TA and restructuring conducted under EBRD counseling. In addition to a TA for project analysis, the bank considers that management level people at the Credit Committee may also need seminars on project finance for their better understanding.

9.6 Xac Bank

(1) Profile

Xac Bank was established by XAC (Golden Fund for Development) LLC in the 1st of October 2001 and is now a medium-sized bank comparable to Zoos Bank in assets. Most of the bank shares are held by a single shareholder, Tenger Financial Group (99.94%), and the remaining little shares (0.06 %) are held by the employees. Tenger Financial Group is newly established as the first holding company in Mongolia. The CEO of the company is Mr. Ganbold, who was former CEO of the bank. IFC (11.81%) and EBRD (11.15%), both became shareholders at the end of 2008.

The Board of Directors of the Tenger Financial Group is composed of 11 directors, including the Xac Bank CEO, a representative from each shareholder, as well as representatives from IFC and EBRD. Executive management is composed of 11 executives, including Mr. BOLD M., the CEO of the bank.

The bank has 76 branches and extension units spread over the country, and over 950 employees, Because of the smallness of clients (average loan size is USD 1,500 per loan) and 70% of clients are in rural areas, the bank has about 300 credit officers, and each officer is in

charge of about 300 clients on the average. The bank opened its branch in Bishkek, Republic of Kazakhstan, which is the first foreign branch for the Mongolian banks.

The bank obtained ratings from Moody's Investor Service (others being Khan, TDB and Zoos) and Fitch rating. The bank obtained "Ba2" from Moody for long-term foreign currency issuer rating and "B+" from Fitch. However, the bank is yet to issue bonds overseas, as the outlook for fund-raising by any Mongolian entity is negative. Xac Bank emphasizes environmental protection by adopting an Environmental Management System, creating the Office of Corporate Compliance and Ethics, and conducting a regular environmental performance audit.

(2) Financial Performance

The size of assets and loans in 2008 is MNT 208 billion and MNT 150 billion, respectively. The bank ranks fifth among the six PFIs, but the figures are comparable to Zoos Bank in the fourth place. Like other major PFIs, it has grown rapidly in the last three years (see also Annex IV, Table IV.6).

The assets of the bank have grown at an annual average rate of 52.2% in the last three years. However, the loan to deposit ratio is very high at 194.4% in 2008 (141.2% in 2006 and 158.9% in 2007) against the 112% average of the 15 commercial banks. This higher loan to deposit ratio indicates that the bank has to make more effort in raising the fund.

Lending

Average loan to asset ratio of 72% in 2006-2008 is close to the average of PFIs. Xac bank does not lend to large-scale enterprises and the bank's activities are more targeted towards microfinance lending. In 2008, the bank's lending structure was at 23.9% for SMEs, 18.1% small business, 20.4% mortgage loans and 37.6% individual loans. The bank intends to expand its SME lending by supporting growth of its microfinance clients and switching its activity by targeting SME business in future.

Lending rates in USD and in MNT (average of USD 18.5% & MNT 25.6%)[3] are both higher than commercial banks' average lending rates (15.5% and 20.7%, respectively). This reflects that their borrowers are SMEs with higher risk on business and less collateral.

Funding

Deposit rates for both USD and MNT are set lower (average of max. deposit rates USD 9.03%, MNT 16.05%) than average rates (ditto USD 13.3% and MNT 19.1%). The rate for MNT time deposit was raised to 18% per annum (p.a.) level from 16.7% in November 2008, which is closer to the average commercial bank rate of 19.4% p.a. As a result, deposits increased by 22% in 2008 from the previous year.

The ratio of deposit to asset of the bank is 37% which is the lowest compared to other PFIs (the ratios range between 42% and 81%), and due to the smallness of per-deposit amount and the clients. Instead, the bank has a variety of borrowing sources overseas.

Thanks to its background as micro-finance institution, Xac bank has successfully accessed foreign financial institutions (development finance institution in particular). As of December

[3] Average of January 2008 to February 2009.

2008, total borrowed funds from foreign financial institutions were MNT 106 billion, of which MNT 82.7 billion (78.1% of the funds) were in foreign currency. The gap between loans and customers' deposits were covered by "borrowed funds".

Table 9.6.1: Financial Statements (Xac Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Loans (net)	60.8	68.4	57.6	100.0	69.6	64.4	149.6	72.0	49.7	57.2
Total assets	**88.9**	**100.0**	**50.2**	**143.8**	**100.0**	**61.7**	**208.0**	**100.0**	**44.7**	**52.2**
Deposits from customer	43.1	48.4	37.2	62.9	43.8	46.1	77.0	37.0	22.3	35.2
Total liabilities	**78.1**	**87.8**	**57.2**	**130.5**	**90.8**	**67.2**	**186.1**	**89.5**	**42.6**	**55.7**
Total equity	**10.9**	**12.2**	**13.8**	**13.2**	**9.2**	**21.7**	**21.9**	**10.5**	**65.5**	**33.7**
Total liab. & equity	**88.9**	**100.0**	**50.2**	**143.8**	**100.0**	**61.7**	**208.0**	**100.0**	**44.7**	**52.2**
Income Statement										
Total gross income	**15.9**	**100.0**	**61.3**	**20.6**	**100.0**	**30.0**	**32.0**	**100.0**	**55.1**	**48.8**
Total net income (=operating income)	**9.7**	**61.1**	**50.2**	**11.9**	**57.5**	**22.3**	**17.4**	**54.4**	**46.7**	**39.7**
Operating expenses	-6.7	-42.4	51.3	-8.2	-39.8	22.0	-12.3	-38.4	49.7	41.0
Profit bfr tax	**2.6**	**16.2**	**19.9**	**3.3**	**16.1**	**28.8**	**4.0**	**12.6**	**21.7**	**23.5**
Net profit	**1.8**	**11.2**	**19.1**	**2.9**	**14.2**	**64.7**	**3.2**	**9.9**	**8.5**	**30.8**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	15.8		28.5	11.1		-29.7	15.4		38.7	14.1
Loan to deposit	141.2		14.9	158.9		12.5	194.4		22.3	164.8
NPL	1.3		-84.9	0.9		-30.8	2.0		122.2	1.4
RoE	19.5		35.4	27.9		43.1	21.6		-22.6	23.0

Source: Xac Bank Annual Report

Profitability

Profitability of the bank is higher than the average of PFIs. However, it is not up to the level of the top banks. With the low NPL ratio of 2.0% and ROE of 21.6% in 2008, the study team believes its current financial performance and future prospect is stable and sound.

CAR of 15.4% in 2008 is high and comparable to those of major banks. The bank will be able to comply with the BOM's new requirement of 12%. However, since almost 78% of total borrowed funds of MNT 106 billion are in foreign currency, it is accordingly anticipated that this may expose the bank's funding operation to foreign currency risks.

(3) Performance under TSL

The bank has applied for only four sub-loans so far. In addition, the bank processed a sub-loan which had been approved under the submission by Anod Bank and transferred to XAC Bank. All five loans are in MNT, totaling to JPY 100.0 million (MNT 1,300.1 million) and have already been disbursed. Reflecting its history based on micro-financing, the average loan amount is MNT 200 million, if the transferred sub-loan is excluded. All sub-projects are concentrated on the manufacturing sector such as production of construction materials and medicine.

Table 9.6.2: TSL Performance of Xac Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	0	0%	¥0	0%	¥0	¥0
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	5	100%	¥100,060,324	100%	¥0	¥100,060,324
Electricity/gas/water supply	0	0%	¥0	0%	¥0	¥0
Construction	0	0%	¥0	0%	¥0	¥0
Hotels and restaurants	0	0%	¥0	0%	¥0	¥0
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	0	0%	¥0	0%	¥0	¥0
Health and social work	0	0%	¥0	0%	¥0	¥0
Total	5	100%	¥100,060,324	100%	¥0	¥100,060,324

Source: JICA study team

The bank explains that their fewer sub-projects can be attributed to the lack of a definite strategy for SME customers, limited work-time involved in processing applications and due to shortage of staff. The bank wants to increase lending to SMEs in production sector which involves substituting imports by purchasing materials from the local markets.

Environmental Protection Loan (EPL)

The bank has one EPL project, production of briquette and light building blocks in Ulaanbaatar. The term of this EPL is four years, including a nine-month grace period. In addition, the bank succeeded one EPL project from Anod bank, and therefore has two EPL projects in total as a result.

Loan Processing and Monitoring

The bank intends to serve clients closely through its large network of 74 branches, with as many as 290 loan officers attending to over 200 clients.

Regarding loan processing, the Corporate Operation Division normally conducts loan processing for SME loans. Meanwhile, the Credit Management Division is in charge of risk management by assessing loan risk and presenting this to the Credit Committee.

As for loan monitoring, off-site monitoring is done first and if any risk is found, an on-site visit is conducted. Based on the SME loan procedure of the bank, on-site visit is done after one month of loan disbursement and after that, once every quarter.

Staff Training

The bank organizes training every quarter for loan officers at its own training center. All loan officers attending the seminar are trained in accordance with the bank's operational regulations and manuals. The in-house training center has conducted and organized more than 18,610 man-day training sessions, where about 450 staff attended workshops in management, credit and risk analysis, accounting, etc. The bank, as well as the study team, considers that a TA on project finance is indispensable to enhance its lending capability.

9.7 Capitron Bank

(1) Profile

Capitron Bank is the smallest bank among the six PFIs, with assets of MNT 103 billion in 2008, which is 1/8 of Khan Bank. The bank is the youngest commercial bank established in November 2001.It merged with the Inter Bank of Mongolia successfully in 2006.

The bank shares are held by three local investor's; B. Medree (49.05%, CEO of TDB), P. Munkhsainan (46.33%, CEO of the bank), and TDB (4.62%). From this fact, the bank is very close to TDB.

The bank participated actively in international donors' programs like KfW and JICA-TSL, which account for about 16% of loan balance. The bank with 208 staff and 17 branch offices aims to expand its activities in Ulaanbaatar, Erdenet, Darkhan city and Bayan-Ulgill province.

(2) Financial Performance

In the last three years, the assets of Capitron Bank have grown by 1.2 times amounting to MNT 103 billion. About 93% of the total assets comprise of loans (82%), and cash and cash equivalent (11%) (see also Annex IV, Table IV.7).

Lending

The loans, which amount to MNT 84.5 billion in 2008, grew fast in the last three years at an average rate of 60%. The loans are mainly for corporations (50.2%), SMEs (34%), and others (mortgage, individuals, etc., 15%). Industrial sector-wise, 73% of the lending is concentrated in four sectors such as construction (31.5%), manufacturing (19.2%), real estate and renting (12.8%), and wholesale and retail trade (9.4%). Of the loan balance in 2008, about 29% were term-loans of over one year, and close to 60% of the term-loans were from JICA and KfW programs.

In April 2008, the bank was instructed to follow the instruction of the BOM, which orders to reduce loans to 70% of assets. The bank has decided to limit new loans within a certain percentage (30-50%) of the loan repayments.

However, according to the bank, BOM allowed that the calculation of the loan to asset ratio may exclude the project term-loans such as JICA and KfW programs, of which funding sources have the similar maturity with lending, since it does not affect liquidity of the bank. Therefore, the bank decided to accumulate TSL Project loans as much as possible. The decision resulted in the bank having the largest TSL loan balance among the six PFIs. If JICA-TSL loans totaling approximately MNT 13,610 million are deducted, the bank's loan balance is reduced to MNT 70,898 million, which corresponds to 68.6% of total assets.

Funding

Deposits, including current accounts of MNT 43 billion, account for only 42% of total assets. This deposit to asset ratio is the second lowest among the six PFIs, following Xac Bank. The loan to deposit ratio of the bank, which was 88% in 2006, rapidly increased to 155% in 2007 and to 195% in 2008, making the liquidity position of the bank very tight. However, the maturity analysis of financial assets and liabilities of 2008 (Annex IV, Table IV.9) shows that assets over one year, including loans and advances, was funded by borrowed funds of MNT

21 billion, which includes JICA long-term loans, so the liquidity of the over one year funds may not be so tight as it looks.

Table 9.7.1: Financial Statements (Capitron Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Loans (net)	26.8	31.9	-0.3	69.4	72.1	158.7	84.5	81.8	21.8	60.1
Total assets	**84.1**	**100.0**	**94.8**	**96.2**	**100.0**	**14.4**	**103.3**	**100.0**	**7.4**	**38.8**
Deposits from customer	30.4	36.1	0.6	44.6	46.4	47.0	43.4	42.0	-2.8	14.9
Total liabilities	**76.0**	**90.5**	**94.5**	**87.4**	**90.9**	**15.0**	**93.9**	**90.9**	**7.4**	**39.0**
Total equity	**8.1**	**9.5**	**97.8**	**8.8**	**9.1**	**8.5**	**9.4**	**9.1**	**6.6**	**37.6**
Total liab. & equity	**84.1**	**100.0**	**94.8**	**96.2**	**100.0**	**14.4**	**103.3**	**100.0**	**7.4**	**38.8**
Income Statement										
Total gross income	**7.8**	**100.0**	**18.1**	**10.0**	**100.0**	**29.5**	**14.5**	**100.0**	**44.6**	**30.7**
Total net income (=operating income)	**3.7**	**47.7**	**46.6**	**4.4**	**43.7**	**18.6**	**5.5**	**37.6**	**24.6**	**29.9**
Operating expenses	-3.0	-39.2	**18.3**	-2.4	-23.8	-21.6	-2.6	-17.7	7.8	1.5
Profit bfr tax	**0.2**	**2.1**	**-13.7**	**0.5**	**5.0**	**204.3**	**0.7**	**4.6**	**32.9**	**74.5**
Net profit	**0.1**	**1.4**	**16.7**	**0.5**	**4.6**	**314.3**	**0.6**	**4.1**	**27.2**	**119.4**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	19.1		6.5	11.0		-8.1	10.0		-1.0	13.4
Loan to deposit	88.3		-0.8	155.5		76.0	194.9		25.3	146.2
NPL	6.7		6.7	5.7		-1.0	6.8		1.1	6.4
RoE	1.4		1.4	5.8		4.4	10.4		4.6	5.9

Source: Capitron Bank Annual Report

Profitability

NPL ratio has been at a high level in recent years, resulting in 6.8% in 2008, which is the highest among PFIs. The contingent expenses of MNT 2.2 billion are regarded relatively large among PFIs. These factors led to the low profitability of the bank, resulting in ROE of 10.4% and ROA of 0.8%.

CAR of the bank is 10.0% in 2008, which just corresponded to the BOM requirement. At present, the bank is discussing with BOM the ways to raise the CAR to 14%, including a 5-year subordinated loan to clear up new requirement of 12% (effective as of March 2009). In view of the fact that most of the shares (95%) are held by two individuals, it may have to find new dependable shareholder to comply with the new requirement.

The issues the bank faces now can be summarized as follows: i) liquidity problem, ii) compliance with the new CAR and iii) the weak shareholding structure. Although the JICA study team considers that the most immediate issues are items (i) and (ii), which need to be followed up closely, there may be no problem with the daily operation of the bank.

(3) Performance under TSL

Capitron Bank is one of the three aggressive PFIs participating in the JICA-TSL Project. As of April 2009, Capitron Bank has submitted 32 loan applications. Two loans were withdrawn because of the longer processing time and non-availability of TSL fund at the time of application. All 30 loans were processed and disbursed.

Table 9.7.2: TSL Performance of Capitron Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	2	7%	¥68,715,979	6%	¥0	¥68,715,979
Mining and quarrying	1	3%	¥61,028,771	5%	¥0	¥61,028,771
Manufacturing	19	63%	¥746,185,190	63%	¥369,299,218	¥376,885,972
Electricity/gas/water supply	4	13%	¥191,856,014	16%	¥157,565,317	¥34,290,697
Construction	1	3%	¥20,451,412	2%	¥0	¥20,451,412
Hotels and restaurants	1	3%	¥18,839,488	2%	¥0	¥18,839,488
Transport, storage and communications	1	3%	¥65,356,777	6%	¥65,356,777	¥0
Education	0	0%	¥0	6%	¥0	¥0
Health and social work	1	3%	¥6,635,071	1%	¥0	¥6,635,071
Total	30	100%	¥1,179,068,702	100%	¥592,221,312	¥586,847,390

Source: JICA study team

Currency-wise, 11 loans are in US dollars amounting to USD 5,695 thousand (JPY equivalent of 592 million) and 19 are MNT-denominated loans amounting to MNT 6,894 million (JPY equivalent of 587 million). The total loan balance of MNT 15,019 million (JPY 1,179 million), which is the largest among the six PFIs, account for 17.8% of the bank's loan portfolio as of December 31, 2008.

Considering the relatively large US dollar loan portfolio (50% of the total TSL loans) and its loan concentration to the construction materials sub-sector and boiler renovation projects (70% of USD loans), the bank needs careful monitoring of these sub-projects when loan repayments start in the coming two to three years.

Environmental Protection Loan (EPL)

Capitron Bank submitted six EPL projects in such sectors as food processing (Bee Farmer Project), manufacturing, and boiler replacement. Five out of six EPL projects received the longest loan tenure of ten years (with three years grace period).

Loan Processing and Monitoring

As far as JICA-TSL is concerned, the bank has proceeded in a most efficient manner. Its application format is well-prepared so that the required processing time was short compared to other PFIs.

Staff Training

In 2008, a total of 44 training programs were conducted, including 34 seminars by professional organizations, 8 in-house and 2 overseas trainings. As training for project finance was not included in the programs, the bank requests a TA on project analysis and formulation, reflecting features of the sector concerned and considering Mongolian local conditions.

9.8 Anod Bank

(1) Profile of Anod Bank

Anod Bank was established in 1999 and rapidly became one of the first four major banks with assets of MNT 349 billion and loans of MNT 140 billion in 2007. The bank engaged in investment banking as well as retail and corporate banking. In May 2008, Anod Bank went

for Initial Public Offering (IPO) successfully. In early December 2008, however, Anod Bank suddenly went bankrupted. Since then, the bank has been under direct control of BOM and its operation is suspended except payment to depositors. The audit of the bank by BOM has just been completed, and the official announcement by the government of its decision is now expected.

(2) Financial Performance

According to the annual reports of 2006 and 2007, which are only available, the average growth of assets in those two years was 43%. The asset size of MNT 349 billion in 2007 ranked the fourth among 16 commercial banks. On the other hand, the growth of loans in the same period was not as high as other PFIs and the size of loans of MNT 140 billion in 2007 was the fifth among the PFIs following Zoos Bank. The loan to asset ratio of about 40% was the lowest among the PFIs (see also Annex IV, Table IV.8). The size of deposits from customers of MNT 248 billion, including current account, in 2007 was the fourth among the PFIs.

Table 9.8.1: Financial Statements (Anod Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Loans (net)	114.2	47.7	34.2	139.5	39.9	22.2	n.a	n.a	n.a	28.2
Total assets	**239.6**	**100.0**	**39.9**	**349.4**	**100.0**	**45.8**	n.a	n.a	n.a	42.9
Deposits from customer	169.5	70.7	45.7	248.3	71.1	46.5	n.a	n.a	n.a	46.1
Total liabilities	**226.7**	**94.6**	**40.8**	**332.4**	**95.1**	**46.6**	n.a	n.a	n.a	43.7
Total equity	**12.9**	**5.4**	**26.2**	**17.1**	**4.9**	**32.1**	n.a	n.a	n.a	29.2
Total liab. & equity	**239.6**	**100.0**	**39.9**	**349.4**	**100.0**	**45.8**	n.a	n.a	n.a	42.9
Income Statement										
Total gross income	**32.0**	**100.0**	**35.4**	**37.9**	**100.0**	**18.8**	n.a	n.a	n.a	27.1
Total net income (=operating income)	**11.5**	**36.0**	**28.3**	**9.8**	**25.7**	**-15.3**	n.a	n.a	n.a	6.5
Operating expenses	-6.2	-19.3	**18.2**	-6.1	-16.0	-1.8	n.a	n.a	n.a	8.2
Profit bfr tax	**1.1**	**3.5**	**33.4**	**2.1**	**5.5**	**88.7**	n.a	n.a	n.a	61.1
Net profit	**0.7**	**2.2**	**134.1**	**1.8**	**4.9**	**166.7**	n.a	n.a	n.a	150.4
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	11.3		n.a	12.2		8.0	n.a		n.a	n.a
Loan to deposit	67.4		n.a	56.2		-16.6	n.a		n.a	n.a
NPL	8.0		n.a	n.a		n.a	n.a		n.a	n.a
RoE	5.4		n.a	10.8		101.1	n.a		n.a	n.a

Source: Anod Bank Annual Reports

Note: the growth rates in 2006 were not available as relevant data of 2005 were not available.

The CAR of 11.3% and 12.2% in 2006 and 2007, respectively, were above the BOM requirement of 10%. But the total equity of MNT 17 billion was relatively small among the major PFIs. As such, the bank went for IPO in May 2008.

(3) Performance under TSL

Anod Bank joined as the seventh PFI in January 2008. Until its failure in December 2008, the bank submitted 8 projects to the PO, out of which three were withdrawn before the CSC's consideration. Of the remaining five loan applications that were processed, four were approved (three by JICA/CSC and one by CSC). For the fourth project (Anod-7A MNT 500 million), disbursement was made to the bank in November 2008, however, the loan proceeds are now held pending by the bank because the lending operation was suspended by BOM before disbursement to the borrower.

The fifth project (Establishment of an Eco-Furniture Factory) , of which application was submitted to CSC in November, was transferred to Xac Bank at the request of the borrower on March 24, 2009, and subsequently, the loan was approved by CSC and disbursement was made to Xac Bank in early April.

Table 9.8.2: TSL Performance of Anod Bank (as of April 2009)

Industrial Sector of Sub-Projects	Number of Projects		Loan Amount (TOTAL)		Loan Amount (in USD)	Loan Amount (in MNT)
Agriculture, hunting and forestry	0	0%	¥0	0%	¥0	¥0
Mining and quarrying	0	0%	¥0	0%	¥0	¥0
Manufacturing	3	75%	¥96,498,572	93%	¥32,139,444	¥64,359,128
Electricity/gas/water supply	0	0%	¥0	0%	¥0	¥0
Construction	1	25%	¥7,475,083	7%	¥0	¥7,457,083
Hotels and restaurants	0	0%	¥0	0%	¥0	¥0
Transport, storage and communications	0	0%	¥0	0%	¥0	¥0
Education	0	0%	¥0	0%	¥0	¥0
Health and social work	0	0%	¥0	0%	¥0	¥0
Total	4	100%	¥103,973,655	100%	¥32,139,444	¥71,834,211

Source: JICA study team

9.9 Review of Selection Criteria on PFIs

Review of PFIs Selection made for Phase I

For Phase I, PFI selection was made by the Selection Committee composing of MOF, BOM and the then JBIC study team, and its conclusion was submitted to JBIC in the final report. The conclusion was to select present six banks as PFIs excluding Anod bank of which participation was approved about a year later.

Selection was made on the basis of the financial information consisting of CAMELS[4] data and the additional four selection criteria, namely growth, management, ability, prudential requirement and corporate finance experience as shown in the table 9.9.1. The calculation for overall evaluation was made by providing five (5) points each to CAMELS plus four criteria. The lower score was better than higher in this evaluation. The Selection Committee scored on an item-by item base to each bank. At that time, the details of CAMELS calculation was not made available to the Committee due to confidentiality of the data and only the result of calculation was informed by the BOM representatives to the Committee. The selection was made in two steps as follows:

(1) Firstly, all candidate banks were evaluated by BOM based on CAMELS method. The banks which got better than 50% (2.5 points) of full score (5.0 points) were selected for short list.

(2) Secondly, the evaluation of the four items, namely growth (assets, earnings and capital), management, observance of prudential requirements and the performance of corporate finance was carried out as indicated in the table below. Each item will have rating of 1.0 to 5.0 (the lower the better) with the weight of 30%, 30%, 25% and 15%, respectively. PFIs need to have total rating of less than 2.5.

[4] "CAMELS" stand for Capital, Assets, Management ability, Earnings, Liquidity and Sensitivity. Therefore CAMELS evaluation has the six components and each component is assigned with rating of 1.0 to 5.0 (the lower the better).

(3) Selection method adopted in the preparation process of Phase I according to the minutes of discussion at 2-4-2-1, "Procurement and Consultant" for further use.

Table 9.9.1 Evaluation of Banks for Selection of PFIs

Items	Weight	Main content of evaluation	Evaluation rating by the Committee
1. Growth	30%	Mainly growth of assets, earnings and capital should be considered.	0.3 to 1.5
2. Management ability	30%	The evaluation through CAMELS method by BOM should be referred.	0.3 to 1.5
3. Prudential requirements	25%	Such items as capital adequacy, foreign exchange exposure risk, credit concentration risk and liquidity should be considered.	0.25 to 1.25
4. Corporate finance	15%	Experience and performance of corporate finance to big corporate, SMEs and micro-firms should be considered.	0.15 to 0.75
TOTAL	―	―	1.0 to 5.0

Source: JICA study team

When application from Anod bank for PFI was received, the PO has evaluated the bank in similar manner of the Selection Committee for Phase I as requested by MOF. However, the PO had to make decision only with the rating on four criteria mentioned above due to no availability of financial data. Based on the conclusion of the study made by BOM, Its committee approved the bank to be the 7th PFI.

Proposed PFIs Selection Criteria for Phase II

The JICA study team is of the view that selection criteria together with its implementation procedures adopted in phase I is to be succeeded in principle, provided that BOM would participate in the Selection Committee and supply its confidential data to the Committee. In view of the Anod failure, qualitative study would also be appreciated. In this sense, a rumor or a report, primarily unfavorable or adverse for the bank from reliable sources should be collected in finalizing PFIs.

For the Phase II, the PFI Selection Committee has been set up among MOF, BOM and the JICA study team during the second mission (2009 April 6th to 24th) in order to collaborate selecting PFIs. At the first meeting, it was decided that the Committee will commence its activities, starting from study on selection criteria and procedures after receiving the Final Report of SAPI study. Confidential information of candidate banks is expected to be made available by BOM to the Committee.

JICA study team would recommend the evaluation of banks for selection of PFIs to be made according to the scheme shown in the following table. It is worth to note that more than half of the ratings is allocated to evaluation by BOM which has access to managerial information and data of banks. Each item will also have rating of 1.0 to 5.0 (the lower the better).

Table 9.9.2 Proposed Evaluation of Banks for Selection of PFIs

Item	Main content of evaluation	Weight	Evaluation Ranking by the Committee						
			less than ave. -10%	Between ave. -10% & ave. +5%	Between ave. +5% & ave. +15%	Between ave. +15% & ave. +25%	between ave. +25%	Total	Weighted Total
1. Growth	Assets	10%	5	4	3	2	1	1 to 5	0.1 to 0.5
	Earnings	10%	5	4	3	2	1	1 to 5	0.1 to 0.5
	Capital	10%	5	4	3	2	1	1 to 5	0.1 to 0.5
	Total	30%							0.3 to 1.5
2. Management	Evaluation through CAMELS by BOM	30%	Rating to be done by BOM						0.3 to 1.5
3. Prudential requirement	Capital adequacy		Rating to be done by BOM						
	Foreign exchange exposure risk								
	Credit concentration risk								
	Liquidity								
	Total	25%						1 to 5	0.25 to 1.25
4. Corporate finance	Ratio of corporate loan over total loan	5%	5	4	3	2	1	1 to 5	0.05 to 0.25
	Ratio of term-loan to corp. over total term-loan	10%	5	4	3	2	1	1 to 5	0.10 to 0.50
	Total	15%							0.15 to 0.75
Grand Total		100%							1.0 to 5.0

Source: JICA study team

In the above table, the following points are worth to be noted:

i. The growth is the growth rate of the latest year vs. the previous year;
ii. The average used as the bench mark for rating is the average rate of each item among all the commercial banks in Mongolia;
iii. The evaluation of management ability and prudential requirements to be made by BOM is based on bench marks to be determined by BOM from time to time, while the evaluation of growth and corporate finance is based on relative position of the candidate among all the commercial banks;

Those candidate banks evaluated at higher than 2.5 in grand total will automatically lose eligibility for PFI. The PFI Selection Committee will further discuss on unfavorable or adverse information of the candidate, if any, and make decision on whether the candidate be excluded from PFIs or not. The final decision of the Committee will be informed to the candidate together with the evaluation made. If an additional bank appears to be included in PFIs during the implementation of the project, the whole procedures stated above should be exercised for decision-making.

9.10 Recommendation and Major Issues

Recommendation

The JICA study team considers that the financial performance of the six PFIs in the current volatile financial circumstances is, in general, stable and acceptable, and recommends them to be ones for Phase II of the TSL Project.

The JICA study team also recommends T/A for project finance/analysis for the PFIs in Phase II. Although PFIs conduct many training programs every year for their basic needs for banking operation, including credit risk and financial analysis of borrowers, it is observed that their training programs are still insufficient to cover their staff required for the implementation of the project.

Major issues

(1) Anod Bank

Out of four approved projects of Anod Bank, three were disbursed to the borrowers and one is held by Anod Bank pending disbursement to the borrower. The JICA study team will have to wait for the outcome of the audit report and find a solution with MOF and BOM on how to proceed forward. Arrangements for interest payment and repayment of principal of the loans disbursed through Anod Bank needs to be attended to.

(2) US Dollar-Denominated Loans

In TSL Phase I, there are 23 loans amounting to USD 9.8 million in total that is denominated in US dollars. Most of the projects do not seem to generate US dollar income. These projects are vulnerable to foreign exchange fluctuation of the MNT. Banks will have to carefully monitor these projects and give appropriate advice to clients so that they are able to repay loans according to the original schedule.

Table 9.10.1: US Dollar Loans (as of April 2009)

Banks	Number of loans disbursed	USD amount
Khan Bank	4	1,830,000
Golomt Bank	6	1,932,000
Capitron Bank	11	5,695,000
TDB	1	51,100
Anod Bank	1	300,000
Total	23	9,808,100

Source: JICA study team

(3) Monitoring of Banks with Tight Liquidity Position and Low CAR

In early 2008, some commercial banks started have tight liquidity positions. So far, there should be no serious worries to the PFIs in general, although follow up of the PFIs' liquidity position may be necessary.

Capitron Bank seems to have received an administrative guidance from BOM, at the time of annual inspection, to limit increasing its loan portfolio to a certain percentage of asset size. The bank's adaptability to the revised CAR should also be monitored.

CHAPTER 10 REVIEW OF IMPLEMENTATION ORGANIZATION

10.1 Counterpart Steering Committee (CSC)

(1) CSC Function and Structure

In accordance with the Loan Agreement (L/A) made between Mongolia and JBIC (currently JICA), the CSC was organized by the MOF as the Executing Agency for JICA-TSL on November 10, 2006. Its chairperson and its members were nominated simultaneously. The members were initially composed of representatives of the MOF, MOIT, MOFA, MONE, and BOM, as shown in the table below. The Director General of the Department of Policy Coordination for Finance of the MOF was assigned to be the chairperson. On September 14, 2007, this chairperson of CSC was replaced by the Deputy Director of the Department of Policy Coordination for Aid and Loans of the MOF.

Table 10.1.1 Member List of CSC

2006	2009
Chairperson: Kh. Ragchaa, Director-General, Department of Policy Coordination for Finance, MOF	Chairperson: T. Dorjkhand, Deputy Director, Department of Policy Coordination for Aid and Loans, MOF
J. Aldarjavkhlan, Advisor to MOF	J. Aldarjavkhlan, Advisor to MOF
Sh. Mungunbat, Director-General, Division of Small and Medium Enterprises and Technology, MOIT	G..Davaadorj, Director-General, Department of Strategy and Policy Coordination, MOFALI
T. Dorjkhand, Deputy Director, Department of Policy Coordination for Aid and Loans, MOF	I.Munkhbayar, Lawyer, Ministry of Health (MOH)
G. Davaadorj, Director-General, Department of Strategy and Policy Coordination, MOFA	S.Regzedmaa, Deputy Director of Light Industry Department, MOFALI
A. Enkhbat, Director-General, Department of Sustainable Strategy and Policy Coordination, MONE	A. Enkhbat, Director-General, Department of Sustainable Strategy and Policy Coordination, MONET
J. Ganbaatar, Director, Department of Supervision, BOM	J. Ganbaatar, Director, Department of Supervision, BOM
B. Batbayar, Director, Division of Debt Management, Department of Treasury, MOF	B. Batbayar, Director, Division of Debt Management, Department of Treasury, MOF
Secretary: Ts. Bayarkhuu, Desk officer, Department of Policy Coordination for Finance, MOF	Secretary: B.Bolormaa, Desk officer, Department of Policy Coordination for Aid and Loans, MOF

Source: JICA study team

According to the L/A, the expected function of CSC is to implement the TSL project as “the Executing Unit” by receiving the ODA loan from GOJ and by making on-lending loans to PFIs for their further lending sub-loans to SMEs. As the CSC meeting is held on a once a month basis in principle, the daily implementation has to be made by MOF, with assistance from the consultant hired by MOF under the loan proceeds of the TSL project.

As seen in the table below, CSC meetings have not always been held every month due to the busy schedules of members. The PFIs have been forced to wait for their applications to be approved. Moreover, all the members have not always attended the meeting, and some meetings were held with attendance of MOF members only. The difficulty in scheduling meetings consisting of high officials of the government is understandable, but a solution has to be studied for Phase II.

Table 10.1.2 Attendance of Members to CSC Meetings

Member	CSC meeting																			
	06	2007									2008									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Chairperson	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MOF 1)	+	+	+	+	+	+	+	+	-	-	-	-	-	-		-	-	+	-	-
MOF 2)	+	+	+	+	+	+	+	+	+	-	-	-	-	-		-	-	-	-	-
MOF 3)	+	+	+	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MOFA	+	-	+	-	+	+	+	-	-	-	-	+	+	+	-	+	+	-	+	+
MOIT	+	+	-	+	-	-	-	+	+	-	-	-	+	-	+	+	+	-	+	+
MONET	+	+	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-
BOM	-	+	-	-	-	-	-	+	-	-	-	+	-	+	+	-	+	-	+	+
Total	7	7	5	5	6	5	5	7	4	2	2	4	4	4	4	4	5	3	5	5

Note: "+" is attended, "-" is absent.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Minutes of CSC Meeting", Dec. 30, 2008

(2) CSC activities

Following the first (inception) CSC meeting held in November 2006, discussion on the implementation of the project started at the second meeting in January 2007, which approved the "Operational Manual for PFIs". CSC meetings had been held 10 times during the first year through its inception in November 2006 to December 2007, and another 10 meetings had been held during the second year of 2008. At the meetings, the members discussed policy issues and sub-loan projects. From the third meeting, they spent more time in discussing sub-loan projects. As to the first three projects of each PFI, the CSC is required to review at first the projects, particularly from the points of its eligibility, policy coherence and environment, and then submit it to JICA for their concurrence. From the fourth project, CSC is requested to review the projects and make final approval for the projects, although at the same time, CSC is requested to submit the application together with minutes of discussion on the project of CSC after its approval.

In general, discussions at CSC meetings are considered satisfactory, covering wide range of topics, not only sub-projects but also certain policy issues, as seen in table below.

Table 10.1.3 Record of CSC Meetings

No.	Date	Sub-projects discussed	Policy issues	attendants
1	16-Nov-06	0	-	7
2	23-Jan-07	0	Operational Manual for PFIs	8
3	25-Jan-07	3	-	6
4	23-Feb-07	4	-	7
5	18-May-07	8	Anod bank participation as PFI	7
6	20-Jun-07	7	-	5
7	11-Sep-07	10	-	6
8	26-Sep-07	11	-	7
9	3-Dec-07	10	-	3
10	26-Dec-07	1	Revised Money Flow, Interest rate	2
11	25-Jan-08	8	Prepayment, Eligibility of Sub-loan	2
12	28-Mar-08	10	-	4
13	13-May-08	5	Relocation of RF/As	4
14	24-Jun-08	4	Promotional Seminars	4
15	10-Jul-08	5	Interest rate	4
16	1-Aug-08	5	-	4
17	11-Sep-08	6	Audit Report	5
18	17-Oct-08	3	-	3
19	12-Nov-08	15	Disbursement out of RF/As	5
20	30-Dec-08	2	-	5
	Total	117	-	-

Note: Some sub-projects were discussed in more than 2 meetings.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "Minutes of CSC Meeting"

CSC has approved 111 projects, 21 for the first three of each PFI, which JBIC (currently JICA) has extended its non-objection basis approval, and 90 for the fourth over, during the two and a quarter years as shown in the table below. CSC has never rejected projects, although approval for some of them has been deferred at the meeting by suggesting some improvements. The number of approved projects can be appreciated; however, there is a request from PFIs to have more CSC meetings to accelerate decisions.

Table 10.1.4 Sub-loans Approved by CSC

PFI	Total		Number of Applications approved by CSC									Amount of Sub-loans approved (JPY million)				
	No. of Application	Amount (JPY million)	2007				2008				'09	2007		2008		'09
			~3	~6	~9	~12	~3	~6	~9	~12	~3	~6	~12	~6	~12	~3
Capitron	31 (28%)	1,212 (40%)	0	0	3	0	3	4	12	8	1	0	106	284	788	34
Khan	29 (26%)	526 (18%)	3	7	6	5	6	1	1	0	0	313	163	39	9	0
Golomt	25 (23%)	671 (22%)	0	0	5	6	7	0	1	2	4	0	352	86	103	130
Zoos	12 (11%)	315 (11%)	0	0	0	0	2	3	1	4	2	0	0	192	77	47
TDB	5 (4%)	78 (3%)	0	0	0	1	2	0	1	0	1	0	21	28	23	6
Anod	4 (4%)	104 (3%)	0	0	0	0	0	0	3	2	-1	0	0	0	104	-47
Xac	5 (4%)	100 (3%)	0	0	1	0	1	1	0	1	1	0	7	36	23	35
Total	111 (100%)	3,006 (100%)	3	7	15	12	21	9	19	17	8	313	649	665	1,127	205

Note: Xac obtained one sub-project from Anod, which was approved as Xac's project.

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table", April 27, 2009

(3) Policy issues discussed

At the implementation process of the TSL, several policy issues have been identified. MOF has initiated to take actions with assistance of the consultants to resolve the issues, by consulting/requesting to JICA. On these issues, MOF has informed the CSC and asked for their views. Some of them are the following:

1) Operational Manual for PFIs;

The Operational Manual for PFIs was introduced to CSC members. In the application formats, there was the borrower's name. A member noted that disclosing the borrower's names to the third party (CSC) by banks could violate the clients' privacy law. However, it was decided that the names should be available for CSC on condition that the attendants of the CSC meetings should not disclose the names to outside, keeping them in privacy.

2) Inclusion of an additional bank (Anod Bank) in PFIs;

The members exchanged their views on the inclusion of Anod Bank in the PFI list, and concluded that Anod Bank was to be included.

3) Revision of money flow;

It was reported that the Project Office had discussions with BOM on the issue of introducing a new scheme for money flow, as illustrated in Figure 8.1.2, and that thereafter, several meetings had been held with relevant officials of BOM, who generally accepted the scheme. A member noted that this issue needs to be talked about with the State Treasury. It was also reported that the JICA (then JBIC) had expressed their endorsement of the new scheme. This new scheme was supported since it saves time and extra efforts. It was agreed that MOF would request for JICA's official approval on the new scheme.

4) Revision of on-lending interest rate (revised semi-annually);

The interest rates to be used commencing 1 January, 2008 and procedures thereafter were confirmed. (In every six months, the interest rates to be applied for the subsequent six months were discussed and revised.)

5) Eligibility for sub-borrowers in relation with newly resolved SME Law;

Regarding the SME Law, it was agreed that there would be no need to follow this new law because the Loan Agreement was approved by the Parliament before its approval. Furthermore, there is a regulation saying that the government needs to follow the international regulations in international contracts, prior to the domestic laws and regulations.

6) Relocation of RF/As (from Capitron Bank to BOM);

The members were informed that TSL project's revolving fund accounts were moved from Capitron Bank to Bank of Mongolia because of JICA's views that the accounts should be settled in Bank of Mongolia. A member commented that the disadvantage of having accounts with Bank of Mongolia is that they will not pay any interests on the accumulated funds. The members agreed on the relocation of revolving fund accounts to the BOM, although the bank might be asked to bear some interests.

7) Audit report;

The Project Office has introduced to the members the final auditing report which was prepared by the Ulaanbaatar Audit Company, and has read the conclusion of the report. CSC approved submission of the final report to JBIC (presently JICA).

8) Disbursement for sub-projects from RF/A;

The Project Office informed the members on the necessity of financing the approved sub-projects from the funds in the revolving fund accounts as the replenished amount in the recovery stage is only 2/3 of the amount spent on the preceding disbursements and decreasing in every request for replenishments. A member expressed to support using the funds in RF/A to finance the approved sub-projects because, once the sub-projects are approved by CSC, they have to be financed as soon as possible, and because the time is valuable for the SME who have already spent considerable time on the application processes. As a result of the policy discussion, the members agreed to approve the use of available funds in the RF/A for financing the approved sub-projects.

9) Bridge loan definition;

It was unanimously understood that, if a PFI's credit committee approved a bridge loan for TSL sub-loan and clearly recorded, then the sub-loan should be eligible for TSL financing, as it is not considered as refinancing.

10) Eligibility of "land and buildings";

According to the terms and condition of sub-loans stipulated in the on-lending L/A, the proceeds of the sub-loan was supposed not be used to finance purchase of land and other real property. A member therefore expressed doubt on the legitimacy of spending most of the funds on construction purposes, i.e., an application, in which 80 percent of funds is proposed to be spent for the construction of a building. However, it was concluded that this sub-project was approved as 80 percent of funds is going to be spent on a building for production purposes, not for lease or sale. In order to make it clear, it was unanimously agreed that the on-lending agreement should be revised to finance land and buildings required for the sub-project, and that MOF would seek JICA's approval on the revision.

In order to achieve more productive discussions on particular policy issues at the CSC meeting, MOF is of the view that CSC members would need to have training on related subjects on TSL implementation, which are not only procedural but has background on finance and fiscal policy.

10.2 Ministry of Finance (MOF)

The MOF receives the ODA loan proceeds and performs financial services through its accounts of S/As and RF/As set up with BOM, in accordance with the L/A concluded between GOM and JICA. MOF is responsible for management of disbursement, and repayment to and from PFIs. As of April 27, 2009, MOF has successfully disbursed 98% of the total TSL portion of the ODA loan (total amount = JPY 2,870 million) and there are no NPL so far in its sub-loans. It is observed that MOF's performance is satisfactory.

The MOF has organized CSC as the executing agency for JICA-TSL and is responsible for management of CSC meetings by holding its chairpersonship. Mr. Dorjkhand, Deputy Director of Department of Policy Coordinating for Aid and Loans, who succeeded the chair from Mr. Ragchaa in September 2007, is now in charge for implementation of JICA-TSL. He is implementing the project in chairing CSC and controlling S/As and RF/As, with assistance of a consultant team.

As far as the disbursement stage of JICA-TSL Phase I is concerned, the Project has been implemented in a satisfactory manner with respect to general aspects such as sub-projects

approval and disbursement processing. On the other hand, the administration of sub-loans and inflow of money from the PFIs is not always satisfactory. Repayment schedule for each on-lending loan is agreed upon between the MOF and PFIs, and is attached to the Contract Letter between GOM and PFIs. However, the payment date itself is not clearly defined in the documents which are prepared prior to actual disbursements. It is important that the schedule be actually reflected in the PFIs' contract, monitored by the MOF every month and proper action should be taken if deviancies are found.

In general, the Treasury Department of MOF is responsible for all the government fund flows, although at present, its involvement in JICA-TSL is limited only to the disbursement process, i.e., in-flow from JICA and outflow to PFIs. As long as RF/As are a part of the government funds, Treasury Department should also be responsible for in- and out-flows of these accounts. A part of responsibilities is to secure payments by PFIs of interest and principal repayment as scheduled. Treasury Department should take hold of the arrears situation. In view of additional cost, such as staff requirement, for Treasury Department, it will be much easier to continue the current operational arrangement to commission the daily operation to a PO.

10.3 Bank of Mongolia (BOM)

BOM holds S/As and RF/As and smoothly performs daily in and out money flow operations under instruction by MOF (Treasury). No operational problems are identified so far. Also, information on accounts such as statements or details of transaction is satisfactorily provided. Thus, BOM will be the best financial institution to also keep the accounts for Phase II of JICA-TSL.

10.4 JICA / JBIC

JBIC (currently JICA) has extended its non-objection basis approval for the application of the first three projects of each PFI. For the fourth project and onwards, JICA has been informed by receiving the applications for approved sub-loans, together with the minutes of discussion of CSC meetings. JICA has been consulted from time to time on the issues related to implementation of JICA-TSL.

It is a fact that it required quite a long time to obtain approval from JICA for the first three applications for sub-projects. Most of such cases were caused by insufficient preparation of applications by PFIs who had not necessarily been accustomed to long-term financing.

10.5 Consultants and Technical Assistance (TA)

The consultants, composed of three international and three national, have been engaged in the services to assist MOF to undertake implementation of JICA-TSL under the contract with MOF. Furthermore, the senior national consultant plays a role as project coordinator and, at the same time, has been designated to be the authorized signatory for the issues vis-à-vis JICA together with the Vice-Minister of Finance. The performance of the consultants is summarized below according to the terms of reference for their services:

(1) Project Supervision

1) Production of a manual for PFIs on the usage of the Project and of a brochure for information to SMEs, including indicative interest rates of sub-loans;

The Operation Manual for PFIs (PFI Manual), which is a joint product by the consultant and PFIs at the initial stage of TSL implementation, has been highly appreciated and used quite well.

2) Review of sub-loan applications in line with the eligibility criteria as well as then JBIC Guidelines for environmental and social impact consideration, and recommendation of the review results to the CSC for their approval;

So far, technical and advisory assistance have been provided for CSC and PFIs, which have been appreciated by CSC. The project coordinator is a top-level economist with a long government service experience. On the other hand, the national consultants that do not necessarily have sufficient experience in finance and PFIs have felt irritation in the communication with them, although they are top-class management in business operation, giving valuable advice to SMEs.

3) Support to the CSC for JICA concurrence of sub-loans as necessary;

JBIC (currently JICA) has extended its non-objection basis approval for the application of the first three projects of each PFI. It is a fact, however, that it required quite a long time to obtain approval by JICA for the first three applications for sub-projects despite the closer on-the-job training that have frequently been provided for PFIs on a man-to-man basis. Most of such cases were caused by insufficient preparation of applications by PFIs who had not necessarily been accustomed to long-term financing. The consultants targeted the capacity building of PFI staff rather than simply support CSC to obtain JICA's concurrence, which is highly appreciated by CSC as well as the PFIs.

4) Support to CSC for instructions to Bank of Mongolia (BOM) for disbursements of sub-loan funds to PFIs;

For the disbursement stage of JICA-TSL Phase I, the Project Office, consisting of consultants under the control of CSC, manages daily operation. National consultants have prepared all the documents required for disbursement of sub-loan funds from BOM to PFIs, obtained all the signatures required according to government procedures, and instructed BOM to make disbursements to PFIs.

There were several cases of delay in disbursement which were caused by the absence of signatories. In such cases, exchange rate used to calculate the disbursement amount from S/A changed, resulting in different figure of disbursement, which requires a repeat of the whole processing from the beginning. Consultants consider that supplementary procedures in cases of absence of some signatories may be required to avoid delay in disbursements.

5) Support to CSC for production of quarterly progress report (P/R), including public relation activities for the Project, and project completion report (PCR) with the format of project status report in line with the L/A and project memorandum;

The L/A requires that, in order to provide JICA with the basis for supervision and monitoring of JICA-TSL, CSC furnishes Project Status Report every quarter during the implementation of the project. It is regrettable that only three reports have been furnished to JICA during these two years so far. The major cause of this failure seems to exist in the lack of PFIs' reporting obligation to CSC or the PO. It is suggested, therefore, that periodical reporting system should be agreed upon between PFIs and CSC or PO. PFIs, in general, have an established internal

loan monitoring system, and there should be no difficulty preparing such report. Consultants are ready to prepare the PCR upon completion of project implementation expected in near future.

6) Support to CSC for request for disbursements from JICA;

Disbursements to the government from JICA are based on a request for the initial disbursement and replenishment with summary sheets of payments for each category of TSL component presented. Disbursement application for expenditures on sub-projects above the threshold needs to be supported by related documents on the sub-borrowers and the purpose of the sub-loans. National consultants, with advice and assistance of the international consultants, have set up the internal procedures of the Project Office for disbursement, and have prepared all the documents required for disbursements from JICA.

7) Support to CSC for submission to JICA of annual external audit report of the Project;

CSC submitted the annual external audit report of the Project for the year 2007 by the time stipulated in L/A. This was done with full assistance of the international consultants, who supported the selection procedure, terms of reference for auditing, tender notice for auditor, and the audit report to be submitted.

8) Preparation of a PR plan, including identification of stakeholders, and implementation of PR activities in close coordination with the CSC and the PFIs;

To reach SMEs which are widely spread in the country, a promotional seminar on how to use the funds will be quite effective. The seminar is aimed to attract many SMEs to TSL, to start contact with them and to select good sub-projects. For this purpose, the technical assistance for SMEs has been extended in the form of marketing or introductory promotional seminars in Darkhan and Erdenet as well as Ulaanbaatar, which are highly evaluated by PFIs since applications for sub-loans substantially increased for all the PFIs after such seminars. In addition to such activities, high demand for training on project formulation, including feasibility study of projects, is also identified through discussion with representatives of the various industries as well as PFIs.

9) Daily monitoring of the Project.

The Project Office comprised of consultants not only monitoring the project but actually managing daily operation. Consultants' monitoring has been summarized in a TSL project status table twice a month, and reported to CSC. The consultants also collect valuable information of implementation of sub-projects from PFI officials for their needed prompt action.

(2) Technical Assistance

1) Training and advice to CSC on ODA Yen loan procedures and study tours on private and financial sector development by selected members of CSC to Japan, including supervision and governance, as well as environmental protection;

At the initial stage, internal office procedures for ODA Yen loan were set up with advice of the consultants. In addition, training and advices to CSC on ODA Yen loan procedures have been done from time to time as needed. Study tours was once planned, but could not be carried out due to budget constraints.

2) Training and advices to PFIs in the fields of the usage of the Project and term loan-related issues and a study tour by selected member of PFIs to Japan on the banking sector issues;

In addition to the preparation of the PFI Manual, seminars on appraisal for project loan have been held for four PFIs. Most of person-months scheduled for the services of international consultants, however, have been fully utilized for review and guidance on sub-loans to PFIs on the job basis. It is regrettable not to hold more seminars periodically due to budget constraints. High demand for training on appraisal for project loans to be provided for more bank staff, particularly for loan officers in branch offices, is identified through discussions with PFIs. Study tours could not be carried out due to budget constraints.

3) Training of SMEs on the usage of the Project, loan application, and bankable project formation in close coordination with JICA assistance.

Technical and advisory assistance for the final sub-borrowers in order to secure the best use of the funds has been provided in the form of preparation of applications for sub-loans through PFIs, and of on-the-spot consultation when the consultants visit sub-borrowers. Although cooperation with Mongolia-Japan Center for Human Resources Development (MOJC) programs for SMEs was discussed between MOJC and TSL consultants, a joint seminar was not realized due to conflict of schedules for both parties. MOJC, however, carried out their own program for SMEs for bankable project formation with information provided by the consultants.

(3) Study

1) Development of domestic term-finance market strategy in close collaboration with GOM and donors, and

2) Development of private sector development and SME promotion strategy.

These studies are yet to be developed, which shall be done in this year.

(4) External Audit

1) Out-sourced to an internationally reputable audit firm by the consultant team on the Project, in line with international accounting standards.

CSC submitted the annual external audit report of the Project for the year of 2007 by the time stipulated in L/A with full assistance of international consultants, who supported selection procedure, terms of reference for auditing, tender notice for auditor, and audit report to be submitted.

10.6 Major Implications

The following are the identified implications with regard to implementation organizations for JICA-TSL Phase I:

- In the survey conducted, PFIs expressed their utmost concern on the processing period required for obtaining approval for sub-loan applications. There is a request from PFIs to have more CSC meetings to accelerate decisions. The functions and quality of works

performed by all the organizations relevant to implementation of JICA-TSL should be revised and improved;

- Most cases requiring quite a long time to obtain approval for applications for sub-projects were caused by insufficient preparation of applications by PFIs who had not necessarily been accustomed to long-term financing. High demand for training programs on project loan appraisal is identified through discussions with PFIs. These will be provided for more bank staff, particularly for loan officers in branch offices;
- CSC is implementing JICA-TSL with assistance by consultants. However, no more services by international consultants are available due to budgetary constraints, and services by national consultants will also be terminated at the end of this year. The JICA study team has apprehensions on the sustainability of TSL;
- MOF is of the view that CSC members would need to have training on related subjects on TSL implementation, which are not only procedural but with background on finance and fiscal policies in order to achieve more productive discussions on particular policy issues at CSC meetings; and,
- Technical and advisory assistance for the final sub-borrowers to secure the best use of the funds has been provided only in the form of preparation of applications for sub-loans through PFIs, and of “on-the-spot” consultation when consultants visit sub-borrowers. Although cooperation with MOJC programs for SMEs was discussed between MOJC and TSL consultants, a joint seminar was not realized due to scheduling for both parties. High demand for training on project formulation including feasibility study of project is identified through discussion with representatives of various industries as well as PFIs.

CHAPTER 11 IMPACTS AND BENEFITS

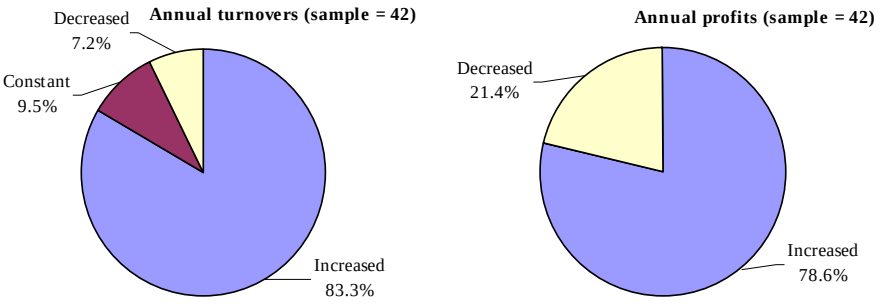
11.1 Impacts and Benefits on SMEs and Economy

SMEs form the backbone of Mongolia's private sector, and expansion and improvement of their business operations would be vital in sustaining economic growth and enhancement of employment. JICA-TSL is expected to contribute to the growth of Mongolian SMEs in the agricultural / animal husbandry and industry manufacturing sectors in particular, by facilitating investment opportunities and financial access to long-term loans of commercial banks. The term-lending credit market would provide financial services for growth-oriented SMEs which are not financed. JICA-TSL is also expected to address one of the major issues of national economy, i.e., growth of exports or import-substitutions.

(1) Expansion and Improvement of Businesses

As of this SAPI study (March 2009), some 23.3% of the entire sub-borrowers (both SME and environmental protection loans) have completed the sub-projects, based on replies to questionnaires given to sub-borrowers (20 enterprises out of 86 collected ones). Accordingly, it is considered still early to assess the overall growth of sub-borrowers as a result of their sub-loan projects. However, if allowing to add the sub-borrowers which passed over one year since disbursement to such completed sub-projects, the number of sample enterprises possibly qualified for growth assessment reaches 42 (almost half of collected ones).

Based on the trend of annual turnovers of such sample enterprises during the period between 2006 (defined as before JICA-TSL) and 2008, almost 83.3% (35 enterprises) have increased their turnovers, if compared to the level before the sub-loan project. Annual average of turnover growth of such enterprises reached about 34.1%[1] during this period. On the other hand, sample enterprises which answered "constant" or "decreased" account for 16.7%. The result is deemed quite promising, revealing that SME sub-borrowers of TSL have largely expanded their operations. This is despite facing the tough economic situation since the autumn in 2008. It is further noted that all enterprises with positive trend of turnovers strongly (25.7%), or somehow (74.3%), relate such increases in sales with their sub-projects. Most of them stated that improved competing performance has accounted for the expansion of their turnovers, followed by the expanded markets, and improved prices of goods or services.



Source: JICA study team

Figure 11.1.1: Trend of Turnovers and Profits of TSL Sub-borrowers (Compared to Before the Project)

[1] Calculated from 31 sample enterprises (out of 35), which answered data of turnover for every last three years ('06-'08).

In the case of annual profit trends (during the same period as above) of sample enterprises, as many as 78.6% (33 enterprises) have increased their profits, if compared to the level before engaging in sub-loan projects. Growth of profit of such enterprises reached about 67.6%[2] on average during the same period. The result is still promising, revealing that SME sub-borrowers of TSL have largely improved their business performance, although confronted with continuous pressures on costs of major materials and fuels in Mongolia. It is further noted that 84.9% of enterprises with positive profit trends strongly (27.3%), or somehow (57.6%), relate such improvements in profits with their sub-projects. Most of them stated that the better sales performance has accounted for the positive trend of profits. It is however noted that some 21.4% of sample enterprises (9 enterprises) replied "decreased" in profits, citing unexpected increases in material / fuel costs as reasons.

Comparison with overall growth trend

Comparing with the growth trend of business operation of the entire Mongolian SMEs, the sub-borrowers under JICA-TSL appear to have served better to the growth of SME sectors. Focusing on sales volume of the industrial sector, sample sub-borrowers (26 enterprises those belonging to the industrial sector out of the said 42 ones) of JICA-TSL has collectively increased their sales by 48.9% during 2007 to 2008. This is comparable to the national statistical office figure of 30.4% for the entire SMEs in the industrial sector, during the same period. This also shows that JICA-TSL has positive impacts to the growth of the SME sector in Mongolia.

(2) Expansion of Employments

Sub-borrowers, through their new investment activities or expansion of business operations, are also expected to contribute to creation of employment, which is one of the most critical issues in Mongolia. Judging from the trend of the number of employees (during the period between 2006 and 2008) in sample enterprises, over 88% (37 enterprises) have increased their employments, if compared to the level before engaging in sub-loan projects. The result is quite promising, revealing that SME sub-borrowers of TSL have largely expanded their employments and consequently, their business operations. It is further noted that 83.8% of the enterprises with increased employments strongly (24.3%), or somehow strongly (59.5%), relate such expansions in employments with their sub-projects. Most of them stated that new business development requires more employees. Hence, better sales performance necessitates increase in employment.

During the period between 2006 (before TSL) and 2008, the number of employment generated by sample sub-borrowers (i.e., 42 enterprises which completed their sub-projects or passed over one year since disbursement), totals to 344 in net (taking into account those enterprises which decrease their employment). Looking at the entire enterprises with effective answers (77 enterprises: 86 in total, less 9 who did not answer the figure for number of employees), generated employments reached almost 650 in net. This is estimated to contribute to 1.2% of the latest number of employed (54.2 thousand, as of the end of 2008) in the industrial sector.

Comparison with overall growth trend

Comparing with the growth trend of employment of the entire industrial sector in Mongolia

[2] Calculated from 27 sample enterprises (out of 33), which answered data of profit for every last three years ('06-'08).

(data specific to SMEs is not available), the sub-borrowers under JICA-TSL appear to have contributed more to the growth of industrial employment. Sample sub-borrowers (those belonging to industrial sector, out of the said 42 enterprises) of JICA-TSL has collectively increased their employments by 31.0% during 2007 to 2008, comparable to actual reduction (the national statistical office figure of -2.1%) for the entire industrial sector during the same period. This also shows that JICA-TSL has positive impacts on the creation of employment in Mongolia.

(3) Access to Long-term Loans

The availability of term-lending based on reasonable terms and conditions would provide strong incentives for SMEs to move away from conventionally short-natured and high-cost borrowing arrangements. JICA-TSL is expected to contribute to the broadening access to long-term loans by the Mongolian SME sector. As of the SAPI study, almost 100 SMEs have been disbursed by JICA-TSL throughout sub-sectors, and accessible to long-term capital finance (6.4 years of maturity on average with less than 10% annual interest rates).

Out of 107 disbursed SMEs, 63 falls under the manufacturing sub-sector, which actually accounts to about 3.0% of the total registered SME units (less than 50 employees defined in TSL Phase I) in the Mongolian manufacturing sub-sector. Considering that most of other SMEs in this sub-sector have yet to access a similar type of long-term finance (over three years at least), said 3.0% in total manufacturing SMEs should be considered significant. The same figure reaches 0.9% in case of SMEs in the agriculture / animal husbandry sub-sector. It is noted that majority of disbursed SMEs under JICA-TSL had not experienced the borrowing of long-term capitals, as recorded in the sub-loan application documents. Accordingly, JICA-TSL has caused significant impacts to improved access of SMEs to long-term financing.

(4) Facilitation of Exports and Import-substitutions

In terms of positive benefits to the economy, promotion of exports and import-substitutions can be facilitated through investment activities of sub-borrowers financed by JICA-TSL. Such benefits can be observed particularly in the sub-sectors including agriculture / animal husbandry, and manufacturing. Referring to the proposals of sub-loan under JICA-TSL, more than 40% of sub-projects have been oriented for exports and import-substitutions.

Table 11.1.1 Share of Export- and Import-substitution-oriented Sub-projects

(in JPY Million)

Sector	Total		*of export-oriented*		*of import-substitution*	
	No. of sub-loan	Cost of Sub-project	*No. of sub-loan*	*Cost of Sub-project*	*No. of sub-loan*	*Cost of Sub-project*
Agriculture / animal husbandry	17	369	*0 (0.0%)*	*0 (0.0%)*	*12 (11.2%)*	*266 (5.9%)*
Manufacturing	65	2,994	*4 (3.7%)*	*319 (7.1%)*	*27 (25.2%)*	*1,310 (29.2%)*
Service & others	25	1,123	*2 (1.9%)*	*108 (2.4%)*	*1 (0.9%)*	*74 (1.6%)*
Total	107	4,486	*6 (5.6%)*	*427 (9.5%)*	*40 (37.4%)*	*1,650 (39.2%)*

Source: JICA study team

Those sub-projects oriented for import-substitution include productions of processed meat, vegetables (or their processing), dairies, furniture, beverage (mineral water) and construction materials. On the other hand, only a few sub-projects are intended to promote exports, with a range of products and limited destinations such as Chinese and Russian markets. Referring to

the proposals of sub-loan under JICA-TSL also reveals that machineries and equipment procured by sub-projects are mostly imported from China, Korea and the Western and Eastern European countries. Meanwhile, imports from Japan are not yet recognized in the disbursed sub-projects.

11.2 Environmental Impacts and Benefits

To evaluate the environmental impacts and benefits of TSL-Phase I, all 16 EPL projects as of February 20, 2009 are identified as subject projects for the survey. Out of these projects, one EPL project, namely Golomt Bank's "Expansion of Brick Production", is excluded from this review because its eligibility and relevance as EPL is questionable as discussed in Section 6.5 of Chapter 6. The other 15 EPL projects are selected as the subjects for the survey.

As of April 2009, all of the said 15 EPL projects of JICA-TSL Phase I are on either construction or trial run stage and not fully operational. In this situation, environmental impacts and benefits were estimated basically considering the information available on the application forms and CSC evaluation reports of the EPLs. Additional relevant information was compiled by directly asking the sub-borrowers.

The estimate was made by prioritizing quantitative indexes, while qualitative estimate was applied in case data and information is insufficient. Furthermore, concepts such as life cycle assessment and best available technology was used for the evaluation process.

(1) Anod Bank EPL Projects

Anod No.2 (B) Construction of Semi-processed Cokes and Briquette Plant

The construction of a semi-processed cokes and briquette plant is being implemented by Sharyngol Co., Ltd., aiming at the production of cokes with value added, such as briquettes, at a production rate of 50,000 tons/year. The impact of this product yields in the final consumer side replacing the current raw coal to briquettes used for heating and cooking. The significance of this shift in consumption may affect positively in energy saving and in the mitigation of air pollution due to higher caloric value and less pollutant contents.

Basically, the target markets for the coal briquette are Ulaanbaatar, Darkhan and Erdenet highly populated areas. Since the process is designed to produce semi-coke and coal briquette, the production for such can be adjusted to the market requirements.

In mid-April 2009, Sharyngol is still constructing its plant in Darkhand aimag's industrial area, with equipment imported from China. Chinese engineers are helping finalize the construction until end of April, and planned to start-up the trial run for the production of semi-coke and coal briquettes from the beginning of May 2009.

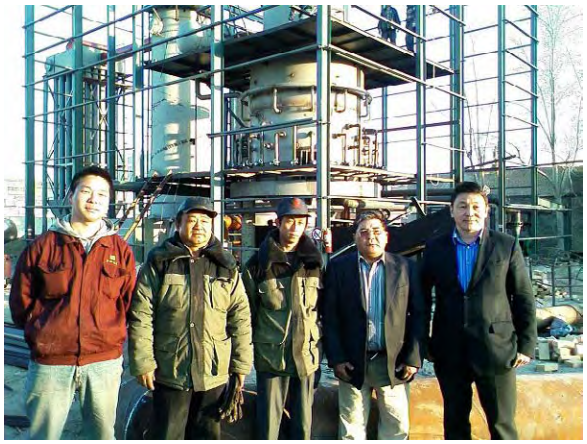
Based on the information from Sharyngol regarding the caloric value of the coal briquettes, the value estimated to be around 6,500 Kcal/kg is 25% higher than raw coal of their mine[3]. This characteristic permits less consumption of coal to generate same amount of energy in heating stoves. The moisture of 8%, 53% less than raw coal, results in virtually smokeless combustion on heating stoves and cooking tools used in households and others.

[3] Note: Caloric value of coal briquettes available ranges around 4,000-8,000 kcal/kg. JBIC's Environmental Sector Study in Mongolia (including development of business plan for clean coal briquette production). February 2006, estimated a caloric value of 6,000 kcal/kg for the proposed coal briquette.

Regarding the emission of particulate matter due to ash generation, this depressed to 15%, which is far less than the raw coal emission of 44%. Absence of sulfur content in the briquette allows practically zero emission of SO_2.

The company estimates an annual energy consumption of 2,760 kW-h (JBIC study estimated an energy requirement of 3,780 kW-h for the production of 30,000 tons of CCB). This is equivalent to 0.05 kcal per kilogram of produced coal briquette (2,760 kW-h / 0.00116279 Kcal/kW-h / 50,000 t / 1,000 kg/t). Regardless of its apparent underestimation, the value is depreciable with respect to the caloric value savings. Furthermore, the energy required for the transportation of the coal briquette to the market will be the same as raw coal. Higher caloric value makes the energy balance favorable for the briquette, due to the expected lesser consumption.

The following pictures show the condition of construction works during the middle of April. Right-side photograph shows the General Manager of Sharyngol (rightmost) and Chinese engineers in charge of the plant construction.



(Source: JICA study team)

Figure 11.2.1: Sharyngol Co., Ltd. Plant of Semi-coke and Coal Briquette in Construction

Anod No.3 (B) Small-scale Sewage Water Cleansing Project

The small-scale sewage water cleansing project is executed by Naran Rashaan Co., Ltd., aiming at the installation and maintenance of household wastewater treatment facilities, using the “sequencing batch reactor (SBR)” system. This is the adapted technology for small-scale operations commonly known as “activated sludge process”.

Since the investor is arranging importation of the equipment from Germany, the impact of the project was estimated considering the information obtained from the company’s director.

The impact of this project yields in the fulfillment of effluent standards through the costumer’s establishment of wastewater quality. The facilities permit improvement of regulated parameters such as COD, BOD, nitrogen and phosphorus for the effluents to be discharged to surface waters or infiltrated to ground soil. With the supplementary pipeline connection, it is possible to reuse the treated water for toilette flushing, resulting in the reduction of water consumption.

Naran Rashan is unable to estimate exactly the performance of the SBR system. However, it is expected that recommended parameters as per USEPA’s Wastewater Technology Fact Sheet

Sequencing Batch Reactors will be meet. In other words, the SBR system can treat sewage quality to less than 10 mg/L of biochemical oxygen demand, 10 mg/L of total suspended solids, 5 mg/L of total nitrogen and 1 mg/L of total phosphorus.

The negative impact of this system is the generation of sludge, a kind of waste requiring proper treatment for its disposal. Additionally, consumption of energy for the treatment plant must be accounted for in the evaluation of the impact. This information however is not available.

(2) Capitron Bank EPL Projects

Capitron No.8 (B) Expansion of Bee Farm

The bee farm expansion project is initiated by Argangat Partnership. Its objective is to produce honey and its environmental effect is biodiversity conservation of the flora in their affected area, located in the buffer zone of Tujin Pine Forest, which was established through the regulation of special protected areas. The target area located in Shaamar soum has an extension of 51,100 m^2, which has distributed micro-ecoregions of taiga, forest-steppe and steppe-desert. The third part of the territory is covered by pine, birch, poplar trees and around 0.5 hectares by bushes.

Facilities for this project are under construction. Hence, the impact due to the implementation of this project can be made only through estimations. The evaluation of the impact for this kind of project can be realistically performed by monitoring the affected ecosystem, comparing the current situation with the baseline data. Unfortunately, the latter information is not available for making comparisons. Furthermore, due to the scale of the project, the effort for obtaining such information can not be justified.

However, the study team agrees with the opinion of CSC to classify this type of project as EPL regardless of the inability to measure its impact quantitatively. This consideration is in line with the policy of the MONET in promoting ecosystem conservation activities, and in compliance with the Law on Special Protected Areas.

The remaining issue is the investor being unable to submit information regarding energy consumption for the process of manufacturing, and required transportation of goods.

Capitron No.13 (B) Recycling of Technical Oil

A technical oil recycling project is implemented by Hi Bi Oil JSC. Its aim is to regenerate used oil to be reused as lubricant for major industries of Mongolia, such as copper mining and cement factories. The already constructed facility has a nominal capacity to process 2,400 tons of used oil per year, producing 1,200 tons of regenerated oil (yield rate of 50%). At the design stage, 70% regeneration was estimated. However, the operation parameters are being adjusted to improve the process performance.

The company has no technical capacity in analyzing the quality of used oil, the raw material for processing and comparing the quality of regenerated oil produced. Thus, quantitatively monitoring the inherent environmental impact is not possible. As of date, consumption of energy for the transportation of used oil and distribution of regenerated oil is not documented due to its outsourcing for related services.

Meanwhile, the company is analyzing to treat the final waste-oil to sell as raw material for the production of asphalt.

The following pictures show the current situation of the installed facilities. Picture at the left side shows the processing plant consisting of heated pressurized filtering system and a batch distillation column for the separation of light and heavy oils. The right side picture shows the storage tank system for the regenerated oil. It is noted that Hi Bi Oil case is a unique EPL project with tangible outcome during the study period.

Source: JICA study team

Figure 11.2.2: Used Oil Regeneration Facility of Hi Bi Oil Co., Ltd.

Capitron No.27 (B) Renovation of Individual Boiler Facility (1)

The project is initiated by Anu Service Co., Ltd. It aims to replace the HOBs of the existing old facilities. The company imports equipment from Hungary. Hence, the following estimation is based on the current performance of existing similar HOBs.

The Hungarian Carborobot boiler is considered the best available technology, catalogued by the experts of the Heat Supply Faculty of the Mongolian University of Science[4], by means of energy efficiency and air pollution prevention skills. Due to energy conversion efficiency, the consumption of coal can be reduced from 9,057 tons/year to 2,916 tons/year.

The emission of CO_2 produced for the oxidative combustion should be reduced from the current 1,351 mg/m^3 to 501.2 mg/m^3, allowing mitigation of more than 60%. Moreover, it improves the reduction over the mass balance as a result of the reduction in coal consumption. Emission of NO_X before and after the replacement of boilers can be improved from 193 mg/m^3 to 108.8 mg/m^3, and SO_2 from 377 mg/m^3 to 147.3 mg/m^3. Additionally, fly ash can decrease from 1,012 mg/m^3 to 799.8 mg/m^3.

Capitron No.28 (B) Renovation of Individual Boiler Facility (2)

Capitron No.29 (B) Renovation of Individual Boiler Facility (3)

[4] Note: The Faculty conducted the market study of HOB and coal-fired water heaters in six districts of Ulaanbaatar city as part of the project "Capacity Building for Development and Implementation of Carbon Finance", implemented by MONET with support of World Bank PHRD.

Other two projects conducted by two enterprises, Parasky Co., Ltd., and UCIG Co., Ltd. are identified to perform similar features as the above project of Anu Service Co., Ltd. These also involve replacement of obsolete boilers with the same Hungary-made HOB model.

(3) Khan Bank EPL Projects

Khan No.3 (B) Fuel Briquette and Stove Manufacturing Plant

A fuel briquette and stove manufacturing plant is constructed by Dayar Trade LLC. It is intended to produce pressed coal from burn-used coal waste, cattle manure, wood chips and clay.

The company is preparing the scale-up design of the plant from the experimental bench-unit. The following estimates of the caloric value and the smoke quality of the pressed coal are based on the test performed on samples produced by the bench-unit. The test was conducted in the laboratory of the Center of Standardization and Metrology of Bayankhongor aimag.

The waste content of pressed coal is 65% and has a component to reuse residual energy in coal waste. The caloric value, 5,300 Kcal/kg, of pressed coal is higher than the average value for raw coal available in Mongolian market, which is 13%.

The company will be able to estimate the energy consumption of their facility when the scale-up design of the plant is completed. Nevertheless, it is expected that the value depreciates with respect to the caloric value savings. Furthermore, the energy required for the transportation of the pressed coal to the market will be the same as raw coal. Relatively higher caloric value makes the energy balance favorable for the pressed coal due to the expected lesser consumption.

Khan No.8 (B) Sea Buckthorn Plantation

This project is implemented by CCT-Od LLC. It is intended for dry regions adaptable to shrub plantation to be harvested in a few years.

The company is preparing plantation works commencing from the current spring season. The irrigation system is under construction, with a supply capacity of 150 liters per second (L/s) by gravity flow, and with a water source on Borshoon River. The average water flow is 1,500 L/s at the uptake point.

Estimated biomass production of hippophae is 250-350 tons/year in a 100-hectare area. The water usage downstream of the uptake point is for the stockbreeding of around 15,000 animals. In the identified affected area, deep well for groundwater use is not being utilized.

Khan No.14 (B) Green Forest-Life Project

This Green Forest-Life project is executed by Andul LLC, aiming at the reforestation of the area affected by Erdenet Company's copper mining activity. Andul LLC imports its materials from Korea for the greenhouse construction, to be used for the nursery garden for forest seedling.

The expected effect is the restoration of landscape of zones affected by the extraction of crude ore and disposal of waste rocks from the pits and tailings generated in the mineral processing plant. Through tree-planting activities, affected land is restored to prevent scattering of dust from the areas disturbed by the mining operations.

The total area of the tailing impoundment of Erdenet mine that requires remedial works was estimated to be 1,800 hectares. For the current year, the aim is to perform rehabilitation activities for an estimated area of 600 hectares. A part of the area to be restored by reforestation is under negotiation by Andul LLC.

Around ten companies are waiting for the decision of Erdenet mine for the 600 hectares rehabilitation activities, which involve abatement of dust-scattering complaints. The following satellite image shows the location of the tailing dam with reference to the concentration plant and open pit locations. The mineral ore extracted at the open pit is transported to the concentration plant for the production of copper and molybdenum concentrates. The mineral waste generated known as "tailings" are transported by a pumping system to the tailings dam. For reference, the location of below described paper manufacturing factory, Razno Trans LLC, is plotted.

Khan No.16 (B) Mongolian Boiler - 21 Century

This project, involving the latest technology on heating stove, is implemented by Zalaa Tsagaan LLC. It intends to replace the heat-only boilers of the existing old facilities. The company decided to replace their current HOB system consisting of BZIU-100 model with a locally manufactured MZ-1500 boiler system.

The estimated energy efficiency was performed using the study of Mongolian University of Science as reference. It is noted that this was also used as reference for the Carborobot HOB, based on Capitron Bank's portfolio.

With the energy conversion efficiency, the consumption of coal can be reduced from the current 2,693 tons/year to 1,204 tons/year, saving 1,489 tons/year. The company is not able to estimate the exhaust gas quality of their facility. However, based on the existing MZ-1500 systems in Ulaanbaatar City which comply with emission standards, similar results are expected from this project.

Khan No.18 (B) Anti-dust Project

This project is conducted by Razno Trans LLC, aiming to mitigate dust scattering from tailings impoundment of mineral processing activity of Erdenet copper mine. It utilizes lignin, a commonly treated waste by-product, generated in its paper mill.

The company is applying a relatively new technology based on the properties of lignosulphonate for dust control. A traditional paper mill plant will be adapted for the production of lignosulphonate, in addition to the operation related to lignin separation. The sprayed solution of lignosulphonate mixture forms strong cohesion with the surface of the rock waste damp and tailing dam to abate dust scattering.

The total area of the tailing impoundment of Erdenet mine requiring remedial works is estimated at 1,800 hectares. Of these, 600 hectares is planned to be rehabilitated this year. Razno Trans is negotiating to deal with the problem for over 130 hectares each year.

As of date, the company is unable to submit information regarding the effluent treatment facility of their project, as well as those related to energy and water consumption of the proposed process. The company has not performed analysis for their effluents containing lignin waste in the past. However, the new process will recover all lignin generated in the

process of lignosulphonate. Consequently, the pollution load will be considerably reduced after the installation.

The following pictures show the Razno Trans' paper-mill section for lignin separation, which will be converted to lignosulphonate production. It also shows the site for the remedial activities related to tailing impoundment of Erdenet mine.

(Source: JICA study team)

Figure 11.2.3: Razno Trans Lignin Separation Filter (Left), Area for Remediation (Right)

(4) Xac Bank EPL Projects

Xac No.4 (B) Production of Briquette and Light Building Block Project

This Briquette and Light Building Block project is implemented under Tanu Tulsh Co., Ltd. Its objective is to produce 25,000 tons of pressed coal per year during the winter seasons. The caloric value estimated as 4,000 kcal/kg is 13% less than the raw coal latent capacity, as it contains clay in the pressed coal. Nevertheless, the pollutant contaminants in exhaust gas are expected to be lower by 40-50%, according to the information submitted by the company.

Regarding the building blocks produced, the company informs that said material could provide heat insulation capacity of three-times higher than the bricks presently available in the local market.

(5) Zoos Bank EPL Projects

Zoos No.12 (B) LPG Project

This project is conducted by Erdene Ulzii Co., Ltd. Its aim is to produce gas at locations near the costumer's vicinity, in order to reduce transportation energy consumption.

The project involves establishment of a gas bottling plant in Bulgan aimag, which will be the center for gas cylinder distribution to the Mongolian western aimags market, such as Khovd, Zavkhan, Uvs and Bayan-ölgii. Energy resources for these aimags consist mainly of extremely limited firewood. It is noted that coal availability is worse considering its far location from the coal mines.

Presently, propane gas is sourced from Ulaabaatar. Alternatively, firewood is being used for related purposes. Hence, the expected impact of the project is the saving of energy for the transportation of gas cylinders and the reduction of fuel-wood consumption as alternative to the propane gas. Quantitative effect of these impacts is not determined since the relevant data is not available.

Zoos No.13 (B) Waste Gravel Processing Project

The Waste Gravel Processing project is conducted by Ariun Urnukh Co., Ltd., aiming at the restoration of areas disturbed by the gold mining activities. The company owns mining licenses for the exploration and extraction of gold in Serlegen soum of Töv aimag.

In order to comply with the environmental regulations inherent to the rehabilitation of disturbed areas due to their extraction activities, the opportunity to commercialize waste rock generated from the process of gold ore concentration was realized. Adding value through size classification of the waste rock using a system for crushing and sieving to produce uniform-sized gravels and sands, the products can be offered as construction materials. In normal cases, waste rocks must be damped in a proper way and treated to prevent dust pollution.

The company is in the process of selecting the equipment for crushing and size classification for the waste rock, and vehicles for the transportation of gravel and sand.

11.3 Impacts and Benefits on the Financial Sector

Through its implementation, JICA-TSL expects that commercial banks in Mongolia would enhance their financial services and realize financial deepening to address the long-term capital needs of SMEs. PFIs, in particular, are expected to develop their term-loan services, strengthen their positions in the term-loan market, and improve their skills in credit analysis and risk management of term-loans. All of these improvements, albeit intangible, would serve to enhance sustainability of the project (good management of sub-loan repayments and effective utilization of revolving fund account), and contribute further to the institutional development of the Mongolian financial sector.

At the same time, the confidence towards SME loans in commercial banks and PFIs is expected to be enhanced along with the improvements in term-loan processing and technical knowledge concerning credit analysis and risk management. As SMEs loan funds for their businesses, they would need further banking and financial services. PFIs are expected to capitalize on such derivative effects through their experience of JICA-TSL, and eventually expand their customer bases.

(1) Contribution to the overall supply of term-lending

During the period between 2007 and 2008, the overall supply of term-loan (over 5 years, or within 1-5 years in a narrow sense) to the Mongolian private sector has been largely augmented. Total term-loan issuance (over one year) to private sector has increased from MNT 143.8 billion during the first quarter of 2007 to MNT 293.2 billion during the same quarter of 2008. Based on records on long-term loans (over five years), issuance has also been largely improved to MNT 25.4 billion during the third quarter of 2008 from only MNT 1.3 billion during the first quarter of 2007, although still small in volume as compared to short- and mid-term loans.

JICA-TSL, which disbursed its funds from early 2007, has significantly contributed to realizing and sustaining such an increased overall supply of term-loans. The figure below shows the degree of contribution of term-loan disbursements, over five years in particular, under JICA-TSL. Although the share of disbursement under JICA-TSL varies according to season, term-loans disbursed by JICA-TSL account for 24.0%, on the average, of the total

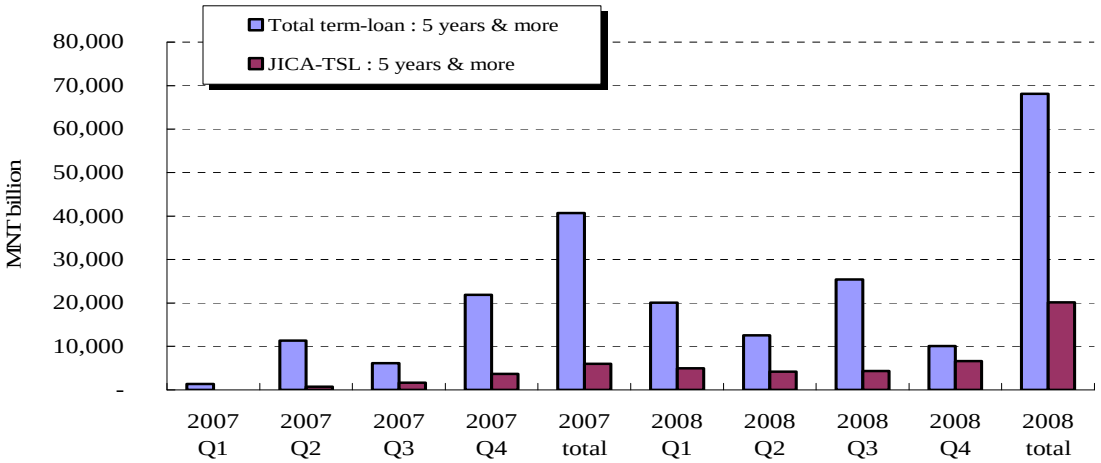
loan issuance with over five years. It ranges from 6.1% in the first quarter of 2007 to as high as 65.7% in the peak season (the fourth quarter of 2008).

Table 11.3.1: Trend of Term-loan Issuance to Private Sector

(in MNT billion)

		07Q1	07Q2	07Q3	07Q4	08Q1	08Q2	08Q3	08Q4	2007	2008	'07-08
Total	Total	350.5	571.6	477.7	577.8	566.9	563.1	518.6	364.2	1,977.6	2,012.7	3,990.4
	Within 1 year	206.8	323.6	305.4	348.0	273.7	271.2	242.2	205.8	1,183.8	993.0	2,176.7
	1-5 years	142.4	236.7	166.2	207.9	273.2	279.3	250.9	148.3	753.2	951.7	1,704.8
	Over 5 years	1.4	11.4	6.1	21.8	20.0	12.6	25.4	10.1	40.7	68.1	108.8
Agriculture	Total	14.1	18.5	8.1	5.2	11.4	14.6	37.6	2.5	45.9	66.2	112.1
	Within 1 year	3.0	15.1	3.6	4.2	6.2	5.5	21.4	0.6	26.0	33.8	59.8
	1-5 years	11.1	3.4	4.5	1.0	4.4	7.1	8.5	1.2	20.0	21.1	41.1
	Over 5 years	-	-	-	-	0.8	2.1	7.7	0.7	-	11.2	11.2
Industry	Total	128.7	291.0	223.6	241.5	285.3	217.4	188.0	147.4	884.7	838.0	1,722.7
	Within 1 year	61.8	134.6	118.6	120.4	154.0	96.0	93.2	60.8	435.4	403.9	839.3
	1-5 years	66.2	145.5	100.9	117.9	118.0	118.1	90.6	79.4	430.5	406.1	836.6
	Over 5 years	0.6	10.9	4.2	3.2	13.3	3.3	4.3	7.1	18.8	28.0	46.8
Services	Total	207.8	262.1	245.9	331.1	270.2	331.1	293.0	214.3	1,047.0	1,108.5	2,155.5
	Within 1 year	141.9	173.9	183.2	223.4	113.5	169.7	127.6	144.4	722.4	555.2	1,277.7
	1-5 years	65.1	87.8	60.8	89.0	150.7	154.1	151.9	67.7	302.7	524.4	827.1
	Over 5 years	0.8	0.4	1.9	18.7	6.0	7.3	13.4	2.2	21.8	28.9	50.7

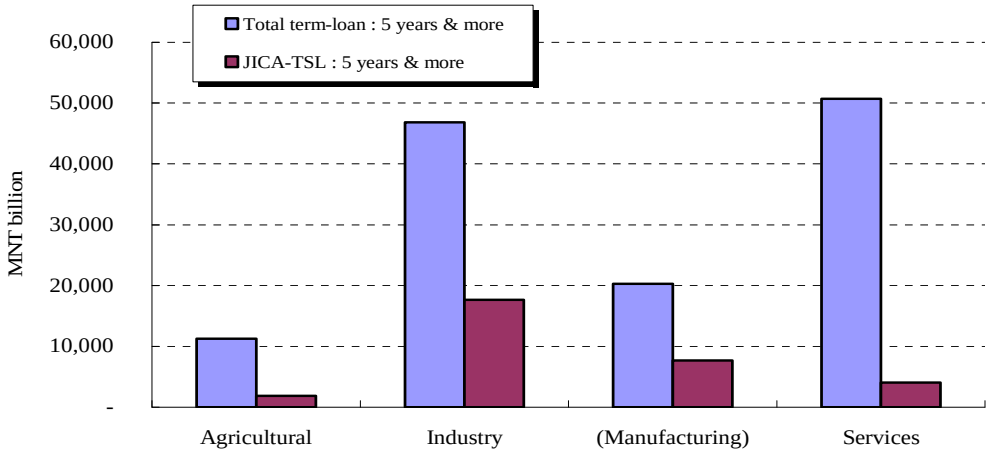
Source: Bank of Mongolia, Loan Report, the latest



Source: JICA study team

Figure 11.3.1: Contribution by JICA-TSL for Supply of Term-loan (over 5 years) to Private Sector

Looking at the contribution by sector, JICA-TSL has issued almost 37.7% of term loans (over five years) directed to the industrial sector, and accounted for a higher share of 37.9%, if limited to the manufacturing sub-sector, between 2007 and 2008. In the same period, JICA-TSL has also provided 16.8% of term loans awarded to agriculture / animal husbandry sub-sectors, followed by 8.0% to the services sector.



Source: JICA study team

Figure 11.3.2: Contribution by JICA-TSL for Supply of Term-loan (over 5 years) by Sector

In conclusion, about a fourth of the capital investments made by the Mongolian private sector in the last two years could not have materialized without the term loans provided by JICA-TSL. Therefore, JICA-TSL evidently contributed to expediting investment activities of Mongolian SMEs and sustained sufficient supply of long-term capital during the period. This is more apparent during the fourth quarter of 2008, when overall loan issuance has been drastically tight due to the overall credit squeeze by commercial banks, brought against the sub-sectors of construction and real estate in particular. During this downward period, JICA-TSL has continuously enhanced its presence in the term-loan market, reaching a share of 94.9% in long-term loan issuance. Otherwise, there could have been adverse impacts in the term loan market.

(2) Improved capacity of long-term loan assessment

From the reply to the questionnaire, the following comments regarding long-term loan assessment were received from PFIs;

- The concept of long-term assessment including Net Present Value (NPV), Financial Internal Rate of Return (FIRR) and Debt Service Coverage Ratio (DSCR) was quite new to the loan officers. This encouraged them to pursue further learning.
- Through long-term loan assessment, loan officers learned not only the technique for assessing projects (such concepts as NPV, FIRR and DSCR), but also the need to listen to clients and collaborate together to formulate projects. This is required in the case of SMEs, but also applicable when dealing with big corporations.
- Because the bank and the borrower cooperate together and exchange views in formulating projects, their relationship and understanding deepens, and business ties are strengthened.
- Loan officers learned the importance of market research, based on which, an accurate estimation of sales and business plan can be drawn.
- Through the exchange of views with the borrower, loan officers often realize that some SMEs have excellent ideas related to new productions or expansion of existing facilities and services.

- Through the preparation of loan applications, English knowledge of loan officers was improved.

The fact, that almost 100 sub-projects / loans based on long-term lending were processed for SMEs by seven PFIs, must have a significant impact to their achievement. Especially, the way the first few loans were given, face-to-face guidance based on actual cases by international consultants must have contributed to the accumulation of experience of PFIs' account officers.

(3) Expansion and diversification of client base of PFIs

The number of sub-loans handled varies among PFIs. Khan Bank, Golomt Bank and Capitron Bank applied for about 30 loans each. Zoos Bank processed 12 loans while the rest, TDB, Xac Bank, and Anod Bank, handled only a few. However, all PFIs, especially Khan, Golomt and Capitron, utilized JICA-TSL in dealing with new clients.

In general, after receiving the request from a borrower, the loan request is registered and an interview is carried out to check whether the borrower is eligible for the TSL Project. During the interview, TSL Project is explained to loan applicants, consequently initiating exchange of views.

According to PFIs, public relations related to the JICA-TSL Project were promoted to the existing clients as well as new clients during the interviews. Depending on the PFIs, the project is used to develop relationship with new costumers and expand client base. The following presents the result due to the initiation of JICA-TSL.

Table 11.3.2: Expansion of Client Base under JICA-TSL Project

PFIs	No. of loans disbursed	New clients	Existing clients	Percentage of new clients (%)
Khan Bank	29	19	10	65.5
Golomt Bank	27	9	18	33.3
Capitron Bank	29	24	5	82.8
Zoos Bank	12	2	10	16.7
Xac bank	4	2	2	50.0
TDB	4	2	2	50.0
Total	105	58	47	55.2

Note: The above is based on application (to CSC) as of 3/2009, excluding Anod Bank's 6 sub-projects. Golomt Bank includes one additional sub-project to the number of sub-projects shown in Table 6.4.1.
Source: JICA study team through hearings with PFIs

Capitron Bank and Khan Bank were by far the most aggressive in dealing with new clients by utilizing the project, and more than 80% and 65%, respectively, of loans were from new borrowers. Other PFIs are less aggressive with approximately 40% to 50% are new borrowers. The most conservative PFI was Zoos Bank with a share of new clients of less than 20%.

In order to avoid the credit risk from new clients, almost all PFIs obtained related information from the Credit Information Bureau of BOM. PFIs also obtained information from banks with which the new clients have the existing relationships. It seems that the banking circle is small, and mutual relationship among banks is normal. Nevertheless, site visits, and collateral check and evaluation are carried out by the evaluator of the bank. According to Capitron Bank, although the margin of the TSL Project to PFIs is small, it has such merits in alleviating liquidity problem and expanding client base of the banks.

CHAPTER 12 SUSTAINABILITY OF THE PROJECT

12.1 Status of Repayment and Bad Debts

The first sub-loan was disbursed to the sub-borrower on May 14, 2007 in the amount of MNT 696 million for "Intensified Pig Farming Project" by Khan Bank. This sub-loan is allowed with a two-year grace period, so repayment is yet to be due. The second sub-loan was disbursed to the sub-borrower on May 25, 2007 in the amount of MNT 12 million for "Felt and Felt Shoes Project" also by Khan Bank. This sub-loan has no grace period, so repayment by the sub-borrower had started in June 2007, but repayment of relevant on-lending loan started only in December 2007 because of the six months gap in maturity. As RF/A to receive repayment was not opened yet at that time, the first repayment of principal was received only in February 2008 in the amount of MNT 750,000, to be repaid for three months.

Since then, repayments of principal have been received on schedule as per agreed upon from all PFIs. So far, only five sub-loans in MNT and one sub-loan in USD have started repayment. A total of MNT 187 million and USD 6,500 have been recovered, of which MNT 150 million are the prepayments afore-mentioned (see 8.2.(2)).

However, JICA study team noted that one sub-project, a wool-washing project with loan amount of USD 600,000, have failed payment of interest, although the PFI, Khan Bank, keeps payment of interest on the on-lending loan.

12.2 Monitoring of Repayment

Repayment schedule for each on-lending loan is agreed upon between the MOF and PFIs, and is attached to Contract Letter between GOM and PFIs. It is important that the schedule shall be actually reflected in the PFIs' action as scheduled. CSC is also required to monitor the PFIs' accomplishment every month, and to take proper action if deviancies are found.

In this context, CSC should establish a money flow administration system. In fact, PFIs have already started to repay principal on only six projects at present, but pay interest on all the on-lending loans. So far, CSC represented by MOF functions as decision-maker, but does not perform fund management as it lacks operational staff. CSC's major activity has rather been concentrated on project appraisal and disbursement. From now on, their efforts should also be directed toward loan administration, since the number of sub-loans to be repaid will far more increase in near future. For this purpose, CSC should establish an efficient and effective loan administration system, including money flow projection.

With respect to fund disbursement for JICA-TSL Phase I, the PO, under the control of CSC, manages daily operation, although all the staff of the office comprises of consultants with only three years contracts, just enough for disbursement period. These consultants will conclude their services toward the end of this year when JICA-TSL Phase I will be completed. Meanwhile, operation of JICA-TSL will continue in order to finance the next generation of sub-projects out of the revolving funds. In general, the Treasury Department of MOF is responsible for all the government funds, although at present, their involvement in JICA-TSL is limited to only the disbursement process. The Treasury Department could not take hold of

even the arrears situation presently, but has intention to do so in near future. This issue has just been raised to the Treasury Department and is yet to reach conclusion as management of arrears may cause additional cost, such as staff requirement.

Management of the revolving funds will be a big issue, after the consultants leave the PO. The JICA study team would further clarify organizational arrangements to be made to sustain efficient management. It is most likely that CSC will continue to make the decisions on sub-loans to be financed out of the revolving funds, and the Treasury Department will follow up figures of inflows and outflows to/from RF/As. However, it will be much easier to continue the current operational arrangement to commission the daily operation to a PO with sufficient budget arrangement to be made.

12.3 Revolving Fund Accounts (RF/As)

So far, MNT 935 million and USD 364,314 has been received in RF/As, out of which MNT 550 million have already been utilized to finance 2 sub-projects. The balance of each RF/A is MNT 336 million and USD 312,571 (equivalent to JPY 52 million in total) for category A, and MNT 49 million and USD 51,743 (eqivalent to JPY 8 million in total) for category B.

In addition, interest of MNT 1.7 million and USD 813 (equivalent to JPY 185,191) on RF/As had been earned in 7 months, while RF/As were opened with Capitron Bank. MNT 1.7 million and USD 812 (equivalent to JPY 184,696 in total) after payment of bank charges are still kept in ex-RF/As with Capitron Bank.

The repayment of principals out of the current outstanding on-lending loans is projected at MNT 400 million plus USD 170,000 in 2009, MNT 1,700 million plus USD 1.5 million in 2010, MNT 2,500 million plus USD 2.3 million in 2011, and will reach MNT 3,000 million plus USD 2.1 million in 2012. In addition, the RF/As will receive interest of MNT 600 ~ 900 million plus USD 200,000 ~ 400,000 every year. The total inflow to RF/As will be MNT 1,389 million plus USD 0.6 million (equivalent to JPY 142 million) in 2009, MNT 2,590 million plus USD 1.8 million (equivalent to JPY 343 million) in 2010, MNT 3,302 million plus USD 2.6 million (equivalent to JPY 459 million) in 2011, and MNT 3,691 million plus USD 2.3 million (equivalent to JPY 453 million) in 2012.

Table 12.3.1 Projection of Fund Accumulation in RF/As

Year	Category A				Category B			
	In-Flow	Balance	In-Flow	Balance	In-Flow	Balance	In-Flow	Balance
	MNT million		USD '000		MNT million		USD '000	
2009/3/2		336		312		49		52
2009/3~12	1,054	1,390	388	700	70	119	94	146
2010/1~12	2,478	3,868	1,666	2,366	112	231	195	341
2011/1~12	3,106	6,974	2,353	4,719	196	427	243	584
2012/1~12	3,470	10,444	1,945	6,664	221	648	342	926
2013/1~12	3,216	13,660	1,034	7,698	242	890	358	1,284
2014/1~12	1,892	15,552	724	8,422	134	1,024	287	1,571
2015/1~12	1,379	16,931	358	8,780	97	1,121	277	1,848
2016/1~12	1,108	18,039	68	8,848	87	1,208	267	2,115

Note: This projection is based on about 90% of sub-loans outstanding and assumes same interest rate for the whole period.
Source: Compiled by JICA study team based on Project Office for JICA-TSL "Loan Amortization Schedules", Mar. 3, 2009

Presently, it is the good time to consider how effectively the funds will be controlled and managed to be used for economic development of the country.

12.4 Major Implications

The following are the implications identified from the standpoint of sustainability of JICA-TSL Phase I:

- CSC is required to monitor PFIs' action every month, and to take proper action if deviancies are found. For this purpose, CSC should establish an efficient and effective loan administration system, which should include money flow projection.
- The consultants will complete their services toward the end of this year, while the operation of JICA-TSL will continue in order to finance the next generation of sub-projects out of the revolving funds. Management of RF/As will therefore be a big issue after the consultants will leave the PO. Organizational arrangements should be clarified for the revolving fund management.

CHAPTER 13 RECOMMENDATIONS AND LESSONS LEARNT

13.1 Overall Scheme of JICA-TSL

(1) Overall Administration of JICA-TSL

The portion for SME Development of the JICA-TSL Phase I has already been fully disbursed. Toward the end of the recovery stage in replenishment, however, several sub-loan applications were foumd pending for approval by CSC or for disbursement, which could not be financed by the remaining balance of JICA-TSLand the current balance of RF/As. These applications had to be held pending further accumulation of revolving funds. Information on the availability of the loan proceeds is therefore important for proper control of the overall project.

Capitron Bank concentrates in rather large projects, resulting to about 40% of the loan proceeds distributed by only one PFI. CSC needs to ensure not to depend on very few PFIs.

In principle, a CSC meeting is held once a month. There is a request from PFIs to have more CSC meetings to accelerate decisions. Also, PFIs request to fix the date for holding the meeting to prepare well in advance for the meeting. The study team considers that these issues are rather internal and should be decided only by the Mongolian side.

PFIs also request to remove the restriction on the number of sub-loan applications per PFI to be submitted to one CSC meeting, which is contradictory to the principle of “first come, first served”. It is considered that this issue, like that on the issue on the frequency of holding CSC meetings, should be decided internally.

In order to achieve more productive discussions particularly on policy issues at the CSC meeting, MOF suggests that CSC members would need to have training on related subjects which are not only procedural but its background on finance and fiscal policy. It may be worthwhile to show how Japan achieved economic development out of nothing in this half century, so that CSC members can share a common philosophy on economic development of the country.

Basically, CSC has been successfully implementing TSL with assistance by consultants who manage daily operation. The consultants’ services will terminate at the end of this year. Since the project will continue, it is quite important that organizational arrangements be made for fund management securing repayment from PFIs and financing the next generation of sub-projects out of Revolving Funds covering both Phases I and II. In this view, it could be much easier to continue the current operational arrangement, i.e., to keep the Project Office staffed with the current consultants for daily operations.

(2) Disbursement Process

The PFIs express their utmost concern with the length of processing time for loans. Excluding the irregular cases, average processing time for the first three applications for each PFI is 248 days or about eight months. The average processing time for the fourth applications and

onwards is 182 days or approximately six months. Three main internal causes are blamed for the slow and stagnant appraisal, namely: i) environmental screening by MONET; ii) slow preparation of documents required by sub-borrowers; and iii) poor presentation of proposal.

Obtaining the EIA Report from MONET reportedly takes about a month. Although this would be considered much faster compared to other countries, a well-advanced preparation for the EIA Report from the SME side is preferable and most recommended.

Application formats to JICA, together with the Operation Manual, have been fully utilized by PFIs. However, PFIs are, now requesting the formats to be simplified so as to expedite processing. The present format needs to be simplified in structure and to avoid duplication of information. It is recommended that PFIs' documents for credit committee discussions be analyzed for reference to modify the application formats.

The PFIs are quite cautious about their clients' information being exposed to outside people, namely CSC. Therefore, the documents being submitted to CSC do not carry any financial information of the borrower, which makes it difficult to analyze impacts and benefits to sub-borrowers at later stage. Revision of the application formats should also take this aspect into account.

Moreover, the problem of translating Mongolian into English is also pointed out. PFIs took quite a time just to prepare English version of applications for sub-loans with satisfactory level, although this situation has been recovered when PO added national consultant with expertise in English and started to provide advices PFIs on how to express in English.

The sub-loans are available in MNT or USD, while GOM is obliged to repay the loan to JICA in Japanese Yen. Prior to this SAPI for JICA-TSL, MOF has requested JICA to reinstall the disbursement scheme adopted at initial stage of Phase I, i.e., keeping the Japanese Yen funds received from JICA in the treasury's Yen account and disbursing funds for sub-loans out of treasury's MNT or USD account, so that MOF may be able to avoid or minimize foreign exchange risk. The JICA study team would endorse this request by MOF. It is also preferable for Japan that the foreign governments keep Japanese Yen in their foreign reserve accounts.

The L/A stipulates that CSC should maintain adequate records and accounts to reflect the expenditures financed out of the loan proceeds. The PO currently keeps these records in forms of "Summary Sheet of Payments for the Accounts" and "Statement of the Accounts", together with bank statements of the S/A denominated in Japanese Yen. It is definitely necessary for CSC to administer on-lending loans in the currencies used. The project accounts in MNT and USD may be needed for this purpose. Such accounts will also be quite beneficial for audit purposes.

In order to provide JICA with the basis for supervision and monitor of JICA-TSL, the L/A requires that, CSC furnishes project status reports every quarter during the implementation of the project. It is unfortunate that only three reports have been furnished to JICA during these past two years. The reason for this failure may be due to the lack of any reporting obligation PFIs' to CSC or the PO. It is thus suggested that a periodical reporting system be agreed between these entities. In general, the PFIs have an established internal loan monitoring system, and the preparation of such report should be relatively easy on their part.

For a couple of cases of irregular implementation of sub-projects, such as discontinuance or delay of implementation due to various reasons, rules or strategies to cope with such cases

should likewise be set up. One is the prepayment of MNT 100 million in June 2008 from Khan Bank disbursed for "Plastic Bag Production Project", the implementation of which was discontinued when the partners decided to separate. They sold off all their assets and paid off all their loans. However, Khan Bank prepaid the on-lending loan only after six months of prepayment by the sub-borrower. In this case, the on-lending loan should have been prepaid immediately as well upon the prepayment of the sub-loan, which should be provided in operational rules.

Another case is prepayment of MNT 50 million in February 2009 from Zoos Bank disbursed for "Renovation and expansion of brick production processing factory", which was only approved 16.5 month after submission to PO. The company has been running construction business and brick production. During the period the company had been waiting for approval, the company reallocated collaterals for other investment loan. When Zoos Bank received disbursement after approval, the Bank found collaterals unavailable. Consequently, the sub-loan amount was reduced to half, and returned to the government. The unavailability of collateral was seen in other cases, too. As such, the rules for disbursement should be revised to make disbursement after confirming the availability of collateral.

(3) Revolving Fund

Out of 107 sub-projects under the JICA-TSL Phase I, 20 sub-projects are in operation, out of which 15 sub-borrowers have already started repayment of sub-loans. However, repayment of principal has started for six on-lending loans only. Moreover, the money received for repayment of principals is allowed to be kept by the PFIs for six months after such receipt per on-lending L/A. It is hard to justify such six month gap between the sub-loans and on-lending loans, except for a relevant clause in the on-lending L/A. It may be more reasonable for the money paid by sub-borrowers to be used for the repayment of on-lending loan without any substantial time delay, which shall then be used to finance other subsequent sub-projects. The JICA study team would therefore recommend some change in the on-lending L/A to stop the current practice.

In order to ensure repayment of principal and payment of interest as scheduled, GOM is required to issue invoices for receivable principal and interest for all the outstanding on-lending loans every month. The JICA study team would recommend establishing a well-controlled operational system for JICA-TSL.

Repayments of principal as well as payments of interest have been received on schedule from all PFIs. Anod Bank has kept paying interests since August 2008, but the payments due in February onward is yet to be received. Similar cases may take place in future, thus henceforth, CSC's efforts should also be directed to loan administration. CSC is required to watch PFIs' action every month, and to take proper action if deviancies are found. For this purpose, CSC should establish an efficient and effective loan administration system including money flow projection.

In this context, the Treasury Department of MOF is responsible for loan administration in principle, but at present, its involvement in JICA-TSL is limited only to disbursement process. It is strongly recommended that the Treasury Department should grasps payment and arrears situation and take timely and proper actions to PFIs, although this function can be outsourced to the Project Office staffed with consultants for daily operation.

PFIs are obliged to pay monthly interest calculated on the basis of 1/12 of annual interest regardless actual number of days elapsed in each month. This calculation seems to be a little bit strange basis, although we understand it simple for calculation of interest. The JICA study team would recommend that interest calculation be on the basis of what is generally practiced in Mongolia.

13.2 SME Development Loans

Although there is no definition of SME provided by the government when the JICA-TSL was formulated, the size of sub-borrowers has been stipulated in the on-lending L/A that the number of core staff be 50 or less. This current eligibility for sub-loan borrowers is not in conformity with SMEs as defined in the so-called "SME Law" enacted in July, 2007. While some overseas donors and government officials regard the definition of SMEs by the "SME Law" excessively wide, almost all the PFIs considers that the JICA-TSL be also managed according to this definition. Furthermore, as the requirement for employees is different among various industries, some PFIs have raised objection to stipulating eligibility only based on the number of employees. The JICA study team would recommend respecting the definition of SME in the "SME Law".

In fact, many parties concerned have the vague contention that the JICA-TSL fund should be earmarked for projects directly affecting the economic development of the country. However, it is difficult to restrict the types of industries which are eligible for sub-loan project because there is no project without any merit. As such, it may be necessary to strictly specify for what the sub-loan proceeds shall be utilized such that the project will be geared towards supporting the key industries that lead Mongolia's economic development.

The JICA study team would like to encourage long-term financing spreads out into the localities of the country. On the other hand, in view of rather scarce population, it may not be efficient to promote smaller industries in rural areas. Instead, infrastructure and trade firms may better be developed in order to secure efficient distribution channels. Varied viewpoints would deliberately be studied in order to recommend appropriate strategies on this issue.

It is worth noting that 15% of sub-loans are hitting the maximum ceiling of sub-loan amount specified in the project. It is commonly observed that support for bigger projects is requested by the government, PFIs and the business community. In order to achieve a firm economic ground of the country, the JICA study team would recommend the increase in the maximum sub-loan amount to USD 1 million.

In the formulation of the lending scheme for Phase II of JICA-TSL, sub-loan applications rejected by the PFIs will be prudently studied for what requirements cause such rejection. Standardized terms and conditions are applied for all sub-loans without consideration of the sector or corporate size of sub-borrowers. As a result, projects for medical or social services, which are rather less profitable but definitely essential for the people, have had difficult access to the TSL. For example, a sub-project for acquisition of hospital building and purchase of clinical and laboratory equipment for a new hospital specializing in chronic inflammation of liver and bile of virus and non-virus origins should be pointed out as a typical case. The sub-loan would be utilized for the purchase of equipment, while hospital building was already acquired through utilization of own capital. The application for this project was rejected by JICA as the financial rate of return (FIRR) of this project was estimated at 5%, which is far below the minimum 13% stipulated in loan documentation. However, the cash

flow itself was projected at positive level because the hospital building was acquired through own fund which was not obliged to pay back in a limited time.

All the PFIs requested for a free hand on deciding on sub-loan interest rate in order to develop industries on the basis of market-oriented programs and to strengthen their capability of project loans appraisal securing proper incentives for management of financial market. The PFIs consider that differences in impacts on the economy and society, and the creditworthiness of each sub-borrower should be reflected in varying sub-loan interest rates. The JICA study team recommends this flexibility in applying terms and conditions to allow the PFIs to make their own decision; on the other hand, it is also considered necessary to set up certain guidelines or preferential terms and conditions with regard to social projects, as PFIs tend to judge based on commercial aspects only.

In order to obtain sub-loans from the PFIs, sub-borrowers are obliged to provide collaterals. On the average, these are about 121% of the sub-loan amount after strict evaluation of recoverable value of collaterals. Many potential SMEs expressed their concern with unavailability of their collaterals to get sub-loans. In fact, several applications have not reached disbursement as collaterals initially expected were found unavailable. The JICA study team would recommend for GOM to promptly study the guarantee fund for operating SMEs so that they may get loans from banks without prior preparation of 100% collaterals.

About 1/4 of sub-borrowers has contracted in USD simply because of the lower interest rates compared to MNT borrowing. In case sub-borrowers decided to borrower in USD despite the sub-project was formulated on the basis of feasibility study appraised on MNT, this borrowing involves future exchange risk unless the sub-borrowers earn foreign exchange in their business. The JICA study team would recommend that PFIs may advise sub-borrowers on the exchange risks involved in USD borrowing.

The government is required to choose good, financially sound, and economically effective projects. To reach SMEs widely spread over the country, a promotional seminar on how to use the funds was effective to select good sub-projects. In addition to such activities, high demand for training on project formulation is also identified through discussions with representatives of various industries as well as the PFIs. The JICA study team recommends that sufficient budget for such technical assistance (TA) programs better be included in Phase II of the JICA-TSL.

13.3 Environmental Protection Loan

(1) Definition of Environmental Protection Loans (EPLs)

Throughout the implementation of JICA-TSL Phase I, the lack of definition on “what environmental protection would be” have obviously caused uncertainties and difficulties among the PFIs and CSC, particularly during the evaluation process of sub-loan applications. Such doubts have accounted for slower utilization of the EPL at the initial stage, approval of questionable EPLs, and poorly set indicators of environmental benefits (most sub-projects have virtually none set). In extreme cases, the sub-projects with non-environmental benefits were taken as EPL, but some SME development loans could be considered as environmental protection projects.

The JICA study team would therefore recommend the definition (i.e., categorization) of environmental protection projects, which is relevant in the context of the JICA-TSL.

Furthermore, the definition shall be elaborated so that both CSC and PFIs could share the same understanding on the environmental protection projects, judge whether the proposed application of sub-loans would fall into which categories of EPL, and use this as an operational guidance of the EPL component.

(2) Monitoring and Reporting of EPLs

Aside from monitoring the progress of the sub-projects and repayment, CSC and PFIs are required to monitor and report how the expected environmental outcomes would be generated as a result of the sub-project, as far as environmental protection loans are concerned. Currently, both CSC and PFIs lack the awareness of such monitoring and reporting obligations. In addition, environmental monitoring by PFIs is deemed quite difficult, since the relevant indicators of environmental benefits are poorly discussed and set during the sub-loan appraisal. Once the definition of environmental projects and operational guidance of the EPL component are clarified, it is expected that this issue can be basically improved.

(3) More Involvement of the Concerned Ministry to Promote Regulatory Compliance

Some environmentally-positive investments have been proposed, such as fuel-briquette production and replacement with energy-efficient heat boilers (both contributing to the improved efficient use of coal and decreased use of raw coal as fuel source), and plantations for the purpose of fruit processing (in the sense that forest coverage would be increased, reforestation). However, there are practically no environmental investments which intend to directly reduce emissions, effluents and wastes generated as a result of industrial activities. This fact is largely attributed to the present weak enforceability of environmental regulations in Mongolia, or the non-profit nature of such regulation compliance investments.

The main issue here is how the government would direct the private sector to make such regulation compliance investments in line with its proposed environmental strategy and action programs. One of the possible measures, although not sufficient by itself, would be to encourage more active involvement of the environmentally-concerned ministry or agencies (such as MONET, local administration offices) in the process of sub-project marketing and evaluation. The meetings of CSC, if this works better, can be a good occasion for such environmental institutions to present their statements and opinions on the sub-projects under the JICA-TSL.

In parallel to strengthening enforceability of environmental regulations, the concerned institutions should also enhance their PR activities on environmental strategy, proposed action programs, available and latest technologies to address environmental issues, and such opportunities of term-loan access to TSLs. Environmental institutions can work out for these PR activities by utilizing the customer network of the PFIs.

Currently, there are a few positive signs in promoting regulatory compliance investments. The public inspectorate agency of GASI has been improving its skills in regulatory monitoring and inspection for the purpose of tightening enforceability, particularly in emissions and effluents. Ulaanbaatar City is also about to implement an enforcement action to prohibit consumption of raw coal in view of mitigating air pollution. These would generate the investment needs of cleaner production, energy-saving as well as direct regulatory compliance from the industrial sector.

(4) Possibility of Preferential Terms and Conditions for EPL Component

Introduction of preferential terms and conditions to EPLs is being demanded by a few PFIs on the grounds that the environmental protection projects have relatively lower profitability and more social-oriented benefits to nature. It is however noted that such opinions are not quantitatively proven by the PFIs. It is apparent that no enterprises would propose environmental projects for term-loan unless they generate sufficient returns. In fact, all the EPL projects under JICA-TSL Phase I are directly connected with selling the products (or services in case of heat boiler) to their markets with expectedly assured profits. Profitability of EPL projects taken under JICA-TSL Phase I can not be necessarily found lesser compared to SME loans. The difference in profitability by category of EPL projects (such as energy-saving, 3R initiative, regulatory compliance, and conservation) is neither clarified in the JICA-TSL due to the limited number of EPL projects.

It is accordingly considered at this moment that providing preferential terms and conditions to the EPL component (or each category of EPL) would be technically difficult, although this matter needs further discussion with the PFIs and CSC. Concerning the regulation compliance investments, which tend to be non-profit in nature by themselves, the adoption of preferential terms can be examined. Even in this case, however, there would be anxiety in that no demand for investments may occur. Responding to this anxiety, it is recommended that the PFIs should approach the clients or borrowers who plan to invest their production facilities (such as new establishments, relocation, expansion and renovation of factories), and consult them to address compliance with environmental regulations, through introducing preferentially termed credits for regulation compliance investments.

(5) Environmental Impact Assessment (EIA)

Whether the application of sub-loans is for SME loan or EPL, all applications require the acquisition of environmental impact assessment (EIA). MONET states that the gained experiences from EIA processing and acquisition by every SME investment project are one of positive outcomes of JICA-TSL Phase I. It is however noted by the PFIs that the time required for EIA acquisition has accounted for considerable parts of the total processing time of sub-loans. Accordingly, the time required for EIA acquisition needs to be shortened as much as possible.

Not only the government side needs to take measures in expediting the processing work required by concerned environmental institutions (such as MONET or the local administration offices), but also efforts need to be further exerted on the SMEs side. SME investors are expected to prepare the documents necessary for EIA before the sub-loan application is made to the financial institutions.

PART III PROPOSAL FOR REVISION OF PHASE I / PLNANING OF PHASE II

PART III PROPOSAL FOR REVISION OF PHASE I / PLNANING OF PHASE II

CHAPTER 14 REVISION OF PHASE I OPERATION

14.1 Revision of Phase I Operation

A total of JPY 2,811 million equivalent or about 98% of the loan amount available from JICA has been disbursed to PFIs for sub-lending to SMEs by 27 April, 2009. The remaining balance of the loan is just sufficient to finance a sub-project which was already approved. The number of sub-projects financed under the JICA-TSL Phase I is 88 for SME Development and 19 for Environmental Protection. Out of 107 sub-projects under the JICA-TSL Phase I, 20 sub-projects are on operational stage. Out of these 20 sub-projects in operation, 15 sub-borrowers have already started repayment of principals of sub-loans. In addition, all the sub-borrowers are paying interest on sub-loans. These repayment of principals and interest payment are received by PFIs, who, in turn, transfer such money to the Revolving Fund Account (RF/A) under control by MOF, after deducting their margin.

Practically, the implementation of JICA-TSL Phase I is almost completed. As such, revision of Phase I operation may be required only for loan administration and the use of the revolving funds.

CSC is required to watch PFIs' action every month, and to take proper action if deficiencies are found. So far, CSC represented by MOF functions as decision-maker, but does not function for fund management as it lacks operational staff. From now on, their efforts should be directed mainly to loan administration because the number of sub-loans to be repaid will increase in the near future. For this purpose, CSC should establish an efficient and effective loan administration system including money flow projection.

The consultants, who manages daily operation, will terminate their obligation toward the end of this year when JICA-TSL Phase I is completed, while the operation of JICA-TSL will continue in order to secure repayment from PFIs and finance the next generation of sub-projects out of Revolving Funds. In general, the Treasury Department of MOF is responsible for the transaction of all the government funds, but at present, its involvement in JICA-TSL is limited only to disbursement process. The Treasury Department has not even grasped even the current arrears situation but has intention to do so in the near future. It may be more appropriate to continue the current operational arrangement, i.e., to keep the Project Office staffed with current but the smaller number of consultants for daily operation, which is recommended as a revision of Phase I operation.

14.2 Revolving Fund Operation

According to the Loan Agreement for JICA-TSL Project Phase I, the repayment of principal and the payment of interest on the on-lending loans shall be received in RF/As from PFIs. Moreover, RF/As fund shall be used for the followings:

i. To repay the principal and pay interest of the ODA Loan; and

ii. To make loans to the PFIs for the same objectives and terms and conditions of the Project.

By accumulating payments of interest and repayments of principal from outstanding on-lending loans, the government is effectively creating revolving funds for the continuous provision of term financing to the SME sector through eligible PFIs. The selected PFIs are eligible also for receiving of revolving funds, while new PFIs can join based on their meeting the eligibility criteria. It is expected that new PFIs may be added when the JICA-TSL Phase II is implemented.

All the sub-borrowers are paying interest on sub-loans right after the sub-loans have been disbursed. The first interest payment was received on September 19, 2007 due to delay in arrangement for openieng RF/As. Since then, RF/As have continuously received payments of interest from PFIs every month. So far, a total of MNT 709 million and USD 305,383 of interest payments have been received from sub-projects in Category A, and MNT 39 million and USD 52,431 from sub-projects in Category B.

Out of 107 sub-projects under the JICA-TSL Phase I, 15 sub-borrowers have already started repayment of sub-loans, but only six on-lending loans have started repayment of principal because of difference in maturity for sub-loans and on-lending loans. So far, a total of MNT 27 million and USD 6,500 of principal repayments have been received from sub-projects in Category A, and MNT 10 million from sub-projects in Category B. In addition, there are one prepayment of full amount of MNT 100 million and another partial return of on-lending loan of MNT 50 million received in RF/As.

In total, about MNT 935 million and USD 364,314 has been received in RF/As, out of which MNT 550 million have already been utilized to finnance two sub-projects. The balance of each RF/A is MNT 336 million and USD 312,571 (equivalent to JPY 52 million in total) for Category A and MNT 49 million and USD 51,743 (equivalent to JPY 8 million in total) for Category B. The projected total inflow to RF/As is shown in Table 14.2.1. The amount of in-flow into RF/As depends on sub-loans to be financed out of RF/As and the level of interest rate, but it will be roughly JPY 400 million and JPY 50 million after 2013 for Category A and Category B, respectively.

Table 14.2.1 Projection of In-flow into Revolving Fund Accounts

(in JPY million)

Year	Category A	Category B
2009	126	16
2010	317	26
2011	423	36
2012	406	47

Source: Project Office, Loan Repayment Schedule as of March 3, 2009

As the objectives of Category A and Category B are different, the revolving funds in each category should be used for their respective objectives, and cannot be mixed up, although Tugrug funds may finance sub-loans in US Dollars, and vice versa.

Since the projected amount in RF/As is limited, it may be necessary to set up certain rules on utilization of revolving fund for PFIs in order to keep fairness among PFIs. Considering the availability of revolving funds, the limits to sub-loan amount to be financed out of RF/As may

better be instituted to be a maximum of USD 200,000 or MNT equivalent. In addition, on-lending loans shall be provided on quarterly basis, and the following procedures are proposed for this purpose:

i. Initially, the priority order of PFIs to receive loans is set up. Those PFIs receiving loans will be listed to the end of the order for the next quarter;

ii. CSC (Project Office) informs the available amount in the following quarter to PFIs;

iii. All the PFIs report potential sub-projects to CSC (Project Office) every quarter;

iv. According to the order of PFIs, CSC (Project Office) determines the PFIs to receive a loan for the quarter within the available amount, and inform PFIs of its decision; and

v. The selected PFIs prepare application for sub-loans to be presented at CSC meeting.

The proposed procedure will not necessarily ensure equality of loan amount among PFIs, but equality in the number of sub-projects financed out of revolving funds will be guaranteed.

After the implementation of JICA Phase II will start, the RF/As will be to receive payments from PFIs for interest and principal repayments on on-lending loans in both Phases I and II, the terms and condition of sub-loan as well as its eligibility should be standardized for sub-loans in Phase II and ones to be newly approved for financing out of RF/As. As such, the following revisions in terms and conditions as well as eligibility in revolving fund operation are proposed to be effectuated (Please refer to Chapter 15 for detailed explanation):

i. The newly selected PFIs to be eligible for the revolving fund operation;

ii. The newly enacted “SME Law” to be applied to the size of eligible sub-borrowers;

iii. Some of the eligibility criteria for sub-borrowers, particularly FIRR requirement, to be flexibly applied for medical services or social services;

iv. Let the PFIs determine the interest rates based on the prevailing market situation and assessment of sub-project as well as sub-borrowers;

v. The on-lending interest rate may also be revised to accommodate foreign exchange risk which may be higher than expected due to high inflation rate in Mongolia;

vi. The on-lending L/A to be revised to let PFIs repay on-lending loans upon receipt of sub-loan repayment; and

vii. The way to calculate interest rate and its payment date should be more precisely stipulated.

CHAPTER 15 PREPARATORY ANALYSIS FOR PHASE II (SME LOAN)

15.1 Relevance of the Project

(1) SME Sector's View Point

Sustained economic growth driven by the private sector remains the key direction of GOM, as stated in its Economic Growth Support and Poverty Reduction Strategy (EGSPRS). The Mongolian private sector has grown rapidly. In terms of GDP contribution, the private sector accounts for 68.4% in 2007 (compared to 57% in 1996). In Mongolia, almost 99% of total business entity comprises of SMEs (defined in the SME Law), and the share of SMEs in industrial outputs accounts for almost 25% in 2007. The SMEs in Mongolia are expected to play a vital role in the growth of the economy, job creation, and contribution to state budget.

In view of realizing the goals of EGSPRS, GOM has formulated a program for support of SMEs in 2005. The primary goal is to realize robust growth of SMEs through improvement of their competitiveness. By this program, the SME Law was enacted in June 2007. The law clearly defines SMEs as a subject of policy support and promises supporting measures. The GOM has recognized in this program that SMEs generally face a range of issues and constraints such as lack of modernized skill in business and production management, quality control, difficulty in securing well-trained labor force, distance to and lack of information on the markets, and limited access to finance.

Limited access to finance (term-loan in particular) prevents SMEs from growing their scale and capacity of business operation and enhancing their capital formulation. The SME support program identified the following issues and constraints as impediments to investments by SMEs; high interest rate and short-term nature of loan, lack of own capital/collateral, and lack of business planning capability. Therefore, the GOM has already taken or would further take actions for such issues through provision of the term-loan with reasonable interest rate.

Also in response to EGSPRS, the Private Sector Development Strategy (PSDS) was prepared by the former MOIT in January 2008. The PSDS sets the priority directions such as enhancing workforce productivity through introduction of high-technology and highly skilled labor, mitigating business risks through creation of sound business environments, and promoting private sector in rural areas. It also addresses the issue of financial accessibility stating that commercial banks and investment funds shall be efficiently utilized to generate capitals for private sector investments.

The government's strategy to develop the private sector was further formulated in the Millennium Development Goals-based Complex National Development Strategy (NDS) in February 2008. NDS aims at achieving dynamic economic growth led by the private sector and promoting export/import-substitution. NDS also focuses on SME development, expecting SMEs to strengthen their competitiveness (agro-processing industries in particular) and contribute to industrial diversification and employment generation.

Accordingly, the project which shall provide the term-loan capital for investments needed by SMEs is judged to have continuing relevance under the current policy and strategy frameworks of the GOM.

(2) Financial Sector's View Point

Lack of domestic long-term capital has been the lingering problem for the Mongolian economy as indicated by international finance institutions time and again. In the IMF report "Financial System Stability Assessment" (prepared in May 2008), capital market development is indicated as a medium term objectives.

In the absence of domestic capital market, the only financial institutions that can provide capital funds are the banks which accounted for over 95% of the total financial assets in 2008. In the last three years, nominal GDP increased at an average rate of 30.3% per annum. Along with this bumper economic development, demand for capital investment was also strong. In Mongolia, banks are the only financial institutions capable to respond to the capital demand in the economy. The money supply also improved fast, increasing deposits in the banks. Based on increased deposits, the banks' lending activity intensified.

Although deposits in the banks are normally short-term funds, demand of investors were long-term. International donors and FDIs provided long-term funds under their programs, but they were not enough to respond to the needs of the industry. The commercial banks, in response to the market demand, started providing long-term loans of up to 3 to 5 years, primarily based on accumulated short-term deposits, because of the underdeveloped capital market and practically nonexistence of life insurance business in Mongolia, which normally are the supply sources of long-term funds. However, bank depositors tend to have short-term deposits because of the relative low interest rate against inflation rate and the vulnerable Tugrug currency.

The system of long-term lending based on short-term funds, supplemented by FDI and donor programs, worked well as long as increase of deposits responded to the increase of loan demands. However, the system of long-term lending by short-term funding involves a risk of internal inconsistency. This basic inconsistency risk has been hidden under the fast growing loans and deposits and did .not materialize during 2006 and 2007.

However, the overheating in the economy as well as in the financial market started to be felt in early 2008, the top 20 indexes started to fall in the spring of 2008 and money flow to the construction sector stagnated. Coupled with high inflation that made deposit rates very unattractive, depositors became concerned with low interest rate on their MNT savings. Also, the government's withdrawal of its deposits from the banking sector as in the case of Anod Bank added concern to bank depositors, drain of deposit started in late 2008. As loan growth outstripped deposit growth in the past three years, loan to deposit ratio increased to 131% in December 2008 from 98% in December 2007.[1]

Because of deposit drain from all commercial banks in late 2008, liquidity problem became a common concern of banks. This liquidity problem spread out to all commercial banks, big or small. The BOM have some guidance for loan to asset ratio of about 70% and some middle-sized banks, at site-inspection, were instructed to reduce their loan balance to within the guiding standard. However, the BOM guidance indicated that donor programs with "long-term funds attached to long-term loans" can be excluded from calculation of loan to asset ratio or loan to deposit ratio. A good part of long-term loans (especially, 30-40% of term-loan of over 5 years)[2] of commercial banks in Mongolia is estimated to be provided by

[1] The World Bank Mongolia Quarterly (February 2009)

[2] Part II, Chapter 7, Section 7.3 Impacts and Benefits on Financial Sector of this Report

the donor programs. The long-term loans under donor programs are provided through the commercial banks of Mongolia based on their credibility.

Donor programs like JICA-TSL Project, which have long-term funding attached, should be very effective and attractive to the commercial banks since they are having liquidity problem. Such donor program has had a very big impact to the financial sector of Mongolia where no provider of long-term capital existed. In the present circumstances of the financial sector, the long-term loans with long-term fund attached will have great impact in the economy.

15.2 Investment Needs of SMEs (Demand Estimate)

(1) Identified Investment Needs

The latest needs of investment by major sectors have been consulted from the following three sources: i) the survey on investment needs under the study on the recent conditions and prospects for nation-wide SMEs by MOFALI in 2008, ii) the list of unprocessed loan requests presented by PFIs, and iii) the list of loan requests to SME Development Fund[3] in 2008. As a result, the needs of around 450 investment projects with an estimated value of USD 209 million are identified from these three sources. Investment need per project ranges from USD 10,000 to over USD 4 million, with USD 460 thousand on the average. Size, volume and distribution by sector of such investment needs are also shown in Annex V.

Survey on investment needs under MOFALI study in 2008

The purpose of the MOFALI survey in 2008 of investment needs of nation-wide SMEs is to identify promising investment projects to be endorsed in the coming years. The sector covered agricultural, animal husbandry and light industries (food-processing and manufacturing). In this survey, almost 150 investment projects are raised, being concentrated to agribusiness (crop and wheat production, greenhouse for vegetable, irrigation, processing of dairy, meat, fruits and vegetables), and textile/apparel (processing and final product manufacturing of cashmere and wool).

The average investment cost is USD 958,000, ranging from USD 300,000 to more than USD 4 million. The sub-sector of agribusiness including animal husbandry, processing of meat and flour, feed and fertilizer, leather and skin, chemical and medicine shows the larger investment needs per project (over or nearly USD 1 million). Majority of the size of project cost ranges from USD 250,000 to USD 500,000, accounting for 42% of the total number of projects.

These investment projects are assumed to be implemented during the period of 2009 to 2012. Although the average implementation period of the majority of investment projects is around three years, the commencement timing of each investment project is not available.

Unprocessed loan applications presented by each PFIs

The JICA study team requested PFIs to present the list of unprocessed projects during the JICA-TSL Phase I[4] in view of grasping the current potential needs of investment from another source. The PFIs received these investment proposals (loan requests) from SMEs in

[3] Due to the lack of depositary assets in this fund, only a small amount of loan applications (MNT 900 million in total) were made processed during the year 2008. Accordingly, a number of loan applications are waiting for the fund.

[4] Those were made unprocessed (voluntarily withdrawn) facing projected depletion of disbursable funds, assumed long processing time and cumbersome steps, and (rejected) due to the lesser project viability, lack of own-fund / collateral, previous financial performance of applicant SMEs.

2008. From this list, around 170 investment projects were identified, almost evenly covering sectors of agribusiness, food-processing, other manufacturing and services. Among them, animal husbandry, processing of dairy and meat, textile and apparel, construction material, tourism, medical care shows the relatively larger appetite for investment.

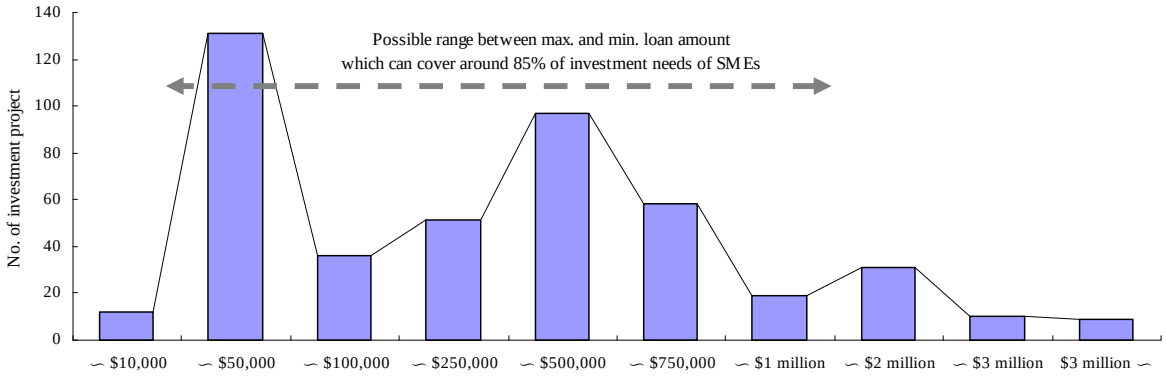
The amount of investment cost averages USD 370,000, widely ranging from USD 30,000 to more than USD 3 million. Around 65% of the total projects fall under the size of investment between USD 50,000 and USD 750,000.

Investment loan requests to SME Development Fund

The list of loan application to SME Development Fund[5] (held by MOFALI) in 2008 is also consulted to grasp the latest investment needs. From this list, around 130 investment projects are identified, being concentrated on animal husbandry, dairy processing, textile and apparel (cashmere/wool related, and sewing), leather and skin, wooden product and furniture.

The amount of the investment cost averages to USD 57,000, being far smaller compared to the other sources since the maximum loan amount in this fund is limited to USD 20,000 as of now. Most frequently observed size of project cost ranges from USD 10,000 to USD 50,000, accounting for 70% of the total identified number of projects.

The figure below shows the distribution of investment needs by size of project cost, which complies the above three sources.



Note: The chart compiles the three sources of investment needs.

Source: JICA study team

Figure 15.2.1 Distribution of Investment Needs by Size of Project Cost

It can be implied from this observation that JICA-TSL Phase II should better expand the maximum loan amount to at least USD 1 million while maintaining the minimum amount of USD 10,000 in view of ensuring better coverage of SME needs for investment.

(2) Type of Investment Needs

Looking at the investment project lists of which capital funding is demanded, the following types of capital investment needs are observed in each major sector (and sub-sector), which are explained in Section 3.4.

[5] Due to the lack of depositary assets in this fund, only a small amount of loan applications (MNT 900 million in total) were made processed during the year 2008. Accordingly, a number of loan applications are waiting for the fund.

Sub-sector		Type of capital investment needs
Crops / vegetables (agriculture)	:	i) Purchase of greenhouse facility, related equipment and raw materials for vegetable and potatoes production, ii) Purchase of plantation facility, related equipment and raw materials for wild berry production.
Animal husbandry	:	i) Development of livestock collection network and own farms, ii) Intensification and modernization of livestock farming, iii) Expansion of fodder production and supply network, iv) Development / improvement of veterinary / technical services for livestock, v) Development of genetic resource center.
Dairy industry	:	i) Modernization / automation of milk processing factory (in view of improving efficiency and meeting the adequate hygiene standard), ii) Development of new dairy product lines (such as yogurt, cheese, butter) with introduction of the modern packaging machines, iii) Establishment of cooling and collection points, iv) Introduction of recording system of breeding and livestock trace system, v) Expansion and intensification of cow farming, vi) Establishment of new factories in rural consumption areas. - The above capital needs would be supplemented with sufficient working capitals to purchase raw materials.
Meat processing	:	i) Modernization and automation of meat processing factory (in view of improving efficiency and meeting the adequate hygiene standard), ii) Expansion or renewal of freezer equipment, iii) Development of new processed product lines, iv) Expansion and intensification of cattle / pig farming, v) Introduction of recording system of breeding and livestock trace system, vi) Establishment of new factories in rural consumption areas. - The above capital needs would be supplemented with sufficient working capitals to purchase raw materials.
Other food processing (flour, fruit, vegetables, confectionary)	:	i) Development and expansion of flour processing plant facility and related equipment, ii) Development and expansion of vegetable processing plant facility and related equipment, iii) Development and expansion of bakery and confectionary production facility and related equipment.
Cashmere / wool (textile / apparel)	:	i) Purchase and renewal of spinning machine by the medium-scaled integrated processors, ii) Purchase of automatic-knitting machines and associated workshop facility by the final product producers (knitters), iii) Renewal of obsolete carpet knitting machines (for wool manufactures). - The above capital needs would be supplemented with sufficient working capitals to purchase raw materials.
Sewing industry (textile / apparel)	:	i) Expansion and renovation of workshop facility, ii) Purchase of sewing machine for replacement and expansion.
Leather industry	:	i) Renovation of tannery factory processes with sophisticated equipment, ii) Purchase of sewing machine for replacement and expansion, iii) Introduction of cleaner processing line, iv) Introduction of filtering system for waste discharge. - The above capital needs would be supplemented with sufficient working capitals to purchase raw materials.

Source: JICA study team, compiled from the investment needs data and hearings from each industrial association

The JICA study team supposes that the identified investment needs would largely have import-substitute orientation, being represented by the sectors of agriculture (crops, vegetables), processed products of dairy, meat, fruit and vegetables, beverage, feed and

fertilizer, wooden products and furniture, pulp and paper products, medicinal products, plastic products, and fabricated metal products.

Investment needs which lead to direct export development are also observed, particularly in animal husbandry (live animals), textile and apparel (raw or primary-processed cashmere/wool, and their final products) and leather and skin (mainly raw or primary-processed forms). Tourism projects are also expected as foreign exchange earners through targeting foreign visitors.

(3) Recent Symptoms Adversely Affecting Investment Needs

It is noted that the above investment needs should be analyzed with caution, particularly those having export-orientations. Sectors with export-orientation have been facing drastic price downturn in the international markets (such as frozen meat, materials of cashmere, wool, skin and hide in raw or primary processed forms). The appetite for investments by the export-oriented sectors would be adversely affected, compared to import-substitute oriented ones. Cooling down of construction and real estate sectors since the winter of 2008 has also direct significance for the related sectors, and indirectly to others.

Triggered by price down in the international markets and cooling down of construction and real estate booming, the following symptom have been arising since the fourth quarter of 2008 in particular, which would likely bring adverse implications to the future investment needs of the private sector:

<u>Increase of NPLs in the private sector loans</u>

According to the loan reports by BOM, NPLs in the commercial bank loans (both short- and long-terms) directed to the private sector has sharply hiked up to the level of 9.3%. Although the amount of total outstanding loans for the private sector has been almost constant, NPLs (comprising of substandard, doubtful, loss, according to BOM's definition) have, on the other hand, increased by 222% (from MNT 45 billion in the third quarter of 2008 to MNT 145 billion in the fourth quarter).

Source: BOM, Loan Report, the latest

Figure 15.2.2 Trend of Outstanding Loans and NPLs for Private Sector

Table 15.2.2 Growth of Private NPLs by Sector

(in MNT million)

		'08 QI	'08 QII	'08 QIII	'08 QIV
Total private sector	NPLs (ratio)	44,857 (3.4%)	46,943 (4.7%)	45,033 (-4.1%)	145,071 (222.1%)
	Growth rate	-3.7%	4.7%	-4.1%	222.1%
Agriculture, husbandry	NPLs (ratio)	2,965 (6.5%)	2,833 (6.6%)	3,488 (5.5%)	6,471 (14.9%)
	Growth rate	1.7%	-4.5%	23.1%	85.5%
Industry	NPLs (ratio)	21,321 (3.0%)	22,535 (2.8%)	23,246 (2.7%)	85,535 (10.0%)
	Growth rate	-6.1%	5.7%	3.2%	268.0%
Mining, quarry	NPLs (ratio)	*3,669 (2.5%)*	*3,946 (2.7%)*	*4,186 (2.8%)*	*26,318 (16.9%)*
	Growth rate	*-13.9%*	*7.6%*	*6.1%*	*528.8%*
Manufacturing	NPLs (ratio)	*14,875 (5.3%)*	*16,803 (5.2%)*	*17,187 (5.3%)*	*18,956 (5.5%)*
	Growth rate	*0.1%*	*13.0%*	*2.3%*	*10.3%*
Construction	NPLs (ratio)	*2,573 (1.0%)*	*1,581 (0.5%)*	*1,020 (0.3%)*	*39,391 (11.5%)*
	Growth rate	*-27.7%*	*-38.5%*	*-35.5%*	*3,756.0%*
Services	NPLs (ratio)	20,571 (3.8%)	21,576 (3.5%)	18,299 (2.9%)	53,065 (8.1%)
	Growth rate	-1.8%	4.9%	-15.2%	190.0%
Real estate	NPLs (ratio)	*453 (0.8%)*	*63 (0.1%)*	*537 (1.0%)*	*7,153 (13.1%)*
	Growth rate	*-17.4%*	*-86.2%*	*759.7%*	*1,231.3%*

Note: Growth rate of the first quarter of 2008 is compared to the previous term (the forth quarter of 2007). Ratio is for NPL one.

Source: BOM, Loan Report, the latest

This increase is largely attributed to the performance of loans for construction, mining and quarry, and real estate sectors, in that order. Productive sectors such as agriculture/animal husbandry[6] and manufacturing show the least contribution to the overall growth of NPLs. The JICA study team considers the following implications of such performances of private sector loans in relation to JICA-TSL:

- Investment needs of construction-driven industries such as construction materials and quarry would not be provided as it was in Phase I.
- Investment needs of agriculture / animal husbandry intended to directly export their raw products to international markets would not be supported. They should be encouraged to target domestic processors in order to export final products value-added.
- The above is also true for the textile/apparel industry, raw material processors of cashmere, wool, skin and hide, in particular, since they face difficulties when the international prices of such processed materials decline, and will have to wait and see the recovery of overseas demand.

15.3 Eligibility of Sub-loan

The main objectives of the proposed JICA-TSL Phase II are almost same as Phase I, i.e.:

- To support the development of SMEs by facilitating term-loans through PFIs; and
- To strengthen the institutional capacity of SMEs as well as the banking sector.

The objectives of JICA-TSL reflect Mongolia's development strategies, supporting SMEs and banking sectors for solution of their current problems.

[6] This sector sees an increase of NPL by 86% and the ratio hikes to 14.9%, but lesser contributes to the overall growth since its share has been much smaller.

(1) Use of Proceeds of Sub-loan

The JICA-TSL Phase II will also be made available for on-lending through eligible PFIs to SMEs established and operating in Mongolia to promote their activities. The ODA loan is proposed to principally finance plant and equipment to be purchased by SMEs in key industries. Refinancing will not be allowed except when the original loan is specified as a bridge loan to start the project before the JICA-TSL is approved.

Financing land or real estate will be, in principle, acceptable in case such facilities are fundamental requirements for the projects. Those projects which intend to use more than half of the loan proceeds for procurement of land or real estate, however, will not be acceptable. Access to the funds will be on a "first-come, first-served" basis, but any PFI will not be allowed to enjoy loan proceeds exceeding 1/3 of the total loan amount available. PFIs will assume full responsibility for the credit risk of the projects.

TSL management is proposed to basically follow the JICA-TSL Phase I approach. But each PFI will not have to submit its first three sub-project proposals to JICA for its review and concurrence. Instead, PFIs should submit full appraisal reports in English, in the agreed format, for sub-projects for JICA review and advice for improvement in appraisal. It is proposed that PFIs will submit full appraisal reports together with minutes of discussion on the project of CSC when they submit summary sheet of payments to obtain JICA authorization to withdraw from the loan account. JICA may comment on the sub-project or appraisal, and/or request improvement in the operation of the project in future, if any, after the review of the reports submitted.

(2) Sub-loan Borrowers

Sub-loan borrowers should be business entities registered with the General Department of National Taxation (GDNT), paying corporate taxes. As long as the borrowers are majority privately owned, no restriction is proposed to be applied regarding the ownership form (i.e. joint stock, limited liability, partnership or cooperatives). State-owned companies are outside sub-loan borrowers.

The newly enacted "SME Law" is proposed to be applied to the size of sub-borrowers in principle. The Law defines SMEs in terms of the number of employees and annual turnover, depending on economic sectors, as follows:

- For industries other than services, the number of employees not more than 199 and annual turnover up to MNT 1.5 billion;
- For service industries, the number of employees not more than 49 and annual turnover up to MNT 1.0 billion.

The above definition of SMEs is proposed to be applied, depending on economic sector the sub-borrower belongs to.

The eligibility criteria for the sub-borrowers to which the JICA-TSL Phase II will be provided is basically the same as those applied to Phase I. These are:

- Majority privately-owned;
- Debt service coverage >= 1.3:1;

- Loan /value ratio <= 80 percent;
- Financial rate of return >= 13 percent; and
- No previous defaults.

Some of the above conditions require some room for flexibility to promote social service development as those projects for medical services or social services, which are less profitable but definitely required for healthy life of the people. Flexibility will be given through discussion at CSC on case-by-case basis, provided that such flexibility shall be justified by PFI.

(3) Sub-projects' Sectors

The business of potential sub-borrowers is generally classified into: i) agriculture; ii) manufacturing; iii) construction; iv) trade; and v) services. As the JICA-TSL is designed to provide medium to long-term finance, it is not intended for trade and construction, except for procurement of equipment required for their business activities, because these services are usually accommodated by short-term finance.

In principle, the major target of the Project is SMEs in the agricultural and manufacturing sectors. Ineligible loans are proposed to be basically the same as the negative list in the JICA-TSL Phase I, and presented below:

- Loans for trade services (sales and purchases of goods and services);
- Loans for entertainment industries (e.g. bars, restaurants, etc.);
- Loans mainly for procurement of real estate, including for individual housing;
- Loans for environmentally-damaging projects;
- Loans for refinancing, except bridge loans;
- Loans for military activities; and
- Loans for consumers.

A loan for the entertainment industries is added to the negative list because these services are considered unsuitable for ODA loan.

The JICA-TSL Phase II is proposed to put its emphasis on the government policy of priority sectors and key industries in a value chain. However, the priority sectors based on the government policy may change from time to time. The sub-projects to be prioritized are currently as follows:

i) Priority sectors in the current government policy;
   - Agriculture for import substitution;
   - Food industry for import substitution;
   - Apparel industry for export promotion; and
   - Construction for employment expansion;

ii) Other key industries in a value chain;
   - Livestock;

- Textile industry;
- Manufacturing of construction materials; and
- Transport service.

The sub-loan for the prioritized areas will get preferential treatment in disbursement. If GOM is required to allocate the funds to these priority areas, further discussion will be held with all the ministries concerned even during the implementation of the Project to revise the scheme.

15.4 Terms and Conditions

(1) Sub-loan Amount

The GOM established the SME Fund in 1992 to be administered by MOIT (then MOFALI). Utilization of this fund has been gradually activated with annual capitalization of MNT 1.0 billion (USD 840,000) since 2006. Currently, MNT 1.0 billion is deposited with three PFIs, which also set additional fund equivalent to 30% of deposit (co-finance with bank is required), total fund available being MNT 1.3 billion (USD 1.1 million). While there is no limit on the minimum amount, the maximum was set at USD 20,000 for SMEs in Ulaanbaatar City and USD 10,000 for SMEs in other provinces. The SME Fund has been disbursed to almost 500 smaller SMEs (less than 20 in number of employees) in food processing and construction materials.

The GOM also established a special fund of MNT 9.0 billion (USD 7.6 million) called Investment and Development Fund (IDF) in 2007 to be administered by MOF. IDF used to channel two-year loans with MNT 500 million (USD 420,000) of loan limit. However, the fund was under-utilized due to small fund size. IDF was accordingly changed over to subsidize interest, scaling up in fund size to MNT 30 billion (USD 25.2 million) in 2008.

PSDC-II (USD 15.8 million) has commenced to provide financial intermediary loan to private sector since June 2005 by the World Bank. While it has no limit on the minimum amount, the maximum was set at USD 600,000, which is the same amount as that of JICA-TSL Phase I. KfW also implemented TSL lending project since 1996, with similar scheme to PSDC and JICA-TSL Phase I. KfW-TSL had two phases. The first phase (Euro 5 million) was implemented with Euro 500,000 of loan limit per sub-project, and the second phase (Euro 3.5 million) was done with Euro 250,000 of loan limit.

Considering the other two TSL projects (the World Bank's PSDC and KfW-TSL phase I & II), the limits to sub-loan amount of JICA-TSL Phase I was instituted to be a minimum amount of USD 10,000 (or MNT equivalent) and a maximum of USD 600,000 (or MNT equivalent). The actual minimum sub-loan disbursed in USD and MNT was USD 36,000 and MNT 12 million (USD 10,000 equivalent) and the maximum was USD 600,000 and MNT 702 million (USD 590,000 equivalent), respectively.

The minimum and maximum limits to sub-loan amount of JICA-TSL Phase II are proposed to be instituted as follows:

- Minimum sub-loan amount USD 10,000 or MNT equivalent
- Maximum sub-loan amount USD 1,000,000 or MNT equivalent.

The following considerations are given to formulate the above proposal for sub-loan amount:

i. Potential trend of economic growth;

ii. Strong demand for term lending from SMEs in the wider range of loan amount;

iii. Demand for bigger projects as seen from the fact that 15% of sub-loans were hitting the ceiling of maximum sub-loan amount, USD 600,000 specified in JICA-TSL;

iv. The proposed amount of JICA-TSL Phase II, which is substantially bigger than Phase I;

v. The eligible SME is proposed to be expanded to less than 200 employees; and

vi. Improved capacity of PFIs obtained through technical assistance provided in JICA-TSL Phase I and experience to implement JICA-TSL.

(2) Term and Grace Period of Sub-loan

Although the larger size of sub-loans is proposed for JICA-TSL Phase II, the term is to be set at 3-10 years with grace period as follows (same as Phase I):

(Term of Loan)	(Grace Period)
3 years	Up to 1 year
3 - 5 years	Up to 2 years
5 - 10 years	Up to 3 years

It is considered that the term of 10 years is sufficient for SME projects regardless of project size.

(3) Currency of Sub-loan

Same as the JICA-TSL Phase I, the project's Phase II will also have two windows: foreign currency (US Dollars) and/or local currency (MNT) window. The JICA-TSL project would be flexible in terms of currency denomination of sub-loans, which can be disbursed either in a foreign currency and/or local currency, to reflect PFIs' request, which, in turn, will reflect the final borrowers' credit demand.

About 1/5 of sub-borrowers has contracted borrowing in USD. In 2008, USD rate against MNT appreciated by 36%, which means end-borrower paid 36% + 7.71% (sub-loan interest rate), totally 43.71% per year. The USD rate increase puts end-borrowers into higher risk. In view of this trend in foreign exchange market, some PFIs request reduction in the cost of USD funds, that is, elimination of +1% on LIBOR rate of USD funds, leaving just LIBOR.

However, the difficulty of sub-borrowers in US Dollar borrowing cannot be solved by such small adjustment of interest rate. The point of this problem is the fact that some sub-borrowers were blindly attracted by relatively lower interest rate and decided to borrow in US Dollars without paying attention to future exchange risk, and that some PFIs allowed this without any advice to the sub-borrowers. In fact, those PFIs who advised sub-borrowers to avoid US Dollar borrowing, do not share the idea of reduction of interest rate on on-lending loans in US Dollars. In this sense, the interest rate itself should not be blamed.

As the foreign exchange risk of MNT/USD will be fully borne by sub-borrowers for US Dollar-denominated sub-loans, sub-borrowers wishing to borrow in US Dollars should be exporting enterprises with US Dollar revenues. It will be the PFIs' responsibility to assess and advise the risk (project risk and foreign exchange risk) involved with their sub-borrowers.

Following operational experience in Phase I, however, it is recommended to let PFIs advising sub-borrowers on exchange risks involved in US dollar borrowing unless sub-borrowers are earning foreign exchange in their business.

(4) Interest Rate of Sub-loan

For determining the interest rate on on-lending loans to PFIs in local currency (MNT), it is proposed to use an average of demand deposit rate, as practiced in Phase I. Demand deposit rate is a commonly used base funding cost rate for any financial institution. Therefore, the interest rate charged by the government to PFIs will be linked to the average demand deposit rate of commercial banks announced by BOM to symbolize the market rates. Currently, demand deposit's lower rate would be around 4.8%.

The government would on-lend to PFIs in foreign currency, and the PFI would, in turn, provide a foreign currency loan to sub-borrowers. In Mongolia, the most widely used foreign currency is US dollar. LIBOR is the commonly used and readily available base rate for any international currency, including US dollar and Yen. Therefore, the interest rate charged by the government to PFIs will be linked to LIBOR plus a spread of 1%. In case of US dollar, current LIBOR plus 1% would result in around 2.6%, which also generally corresponds to the average US dollar demand deposit rate of 2.1% but is far below the average US dollar 6-months time deposit rate of 7.7% in Mongolia.

At the early stage of implementation of JICA-TSL Phase I, MOF proposed to eliminate the spread of 1% to reduce the US dollar fund cost which, in turn, would reduce SMEs' cost. However, in the JICA-TSL, the cost of JPY/USD exchange will have to be added to its interest rate. "LIBOR" at the time MOF proposed the elimination of 1% spread was higher than 5%, but it goes down to 1.6%, practically squeezing the margin of MOF which is responsible for operation of the Project as well as for exchange risk. Therefore, adopting the same lending rate formula for on-lending from the government to PFIs, i.e. "LIBOR plus 1%", can be recommended for use in the JICA-TSL Phase II. The spread may be revised periodically following joint reviews by MOF/BOM and JICA in case changes in the market rate is significant.

The PFIs would on-lend the funds to sub-borrowers on their own terms and conditions (within the framework defined for the Project, based on market conditions and their own assessment of sub-borrowers and sub-projects).

In order to prevent the sub-lending rates being raised too high, the government has been putting a cap on PFIs' margins, 3.6% p.a. for US dollars and 4% p.a. for local currency, making both maximum US dollar and local currency sub-loan rates no more than 10% p.a..

Same as in the JICA-TSL Phase I, the government had been putting a cap on PFIs' margins for PSDC-II in order to prevent the sub-lending rates being raised too high. The government, at later stage of implementation of the Project, withdrew the cap on PFI's margins upon request by the World Bank to reflect the financial market conditions from time to time and assessment of sub-borrowers, making sub-loan rates between 12% to 18% p.a. The targets of JICA-TSL and PSDC-II are not exactly the same, but quite similar. As such, the existence of big difference in sub-loan rates for the common market would jeopardize the development of healthy market-oriented financial market and of strong capacity financial institutions. These objectives were commonly shared with the government when JICA-TSL Phase I was formulated as reflected in the lending schemes agreed in the documents. In the on-lending

agreement between the Government and PFIs, the interest rate on sub-loans is clearly stipulated to be determined by the agreement between PFI and the sub-borrower, taking into account the prevailing market conditions.

In replying to the questionnaire prepared by the SAPI team, PFIs request to withdraw the current imposition of restriction on PFIs margin from the government. PFIs explained that 3.6% to 4.0% margin is too low to cover their operational costs and credit risks involved. Since the operational costs and lending policies are various among PFIs, the margin they request is also different, ranging from 6% to 9%. Based on the current demand deposit rate of around 6%, the sub-loan interest rate would be 12% to 15% p.a., which is same level as PSDC-II and still much lower than most of the current prevailing rates for corporate financing, which is higher than 20%.

Instead, modification for the scheme of determining sub-loan interest rate is strongly requested by PFIs. They insisted that the current margin is just enough to cover their operation cost only. The average operation cost ratio against gross interest income is about 3% at present. The non-performing loan ratio of 6 PFIs (excluding Anod Bank as exceptional case) would have been 3.3% in 2008, which is the lowest in five years. The actual loss would have been about 1/4 of them, so it burdens 0.8%-0.9% to banks. In total, bank's cost for lending operation would be estimated at about 4%, which may be covered by current margin rate allowed by MOF. Taking the overall ROA of about 2.5% in banking sector in these few years, PFIs may need 6%-7% of margin on TSL operation. It is worth noting that, in KfW-TSL, the margin for PFIs have been fixed at 6%.

These sub-loan interest rates may destroy the structure of interest rates in the country. The interest rate of 9.9% for MNT loans is far below current market rate of 20.4% and even substantially below the current policy rate of 14%, which was raised from 9.75% in March. The interest rate of 7.71% for US dollar loans is also far below current market rate of 19.4% and even below the US dollar deposit rate of banks. For JICA-Phase II, it should be more prudently considered how to set up the sub-loan interest rate.

On the other hand, it is true that some government officials consider banks greedy trying to maximize their profits. However, the current behavior of banks in financing under PSDC-II shows their prudent consideration, acceding to the sub-loan rates of 12% to 18%. In addition, JICA-TSL has an advantage in controlling PFIs' behavior over PSDC-II. All applications for JICA-TSL require discussion and approval by CSC comprised of several government officials, while applications for PSDC-II would directly be sent to the World Bank for their approval. In JICA-TSL, it is possible for CSC to reject applications if PFI determines excess profit margin out of the sub-project. The CSC member or Project Office staff assisting CSC should have an idea on what is an excessive rate.

In conclusion, it is strongly recommended to let the PFIs determine the sub-loan rates based on the prevailing market situation and assessment of sub-project as well as sub-borrowers.

(5) Interest Calculation of On-lending Loan

In case the above-mentioned recommendation on sub-loan interest rate is to be instituted in JICA-TSL Phase II, the on-lending interest rate also should be revised. One of the reasons for relatively high interest rate in Mongolia is the existence of high inflation rate, which may affect the foreign exchange rate of Tugrug against Japanese Yen in future. That is, the government owes high risk of foreign exchange on the ODA loan. As such, the current

on-lending interest rate for Tugrug lending may better be revised, for example, to adopt average time deposit rate instead of current demand deposit rate.

Regarding the interest calculation, the on-lending L/A stipulates that PFIs are obliged to pay monthly interest calculated on the basis of 1/12 of annual interest regardless actual number of days in each month. As all the parties concerned are currently agreeable to this calculation, no objection would be raised although it is not commonly found in other financial markets. However, the way to calculate interest rate and its payment date should be more precisely stipulated because the current interest payment date has been changed to be at month-end or the first date of the following month. It is not clear whether the interest paid shall be for the period of one month corresponding to the disbursement date or simply the calendar month-based.

(6) Repayment of Principal of On-lending Loan

JICA will lend to the government at standard ODA loan. These funds will in turn be on-lent to PFIs, which would then re-lend the fund to private sector sub-borrowers. The funds available under TSL would be passed on to the PFIs on a back to-back basis. This means that the PFIs would repay the government on essentially the same loan repayment schedule as for the underlying sub-loan. Sub-borrowers would make repayment of principal in accordance with the projected cash flow. Under the current scheme, however, PFIs are allowed to repay relevant on-lending loans six months after the sub-loan repayment date, so PFIs can keep the funds repaid by sub-borrowers in their pockets for six months. A time lag of six months for repayments from PFIs to the government is allowed to minimize the impact on PFI liquidity in the case of delayed repayment by sub-borrowers.

However, such cases are considered rare in general. Some sub-borrowers have already started repayment of principal, and not any delay in repayment has been reported so far. It seems unnecessary to allow the PFIs to keep all the repayments from sub-borrowers for six months. CSC can be flexible in repayment of on-lending loans if it is really needed, although it may be more reasonable that the money paid by sub-borrowers be used for the repayment of on-lending loan without the long time span, which shall be used to finance subsequent sub-projects. By extending the credit line on a back-to-back basis, the government would more effectively create a revolving fund for the continuous provision of term finance to the private sector, through eligible PFIs. Taking this opportunity, it is recommended, if PFIs are willing to participate in JICA-TSL Phase II, to change the on-lending L/A to stop current practice so that PFIs may be obliged to repay on-lending loans in both JICA-TSL Phase I and Phase II upon receipt of sub-loan repayment.

(7) Payment of Interest on Sub-loan

Flexibility in payment of interest is also requested by some PFIs. About 20% of sub-loans under JICA-TSL Phase I have supported to launch new businesses, either diversification of business lines or foundation of new enterprises. Unless the sub-borrower engages in other business bringing cash generation or prepares more than sufficient working capital for start up, the sub-borrower may have difficulty in paying interest during the initial start-up period. Also, some sub-borrowers usually have difficulty in paying interest during the winter season since some businesses, such as agriculture or construction industry, are forced to stop due to severe weather conditions. In these cases, PFIs want to allow sub-borrowers to postpone payment of interest, at least for half a year at the initial start-up period.

One way may be capitalization of interest during such periods, but this is not so simple because the interest rate is to be revised every six months and the interest amount during such period cannot be fixed beforehand. Then, the repayment amount of principal shall also be revised every six months when the interest rate for the coming six months is determined. As such, it may not be suitable to accommodate this kind of request. If a PFI finds it definitely needs to postpone payment of interest during particular periods, they can do so in their own capacity on sub-loan basis.

(8) Collaterals

While sub-loans under JICA-TSL also need to be secured as per PFIs' internal regulation since PFIs take full credit risks of sub-borrowers, availability of collaterals is generally very limited. Although it is up to PFIs to evaluate and decide on what to hold for security, basically they hold collaterals on properties. In addition, most of PFIs accept machinery and equipment for production as collaterals. A few PFIs are also partially secured by accounts receivable and stocks of raw materials and products. It will be appreciated if they also consider future cash flows based on sound project feasibility as securities for their loans. In this connection, social and legal frameworks as well as the banks' skills in evaluating financial statements, including cash flows of customers, need to be further improved. In any case, however, decision to lend to borrowers should be totally up to the PFIs.

It is generally observed in other countries that the government operates a guarantee fund for SMEs, so that SMEs may be able to get loans from banks without prior preparation of 100% collaterals. In Mongolia, there is no government guarantee program that exists at present. Only some small-scale guarantee programs are operated by some donors. It is understood that this issue has been discussed among government organizations and hope that conclusion would be made in the near future.

(9) Other Conditions of Sub-loan

At the final stage to formulate the framework of the JICA-TSL Phase II, some other relevant aspects may need to be considered such as the avenues for co-operation with other projects, number of loans to be lent to a single company or a group of companies, securities of sub-loans, etc. as elaborated below:

- Co-operation, such as co-financing or guarantee programs, with PFIs or other donors is worth seeking. Particularly, the possibility of JICA-TSL financing with other guarantee programs, for instance, ADB ARDP with guarantee component for loans for investment plans of agribusiness enterprises, GTZ LGF guarantee program for loans to SMEs and cooperatives for manufacturing/processing industry, and the planned SME Fund Guarantee Scheme, may need to be given consideration to ease collateral requirements to some extent.
- A company or group of companies should be able to borrow only one sub-loan from PFIs at a time. Because of scarcity of long-term funds in Mongolia, the number of sub-loans should be limited to one per single borrower or to a group of companies.

CHAPTER 16 PREPARATORY ANALYSIS FOR PHASE II (ENVIRONMENT)

16.1 Relevance of the Project

(1) Environmental Issues in Industrial Sector

Industrial activities are continuously a major source of pollution in Mongolia, especially in urban areas. Appropriate management of energy and natural resource consumption is another issue to be addressed. In relation with SME activities in the sector, the JICA-TSL Phase I has responded to issues particularly related to energy consumption and air pollution. This response from SMEs is assumed to continue in Phase II.

(2) Policy Context

The National Action Plan 2008-2012 and the MONET Implementation Program are thorough and the comprehensive listing of policy agenda and activities shows the government's commitment to cope with environmental issues by taking multifaceted approaches, including those involving the private sector, such as air and water pollution prevention, efficient energy and resource consumption, and environmental awareness building. The JICA-TSL project has supported in line with those multiple efforts by financing diverse projects as evidenced by its Phase I operation. These multiple efforts by the government and the private sector's investment needs therein should be continuously assisted by JICA-TSL Phase II.

However, the most important and urgent environmental issue to be addressed by the government is deemed to be regulation compliance among enterprises. Phase I originally aimed at financial support to private investment of this kind, but the Phase I portfolio has no projects directly investing in pollution control measures among the borrower SMEs. At the operational level, the current CSC does not have members from the central and local government agencies in charge of environmental monitoring and inspection. These points should be reflected in the Phase II project design, including technical assistance provided as consulting services. Positive sign from the policy context in this respect is the reorganization of the former State Inspection Agency (SIA) into the General Agency for Special Inspection (GASI). GASI is given a new mandate of regulation enforcement and policy formation, including enhancement of its environmental monitoring and enforcement capacity.

(3) Private Sector Context

Although there are no statistics or data available in the country about the private investment in environmental protection activities, the disbursement progress of EPLs of Phase I implies active demand for environment-related investments.

The Phase I portfolio also suggests that the additional profitability expected from investment is the borrower SMEs' primary interest whereas the investment for regulation compliance is currently not prioritized regardless of their compliance status. It is considered that, especially for such activities that cannot add to the profitability of their business, the financial support by TSL is not attractive enough to potential borrower SMEs eligible by the current limited

criteria (as small as less than 50 employees). On the other hand, the regulation compliance of larger-scale enterprises are not at satisfactory level and the TSL financial supports should be amplified to cover their investment needs, particularly for pollution prevention.

For other types of both environmentally-effective and financially viable projects, investment needs of SMEs will continuously exist in a variety of project types such as heat supply, insulating materials, etc. Cleaner Production and ESCO promotion activities by MCCI are remarkable private sector initiatives relevant to the objectives of JICA-TSL.

16.2 Potential EPL Projects

(1) Classification of EPLs

Based on its review and analysis on environmental issues, government policies and programs as well as the Phase I EPL performance, the study team has classified the potential private sector investment in environmental protection in the following four groups with description of the nature and characteristics of potential sub-projects for EPLs.

These classifications and project types are made inclusive based on their necessity identified in the course of this study rather than limited to probable or bankable financing needs in the short-term perspective. Some project types may not come as Phase II EPLs because of the current lack of market, policy and legal frameworks, or technology development. However, general perception on the project bankability of each classification is briefly presented in the following sections. Generally in the short run, it is considered that the bankability as EPL projects is higher in “Energy Saving Investments” and “3R Initiative” than in “Environmental Awareness Approaches” and “Environmental Regulation Compliance”.

For screening purposes for the Phase II EPLs, it should be noted also that this classification is an indicative description and not strictly excluding other activities mentioned below. Likewise, one project can be grouped in more than one classification depending on its purposes or environmental effects.

1) Environmental Awareness Approaches

Corporate social responsibility (CSR) is a concept whereby private entities consider the interests of the society by taking responsibility on the impact of their activities in relation to their customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment. EPL projects categorized in the Environmental Awareness Approaches are the investments related to environment to practice the CSR concept, e.g. cleaner production techniques, organic farming, reforestation and biodiversity protection.

Since most CSR activities such as reforestation and biodiversity protection per se are not profitable, bankability of those investments are considered low in general. However, depending on the project contents and market situation, some project types in this group may be bankable enough for EPL financing; e.g. cleaner production activities involving energy /material saving, organic farming with good market situation, etc.

2) Energy Saving Investments

Projects categorized in this group are investments by SMEs to introduce new technology to save energy consumption in their own production process. Typical energy saving investment

is replacement of degraded Heat-Only Boilers (HOBs) or smaller-scale heat stoves. The mitigation of air pollution is also brought about as a major positive impact by such investment. As another project type that will fall in this group in much longer-term perspective, GOM proposes the development of alternative energy sources, or so-called renewable energy projects such as wind power, solar energy, geothermal energy, etc. in Action Plan 2008-2012.

Energy saving effect is directly connected to reduction in production costs and contributes to additional profitability. Except for the alternative energy source development, the energy saving investments are generally deemed bankable as evidenced in the Phase I operation which financed four HOB replacement projects. However, relatively heavy investment costs may narrow opportunities for SMEs when applying for EPLs, depending on the project and borrower situation.

3) 3R Initiative

The "3R initiative" aims at promotion of "reduce", "reuse" and "recycle" of materials so as to build sustainable society through the effective use of resources and materials. Some of Phase I EPLs can be classified in this group, i.e. the production of clean coal briquette (CCB) as an alternative energy-efficient fuel with lower pollutant emission, and the used lubricant oil recycling business.

Since these projects are all for-profit businesses and intend to market their environment-friendly products (e.g. recycled oil or CCB), their bankability depends on the market situation. The Phase I portfolio including SME loans[1] suggests that the private sector will actively respond to market needs and form a wide variety (probably unpredictable)of projects by introducing new technology and exercising their creativity. As for the 3Rs in production process (e.g. effluent reduction or reuse in a factory), the project bankability is considered lower and may not take place by themselves otherwise as a part of for-profit project, for instance, expansion of production capacity.

4) Environmental Regulation Compliance

The projects classified in this group are investments in pollution prevention measures to comply with the environmental regulation and standards. Especially in the urban area, air and water pollution control is the major issues to be addressed. Projects envisaged for this type are, for example, the investments in prevention measures for the exhaust gas emission of coal-fired heating systems and the industrial effluents containing pollutants such as organics and chrome.

Except for the production of goods for end users' regulation compliance, the investment in the pollution control measures does not contribute to profitability and is not deemed bankable projects. It is more likely to come as a part of expansion or green-field projects.

(2) Potential EPL Projects

Following the classification of EPL presented above, potential EPL project types are described below.

[1] Several SME loan sub-projects of the Phase I, production of heat insulating materials for instance, could be categorized in this group.

1) Environmental Awareness Approaches

Cleaner Production

Cleaner Production is the continuous application of an integrated preventive environmental strategy applied to processes, products, and services to increase overall efficiency and reduce risks to humans and the environment. Although most Cleaner Production activities expect such benefits as energy saving and resource consumption efficiency, the most prominent characteristic of cleaner production is SMEs' environmental awareness and consciousness to Corporate Social Responsibility. Thus this project type is classified here in Environmental Awareness Approaches.

MCCI, as described in Chapter 4 of Part I, has conducted technical assistance to selected 17 SMEs in total since 2000 to date, with support from the Netherlands Government and EC. In its latest "Ecoprofit for Sustainable Entrepreneurship Project for Cleaner Production" (2006-2008) under EC assistance, seven SMEs were provided with technical assistance and their investment reached USD 150,000 in total (average USD 21,400 per project). MCCI has a plan to conduct another cleaner production project for 2009-2011 with EC assistance. MONET has recently established Cleaner Production Department as response to these private sector initiatives and its Implementation Program.

Reforestation

Currently, almost all reforestation activities are implemented as public investments. MONET has a plan to restore 10,000 hectares of forest areas annually in its current implementation program. In the current situation, the private sector may involve in reforestation as either contractor or supplier to the public investments; for instance there is one EPL project in Phase I to produce and supply nursery trees.

Biodiversity Protection

MONET has plans to prepare the legal framework and to improve management for biodiversity protection activities, e.g. the protection of endangered species and flora and fauna. This includes appropriate use of natural resources and their restoration.

Organic Farming

According to the National Action Plan 2008-2012, MOFALI is in process to create legal conditions and standards to support the production of ecologically clean products in the agricultural sector.

2) Energy Saving Investments

Replacement of Heat-Only Boilers (HOBs)

In Ulaanbaatar, 89 HOB stations are supplying heat service mostly to public facilities, schools and kindergartens[2]. Ulaanbaatar City has recently completed privatization of 29 degraded HOB stations to 10 private companies on a "replace-manage-transfer" basis. Out of the remaining 60 HOB stations, 37 are private-owned for private schools, industrial use, etc.; and 23 are state-owned for military, detention facilities, etc. For some of the remaining HOB

[2] "Capacity Building for Development and Implementation of Carbon Finance", implemented by MONET with support of the World Bank.

(tentatively 16 stations), the proposed World Bank finance for "Ulaanbaatar Clean Air Project (UBCAP)" is under consideration and has a component that supports some public sector HOB replacements.

In the regional level, almost all HOB stations remain with the public sector. According to MOME, there are approximately 1,100 HOB units (3 to 4 units per boiler station) owned by around 330 aimags or soums in 2001. ADB is providing grant assistance of USD 2 million in total to selected soums for the replacement of HOBs through its "Community-Based Heating Supply in Rural Remote Areas" with the Japan Fund for Poverty Reduction. In this project, about 20 soums in total will be funded for 2008-2010.

Improvement of Heat Stoves for Buildings and Households

In urban areas where centralized heating or heat supply from HOBs are not available, heating system is made by stand-alone stoves installed in buildings. It is estimated that 1,005 raw coal-fired water heating stoves in Ulaanbaatar City require improvement by either replacement with energy-efficient units or adjustment of their system to be operated with coal briquette[3]. The owners of 685 stoves show their willingness to improve their stoves, out of which 421 stoves are actually planned to be improved in the near future.

Development of Alternative Energy Sources

Efforts for development of renewable energy have just been initiated by GOM. The market and technology are still undeveloped for private sector involvement.

3) 3R Initiative

Clean Coal Briquette (CCB) Production

The JICA-TSL Phase I has one CCB production project implemented by Sharyngol Energy with planned production capacity of 50,000 tons/year, which is currently under construction. The European Bank for Reconstruction and Development (EBRD) has financed a similar project by the company called MAK with a production capacity of 100,000 tons/year. The production capacity of these two projects will satisfy the current demand of 150,000 tons/year estimated in the Environmental Sector Study by JBIC (2006)[4]. World Bank is planning to assist the promotion of CCB use by introducing a voucher system for improvement of domestic stoves by poor households. Originally, USD 8 million is allocated for this activity to cover 100,000 stoves to be replaced, but the current economic situation may cause a delay or downsizing of the World Bank operation.

Heat Insulating Construction Materials Production

Several SME loan projects in Phase I were production of construction materials with energy saving effects, such as heat-insulation windows. In this type of project, the subject production process does not necessarily have positive environmental impacts; however, the heating energy consumption of its final users will be reduced by using these products. The concept of

[3] Ditto.

[4] "Environmental Sector Study in Mongolia Including Business Plan for Clean Coal Briquette Production" (2006), JBIC. While JBIC sector study estimated the current demand of 150,000 tons / year, the World Bank's consultant report "Urban Air Pollution Analysis for Ulaanbaatar" (2007) estimated more increased demand of 200,000 tons / year.

Life Cycle Assessment[5] must be applied for the estimation of the environmental impacts of this project type.

Alternative Igniters Production

Solid fuels, such as raw coal and coal briquettes, require igniters to start burning. In Mongolia, households commonly use wood logged from the scarce forests surrounding the urban areas. It is the principal human-generated cause of deforestation following human-made forest fires. Use of alternative igniters made of chemicals and other materials should be promoted to reduce the wood consumption by households.

Sewerage Treatment for Water Reuse

The market is still premature for sewerage treatment systems for factories and buildings to reuse their own water discharge. One private company has started to develop imported technology of small-scale systems. MONET is preparing the unified state policy on introduction of water recycling systems to promote water resource and quality conservation.

Used Lubricant Oil Recycling

One EPL project of Phase I was the construction of a recycling plant for used industrial lubricant oil collected from mining and cement companies. In this project, the introduction of new-to-Mongolia technology enables this recycling business to be competitive enough with the existing imported products. For sustainability of this project type, it is essential to establish the legal framework and infrastructure for final treatment and disposal of the waste oil generated in the recycling process. The establishment of a centralized waste disposal facility is planned in MONET's implementation program.

Solid Waste Recycling

Solid waste problem in highly populated areas, especially Ulaanbaatar, can be mitigated with the practice of 3R Initiative. There are some attempts by SMEs to initiate this kind of business such as plastic bag recycling. For the centralized recycling from public solid waste collection system, further studies are required for business development through either by the public sector or with the involvement of private enterprises.

Wastewater Recycling in Cement Factories

There are three large-scale cement factories in Mongolia, one state-owned and two private. These plants currently discharge waste water used in their cooling process. To reduce this water resource use, one of these companies is planning to introduce a water recycling system but lacks sufficient funding.

4) Environmental Regulation Compliance

Wastewater Treatment Facilities for Leather and Wool Processing Factories

In the industrial area of Ulaanbaatar, there are 14 leather processing and 12 wool washing factories run by SMEs that discharge their effluents to Khargia, a privately-owned (with 15%

[5] Life Cycle Assessment (LCA) is a comprehensive environmental impact analysis that assesses the environmental effects of a product (e.g. material use, energy consumption, waste and pollutant emission, etc.) through its whole life cycle: exploitation - production - distribution - consumption - discharge.

Ulaanbaatar City share) wastewater facility with current treatment volume of 8,000 m^3/day (nominal 13,000 m^3/day). However, the facility is very much degraded and requires renovation for more effective stabilization and separation of chrome and organic pollutants in the wastewater from the factories.

Another solution would be the introduction of individual treatment facilities in the respective factories to remove chrome. In this alternative, Khargia will treat the residual organic loads in the effluent. However, it is required to establish a disposal facility for the sludge containing chrome from the factories.

Wastewater Treatment Facilities for Food Processing and Textile Factories

Organic and nutrient load and chemical residue are considered as major pollutants in food processing and wool textile industries. GASI puts high priority in the enforcement of relevant environmental regulations in these sectors.

Since the main pollutant load from food processing is organic, it is required to introduce effluent treatment facility with the activated sludge bacteria process. The textile factories that normally use dyers require additional treatment process to separate residual chemicals from the effluent.

Dust Prevention in Copper Mining and Cement Production

One Phase I EPL project, still at the pre-construction stage, involves production of adhesive material to be used for dust prevention in copper mining sites. The MONET implementation program plans the revision of laws and regulations on restriction of mining activities and implementation of "Reducing negative impacts of mining activities to the environment" program.

Cyanide Leak Prevention in Gold Mineral Processing

The three largest gold mine producers, two foreign investments and one Mongolia-Russia joint venture, use cyanide solution in their leaching process for extraction. Mongolian companies may find business opportunities in the provision of prevention systems for leakage of cyanide. Technical issues for the implementation are the monitoring capacity of the Central Laboratory of Environment and Metrology, and availability of technology for preventive treatment of cyanide solution. The required treatment technology consists of (i) pH adjustment to decompose cyanide; and (ii) prevention of the complex compound formation.

Mercury Amalgam Leak Prevention in Informal Micro-scale Gold Mining

Informal micro-scale miners extracting alluvial gold are polluters of river streams because of the mercury used in amalgamation. Well-known solution is the establishment of medium-scale gold processing plant equipped with shaking table for gravity separation, cyanide leaching process and effluent treatment facility. The plant will offer gold mineral processing services to the micro-scale miners and is expected to lead to abandonment of their mercury use. Prerequisites of this solution are formalization of the miners, the Central Laboratory's monitoring capacity, and relevant gold processing technology.

Air Pollution Control of Heat Supply Facilities

As mentioned in "Energy Saving Investments", the privatization of 29 HOBs is completed in Ulaanbaatar resulting in replacement with new units that comply with gas emission standards.

Other public and private HOBs need improvement not only for energy efficiency but also for compliance with the pollutant emission standards. In the regional level, almost all HOB stations remain with the public sector and face the same issues due to degradation.

Air pollution control component of such heat supply facilities is considered as one of the "Environmental Regulation Compliance" project. Installment of such equipment as desulphurization, dust collection and NOx removal is examples of investment in the air pollution control measures.

The facilities to accommodate emission monitoring by public inspectors may also be eligible investment component as "Environmental Regulation Compliance" EPLs. These may include measurement hole in gas flue, footholds, etc. for emission sampling activities.

(3) Market Situation and Short-term Financing Needs

Annex VI shows the potential EPL project types mentioned above and their respective market situation. The following are the major project types with short-term financing needs envisaged by the study team:

1) Environmental Awareness Approaches

Cleaner Production

Around 10-year experience of MCCI in technical assistance of Cleaner Production is an evidence of considerable need from SMEs for such activities (See Chapter 4 of Part I). Average investment size of around USD 20,000 is also suitable to the present project eligibility of TSL Phase I. However, it is also worth noting that intensive and direct technical assistance to the private sector is necessary for promotion and implementation of Cleaner Production activities. MCCI has shown its interest in collaboration with JICA-TSL, whereby TSL will provide loan assistance and MCCI will support the SME's project formulation and implementation as well as possible guarantee assistance.

2) Energy Saving Investments

Replacement of Heat-Only Boilers

TSL Phase I have provided EPLs for three HOB replacement projects in Ulaanbaatar. Investment needs for the HOB replacements of similar kind is becoming smaller because of the recent completion of privatization by Ulaanbaatar City from 2006. However, some of 33 private HOB stations owned by various entities (private schools, etc.) may become potential EPL projects. According to the market study by the World Bank (2009), 12 HOB stations, consisting of both public and private owners, wish to make the replacements in two years.

Furthermore, there are about 300 HOB stations operated by aimags and soums that require improvement in the regional level. If MOME takes similar approach as in Ulaanbaatar, commercially viable HOBs in urban areas will have potential for financing by EPLs.

Improvement of Heat Stoves for Buildings and Households

Most of the heat stoves are small-scale facilities for domestic use so they are not considered suitable for TSL funding. However, stove manufacturing or supply business may have the potential to be financed in the short run if it applies appropriate technology for energy efficiency and gas emission. There are 55 types of stove units provided by 13 local manufacturers or importers/suppliers.

3) 3R Initiative

Clean Coal Briquette (CCB) Production

Regardless of the enactment of raw coal use restriction under consideration from 2011 in Ulaanbaatar, the demand for CCB will increase by population growth. In that sense, the expansion of existing or small-scale CCB plants will have potential financing needs in the short term. The said raw coal restriction will highly depend on the consensus among stakeholders, especially poor households in ger areas, as well as the implementation of UBCAP by the World Bank. Since the current economic situation limits the World Bank's resources for project assistance, it is possible that project implementation will be delayed or downsized, especially of the household stove improvement component related to CCB. Thus, drastic demand increase is considered only in the medium- or long-term perspectives.

Heat Insulating Construction Materials

Four SME loan projects in Phase I were production of heat insulating windows. According to the ODA loan consultants, they still receive inquiries about projects of this kind from potential borrower SMEs. Applying the eligibility as EPL to this project type will add the financing needs for Phase II EPLs.

4) Environmental Regulation Compliance

Despite its strong relevance to the most important environmental issue, there are no EPL projects in Phase I directly investing in pollution control within their own production processes.

However, the study team identified some SMEs in the industrial sectors with serious environmental problems like tannery and wool washing that have started seeking for solutions. For example, a local construction contractor attempts the introduction of effluent treatment systems for those factories as an alternative to the deteriorated centralized facility (Khargia) in the Ulaanbaatar industrial area. Since GASI prioritizes its monitoring activity to industrial effluent, some leather and wool processors are becoming more conscious of regulation compliance. Although the short-term financing need is minimal as a whole, it is crucial to provide detailed technical assistance to support such efforts, and guide to TSL finance through continuous marketing and consultation, which has hardly been attempted by the consulting services in Phase I.

Another approach to vitalize EPLs of this type will be amplifying borrower and project eligibility criteria. Regulation compliance must be practiced not only by SMEs but also by large-scale enterprises including those state-owned. The study team has identified some investment needs of this kind in cement plants and mineral processing plants as presented in the previous section.

Lastly, as seen in the review of the Phase I EPL projects (See Chapter 6 of Part I), the financing need will continuously exist for the production of goods or commodities for the regulation compliance of their consumers.

(4) Analysis of Loan Applications

The study team intended to take the same approach as that for SME Loans (See Chapter 15) to analyze the unprocessed sub-loan application in JICA-TSL Phase I and survey on investment under MOFALI Study 2008, as well as investment loan requests to SME Development Fund. Additionally, applications for Green Credit Guarantee Fund by MNCCI

are also analyzed. The difference from the SME Loan analysis was that, from the nature of EPLs, the analysis must identify the applications to be categorized in EPLs with little project description provided from the information sources so that the results are limited to rough estimates (see Annex V for details).

Out of 176 unprocessed applications in Phase I, at least seven projects (total project costs of USD 1.4 million) are considered as EPL projects including two insulating materials and two recycling projects. However, many other applications excluded from above (typically expansion of production capacity) may contain investment components eligible to EPLs such as pollution control and energy saving measures. Similar results are retrieved from the MOFALI survey (four potential EPL projects out of 142 in total) and the SME Development Fund requests (two insulating window projects out of 136); except that the MOFALI survey identified the Khargia effluent treatment facility rehabilitation (USD 1.2 million) as a potential project.

Although all GCGF applications must be environmental projects, many of them are for merely agricultural production, mostly animal breeding, farming or plantation. At least 17 projects (USD 0.82 million) are identified to have probable EPL eligibility, including three possible Cleaner Production projects, three recycling business, one energy saving, and two insulating material production. In addition, there are two projects that intend to provide sanitation services to households without access to public centralized services.

A small portion of potential EPLs in these results imply little apprehension among SMEs on what is investment in environmental protection. Marketing and awareness-raising for promotion of EPLs are considered important in the Phase II operation.

16.3 Eligibility of Sub-Loan

(1) Sector

Eligibility for EPLs should put emphasis in the nature of the project rather than in sector classification. In that sense, it is proposed to apply only the same negative list of ineligible sectors as proposed for SME Loans (See Chapter 15).

(2) Sub-project

EPL projects shall be investment for environmental benefits. The proposed “Guidelines for Formulation and Evaluation of EPLs” (Annex VII) will facilitate to assess the project eligibility for EPLs. As discussed in the previous section, the following four project classifications are envisaged:

- Environmental Awareness Approaches
- Energy Saving Investments
- 3R Initiative (“Reduce” “Reuse” “Recycle”)
- Environmental Regulation Compliance

Except for those classified in “Energy Saving Investments”, EPL projects in the other three groups can be production of goods for environmental benefit of their customers. For example, the investment in manufacturing plant for production of effluent treatment facilities is eligible for EPL as an “Environmental Regulation Compliance” project.

(3) Use of proceeds of loans

Acceptable use of loan proceeds of EPLs will be the same as that of SME Loans: construction of plants and purchase of equipment, as well as permanent working capital, if deemed necessary (See Chapter 15 for details).

Moreover, it is considered that investment in environmental protection normally does not take place alone but as a part of construction of production facilities. It is necessary to take into consideration that the EPL eligibility is partially given to a project component especially in case of "Environmental Regulation Compliance".

(4) Sub-loan Borrower

Phase II EPL will apply the same eligibility criteria for SME loans (less than 200 employees and up to MNT 1.5 billion of annual turnover) reflecting the recent enactment of the SME Law. Other particulars will also be the same as for SME loans.

Exceptional consideration is proposed for "Environmental Regulation Compliance" EPL or more precisely, the investment in pollution prevention measures within the production process of the sub-borrower[6]. No performance of EPL of this kind in Phase I suggests that the eligible SMEs (currently as small as less than 50 employees) are not financially capable of such investment even with the financial support of TSL. On the other hand, the financial support has to be equally open to larger-scale companies including the state-owned facing the same problem of regulation compliance. This is justifiable because investment in regulation compliance normally cannot expect profitability. Hence, it is proposed to remove the limitation in the borrower eligibility criteria exclusively to the EPLs for the project component of pollution prevention. To do this, a certain limitation in the loan amount per sub-project will be necessary for JICA-TSL to have appropriate outreach in terms of the number of enterprises served as well as small-scale enterprises' participation.

16.4 Terms and Conditions /Preferential Terms

Basically, the terms and conditions to be applied for EPLs of Phase II will be the same as the one applied for SME Loans. The study team, however, proposes that the preferential terms as shown below will be applied to the preferred EPLs specified in the previous section, i.e. "Environmental Regulation Compliance" projects implemented as direct investment in pollution prevention measures within the sub-borrowers' production process.

Repayment Period: 10 years (1 to 3 years grace period) (No preferential treatment)

Interest Rates (On-lending loan rates):

- MNT: Average 6-month deposit rate minus 1.0%
  (1.0 percentage point preferential discount)
- USD: LIBOR flat
  (1.0 percentage point preferential discount)

* Sub-loan Rates: To be determined by agreement between PFIs and sub-borrowers

[6] Even if classified in "Environmental Regulation Compliance", EPL projects for production of goods and materials for customers' regulation compliance are excluded from this consideration.

CHAPTER 17 PROJECT DESCRIPTIONS AND IMPLEMENTATION PLAN

17.1 Overall Project Scheme of Phase II

(1) Background

Upon request of the GOM, JICA will extend ODA Loan in the form of TSL Phase II amounting to JPY 5.0 billion to Mongolia to promote SMEs development and to support environmental protection in cooperation with local banks.

(2) Outline of Proposed TSL Phase II

Outline of proposed TSL Phase II is as follows.

Lender	: JICA
Borrower	: The Government of Mongolia
Amount	: JPY 5.0 billion (USD 50 million equiv, excluding consulting services)
Interest	: to be decided
Term	: to be decided
Implementation	: 3 years
Components (current allocation) :	
1) Category A (SMEs Development)	: JPY 3.5 billion
2) Category B (Environmental Protection)	: JPY 1.5 billion
(Consulting Services amounting to JPY 300 million is expected to be provided additionally)	

(3) TSL Lending Scheme

The proposed TSL lending scheme is as follows.

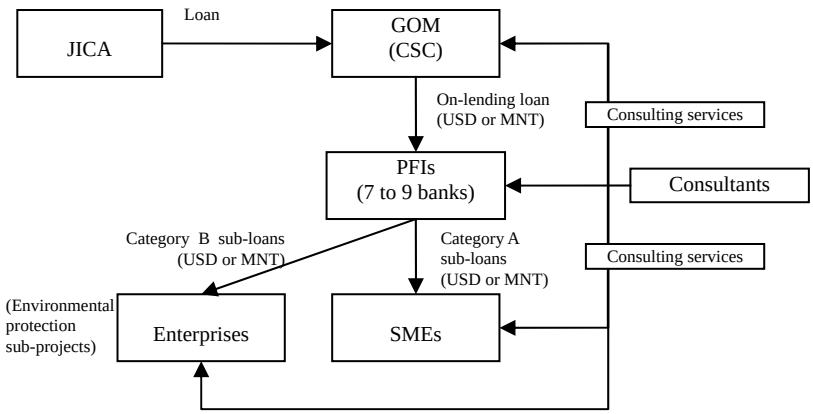


Figure 17.1.1 Proposed TSL Lending Scheme

(4) Outline of Proposed On-lending Loans

Outline of proposed on-lending loans is as follows.

Lender	: Ministry of Finance (MOF)
Borrower	: To be selected
Amount	: Lump sum requested amount
Currency	: USD or MNT
Term	: 3-10 yrs (including grace period of 1-3 yrs)
Interest Rate	: USD: LIBOR + 1%
	MNT: Average rate for MNT demand deposits

(Specially categorized environment projects might have preferential conditions including interest rate.)

(5) Outline of Sub-loan

Lenders : Selected PFIs

Borrowers : SMEs meeting the following conditions

1) Established and operating in Mongolia
2) All but real estate, military, and consumer finance (main targets are agricultural and industrial sector)
3) Majority privately owned
4) Pre-tax profit of MNT 100 million or less (applicable corporate tax rate at 10 percent)
5) Number of employees 199 or less
6) No previous default

Currency : USD or MNT

Amount : USD 10,000 - 1,000,000 or equivalent

Terms & Conditions:

- Terms: 3-10 years (grace period of 1-3 years)
- Interest Rate: To be determined by agreement between the Lender and the Borrower
- Interest Payment: - ditto -

Security : to be determined by PFIs

(Specially categorized environment projects might have preferential conditions including interest rate and loan amount.)

17.2 Eligibility and Selection of PFIs

It is recommended that selection of PFIs for Phase II will be made in principle by the same way adopted in Phase I which is mentioned in the previous relevant chapter (Part II, Chapter 9, Section 9.1). The PFI Selection Committee, which was already established by the State Secretary of MOF in April 2009 during the second mission, consisting of MOF, BOM and the JICA study team, had the first meeting and decided that selection of PFIs for Phase II will be made newly with due consideration and recommendations (Part II Chapter 9, Section 9.9) made in this Final Report. BOM, based on various risk analysis, is required to disclose confidential data including prudential ratios, to the Committee.

The JICA Study Team expressed its view that the present six PFIs, except Anod Bank, would be duly selected reflecting their successful financial performances and other banks which would be newly selected upon their application to enhance the overall implementation capability. The committee appreciated its comments.

The Selection Committee will review the selection criteria, financial performance of each existing PFI as well as their performance on the TSL Phase I. In addition, with due consideration of the expected loan amount, current government, industrial policies, and environment policies, the Selection Committee will finally select PFIs.

17.3 Implementation Set-up and Roles of Stakeholders

(1) MOF

MOF as the borrower receives ODA loan proceeds and performs financial services through its accounts of S/As and RF/As set up with BOM in accordance with L/A concluded between GOM (represented by MOF） and JICA. MOF is responsible for management of disbursement and repayment to and from PFIs.

MOF is responsible for management of CSC meetings by holding its chairpersonship. Mr. Dorjkhand, Deputy Director of Department of Policy Coordinating for Aid and Loans, is now in charge for implementation of JICA-TSL. He is implementing the projects in chairing CSC and controlling S/As and RF/As with full assistance of the consultant team. It is observed that MOF is performing satisfactorily.

(2) CSC

CSC was organized as the Executive Agency for JICA-TSL on November 10, 2006 by MOF, in accordance with L/A made between Mongolia and JICA, and its chairperson together with its members were nominated simultaneously. The members are presently composed of representatives from MOF (4 persons), MOFALI (2 persons), MONET (1 person), MOH (1 person) and BOM (see details in Table 10.1.1 in Chapter 10).

According to L/A, the expected function of CSC is to implement TSL project as “the Executing Unit” by receiving ODA loan from GOJ and by making on-lending loans to PFIs for their further lending sub-loans to SMEs. However, since CSC is a meeting and not an organization, and it is expected to be held only monthly, daily execution has to be made by MOF with assistance of the consultant hired by MOF under the loan proceeds of the TSL project. Eventually operation is made by the consultants in consultation with the chairman of CSC, Mr. Dorjkhand.

(3) BOM

BOM holds S/As and RF/As and smoothly performs daily in and out money flow operations under instruction by MOF (Treasury). No operational problems are identified so far. Also, information on accounts such as statements or details of transaction is satisfactorily provided. Accordingly, BOM will be the best financial institution to keep these accounts for Phase II of JICA-TSL.

(4) JICA (former JBIC)

In accordance with the L/A, JICA has extended its concurrence for the application of the first three projects of each PFI. For the fourth project and onwards, JICA has been informed by receiving application for sub-loans approved together with minutes of discussion in the CSC meetings. JICA has been consulted from time to time on the issues related to implementation of JICA-TSL.

It is a fact that it took quite a long time to obtain approval by JICA on the first three applications for sub-projects. Most of such cases were caused by insufficient preparation of applications by PFIs who had not been accustomed to long-term financing, particularly in preparation of application format which could be acceptable to JICA.

(5) Consultants

The consultants, who are composed of three international consultants and three national consultants, have engaged in the services to assist MOF to undertake implementation of JICA-TSL in consultation with MOF. Furthermore, the senior local consultant plays the role of project coordinator and, at the same time, has been designated to be authorized signer for the issues vis-à-vis JICA together with Vice-Minister of Finance. The Consultant has made substantial training for the staff of PFIs through mainly face to face discussion on the proposed projects.

For the Phase II implementation, enhanced consultant services would be highly needed, because i) loan amount will be increased , ii) number of PFIs will be increased accordingly, iii) loan administration should be strengthened to avoid defaulting/non-performing, and iv) environmental protection projects should be more stressed responding to the policy change to enhance environment protection.

17.4 Fund Management and Flow

JICA will lend to the government at standard ODA loan. These funds will be on-lent to PFIs, which would then re-lend the fund to private sector sub-borrowers. For the line of credit, special accounts will be held in BOM to facilitate disbursements, which is the same procedure as JICA-TSL Phase I. Disbursements to the government from JICA are based on a request for the initial disbursement and replenishment with Summary Sheets of Payments for each Category of TSL component presented. Disbursements to PFIs from the government are to be made from special accounts to be established at BOM on the basis of an application by PFIs to CSC and its approval, although environmentally-damaging sub-loans are subject to JICA review and concurrence. Procurement of goods and services under the line of credit needs to be competitively made in the spirit of the Procurement Guideline of JICA.

One of the issues concerning fund flow is how the fund in special accounts be transferred to PFIs. The current practice is made in the following manner:

i) Convert JPY equivalent to the on-lending loan scheduled to MNT or USD through exchange from special account with BOM; and

ii) Transfer the MNT or USD fund directly to each PFI's account with BOM.

Prior to this SAPI for JICA-TSL, MOF requested JICA to agree with the following fund flow:

i) Transfer JPY amount equivalent to the total amount of on-lending loans scheduled to the treasury's JPY account specifically maintained for future payment to JICA;

ii) Transfer, at the same time, the total amount of on-lending loans scheduled in MNT or USD from the treasury's general accounts to JICA-TSL accounts in MNT or USD; and

iii) Then, transfer on-lending loan amount to PFI's MNT or USD account one by one.

The reason why MOF sticks to the above scheme for disbursement is to avoid exchange risk by keeping Japanese Yen fund in the treasury. The sub-loans are extended in MNT or USD, while GOM is obliged to pay interest or repay the loan to JICA in JPY. MOF is responsible for the exchange risk, therefore MOF wants to be prepared for payment in JPY from time to time, by storing Japanese Yen fund as much as possible while fund available. According to MOF, BOM tends to keep foreign exchange in USDs, not in JPY, and, as such, "storing Japanese Yen fund in Treasury" and "transferring Japanese Yen fund to BOM" have different effects on exchange risk considering the country as a whole. It appears that MOF's approach gives better ground to avoid possible exchange risk in operation as long as JICA-TSL is concerned.

Even if the proposed money flow scheme would be effective to control the possible exchange risk, another doubt may arise, i.e., whether the treasury's MNT and USD funds are sufficient for sub-loans to be provided by PFIs. The government's budget has continued to expand in these five years, and the current revenue exceeded MNT 2,000 billion (JPY 130 billion equivalent) in 2008. MOF is of the view that it will not be any problem to pay out the disbursement from the treasury's accounts. In view of fluctuations in availability of funds throughout the year, however, MOF shall be required to exchange Japanese Yen fund in S/A to make disbursement in some cases. Even in these cases, the transaction records in S/A in JPY and JICA-TSL accounts in MNT or USD will be exactly same as the proposed scheme. As long as the transactions are recorded in the bank accounts used for the project in the same manner, it is not necessary to differentiate two schemes in detail, such as through treasury's accounts or the exchange market. The importance exists in recording in and out money flow in S/A in JPY and JICA-TSL accounts in MNT or USD. The fairness of the actual money flow handling can easily be audited on these accounts (S/A and JICA-TSL accounts) together with the exchange rates available from BOM.

Another issue is how to monitor the project implementation in terms of fund flow. In JICA-TSL Phase I, available information is only bank statements of special accounts, and it is difficult to grasp current status of usage of loan proceeds in relation with JPY to MNT / USD. It is considered definitely necessary for CSC to administer on-lending loans in the currencies used. The JICA-TSL accounts in MNT / USD will be needed for this purpose. Such accounts will be quite beneficial for audit purpose, too. Auditors usually use bank transaction tapes and statements as a key part of their evidence for transaction flows. These reports are externally sourced, have a high degree of reliability and are comprehensive. As such, it seems obvious that the project accounts denominated in on-lending loans should be maintained by CSC.

A far more important issue is that it is not clearly defined who is responsible for daily control of loan fund management. The L/A stipulates that CSC shall maintain or cause to be maintained records and accounts adequate to reflect the expenditures financed out of the proceeds of the ODA loan. The Project Office currently keeps these records in forms of Summary Sheet of Payments for the Accounts and Statement of the Accounts.

On the other hand, PFIs cannot make any payment without paper-based invoices. In order to ensure repayment of principal and payment of interest as scheduled, GOM is required to issue invoices for principal and interest receivable for all the outstanding on-lending loans every month. Now that the number of outstanding on-lending loans is over 100, it is required to establish well-controlled operation system for JICA-TSL. This process should be programmed at the appropriate level so that an efficient operation on the government side is materialized. The operation system should accommodate at least the following functions:

i) Book keeping of fund flow;

ii) Book keeping of sub-projects financed by PFIs;

iii) Interest calculation;

iv) Repayment schedule; and

v) Projection of fund inflow from PFIs.

17.5 Project Cost and Financing Plan

The JICA study team proposes that total loan amount will be JPY 5.0 billion (excluding expected TA for consulting services) of which JPY 3.5 billion is for SMEs development (namely Category A) and JPY 1.5 billion for environmental protection (namely Category B). The reason for such a bigger loan amount than the Phase I proposed could be explained by the following reasons; i) huge financial demand anticipated in the private sector, ii) enhanced implementing capacity of PFIs through experience in Phase I, iii) increased environmental concerns, and iv) strong government request.

The JICA study team also recommends that provision of additional JPY 5.0 billion as Phase III could be considered after reviewing the implementation of Phase II.

Financial demand would be difficult to grasp in figure, however the JICA study team felt that the good operational result of Phase I is disseminated to the corners of Mongolia.

17.6 Implementation Schedule

Phase II will be implemented in the period of three years. Careful review will be made after the Phase II is completed. Subsequently, the provision of Phase III could be considered.

Time requirement for each step is projected as follows.

Item		Time requirement
Selection of consultants	:	6 months
Project completion (Phase II)	:	2 years and 6 months

17.7 Monitoring and Evaluation Indicators

(1) SMEs Development Loan (Category A)

Periodical monitoring schemes are proposed for smooth implementation of the project:

- Monthly Progress Review

  Every month, CSC will review PFIs' submission of applications for sub-loans, processing of applications, disbursements in the currency of on-lending loan as well as Japanese Yen, fund flow to and from special accounts and revolving fund accounts, fund availability projected for the coming three months, etc.

- Quarterly Progress Review

  Every quarter, CSC will report to JICA on status of the project.

- Annual Audit of Accounts

Every year, CSC will submit the audit report conducted by external auditors on the use of proceeds of the loan on the basis of the project's accounts as well as management and operational problems and issues.

The supply of credit line to sub-loan borrowers will certainly bring about benefits to them in the form of increase of sales, profit and employment. The benefits would correspond to an incremental outcome between "with" and "without" conditions. The performance and impact of JICA-TSL Phase II is proposed to be monitored through inputs and outcomes. The expected outcomes will be assessed through the lifetime of the project, and impacts are designed to assess the achievement of the objectives of the project. Indicators on outcomes and impacts of Phase II Project s are proposed to basically follow the Phase I, as listed below:

Objective: Private sector promotion through SME development.

Inputs: JPY 75 million credit line.

Outcomes:

i) Sales increase (by commodity or industrial sector)

ii) Profit increase (in province, in sector)

Impacts:

i) Export promotion (by commodity or commodity groups),

ii) Import substitution (by commodity or commodity groups),

iii) Employees increase (by industrial sector and by unemployment in province)

Indicators:

i) Sales increase (by commodity or industrial sector)

ii) Profit increase (in province, in sector)

iii) Export promotion (by commodity or commodity groups)

iv) Import substitution (by commodity or commodity groups)

v) Employees increase (by industrial sector and by unemployment in province)

Effect indicators for the project entail key outcome and impact indicators. The proposed indicators are average in each category, and the effects of the project are expected to be higher than these average indicators.

The Consultant is basically responsible for the build-up of a time series of performance data on sub-loan borrowers during the project life. The implementation of project analysis and the preparation of the yearly evaluation report are to be practiced every year.

(2) Environmental Protection Loan (Category B)

Regardless of their category, all TSL sub-projects must follow the environmental impact assessment (EIA) procedure established in Mongolia. In addition to the EIA procedure mentioned above, all EPL projects are required to make appropriate consideration on the anticipated negative environmental impacts to ensure its overall environmental performance.

All EPL project owners, i.e. all EPL sub-borrowers, must provide baseline information on the influenced area and mitigation measures to be applied in case any negative impacts are anticipated. This information should be compiled jointly with estimated benefits and positive impacts expected from the project.

These baseline data and proposed mitigation measures (including countermeasures for contingencies) will be used for ex-ante evaluation of the loan application to assess the eligibility of applied sub-loan as an EPL, and also for the monitoring during the project preparation, implementation and operation stages as well as ex-post evaluation.

Monitoring and Evaluation Indicators by EPL Project Type

All EPL projects must have positive environmental effects that vary by project type classification. Presented below are the basic indicators to be used for ex-ante evaluation of their eligibility as EPLs and for further monitoring and ex-post evaluation[1].

1) Environmental Awareness Approaches

Cleaner Production

Cleaner production projects have various positive impacts depending on their project components. They may bring about impacts as those of Energy Saving Investments, 3R Approaches, Environmental Regulation Compliance, or combination of these classifications. Hence, the subject project activities must be carefully reviewed to determine the indicators to be applied for monitoring and evaluation. Appropriate indicators should be selected from those for the said classifications presented in the respective sections below.

Organic Farming

Although the legal requirement of organic farming is not yet established, the following basic indicators must be verified:

- No usage of agrochemicals in planting and harvesting
- No usage of hazardous materials for packaging

Reforestation and biodiversity protection

The project activities must be in line with the laws and regulations on protected areas and endangered species. The basic indicators envisaged for this project type are:

- Biomass increase rate
- Specimen community/individual increase rate

2) Energy Saving Investments

Change in the energy balance on a before/after-project basis must be evaluated to show energy efficiency effect of the project. The basic indicator is:

- Energy saving rate

[1] Detailed description of required information for each indicator is presented in Annex VII "Guideline for Formulation and Evaluation of EPLs".

3) 3R Initiative (“Reduce”, “Reuse” and “Recycle”)

Change in the material balance on a before/after- or with/without-project basis must be evaluated through Life Cycle Assessment (LCA) methodology. It is required to estimate the overall balance of material or energy usage throughout the life cycle of the subject product to show the positive impacts to the environment. The basic indicator is:

- Material/energy consumption reduction rate

4) Environmental regulation compliance

The most significant issues requiring the compliance of environmental regulation in Mongolia is regarding the preservation of air and water qualities. Compliance with the relevant environment regulations (air emission standards, effluent standards, etc.) must be verified depending on the subject project components and their purposes. Typical regulations to be followed are:

- Air emission standards (MNS 5457-2005, the emission standards for exhaust gases from of heating boilers and home stoves)
- Effluent standards (MNS 4943-2000, the effluent standards for the discharge to surface water and groundwater)
- Law on protected areas

CHAPTER 18 PROPOSED TECHNICAL ASSISTANCE

18.1 Necessity of Technical Assistance for Project Management

Although the project implementation of JICA-TSL Phase I has been made satisfactory and its disbursement has been made at the faster pace than originally scheduled, the overall project management has not always been satisfactory, and the scheme of the project has seldom been reviewed and modified, which has disclosed several problems and issues left behind.

Project Management: CSC's major activity has rather concentrated to project appraisal and disbursement, and, CSC has not always functioned for overall project management including fund management and loan administration. In addition, CSC meeting has not always achieved productive discussions, particularly on policy issues. Those policy issues discussed at the meeting are rather technical ones. Implementation of the project requires its scope and lending policy in detail, which would have been discussed by CSC comprising of various ministries concerned.

Promotion: While promotional seminars on how to use the JICA-TSL have been quite effective in introducing good sub-projects, such seminars were not sufficient to reach most SMEs widely spread over the country. Training on project formulation is also identified through discussion with representatives of various industries as well as PFIs.

Reporting/ Information Management: Toward the end of implementation, several sub-loan applications have been held pending for a long time, waiting for further accumulation of revolving funds. This problem was caused by lack of information on availability of the loan proceeds. More than 40% of the proceeds of the loan have been distributed by only one PFI due to lack of timely information of disbursement for each PFI. CSC has not furnished Project Status Reports due to lack of a periodical reporting system from PFIs.

Loan Administration: A well-controlled operation system which would prepare invoice for repayment of principal and payment of interest is required. It is definitely necessary for CSC to administer on-lending loans in the currencies used. CSC's efforts directed to loan administration have not been satisfactory. CSC has not quickly responded to irregular implementation of sub-projects. CSC is required to observe PFIs' behavior, and to take proper action if irregularities are found. For this purpose, CSC should establish an efficient and effective loan administration system, including money flow projection.

SMEs' Business Development Capacity: As PFIs and the PO under Phase I commented, one of the obstacles faced during the project implementation was poorly-prepared project proposals (business plan for capital investments) submitted by the applicant SMEs. PFIs and the PO both admitted that the time and communication (among PFIs, PO and applicant SMEs) spent for brushing up the project proposals was considerable although not tangible, since this process is out of "loan processing". In addition to the general situation that many SMEs does not have sufficient capability in preparing a business plan for capital investments, the project proposals were prepared and submitted in free form by SMEs to PFIs, causing the lack of important information and data, and a variation in the quality of such proposals.

Therefore, the guidance seminar for potential applicant SMEs to learn how to conduct business planning and to prepare loan application needs to be designed under the Phase II project in order to facilitate and smoothen the loan application from SMEs. During the course of Phase I, technical assistance was limited to promotional/PR activities to announce JICA-TSL to SMEs. The need for technical assistance to provide such a series of business planning seminars during the course of Phase II is deemed as high, being supported by PFIs.

The main issue would be who needs to be involved in conducting the business planning seminars for SMEs. The JICA study team recommends that PFIs under Phase II would arrange and conduct the seminars with assistance of the project management consultant. Some selected branch officers of PFIs are expected to participate in this business planning seminar, since their capability to assist business planning by SMEs is supposedly weaker compared to the officers in the headquarters.

Business planning seminar for SMEs shall be conducted in several places in Ulaanbaatar City and provinces where the number of SME is relatively larger, and jointly held by PFIs. PFIs can also have the session to conduct marketing / PR activities for TSL fund to SMEs. PFIs are expected to dispatch lecturers (to be assisted by the project management consultant) for business planning seminar, and call their clients, MCCI and MONEF (both central and provincial) to efficiently secure a good number of seminar participants and identify potential applicant SMEs.

Capacity Building of PFIs: In Phase I operation, it is observed that the lack of capacity among PFIs of sub-loan formulation and application is one of the major reasons for long preparation time for sub-loan disbursements.

PFIs have training programs of their own through which intensive education of staff have been carried out. Each PFI has training programs of at least 50 to a few hundred for general purposes, including those related to loan officers or financial analysis. The programs are mainly to loan officers for credit analysis while training for project finance is rarely found. Further, the actual credit applications of TSL sub-projects/loans to Credit Committees (CC) of PFIs were checked. These applications to CC reveal that risk analysis of loans and sub-projects are mainly concerned with credit risk of borrowers. One of the PFI's management commented that because the basic concept of risk analysis of PFIs rest on the borrowers' risk, risk analysis on project viability is hard to be practiced. Perhaps the management should have more understanding of project finance. According to the PFI director, the relationship of corporate risk and project risk, and the merits of analyzing project risk need to be understood by CC members. Considering that PFIs organize many training and seminars by themselves on the basic matters such as risk and financial analysis on borrowers, TA needs for PFIs would only be on project finance, including financing of environment protection projects, and, if necessary seminars for PFIs' management.

Environmental Protection Loans: Lack of definition on "what the environmental protection would be" has obviously caused uncertainties and difficulties among CSC and PFIs. In this SAPI study, categorization of environmental protection projects is recommended, which should be further elaborated, implemented and disseminated. Although CSC is required to monitor and report how the expected environmental outcomes would be generated by the sub-project, environmental monitoring by PFIs is deemed difficult. In terms of TA by Consulting Services, it is obvious that the lack of environment component was the main issue. Although the present SAPI study completes intensive preparation work including the EPL

Guideline, there will be great need for capacity building and dissemination work for those players including borrower enterprises, in the form of TA on daily and on-the-job bases, for smooth and effective implementation of TSL Phase II.

18.2 Outline of Proposed Technical Assistance

The outline of the technical assistance (TA) for overall project management is summarized and explained as below;

Objectives	- To provide daily services and professional advices for Project implementation
Targeted beneficiaries	- Government of Mongolia represented by CSC - PFIs and SMEs implementing the Project
Contents	- General secretariat functions for CSC - Screening and presenting applications for sub-loans for CSC - Capacity Building of PFIs through daily-basis training on sub-project preparation - Disbursement of the Loan proceeds for sub-projects - Operation for collection of interest and principal repayment - Book keeping of the Project accounts - Administration of Revolving Fund accounts (RF/A) - Sub-loan administration and reporting to JICA - Monitoring impacts of sub-projects - Guidance Seminar for Potential Borrower SMEs - Promotion and dissemination activities on EPL and the relevant concepts for subject enterprises (mostly industrial sector) - Feedback and technical consultation/advisory on findings through TSL implementation, for ministries and local authorities concerned
Implementation	- National consultants (Project coordinator, Projects appraisal, Operational management, Operational processing, Environment expert) - International consultants (Project advisor, Project finance expert, SME expert, Environment expert, Project administration expert)
Budget estimate	International consultants: 30M/M x USD 30,000 = USD 900,000 National consultants: 180 M/M x USD 3000 = USD 540,000 Operation of Project Office: USD 300,000

TA allocation for overall project management is to finance mainly the cost of Project Office, staff training, and annual project audits. A scope of work is provided below:

Project Advisor and Coordinator: The MOF shall employ a project advisor (international consultant) and a full-time project coordinator (national consultant) to help CSC monitor the project progress and to act as a central link between JICA, CSC and various government entities. The Project Coordinator would be assumed by the one from Phase I for the duration of the project. The Project Advisor would be an international consultant to assist CSC in overall management of the Project implementation from time to time.

Project Implementation: This is the main component of TA allocation to implement the Project on behalf of CSC and MOF. The costs to be covered include those of limited office equipment, supplies, workshops, information dissemination, and translation, as well as staff assumed by national consultants for the duration of the project. The Consultant is also

responsible for build-up of a time series of performance data on PFIs and sub-loans borrowers during the project life. The implementation of project analysis is to be practiced every year as well as the preparation of the yearly evaluation report in conjunction with auditing results prepared by the external auditors.

Staff Training: The MOF shall employ international consultants to conduct technical training for Project Office to set up overall loan administration system such as secretariat functions for CSC, screening applications for sub-loans for improvement, disbursement control of the loan proceeds, operation for collection of interest and principal repayment, book keeping of the project accounts, administration of revolving fund accounts, administration of sub-project implementation and reporting to JICA, and monitoring impacts of sub-projects.

In addition, the international consultants will conduct training SME management and bank staff in form of seminar and on-site discussion for project formulation such as investment planning, financing and staffing.

Project Audits: The required annual audits of the Project until the closing of the project are to be financed by the TA provided to CSC. The audit would be carried out by one of the major auditing firms with international accreditation.

It is proposed that additional TA may be extended to CSC in the form of overseas training to work out plans or to be more involved in policy making to develop the country in more strategic way by financial policies if the government wants to allocate the funds to specific priority areas.

The consulting services, including technical assistance, are comprised of three components. They are: (i) consulting services for project implementation; (ii) technical assistance in the form of training for CSC, PFIs, and SMEs; and (iii) the cost of external audit for the project. It would be best practice for a project consultant to undertake the whole package of TA components as done in JICA-TSL Phase I. Short List method is applied to employment of an international consulting firm that must be eligible for management of term loan lending and TA components. The credit allocation of the TA components will be USD 1.8 million for consulting services, including TA and external audits.

18.3 Cooperation with MOJC

(1) Capacity Building of PFIs

In view of the fact that PFIs have their own training programs inside and outside banks, including overseas trainings or trainings by professional organizations, the proposed TA through Consulting Services should be closely coordinated with these professional organizations. Capacity building among PFI officers of general knowledge on project finance would be recommended to be supported especially by the Mongolia-Japan Center for Human Resources Development (MOJC), while the JICA-TSL Consulting Services will take the daily-basis and on-the-job basis assistance for screening and preparation of sub-projects.

(2) Capacity Building of SMEs

The Mongolia-Japan Center for Human Resources Development (MOJC) held one 5-day business planning training designed to facilitate JICA-TSL Phase I targeting manufacturing SMEs with the attendance of 40 participants in the fiscal year 2007 and two courses in the fiscal year 2008 for both SMEs and bank officers. MOJC will continue to implement training in the fiscal year 2009. PO supported the design and preparation of this training course. The contents covered the necessary skills in long-term business planning such as market analysis, sales and profit projection, and repayment planning.

The JICA study team, in parallel to the above business planning seminar, expects MOJC to further continue this training. In case MOJC decides to conduct this training throughout Phase II, the project management consultants and PFIs involved should work for the preparation of the curriculum and materials together with MOJC, and dispatch the lecturer upon the request of MOJC.

18.4 Additional Technical Assistance Independent from TSL Operation

(1) Capacity Development on Water Quality Monitoring

Background and necessity

GASI is the state agency in charge of the supervision and monitoring over the compliance with environmental regulations. However, its technical capacity is insufficient to satisfy its mandate as the regulation enforcement agency. Meanwhile, industrial water effluent is one of the largest pollutant sources to Mongolia's environment. This T/A project on taking water effluent as the particular monitoring subject, aims at enhancing GASI's monitoring capacity through technology transfer. Although the TA is implemented independently from the TA component of the TSL project, it has high relevance to the promotion of "Environmental Regulation Compliance"-type of EPLs, especially in the mid and long-term perspectives.

Outline

Proposed outline of this technical assistance are shown below;

Capacity Development on Water Quality Monitoring		
Objectives	:	- To transfer technology on pollutants behavior on water environment and on monitoring techniques using simple measurements on site
Targeted beneficiaries	:	- GASI inspectors
Contents	:	- Technology transference on ecological behavior of the pollutants in water environment - Technology transference on on-site monitoring with simple measurements
Implementation	:	- Foreign experts in water quality monitoring are required

(2) Other Issues Related to TAs on Environmental Protection

1) Collaboration with MCCI "Green Initiatives" Technical Assistance and Loan Guarantee Scheme

With European donor support, MCCI has profound and long experience of technical assistance in the introduction of Cleaner Production and ESCO activities for Mongolia's industrial sector. MCCI is also about to complete its Green Credit Guarantee Fund operation and the future use of its revolved fund is under consideration with the donor.

The efforts of MCCI ("Green Initiatives") have high relevance to the objective of JICA-TSL in terms of promotion of such environmental protection activities by the private sector. Moreover, Green Initiatives and JICA-TSL may supplement each other. Green Initiatives have their financial tool (the guarantee program) and intensive and direct TA to the private sector (Cleaner Production and ESCO activities), both of which may not be easily implemented by assistance schemes of other donors like JICA. On the other hand, JICA has massive funding capacity in the form of TSL compared to that of GCGF.

Such collaboration with MCCI will be worth considering in enhancing EPL formulation for these project types although it requires further consultation and adjustments in the forthcoming preparation stage of TSL Phase II.

2) Assistance for Regulatory Framework of the EIA Process

Evaluation experts of environmental issues are limited to those authorized by MONET for EIA study. The qualification for this license is unclear. MONET is planning a comprehensive framework for environmental assessment, including introduction of the concept of strategic environment assessment. However, for the appropriate improvement of the EIA system, it must be prioritized firstly to set procedures of baseline studies and technical guidance of respective sectors, as well as public consultation process. It requires strengthening of technical knowledge and formulation of the legal framework through .external TA.

3) Assistance for Environmental Protection Activities in Public Sector

As the government promotes environmental protection, state-owned enterprises must take the lead, among others, in complying with environmental regulations. Investment needs for such exists, for instance, in Combined Heat and Power Plants (CHPs), Khargia Industrial Effluent Treatment Plant, Central Waste Water Treatment Plant, and the public sector HOBs operated totally or partially by Ulaanbaatar City. In the mining sector, environmental liabilities left by the former state-owned companies require remediation works. Nevertheless, MOME is financially unable to deal with this issue. Hence, it is proposed to dispatch an expert to analyze the situation and to recommend solutions for these facilities.

ANNEXES

ANNEX I

Action Plan 2008-2012 (Environment) & Implementation Program[1] of MONET

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
Formulate a policy to preserve natural resources within the scope of natural restoration capacity, use them rationally, and promote eco-friendly clean technologies, in line with related laws and regulations.	Introduction of new and environmental-friendly technology technologies and promotional measures, such as implementation of preferential taxation mechanism and financing support to SME	2009-2010	MOF, NDRC
	Refinement of standards for proper treatment and disposal of industrial waste, and establishment of legislative framework for cleaner production	2009-2010	NASM
	Provision of criteria and guidelines in line with international standards for the application of "eco-labeling" grant	2009-2010	Trade & Industrial Center
	Dissemination of principles with respect to sustainable consumption and production, protection of environment, and preservation of natural resources, in order to make enterprises and citizens conscious of these matters.	2009-2012	National Productivity & Development Center
	Strengthening of the control and auditing capacity for the compliance of environmental regulations by enterprises.	2009-2010	MOME
	Implementation of a system for ecological education based on the principles of sustainable development	2009-2011	MONE
	Implementation of programs and conduct of projects related to energy saving and environmental-friendly technology; and development of standards and resources, including the drafting of a related national report with assistance of international organizations	2009-2012	MOME, the World Bank
Reduce air pollution in Ulaanbaatar and other cities through restriction of burning raw coal, increase construction of buildings with appropriate heating facilities for the resettlement of ger area living people, widening of green belts, renewal of the public transportation system promoting the use of gas fuel for their operation.	Reduction of air pollution and revision of related laws and regulations, with the purpose of achieving the required air quality	2009-2012	MOME, MOH, MORTCUD
	Formulation and implementation of the national program for the mitigation of air pollution	2009-2012	-
	Improvement of the plan and maintenance program for the green belts	2009-2011	MORTCUD
	Setting up of the restriction of raw coal consumption for heating and cooking in households	2009-2012	MONE
	Formulation of measures to change public transportation energy to fuel gas	2009-2012	MONE
	Construction of necessary infrastructure and facilities for the redevelopment of ger areas	2009-2012	-
	Implementation of a program to reduce air dust generated by industrial activities	2009-2012	MOME, MOFALI

[1] Source: MONET, unpublished document in Mongolian language translated by the JICA study team

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
Reduce the air, water pollution and land degradation in cities and other settlement areas, and create healthy and comfortable living conditions for citizens.	Establishment of a centralized waste disposal facility for proper management of hazardous waste	2009-2011	-
	Renewal of technologies and equipment of the existing water treatment facilities in highly populated cities to improve their operation in complying with regulations and standards	2009-2012	MORTCUD
	Strengthening and enhancement of the environment control and monitoring system	2009-2012	-
	Abandonment of waste incinerators generating polychlorobiphenil (PCB), and strengthening of monitoring capacity	2009-2012	UNITAR
	Formulation and implementation of projects on the management of hazardous wastes, with assistance from domestic and international finance systems	2009-2012	UNITAR
	Creation of a databank for toxic chemical wastes and the mechanism for the control and transparency of their utilization	2009-2012	MOH, SSIA
	Formulation and implementation of a program for the introduction of related technologies for the neutralization of hazardous waste effects	2009-2012	-
	Renewal of the technology used for the national environment and climate monitoring network, and strengthening the alert system for natural disasters	2009-2012	-
	Protection of Tuul River located around the city, preservation of its ecosystem, and construction of facilities for the protection of rivers in urban areas	2009-2012	-
Introduce waste management systems in cities and other settlement areas, and set up waste recycling plants.	Reformulation of the national waste program	2010	-
	Formulation and implementation of the master plan for the management of wastes in all provinces	2009-2012	-
	Formulation of a system for the classification, reuse and recycling of industrial and hazardous wastes	2010-2012	-
	Establishment of recycling plants in the regional centers, and introduction of sanitary landfill systems	2009-2012	-
Conduct unified state policy on water, regulate the flow of principal rivers and construct infrastructures required for the transference of reserved water for utilization.	Ratification and implementation of the national water management plan	2011-2012	-
	Establishment of river basin councils, and formulation of master plans for water management	2009-2012	-
	Creation of a network for the management of aquifers, and provision of required technology	2009-2012	-
	Implementation of the projects for the regulation of water flow on Orkhon and Kherlen Rivers and the utilization of reserved water	2010-2012	Turkish Dev. agency
	Renewal of the groundwater monitoring system and the equipment for the analysis of water and revision of the program for control and monitoring	2009-2012	-
	Expansion and renewal of the Ulaanbaatar City wastewater discharge system, and implementation of treatment technology	2010-2012	MORTCUD
	Formulation of a unified state policy on the promotion of water conservation and wastewater treatment, and introduction of water recycling systems	2009	MORTCUD
	Conduct of survey for the identification of water resources	2009-2012	Private sector
	Rehabilitation of disturbed river basins	2009-2012	-

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
	Demarcation of zones for protection of water resources and for the implementation of sanitation facilities	2009-2010	MOH
	Establishment of a national information network with data on springs and their quality	2009-2010	MOH
Re-plant indigenous plants in Gobi regions and scarcely vegetated areas where desertification spreads, improve the use of meteoric waters, set up artificial lakes and ponds to keep ecosystem balance and implement the project "Water".	Promotion and support of initiatives and activities of the private sector and individuals on the development of water sources, such as snow and rainwater, for the irrigation of pastureland, hayfields and green belts	2009-2012	MOFALI
	Financial and technical assistance for projects for forestation, plantation conducted by the SMEs and individuals	2009-2012	Netherlands, UNDP, SIDA
	Implementation of the national program "Water", and revision of its activities	2009	MOFALI, MORTCUD
	Formulation of policy and strategies for the economic sectors	2009-2010	-
	Implementation of pilot project to assess the adaptation of people, animals and plants to climate change	2009-2010	-
	Assessment of the harmful effects of climate change in each province	2010-2011	-
	Finding of finance sources for the purchasing of equipment required to recognize harmful effects of climate change	2009-2012	-
Implement wind power- and solar energy-operated water wells for the irrigation of pastureland in Gobi area and scarcely vegetated areas.	Implementation of sustainable management for pastureland, conduct of survey on water resources in Gobi and steppe areas, and determination of the feasibility for uses of renewable energy in irrigation systems	2009-2012	MOFALI
Reformulate the national program to combat desertification and increase foreign and domestic funding to reduce its progress	Reformulation of the national program to combat desertification, and improve its implementation and financial mechanisms	2009	SIDA
	Establishment of the "Desertification Research Center"	2010-2011	-
	Promotion of the cooperation with foreign institutes for the research, and introduction of their experiences to combat desertification	2009-2012	MOFA
	Promotion of educational and training activities regarding desertification	2009-2012	-
Improve the legal framework for the protection of soil, and adopt and implement the law on soil.	Promotion of plantation within the framework for "3rd Plantation Movement"	2009-2010	MOFALI
	Revision of the law on "soil protection".	2009-2011	MOFALI
Prohibit geological survey and exploration of mineral resources for mining activity purposes, in areas with limited gold-ore reserves, watersheds, closed forests, the Gobi oasis, and protected areas.	Revision of the laws and regulations regarding the restriction of mining activities in areas with limited gold-ore reserves, watersheds, closed forests and areas where mining activity was abandoned or suspended	2009-2011	MOME
	Implementation of the program of "Reducing negative impacts of mining activities to the environment"	2009-2012	MOME
	Revision of the technologies for the rehabilitation and restoration of disturbed areas post-closure of mining activities	2009-2010	MOME

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
Desist from any projects, if there is no guarantee to restore the nature and environment after it is completed.	Conduct of economical and environmental feasibility studies on mining projects and their impacts to the environment	2009-2010	MOME
Create a database for the management of exploration and extraction activities in the mining sector, survey programs, protection of the nature and restoration plan, assignments and payment norms for the use of natural resources, and make the information open for public access.	Creation of a database for the management of survey, exploration and extraction activities of the mining sector.	2009-2010	MOME
	Introduction of the principle of corporate social responsibility to the mining sector, in order to abate negative impact caused by their activities to humans and the environment	2009-2012	MONE
	Creation of a database for the environmental impact assessment and other environmental studies concerned with the mining sector, and make the information open and available	2009-2012	-
Introduce criteria and comprehensive guidelines with respect to environmental assessment, as a requirement for the concession of the permission for the activities of surveying, exploration and extraction in the mining sector	Strengthening the capacity for the evaluation and supervision of environmental assessment regarding mining operations	2009-2012	-
	Revision of the legislation related to the environmental impact assessment and introduce principles of strategic environment assessment	2009-2011	MOJIA, MOME
	Introduction of criteria and guidelines for the application of strategic environmental assessment principles in the concession procedures for the activities of surveying, exploration and extraction in the mining sector	2009-2012	MOME
	Formulation of legal framework regarding the implementation of strategic environmental assessments by experts and professional organizations	2011-2012	MOME
Strengthen local network of special protected areas for the conservation of the ecosystem and ecological balance.	Extension of the coverage area of the local network for special protected areas up to 15 percent	2009-2012	-
	Definition of criteria for the protected areas, integrating the local networks to establish a national network	2009-2010	-
	Management and assessment of the protected areas established since 2002, and revision of the current legal framework	2009-2010	-
	Provision of necessary equipment for local authorities and environmental officers	2009-2012	-
	Establishment of protected areas along the country borders, in cooperation with neighboring countries .and implementation of joint management for the special protected areas	2009-2012	-
	Dispatch of local environmental authorities and officers close to their protection areas, providing them facilities such as office, vehicle and other necessary equipment	2009-2012	-
	Improvement of the management capacity by constant training programs to the human resources	2009-2012	-
	Definition of privileges and duties of local authority in the protected areas, revision of its administrative management and provision of technology and equipment	2009-2012	-
	Assessment on the special protected areas to determine their viability for tourism development	2009-2010	-

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
Implement a sustainable management and restoration programs for forest resources and promote initiatives to replace use of wooden materials with other type of materials.	Implementation of restrictive measures on the plan of reforestation and to control logging for specific regions and provinces	2009-2012	-
	Conduct of the initiatives for the replacement of wooden materials in the sectors of railway and construction at the initial stage	2009-2012	MORTCUD
	Establishment of logging limitations considering the results of the survey on forest resources	2009-2010	Netherlands
	Identification of endangered species of forest resources and restoration up to 10,000 hectares annually	2009-2010	
	Financing of reforestation and restoration activities based on qualitative analysis and time schedules	2009-2012	
	Selection of the best growing performance plants in order to assure sustainability of forest resources	2009-2012	
	Introduction of technology and strengthening of capacity to deal with forest parasites and mitigation of contagion in forest areas	2009-2012	
	Introduction of technology to deal with illegal logging and use of forest resources, and promotion of participatory involvement of local people	2009-2012	
Improve the management for the protection of flora and fauna and their rational use, and create favorable conditions for their natural restoration and rehabilitation.	Improvement of management for the protection of flora and fauna, and promotion of their rational use, and creation of favorable conditions for their natural restoration and rehabilitation	2009-2012	
	Formulation of the protection program for endangered species	2009	
	Revision of the legislation regarding the protection of endangered species, including norms related to their trade	2010-2011	MOF, UNDP
	Improvement of the rehabilitation programs for endangered species, and introduction of advanced biotechnology for their genetic protection	2009-2012	
Formulate an unified policy on protection of the nature and environment, rational use of the natural resources as the basis of the national policy on land and unified land fund planning in Mongolia, establish an independent entity replacing the present land and real estate registry authorities and review the methodology on land value determination.	Revision of the law on land management, establishment of a unified state entity for the management of the land fund, and formulation of related policy on issues in charge of the Ministry	2009	
	Selection of the technology for the restoration of disturbed areas based on the results of site surveys focusing on the impacted extension and level of contamination	2009-2012	MONE, MOME
	Revision of the economic valuation of the land based on soil quality and the status of the ecosystem, and definition of land referential price, considering the revised economic valuation	2009-2012	
	Revision of the cadastre for the establishment of a unified database for the land fund system, and formulation of a long-term management plan	2009-2012	MONE
	Establishment of the monitoring system for the identification of endangered species, focusing on special protected areas	2009-2012	MONE
	Revision of related legal framework and enhancement of their consistency with other legislation	2009-2012	MOE, MOJIA

National Action Plan	MONET Implementation Program Activities	Implementation Period	Collaborating Agency
	Formulation and implementation of measures for environment protection, rational use of natural resources, and rehabilitation plans	2009-2012	MONE
	Establishment of strategically significant land areas and formulation of a policy for their protection	2009-2011	MOME, MORTCUD
Strengthen state control over nature and environment, and enhance the responsibilities and consciousness for the preservation of natural resources.	Strengthening of the state control system for natural resources and the environment, and establishment of the monitoring system for environmental pollution	2009	-
	Formulation of the legislation regarding the implementation of "polluter's pay" principle	2009-2010	-
	Strengthening of responsibilities and consciousness for the preservation of natural resources and the ecosystem	2009-2012	-
	Revision of the legal framework of enforcement for compliance to environmental regulations, and formulation of restoration and rehabilitation standards	2009-2012	MOME
	Improvement of the enforcement system for the application of "polluter's pay" principle, and enhancement of public awareness	2009-2012	MOME, MOFALI

Note: FA=Forest Agency, MOECS=Ministry of Education, Culture & Science, MOF=Ministry of Finance, MOFA=Ministry of Foreign Affairs, MOH=Ministry of Health, MOJIA=Ministry of Justice & Internal Affairs, MOME=Ministry of Mineral & Energy, MORTCUD=Ministry of Roads, Transport, Construction & Urban Development, NASM=National Agency for Standardization and Meteorology, NDRC=National Development and Renovation Committee, RA=Railway Authority, SSIA=State Specialized Inspection Agency, UNITAR=United Nations Institute for Training and Research

ANNEX II

Environmental Standards

(1) Air Quality

The air quality standard of Mongolia is established in MNS 5485-2007 "Air quality, general technical requirements". The standards are classified as maximum acceptable level of toxic elements in outdoor air and maximum acceptable level of toxic elements in indoor air. The values are shown in the following tables.

Table II.1 Maximum acceptable level of toxic elements in outdoor air

Toxic elements	Averaging period of measurement	Measuring unit	Max. acceptable content
Chemical influence			
(SO_2)*	10-minute mean 20-minute mean 24-hour mean Annual mean	µg/m^3	500 450 20 10
(CO)*	30-minute mean 1-hour mean 8-hour mean	µg/m^3	60,000 30,000 10,000
(NO_2)*	20-minute mean 24-hour mean Annual mean	µg/m^3	85 40 30
(O_3)*	8-hour mean	µg/m^3	100
Dust (Total particular matter)*	30-minute mean 24-hour mean Annual mean	µg/m^3	500 150 100
Particular matter bigger size (PM 10)*	24-hour mean Annual mean	µg/m^3	100 50
Particular matter small size (PM 2.5)*	24-hour mean Annual mean	µg/m^3	50 25
(Pb)*	24-hour mean Annual mean	µg/m^3	1 0.5
Pyrene ($C_{20}H_{12}$)*	24-hour mean	µg/m^3	0.001
Physical influence			
Noise* - day time (07-23) - night time (23-07)	16-hour mean 8-hour mean	dB	60 45

Note: *Also used for indoor air quality

Source: MASM

Table II.2 Maximum acceptable level of toxic elements in indoor air

Parameter	Averaging period of measurement	Measuring unit	Max. acceptable content
Chemical influence			
(CO_2)	24-hour mean	μ/m^3	1,800
(Rn)	24-hour mean	μ/m^3	0.005
Formaldehide (CH_2O)	24-hour mean	μ/m^3	0.3
Air oxidizing	24-hour mean	μ/m^3	4,000-6,000

Source: MASM

As gas emission standards, MNS 5457-2005 establishes the maximum acceptable level of toxic elements in the exhaust gases contents of heating boilers and home stoves as follows.

Table II.3 Max. acceptable level of toxic elements in the exhaust gases of heating boilers / home stoves

Boiler installed capacity (Q), MW		NO_x				SO_2			
		Emitted by burning 1kg fuel equivalent, (g/kg)	Emitted by 1 MJ heat produced, (g/MJ)	Concentration in the exhaust gases (mg/m^3)	Emitted in unit of time, (g/s)	Emitted by burning 1kg fuel equivalent, (g/kg)	Emitted by 1 MJ heat produced, (g/MJ)	Concentration in the exhaust gases (mg/m^3)	Emitted in unit of time, (g/s)
1	$Q \leq 0.8$	6.75	0.23	450	0.3	12.0	0.4	800	0.4
2	$0.8 \leq Q \leq 3.15$	6.0	0.2	400	0.25	9.0	0.3	600	0.5

Boiler installed capacity (Q), MW		CO				Ash			
		Emitted by burning 1kg fuel equivalent, (g/kg)	Emitted by 1 MJ heat produced, (g/MJ)	Concentration in the exhaust gases (mg/m^3)	Emitted in unit of time, (g/s)	Emitted by burning 1kg fuel equivalent, (g/kg)	Emitted by 1 MJ heat produced, (g/MJ)	Concentration in the exhaust gases (mg/m^3)	Emitted in unit of time, (g/s)
1	Home stove			4,000				2,500	
2	$Q \leq 0.8$	37.5	1.28	2,500	1.8	6.0	0.15	400	0.34
3	$0.8 \leq Q \leq 3.15$	30	1.02	2,000	1.5	4.5	0.2	300	0.23

Source: MASM

(2) Water Quality

The water environment quality standards are established in MNS 4586-1998 as follows.

Table II.4 Acceptable content of substances in water environment

No.	Substances	Measuring unit	Acceptable level
1	pH		6,5-8,5
2	Dissolved oxigen	mg-O/l	Not less than 6 (warm season)
			Not less than 4 (ice covered season)
3	BOD_5	mg-O/l	3
4	COD_{Mn}	mg-O/l	10
5	NH_4-N	mg-N/l	0,5
6	NO_2-N	mg-N/l	0,02
7	NO_3-N	mg-N/l	9.0

No.	Substances	Measuring unit	Acceptable level
8	PO_4-P	mg-P/l	0,1
9	Cl	mg/l	300
10	F	mg/l	1.5
11	SO_4	mg/l	100
12	Mn	mg/l	0.1
13	Ni	mg/l	0.01
14	Cu	mg/l	0.01
15	Mo	mg/l	0.25
16	Cd	mg/l	0.005
17	Co	mg/l	0.01
18	Pb	mg/l	0.01
19	As	mg/l	0.01
20	Cr total	mg/l	0.05
21	Cr^{6+}	mg/l	0.01
22	Zn	mg/l	0.01
23	Hg	µg/l	0.1
24	Mineral oils	mg/l	0.05
25	Phenol	mg/l	0.001
26	Detergents	mg/l	0.1
27	Benzo (a) pyren	mkg/l	0.005

Source: MASM

The effluent quality is established in MNS 4943-2000. The regulation permits to discharge with a maximum level of concentrations for the pollutants to the surface water and groundwater as follows.

Table II.5 Acceptable level of pollutants in effluent to be discharged into surface water

No.	Pollutants	Measuring unit	Acceptable level
1	Water temperature	^oC	20
2	Hydrogen indicator		6-9
3	BOD = Biochemical Oxygen Demand	mg-O/l	20
4	COD = Chemical Oxygen Demand	mg-O/l	50
5	Permanganate oxidation	mg-O/l	20
6	Particulate matter	mg/l	35
7	Dissolved salt	mg/l	800
8	Cyanide	mg/l	0.05
9	Phenol	mg/l	0.05
10	Mineral oil	mg/l	1
11	Fats	mg/l	5
12	Sulfide	mg/l	0.2
13	Copper	mg/l	0.3
14	Cadmium	mg/l	0.03
15	Manganese	mg/l	0.5
16	Mercury	mg/l	0.001
17	Antimony	mg/l	0.05
18	Nikel	mg/l	0.2
19	Selenium	mg/l	0.02
20	Iron	mg/l	1
21	Lead	mg/l	0.1
22	Chromium total	mg/l	0.3
23	Chromium hexavalent	mg/l	0.05
24	Zinc	mg/l	1
25	Ammonium	mg/l	8

No.	Pollutants	Measuring unit	Acceptable level
26	Total nitrogen	mg/l	20
27	Total phosporus	mg/l	1.5
28	Residual chloride	mg/l	1.5
29	Trichloroetylene	mg/l	0.2
30	Tetrachloroetylene	mg/l	0.1
31	Phosporus organic compounds	mg/l	0.2

Source: MASM

Table II.6 Acceptable level of pollutants in effluent to be discharged into ground-soil

No.	Pollutants	Measuring unit	Acceptable level
1	Water temperature	^{o}C	20
2	Odor		Odor not smelled
3	pH		6-9
4	BOD = Biochemical Oxygen Demand	mg-O/l	50
5	COD = Chemical Oxygen Demand	mg-O/l	100
6	Permanganate oxidation	mg-O/l	30
7	Particulate matter	mg/l	150
8	Dissolved salt	mg/l	1,000
9	Cyanide	mg/l	0.2
10	Mineral oil	mg/l	3
11	Fats	mg/l	10
12	Sulfide	mg/l	0.5
13	Copper	mg/l	0.5
14	Cadmium	mg/l	0.05
15	Manganese	mg/l	1
16	Mercury	mg/l	0.001
17	Antimony	mg/l	0.1
18	Nickel	mg/l	0.5
19	Selenium	mg/l	0.02
20	Iron	mg/l	2
21	Lead	mg/l	0.5
22	Chromium total	mg/l	0.5
23	Chromium hexavalent	mg/l	0.1
24	Zinc	mg/l	2
25	Ammonium	mg/l	15
26	Nitrogen total	mg/l	30
27	Phosphorus total	mg/l	5

Source: MONET

MNS 5582-2006 establishes the effluent quality for the leather processing activities as acceptable level of main pollutants released by common tanning technology and acceptable level of main pollutants in effluent from tannery. The values are shown in following tables.

Table II.7 Acceptable level of main pollutants released by common tanning technology

(processing of salted hides)

For 1 ton of raw material	Water (m^3/t)	COD (kg/t)	BOD (kg/t)	SS (kg/t)	Cr^{3+} (kg/t)	S (kg/t)	Total N_2 (kg/t)	Chloride (kg/t)	SO_4 (kg/t)
Soaking & liming	25	160	60	120	-	9	14	150	20
Fleshing	3	20	7	10	5	-	1	60	50
Pickling	8	40	15	20	2	-	2	10	40
Shaving	1	10	4	5	-	-	-	-	-
Total	37	230	86	155	7	9	17	220	110

(processing of salted wet sheep skin)

For 1 ton of raw material	Water (m^3/t)	COD (kg/t)	BOD (kg/t)	SS (kg/t)	Cr^{3+} (kg/t)	S (kg/t)	Total N_2 (kg/t)	Chloride (kg/t)	SO_4 (kg/t)
Soaking & liming	150	600	260	300	-	20	30	300	15
Fleshing	70	300	100	30	12	-	10	200	70
Pickling	35	100	35	20	3	-	4	40	40
Shaving	10	5	2	2	-	-	-	-	-
Total	265	1005	397	352	15	20	44	540	125

Source: MASM

Table II.8 Acceptable level of main pollutants in effluent from tannery

No	Pollutants	Acceptable level	Measuring unit
1	SS	5,500	mg/l
2	COD	6,200	mg/l
3	BOD	6,000	mg/l
4	Cr_3	100	mg/l
5	Sulfate	150	mg/l
6	Chloride	5,400	mg/l
7	pH	9.0	-

Source: MASM

ANNEX III

Project List for Sub-Loans

Table III.1: Agriculture, Farming, Forestry

No.	Project	Borrower	Project Cost	ODA Loan	Approval		Disbursement	Loan			Project				Borrower	
			(JPY million)		PFI	CSC (JBIC)	to PFI	PFI	Duration (Grace)	Main Fund Use	Main Product	Main Purpose	Main Effect	Location	Employees	Business (years)
1	Irrigation System	Ikh Nomt Co., Ltd	38.4	18.7	9/2/08	9/11/08	9/15/08	Zoos	5 (1.5)	Equipment	wheat	Capacity Expansion	Utilization of Resource	Selenge	10	10.2
2	Modernization of Agriculture	Nomunkhan Co., Ltd	72.9	58.0	9/4/08	9/20/08	10/30/08	Capitron	7 (2)	Equipment	crop	Capacity Expansion	Import Substitute	Selenge	48	10.2
3	Greenhouse	Bandida Co., Ltd	7.2	2.9	1/11/07	9/11/07	11/1/07	Khan	5 (1)	Facility	vegetables, fruit, tree	New Product	Import Substitute	Ulaanbaatar	3	1.8
4	Greenhouse	Ajnaitsegst Co., Ltd	21.7	16.9	1/12/07	2/23/07 (7/6/07)	7/19/07	Khan	8 (2)	Facility	cucumber, tomatoes	Capacity Expansion	Import Substitute	Bulgan	10	11.6
5	Planting vegetable in Winter Dome	Suusgur Co., Ltd	12.1	5.3	1/25/07	5/18/07	7/10/07	Khan	7 (2)	Equipment	vegetables	Capacity Expansion	Import Substitute	Ulaanbaatar	20	5.6
6	Milk feeding	Terelj altai Co., Ltd	5.2	4.2	6/6/07	1/25/08	3/14/08	Khan	7 (2)	livestock	milk, milk product	Capacity Expansion	Import Substitute	Tuv	35	1.9
7	Milk Farming	Batdelger Trade Co.,Ltd	3.9	1.5	2/22/07	9/26/07	11/1/07	Khan	5 (1)	livestock	milk	Capacity Expansion	Import Substitute	Ulaanbaatar	5	6.7
8	Cow farm	Taliin Nuur Co., Ltd	2.2	1.7	3/16/08	3/28/08	4/9/08	Khan	3 (1)	Facility	meat, milk	Product Quality Improvement	Advanced Technology	Orkhon	5	17.7
9	Cow Farm	Bayalag Gazar Co., Ltd	8.1	5.7	9/2/08	11/12/08	12/24/08	Zoos	5 (0.7)	Facility	milk, yogurt, sour cream	Capacity Expansion	Import Substitute	Selenge	12	14.2
10	Grops and Pig Farming	Baguulan Co., Ltd	10.1	8.0	6/6/07	9/26/07	12/11/07	Khan	4.7 (2)	Equipment	meat, fat, wheat seed	New Business	Import Substitute	Bulgan	12	11.0
11	Intensified Pig Farming	Zurgaan khoshuu Co., Ltd	89.7	71.7	1/8/07	1/25/07 (4/10/07)	5/11/07	Khan	7 (2)	Facility	pork meat	Capacity Expansion	Import Substitute	Ulaanbaatar	5	2.7
12	Intensified Pig Farming	Soyo Sureg Co., Ltd	6.5	2.7	2/27/07	12/3/07	1/3/08	Khan	4 (1)	Equipment	meat, meat product	New Business	Import Substitute	Tuv	3	0.7
13	Intensified Pig Farming	Chandmani Sureg Co.,Ltd	4.0	3.2	5/22/07	6/24/08	7/16/08	Khan	7 (2)	Equipment	meat, meat product	Capacity Expansion	New Industry	Selenge	9	0.5
14	Livestock Genetics Resource	Montarimil Co., Ltd	15.0	11.8	5/3/07	1/25/08	4/9/08	Golomt	6 (2)	livestock	deep-frozen embryos	New Business	Import Substitute	Tuv	18	14.9
14	Sub-total or Average		297.0	212.3					5.8 (1.6)						13.9	7.8

Source: Compiled by JICA study team based on Project Office for JICA-TSL “TSL Project Status Table” as of April 27, 2009

Table III.2: Food Products and Beverages, Drug, Paper Products

No.	Project	Borrower	Project Cost	ODA Loan	Approval		Disbursement	Loan			Project				Borrower	
			(JPY million)		PFI	CSC (JBIC)	to PFI	PFI	Duration (Grace)	Main Fund Use	Main Product	Main Purpose	Main Effect	Location	Employees	Business (years)
1	Semi-ready Food Factory - "Buuz"	Khan Khuns Co., Ltd	55.8	44.6	4/2/07	6/20/07 (12/25/07)	1/3/08	Golomt	4 (1)	Equipment	buuz, bansh	Capacity Expansion	Advanced Technology	Ulaanbaatar	48	4.8
2	Production of Buuz and Bansh	Dagina Ekh Co., Ltd	67.1	50.9	7/2/08	7/10/08	8/6/08	Capitron	5 (1)	Equipment	buuz, bansh	Capacity Expansion	Sanitary Food	Ulaanbaatar	23	12.4
3	Sausage Prodiction	Tumenbadrakh Co., Ltd	31.9	23.2	8/3/07	9/10/07 (3/3/08)	3/18/08	TDB	3 (0.4)	Equipment	sausages	Capacity Expansion	Import Substitute	Ulaanbaatar	15	12.1
4	Sausage Production Factory	Munkhdegjikh Gal Co., Ltd	18.5	13.6	9/29/08	12/8/11	12/24/08	Capitron	7 (1)	Facility	sausage	Products Diversification	Import Substitute	Darkhan-Uul	25	9.3
5	Flour Factory	Azik Co., Ltd	27.0	21.6	12/7/07	3/28/08	5/12/08	Khan	6 (1.5)	Equipment	flour	Products Diversification	Import Substitute	Bayan-Ulgii	18	16.9
6	Food Production	Delgerekh Khuns Co., Ltd	22.2	16.4	9/19/08	12/8/11	12/24/08	Zoos	5 (1)	Equipment	bread and pateries	Capacity Expansion	Introduce HACCP	Uvurkhangai	48	67.5
7	Confectionery Production	Tushnee Co., Ltd	17.5	12.8	5/18/07	12/21/07	6/9/08	Golomt	5 (1)	Facility	confectionery /cake, biscuits	Capacity Expansion	New Industry	Dornod	31	10.9
8	Potato Chips and Corn Puffs	Tsogtbilguun Co., Ltd	143.4	62.7	4/28/08	5/13/08	5/21/08	Capitron	10 (3)	Equipment	potato chips, corn puffs	New Business	Import Substitute	Ulaanbaatar	29	3.0
9	Production of Soup / Dry Meat	Mon-So Co., Ltd	12.4	8.5	3/28/07	6/20/07 (3/3/08)	3/14/08	Capitron	5 (1)	Facility	instant soup, dried beef	Capacity Expansion	Import Substitute	Ulaanbaatar	10	10.3
10	Expansion of Food Processing Factory	Uguumur Mongol Co., Ltd.	69.2	52.7	4/10/07	6/20/07 (7/17/07)	12/11/07	Capitron	7 (1)	Equipment	nutrition, juice, soup	Capacity Expansion	Import Substitute	Ulaanbaatar	12	2.0
11	Dairy Food Production	Monsuu Co., Ltd	41.3	33.0	10/15/07	12/3/07	5/21/08	Golomt	10 (3)	Equipment	dairy products	Capacity Expansion	Advanced Technology	Ulaanbaatar	25	16.4
12	Expansion of Milk processing factory	Double Erdene Co., Ltd	6.3	5.0	10/16/08	10/17/08	11/4/08	Capitron	5 (2)	Equipment	natural milk, milk product	Products Diversification	Import Substitute	Ulaanbaatar	13	8.3
13	Production of Soft Drink	Vitafit Invest Co., Ltd.	105.3	66.9	2/8/07	6/20/07 (9/27/07)	1/3/08	Golomt	5 (2)	Equipment	soft drink, pure water	Capacity Expansion	Import Substitute	Ulaanbaatar	45	6.6
14	Expansion of Pure Water Production	Galshint Co.Ltd	13.8	10.8	5/2/07	12/3/07	1/11/08	Golomt	5 (1)	Equipment	pure water	Capacity Expansion	Advanced Technology	Ulaanbaatar	20	5.9
15	Mineral Water Production	Delger International Co., Ltd	47.3	37.9	11/16/07	3/28/08 (4/18/08)	5/21/08	Zoos	5 (1)	Equipment	mineral water	Capacity Expansion	Import Substitute	Ulaanbaatar	50	14.4
16	Mineral Water Production	Khanrashaan Co., Ltd	28.2	22.8	1/22/08	5/13/08	7/16/08	TDB	5 (0.3)	Working Capital	sparkling mineral water	Capacity Expansion	Import Substitute	Ulaanbaatar	17	9.6
17	Manufacturing Antibiotics	Astrapharm Co., Ltd.	8.9	7.1	2/22/07	5/18/07 (7/6/07)	8/3/07	XAC	3 (1)	Working Capital	antibiotics	Products Diversification	Import Substitute	Ulaanbaatar	32	4.7
18	Expansion of Drug Factory	Munkhiin Tun Co.,Ltd	54.0	43.2	9/1/08	9/11/08	10/30/08	Capitron	8.5 (3)	Facility	drug	Capacity Expansion	Import Substitute	Ulaanbaatar	43	16.2
19	Paper Cup Production	Ebo Holding Co., Ltd	15.2	12.2	5/8/07	12/3/07	1/11/08	Golomt	8 (3)	Facility	paper cup	Capacity Expansion	Import Substitute	Ulaanbaatar	12	7.9
19	Sub-total or Average		785.3	545.9					5.9 (1.5)						27.2	9.5

Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table" as of April 27, 2009

Table III. 3: Construction, Construction Materials

No.	Project	Borrower	Project Cost	ODA Loan	Approval		Disbursement	Loan			Project				Borrower	
			(JPY million)		PFI	CSC (JBIC)	to PFI	PFI	Duration (Grace)	Main Fund Use	Main Product	Main Purpose	Main Effect	Location	Employees	Business (years)
1	Acquisition of Well Drilling Rig	Us-Oyu Co., Ltd	31.2	20.5	3/30/07	6/20/07 (7/17/07)	12/11/07	Capitron	4.6 (0.6)	Equipment	water drilling / construct well	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	42	14.0
2	Brick Plant	Sant mandakh Cooperative	6.8	5.2	4/5/06	3/28/08	4/9/08	Khan	5 (2)	Equipment	bricks	New Business	Utilization of Resources	Uvurkhangai	30	100.9
3	Brick Production Processing Factory	Hurd-Orgil Co., Ltd.	18.2	9.3	4/9/07	9/11/07 (6/9/08)	6/12/08	Zoos	5 (1)	Equipment	bricks	Products Diversification	Import Substitute	Uvs	43	4.8
4	Construction Material Decor factory	Nemekh Trade Co.,Ltd	15.5	9.9	4/13/07	1/25/08	5/12/08	Golomt	3 (1)	Equipment	bricks	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	19	11.8
5	Expansion of Brick Production	MBRIC Co., Ltd	83.2	43.9	6/12/08	12/8/11	2/20/09	Golomt	7 (3)	Equipment	bricks	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	5	1.0
6	Sand and Stone Smashing /Sorting	Suuri Khan Co., Ltd	93.1	55.1	2/8/07	6/20/07	12/11/07	Khan	7 (2)	Equipment	gravels	New Product	contribution to Key Industry	Tuv	40	5.1
7	Establishment of Cement Factory	Teeliin Shonkhor Co. Ltd	32.8	20.1	9/15/08	11/12/08	12/24/08	Capitron	5 (1)	Equipment	cement	New Business	Import Substitute	Dornogobi	21	2.0
8	Concrete Production	Suuri Co., Ltd	91.5	61.9	4/2/07	9/26/07	3/13/08	Golomt	5 (2)	Facility	concrete ready-mixes	Capacity Expansion	Import Substitute	Ulaanbaatar	46	12.8
9	Concrete Mixing Plant	Batkhuyag Tsamkhag Co Ltd	79.0	63.2	6/12/08	6/24/08	7/16/08	Capitron	4 (1)	Equipment	concrete mixture	New Business	contribution to Key Industry	Ulaanbaatar	18	0.1
10	Concrete Mixture Manufacturing	Dorniin Urguu Co., Ltd	27.2	20.0	6/12/08	4/3/09	4/6/09	Golomt	5 (2)	Equipment	concretes	New Business	contribution to Key Industry	Ulaanbaatar	36	12.0
11	Concrete Mixture Factory	NSR Co., Ltd	87.1	47.1	9/17/08	4/3/09	4/27/09	Golomt	10 (3)	Equipment	concretes	Products Diversification	contribution to Key Industry	Ulaanbaatar	13	1.2
12	Construction Fixture / Boards	Gangar Khash Co., Ltd	19.0	15.2	4/12/07	1/25/08	4/9/08	Golomt	3 (0.5)	Equipment	construction fixture/boards	Capacity Expansion	Import Substitute	Darkhan-Uul	22	0.8
13	Construction Material	Mongol Deever Co., Ltd	38.9	31.1	5/16/07	9/26/07 (3/3/08)	1/3/08	XAC	5 (1)	Equipment	heat isolation blocks	New Product	New Industry	Ulaanbaatar	43	13.9
14	Foam Concrete Blocks	Darkhan Chandmani Co. Ltd	20.5	16.4	2/20/08	6/24/08	7/16/08	Capitron	5 (1)	Equipment	concrete blocks	New Product	Advanced Technology	Ulaanbaatar	18	11.8
15	Light Block Production	Mongol Tsonkh Co., Ltd	75.1	46.7	3/17/08	6/24/08	8/6/08	Zoos	7 (1.5)	Equipment	light blocks	New Product	Import Substitute	Ulaanbaatar	22	6.7
16	Lightweight Concrete Blocks	Sunderleg-Asar Co., Ltd	69.5	53.7	6/23/08	7/10/08	7/16/08	Capitron	4 (1)	Equipment	concrete blocks	New Business	contribution to Key Industry	Ulaanbaatar	33	0.1
17	Concrete Product Factory	Bolortokh-Ekhlel Co.Ltd	80.8	64.7	28-Jul-08	8/1/08	8/1/08	Capitron	3 (1)	Equipment	concrete products	New Business	contribution to Key Industry	Ulaanbaatar	10	0.1
18	Light Block Production	Orkhon Khiits Co., Ltd	19.5	14.7	9/26/08	11/12/08	2/20/09	Zoos	5 (0.5)	Equipment	light blocks	Products Diversification	Import Substitute	Orkhon	45	8.3
19	Expension of Glass Factory	Shilen Khiits Co., Ltd	33.7	20.7	4/12/07	12/3/07	3/13/08	Golomt	5 (2)	Equipment	dried glasses	Capacity Expansion	Import Substitute	Ulaanbaatar	35	4.8
19	Sub-total or Average		922.6	619.4					5.1 (1.4)						28.5	6.2

Note: No.5 Brick production project (MBRIC) extended as an EPL is listed in this table in view of its questionable eligibility for EPL.
Source: Compiled by JICA study team based on Project Office for JICA-TSL “TSL Project Status Table” as of April 27, 2009

Table III. 4: Metal Products, Chemical Products, Furniture, Textiles, Wearing Apparel

No.	Project	Borrower	Project Cost	ODA Loan	Approval		Disbursement	Loan			Project				Borrower	
			(JPY million)		PFI	CSC (JBIC)	to PFI	PFI	Duration (Grace)	Main Fund Use	Main Product	Main Purpose	Main Effect	Location	Employees	Business (years)
1	Reinforcement Steel Cages	Erdes Beton Co., Ltd	105.2	61.0	3/3/08	3/28/08	4/9/08	Capitron	5 (1)	Equipment	steel cages for reinforcement	New Product	Import Substitute	Ulaanbaatar	48	4.8
2	Canadian Housing Technology	Universal Exchange Co. Ltd	86.8	65.4	2/28/08	3/28/08	4/9/08	Capitron	7 (2)	Equipment	structural insulated panels	Products Diversification	New Product / Service Introduction	Ulaanbaatar	50	1.5
3	Vacuum Windows / Doors	Batkhuyag Orgil Co., Ltd	80.8	64.7	7/28/08	8/1/08	8/1/08	Capitron	3 (1)	Facility	vacuum windows /doors	New Business	Contribution to Key Industry	Ulaanbaatar	30	0.2
4	Vacuum Windows / Doors Assembling Factory	Batlalt Co., Ltd	22.3	9.4	9/1/08	9/11/08	9/15/08	Capitron	5 (2)	Equipment	vacuum plastic windows/doors	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	16	3.3
5	Production of Door / Window	Life Ttrading Co., Ltd	28.0	20.0	9/15/08	11/12/08	12/24/08	Golomt	3 (1)	Working Capital	window, door, fasad	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	18	2.8
6	Waterproof Adhesive Plant	Ubona Co., Ltd.	6.5	4.7	7/19/07	9/26/07 (12/25/08)	5/12/08	XAC	4 (1.5)	Facility	waterproof adhesive	New Business	Utilization of Resources	Ulaanbaatar	15	4.1
7	Furniture Production Factory	MMB Co., Ltd	33.9	23.7	9/9/08	9/11/08 (9/30/08)	10/30/08	Anod	7 (1)	Equipment	melamine particle board	New Business	Import Substitute	Ulaanbaatar	33	9.8
8	Wood / Furniture Manufacturing	Mot House Co., Ltd	7.6	5.3	3/13/07	9/26/07	11/1/07	Khan	4 (0.3)	Equipment	doors, window, furniture, gers with 5 walls	Capacity Expansion	Import Substitute	Ulaanbaatar	9	10.7
9	Wood / Furniture Manufacturing	Tal Khudag Co., Ltd.	48.7	36.1	8/3/07	12/3/07 (1/23/08)	3/14/08	Zoos	5 (1.4)	Equipment	furniture, wood materials	Capacity Expansion	Export Increase	Ulaanbaatar	13	9.1
10	Wood / Furniture Manufacturing	Ganbros Co., Ltd	6.5	5.0	5/3/07	9/11/07 (3/3/08)	3/18/08	TDB	3 (0)	Equipment	furniture, wooden door /detail	New Sales Channel	Import Substitute	Ulaanbaatar	17	2.9
11	Fireplace Production Factory	Dalaisainshand Co., Ltd	79.1	46.5	11/6/08	11/12/08	11/28/08	Capitron	10 (1)	Equipment	fireplace	New Business	Import Substitute	Ulaanbaatar	12	8.4
12	Plastic Bag Production	Mon Taij Co., Ltd	14.5	10.5	1/26/07	6/20/07	7/10/07	Khan	6 (1)	Equipment	plastic bags	Capacity Expansion	Import Substitute	Ulaanbaatar	15	3.6
13	Felt and Felt Shoes	Berkh Toonot Co., Ltd	1.6	1.2	1/2/07	1/25/07 (5/10/07)	5/23/07	Khan	3 (0)	Equipment	felt, felt shoes	Advanced Technology	Advanced Technology	Khentii	5	13.6
14	Wool Washing Project	Tungalag Alt Co., Ltd	153.0	73.6	1/17/07	2/23/07	7/10/07	Khan	7 (2)	Equipment	felt	Capacity Expansion	Utilization of Resources	Zavkhan	30	14.6
15	Mongolian White Felt	Dulaan Beleg Cooperative	1.6	1.3	12/7/07	1/25/08	3/14/08	Khan	5 (0.8)	Equipment	felt	Capacity Expansion	contribution to Key Industry	Dundgovi	4	102.5
16	Establishment of Carpet Factory	Tufting Co., Ltd	21.0	15.9	7/25/08	9/11/08	9/15/08	Capitron	5 (1)	Equipment	carpets, rugs	New Business	Import Substitute	Ulaanbaatar	2	0.1
17	Wool and Cashmere Goods Production	Khatan Suljee Co., Ltd	77.2	61.7	1/24/08	5/13/08	7/16/08	Zoos	10 (1.5)	Facility	cashmere/ wool products	Capacity Expansion	Export Increase	Ulaanbaatar	20	15.6
18	Establishment of Sewing Factory	Uran Siluet Co., Ltd	52.8	40.7	10/28/08	11/12/08	11/28/08	Anod	7 (1)	Equipment	garment	Quality Improvement	Import Substitute	Ulaanbaatar	20	n.a.
18	Sub-total or Average		827.1	546.7					5.7 (1.1)						19.8	6.2

Source: Compiled by JICA study team based on Project Office for JICA-TSL “TSL Project Status Table” as of April 27, 2009

Table III. 5: Mining, Printing, Land Transport, Hotel & Restaurant, Health, Education

No.	Project	Borrower	Project Cost	ODA Loan	Approval		Disbursement	Loan			Project				Borrower	
			(JPY million)		PFI	CSC (JBIC)	to PFI	PFI	Duration (Grace)	Main Fund Use	Main Product	Main Purpose	Main Effect	Location	Employees	Business (years)
1	Expansion of Coal Mine	Powerland Co., Ltd	100.0	61.0	3/24/08	3/28/08	4/9/08	Capitron	5 (1)	Equipment	coal	Capacity Expansion	Export Increase	Dornogobi	44	3.7
2	Expansion of Offset Publishing Factory	Tsogt Print Co., Ltd	4.2	3.3	4/11/07	9/26/07 (12/25/07)	1/3/08	Golomt	5 (1)	Equipment	color printing, paper publish	Capacity Expansion	Advanced Technology	Ulaanbaatar	5	5.8
3	Extension of Printing Industry	Erdenet Khuleg Co., Ltd	6.1	4.9	4/26/07	9/26/07	11/1/07	Khan	8 (3)	Equipment	printing products	Products Diversification	Advanced Technology	Sukhbaatar	6	13.9
4	Freight Forward Service	Progresstrans Co., Ltd	81.7	65.4	7/23/08	8/1/08	9/9/08	Capitron	7 (3)	Equipment	freight forwarding	Capacity Expansion	contribution to Key Industry	Ulaanbaatar	21	7.8
5	Tourist Camp Project	Egiin ekh Co., Ltd	8.7	3.7	4/6/07	3/28/08	4/9/08	Golomt	5 (1)	Equipment	toursit camp	Capacity Expansion	Export Increase (Forex Earning)	Khuvsgul	8	1.8
6	Tourist Camp Project	Bayar Co.,Ltd	27.5	22.1	8/29/08	4/3/09	4/6/09	Golomt	10 (3)	Facility	complex gers, restaurant	Capacity Expansion	Export Increase (Forex Earning)	Ulaanbaatar	45	12.2
7	Tourist Camp Project	Undur Ulaan Travel Co., Ltd	30.1	22.6	9/17/08	11/12/08	12/8/08	Golomt	10 (3)	Facility	gers, summer house/restaurant	Capacity Expansion	Export Increase (Forex Earning)	Ulaanbaatar	10	2.2
8	Sanitorium and Tourist Complex	Bayan Bars Co., Ltd	21.0	9.5	6/16/08	7/10/08	9/9/08	Khan	6 (1)	Facility	tourism and spa	Quality Improvement	Employmnet Increase	Uvs	20	4.0
9	Leisure/Strengthening Center	Tumen zangi Co., Ltd	103.7	52.3	7/28/07	9/26/07	4/9/08	Golomt	8.3 (3)	Facility	hotel, sport gim, restaurant	Capacity Expansion	Employmnet Increase	Ulaanbaatar	20	5.1
10	Establishment of Small-Size Hotel	New Summit Co., Ltd	45.2	18.8	10/16/08	11/12/08	12/8/08	Capitron	8 (2)	Facility	hotel, restaurant supermarket	New Business	Employmnet Increase	Ulaanbaatar	4	1.9
11	Motel Project	Bayangovi Juulchin Co., Ltd	13.6	6.2	4/12/07	9/26/07	3/13/08	Golomt	5 (2)	Facility	roadside motel	New Service	Employmnet Increase	Bulgan	35	14.8
12	Addition of VIP / Karaoke Rooms	Saifu Co., Ltd	52.6	31.7	9/19/08	11/12/08	2/20/09	Zoos	7 (1)	Facility	restaurant	New Service	Employmnet Increase	Ulaanbaatar	28	6.2
13	Sanatorium for Sport Treatment and restoring	Zakira Co., Ltd	74.5	56.1	9/28/07	12/26/07	1/3/08	Khan	10 (1)	Equipment	treatment, sanatorium	New Service	Import Substitute	Ulaanbaatar	6	10.3
14	Establishment of ECO Center	Bayangol Hospital Co., Ltd	39.3	28.2	3/9/07	5/18/07	7/10/07	Khan	7 (2)	Equipment	diagnosis, treatment	New Service	Social Development	Ulaanbaatar	41	4.6
15	Health / Labour Protection Center	EMJJ Co., Ltd	37.3	28.2	3/9/07	5/18/07	12/11/07	Khan	7 (2)	Equipment	surgery, health treatment clothes	New Service	Social Development	Ulaanbaatar	48	9.3
16	Improving Hospital Condition	Enkhiin Zuun Co., Ltd	3.0	2.0	8/15/07	1/25/08	3/14/08	Khan	5 (0)	Equipment	medical service	Services Diversification	Social Development	Govi-Altai	14	6.1
17	Renovation of Equipment	Chimeg Oyu Co., Ltd	17.4	13.1	12/13/07	3/28/08	4/9/08	Golomt	5 (1)	Equipment	diagnosis, treatment	Capacity Expansion	Social Development	Ulaanbaatar	14	4.1
18	Modernization of Dental Equipment and Services	Ganshunkh Co., Ltd	8.5	6.6	7/5/08	8/1/08	9/9/08	Capitron	7 (2)	Equipment	dental treatment	Quality Improvement	Social Development	Orkhon	4	12.0
19	Build School, Dormirory / Gym	Orkhon University	81.8	36.4	4/12/07	3/28/08	7/1/08	Golomt	8 (3)	Facility	education	Capacity Expansion	Social Development	Ulaanbaatar	48	15.8
19	Sub-total or Average		756.2	472.1					7.0 (1.8)						22.2	7.5

Source: Compiled by JICA study team based on Project Office for JICA-TSL “TSL Project Status Table” as of April 27, 2009

Table III. 6: Environment Protection

No.	Project	Borrower	Project Cost (JPY million)	ODA Loan (JPY million)	Approval PFI	Approval CSC (JBIC)	Disbursement to PFI	Loan PFI	Loan Duration (Grace)	Loan Main Fund Use	Project Main Product	Project Main Purpose	Project Main Effect	Project Location	Borrower Employees	Borrower Business (years)
1	Fuel Briquette Manufacturing Plant	Dayar Trade Co., Ltd	4.2	2.6	12/19/06	1/25/07	7/10/07	Khan	3 (0.4)	Equipment	fuel briquettes	New Business	Utilization of Resources	Bayankhongor	11	9.5
2	Non-Smoke Fuel Plant	Shariin Gol Energo Co., Ltd	49.4	32.1	2/21/08	5/13/08 (6/13/08)	7/8/08	Anod	4 (0.6)	Equipment	coks, tar, briquette	New Product	Export Increase	Darkhan-Uul	34	3.7
3	Briquette and Building Block	Tanu Tulsh Co., Ltd	54.8	22.6	6/5/08	11/12/08	1/26/09	XAC	4 (0.8)	Equipment	briquette, light building block	Capacity Expansion	Environment Protection	Ulaanbaatar	15	2.9
4	Mongolian Stove-21st Century	Zalaa Tsagaan Co., Ltd	7.5	4.3	1/5/07	12/3/07	1/3/08	Khan	6 (1.5)	Equipment	heating supply	Capacity Expansion	Environment Protection	Bayankhongor	10	12.0
5	Renovation of Individual Boiler	Anu Service Co., Ltd	80.4	47.2	10/6/08	10/17/08	10/23/08	Capitron	10 (3)	Equipment	heating supply	Capacity Expansion	Environment Protection	Ulaanbaatar	18	7.8
6	Renovation of Individual Boiler	Parasky Co., Ltd	78.2	56.2	10/6/08	11/12/08	11/27/08	Capitron	10 (3)	Equipment	heating supply	Capacity Expansion	Environment Protection	Ulaanbaatar	18	0.5
7	Renovation of Individual Boiler	UCIG Co., Ltd	73.2	54.2	10/6/08	11/12/08	12/25/08	Capitron	10 (3)	Equipment	heating supply	Capacity Expansion	Environment Protection	Ulaanbaatar	18	0.5
8	Renovation of Individual Boiler	Chintulga Erdene Co., Ltd	81.8	34.3	4/2/09		4/27/09	Capitron	10 (3)	Equipment	heating supply	Renovation of Facility	Environment Protection	Tuv	18	0.3
9	Eco Boiler Project	Sagakon Co., Ltd	8.3	6.2	3/20/09	4/3/09	4/6/09	TDB	4 (0.4)	Equipment	boiler	Products Diversification	Environment Protection	Ulaanbaatar	10	2.7
10	LPG project	Erdene-Ulzii Co., Ltd	14.7	11.8	11/20/08	12/30/08	2/20/09	Zoos	7 (1.5)	Equipment	propane gas supply	Capacity Expansion	Environment Protection	Khovd	4	6.4
11	Hippophoe Plantation	CCT-Od Co., Ltd	50.6	36.9	2/14/07	2/23/07	7/10/07	Khan	10 (2)	Equipment	fruit	Products Diversification	Environment Protection	Uvs	50	8.7
12	Green Forest-Life	Andul Co. Ltd	8.1	5.7	2/22/07	12/3/07	1/3/08	Khan	6.8 (3.1)	Equipment	tree breeding	Capacity Expansion	Environment Protection	Orkhon	15	6.8
13	Expansion of Bee Farm	Argangat Partnership	13.4	10.7	3/17/08	5/13/08	5/21/08	Capitron	10 (3)	bees	honey, beeswax	Capacity Expansion	Import Substitute	Selenge	10	1.4
14	Anti-Dust Project	Razno Trans Co., Ltd	143.3	55.1	7/27/07	9/11/07	12/11/07	Khan	5 (1)	Equipment	paper	Capacity Expansion	Export Increase	Orkhon	35	3.1
15	Wasted Gravel Processing	Ariun Urnukh Co., Ltd	41.0	24.5	11/27/08	12/30/08	1/26/09	Zoos	5 (1)	Equipment	sand, fine gravel	New Business	Utilization of Resources	Tuv	28	4.4
16	Toilet Water Processing System	Naran Rashaan Co., Ltd	10.0	7.5	3/30/08	8/1/08 (9/30/08)	10/27/08	Anod	4 (0.3)	Equipment	sewage water cleansing equip	New Business	Utilization of Resources	Ulaanbaatar	10	3.0
17	Recycling of Technical Oil	Hi Bi Oil JSC.	130.7	28.6	6/23/08	7/10/08	8/6/08	Capitron	5 (2)	Equipment	basic technical oil	New Business	Import Substitute	Ulaanbaatar	14	8.0
18	Eco Furniture Factory	TBM Co., Ltd	47.5	34.6	11/22/08	11/12/08	4/6/09	Anod→ XAC	9 (1.3)	Equipment	household furniture	New Business	Import Substitute	Ulaanbaatar	5	0.0
19	OSB Sandwich Board Factory	Panel System Co., Ltd			3/19/09	4/6/09		Golomt	10 (3)	Equipment	linear / heated OSB board	Products Diversification	Social Development	Ulaanbaatar	45	2.7
19	Sub-total or Average		897.1	475.1					7.0 (1.8)						19.4	4.4

Note: Brick production project (MBRIC) extended as an EPL is listed in Table III. 3: Construction Materials. An additional EPL (OSB sandwich board project yet to be disbursed is listed here.
Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table" as of April 27, 2009

Table III. 7: Sub-loan with maximum sub-loan size

PFI	Sub-borrower	Sub-project	Project Cost	Sub-loan Amount	Loan-to-Value Ratio
Capitron	Erdes Beton	Steel cages production	MNT 1,207 M	MNT 700 M	58%
	Universal Exchange	Insulated panel production	USD 796,486	USD 600,000	75%
	Powerland	Coal mine	MNT 1,146 M	MNT 700 M	61%
	Tsogtbilguun	Potato chip & corn puff	MNT 1,607 M	MNT 702 M	44%
	Batkhuyag Tsamkhag	Concrete mixing plant	USD 750,000	USD 600,000	80%
	Progresstrans	Freight forward service	USD 750,000	USD 600,000	80%
	Bolortokh-Ekhlel	Concrete product factory	USD 750,000	USD 600,000	80%
	Batkhuyag Orgil	Vacuum window & door	USD 750,000	USD 600,000	80%
	UCIG	Boiler facility renovation	USD 810,015	USD 600,000	74%
Golomt	Vitafit Invest	Soft drink production	USD 943,789	USD 600,000	64%
	Suuri	Mix concrete production	USD 887,110	USD 600,000	68%
	Tumen zangi	Leisure center	USD 1,190,000	USD 600,000	50%
	MBRIC	Brick production	MNT 1,311 M	MNT 692 M	53%
	NSR	Concrete mixture factory	MNT 1,278 M	MNT 691 M	54%
Khan	Zurgaan khoshuu	Intensified pig farming	MNT 871 M	MNT 696 M	80%
	Tungalag Alt	Wool washing	USD 1,246,800	USD 600,000	48%
Zoos	Khatan Suljee	Wool & cashmere goods	MNT 848 M	MNT 678 M	80%
Total	16 SMEs	16 sub-projects	JPY1,418 M equivalent	JPY989 M equivalent	70%

(Source: Compiled by JICA study team based on Project Office for JICA-TSL "TSL Project Status Table" as of April 27, 2009)

ANNEX IV

Financial data of PFIs

Table IV.1: Financial performances of PFIs and consolidated 15 banks

(in MNT billion)

	Khan Bank			TDB			Golomt Bank			Zoos Bank			Xac Bank			Capitoron Bank			Anod Bank *			Consolidated Financial Statements of 15 Banks (2008)
	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008	
Balance Sheet																						
Cash and cash equiv.	13.5	51.1	118.1	25.4	110.4	140.8	40.1	74.5	72.8	15.9	26.1	31.0	5.3	12.4	7.5	5.6	9.5	8.9	59.3	107.8	n.a.	650.3
Short-term liquid assets	69.2	22.8	66.1	137.2	46.4	38.8	129.8	243.6	165.0	22.5	40.2	0.0	13.5	18.6	32.3	47.8	12.5	2.6	15.0	20.9	n.a.	126.9
Loans (net)	242.6	490.1	608.7	240.1	382.3	440.3	174.7	323.0	447.8	80.5	150.1	168.5	60.8	100.0	149.6	26.8	69.4	84.5	114.2	139.5	n.a.	2,456.4
Other assets	19.4	36.6	46.1	23.7	24.4	39.4	8.6	10.9	11.6	9.0	18.7	31.1	9.3	12.7	18.6	4.0	4.9	7.3	51.2	81.2	n.a.	
Total assets	**344.7**	**600.6**	**839.0**	**426.3**	**563.5**	**659.3**	**353.2**	**652.1**	**697.2**	**127.9**	**235.0**	**230.6**	**88.9**	**143.8**	**208.0**	**84.1**	**96.2**	**103.3**	**239.6**	**349.4**	**n.a.**	**3,499.6**
Deposits from customers	291.3	493.4	679.2	324.7	373.0	383.3	283.7	512.5	505.2	100.5	162.5	148.7	43.1	62.9	77.0	30.4	44.6	43.4	169.5	248.3	n.a.	2,183.4
Due to banks & FIs	4.5	20.3	2.6	36.0	22.6	35.0	20.9	58.7	8.0	4.9	33.8	22.6	34.4	65.5	106.1	44.4	41.4	47.0	9.0	7.9	n.a.	
Other liabilities	16.4	29.2	77.1	15.9	107.6	172.5	17.2	26.0	120.4	10.3	18.4	25.7	651.0	2.1	3.0	1.3	1.4	3.5	48.2	76.2	n.a.	
Total liabilities	**312.2**	**542.8**	**758.8**	**376.6**	**503.2**	**590.8**	**321.9**	**597.2**	**633.6**	**115.7**	**214.7**	**197.0**	**78.1**	**130.5**	**186.1**	**76.0**	**87.4**	**93.9**	**226.7**	**332.4**	**n.a.**	**3,061.3**
Share capital	11.6	12.3	12.3	6.6	6.6	6.6	21.9	21.9	21.9	10.0	10.0	14.7	8.0	8.0	10.9	8.0	8.0	8.0	11.5	13.8	n.a.	214.2
Other reserves	5.9	11.1	11.1	12.2	6.3	14.6	0.0	16.2	12.7	367.0	7.1	15.4	1.1	2.3	7.8	0.0	0.3	0.3	64.0	52.0	n.a.	
Retained earnings	14.9	34.4	56.7	30.9	47.3	47.3	9.4	16.7	28.9	1.8	3.3	3.5	1.8	2.9	3.2	0.1	0.5	1.0	1.3	3.2	n.a.	
Total equity	**32.5**	**57.8**	**80.1**	**49.7**	**60.3**	**68.5**	**31.3**	**54.9**	**63.5**	**12.2**	**20.3**	**33.5**	**10.9**	**13.2**	**21.9**	**8.1**	**8.8**	**9.4**	**12.9**	**17.1**	**n.a.**	**438.3**
Total liab. & equity	**344.7**	**600.6**	**839.0**	**426.3**	**563.5**	**659.3**	**353.2**	**652.1**	**697.2**	**127.9**	**235.0**	**230.6**	**88.9**	**143.8**	**208.0**	**84.1**	**96.2**	**103.3**	**239.6**	**349.4**	**n.a.**	**3,499.6**
Income Statement																						
Interest income	55.2	88.1	130.0	36.0	47.3	71.2	27.0	44.6	69.3	13.8	21.9	29.5	13.9	18.2	29.5	7.2	9.8	13.7	27.5	32.0	n.a.	
Non-int. income	5.3	8.6	11.6	8.9	10.4	0.0	4.7	8.5	10.9	2.9	4.7	5.9	2.0	2.4	2.5	0.6	0.3	0.9	4.5	5.9	n.a.	
Total gross income	**60.6**	**96.8**	**141.6**	**44.9**	**57.7**	**71.2**	**31.7**	**53.0**	**80.2**	**16.7**	**26.6**	**35.4**	**15.9**	**20.6**	**32.0**	**7.8**	**10.0**	**14.5**	**32.0**	**37.9**	**n.a.**	
Net interest income	32.6	51.4	77.0	21.4	20.6	37.6	8.7	14.3	25.7	6.2	9.1	8.6	8.4	10.1	14.9	3.1	4.1	4.6	7.1	3.9	n.a.	212.6
Net non-interest income	5.4	8.4	11.2	8.9	10.4	24.0	3.7	7.2	8.9	1.0	2.7	2.6	1.3	1.8	2.5	0.6	0.3	0.9	4.5	5.9	n.a.	196.1
Total net income																					n.a.	
(=operating income)	**37.9**	**59.8**	**88.3**	**30.3**	**31.1**	**37.6**	**12.4**	**21.6**	**34.7**	**7.1**	**11.8**	**11.2**	**9.7**	**11.9**	**17.4**	**3.7**	**4.4**	**5.5**	**11.5**	**9.8**	**n.a.**	**445.7**
Operating expenses	(19.2)	(31.2)	(48.4)	(12.2)	(13.7)	(15.9)	(10.1)	(10.1)	(15.2)	(4.6)	(6.4)	(5.7)	(6.7)	(8.2)	(12.3)	(3.0)	(2.4)	(2.6)	(6.2)	(6.1)	n.a.	
Contingent risk exp.	(0.8)	(3.1)	(10.2)	(1.6)	2.6	(1.8)	(2.6)	(2.3)	(4.0)	(1.3)	(1.6)	(1.6)	(0.4)	(0.3)	(1.1)	(0.8)	(1.5)	(2.2)	(3.4)	(0.9)	n.a.	
Net non-operating income		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	(0.2)	0.0	0.0	0.0	0.3	(0.0)	(0.0)	(0.8)	(0.7)	n.a.	
Profit bfr tax	**17.9**	**25.5**	**29.7**	**16.5**	**19.9**	**19.9**	**3.6**	**9.2**	**15.5**	**1.2**	**3.8**	**3.8**	**2.6**	**3.3**	**4.0**	**0.2**	**0.5**	**0.7**	**1.1**	**2.1**	**n.a.**	**82.3**
Net profit	**12.0**	**19.4**	**22.3**	**11.8**	**16.4**	**16.3**	**2.5**	**7.4**	**12.2**	**0.4**	**3.3**	**3.3**	**1.8**	**2.9**	**3.2**	**0.1**	**0.5**	**0.6**	**0.7**	**1.8**	**n.a.**	**64.1**
Operational Ratios (%)																						
Capital adequacy (>10%)	13.1	11.4	12.4	18.6	13.8	14.7	16.7	14.4	12.8	13.8	12.8	15.9	15.8	11.1	15.4	19.1	11.0	10.0	11.3	12.2	n.a.	15.3
Liquidity	24.0	13.1	21.9	27.5	26.0	37.0	53.2	49.3	37.0	29.2	28.3	15.6	24.1	23.2	21.2	62.3	19.0	12.2	n.a.	n.a.	n.a.	25.4
NPL	2.0	1.1	2.9	4.4	2.0	1.5	6.7	4.2	3.9	4.5	3.7	2.1	1.3	0.9	2.0	6.7	5.7	6.8	8.0	n.a.	n.a.	3.3
RoE	57.4	45.9	34.2	27.2	32.1	26.2	10.7	17.3	24.3	2.6	13.7	9.9	19.5	27.9	21.6	1.4	5.8	10.4	8.6	10.8	n.a.	17.6
RoA	4.5	3.9	3.2	3.1	3.5	2.8	0.8	1.6	1.8	0.3	1.4	1.4	2.4	2.6	1.8	0.1	0.5	0.8	0.5	0.5	n.a.	2.4

Note: Financial statements of Anod Bank for 2008 are not available, therefore the consolidated figure is of 15 banks, excluding Anod Bank.

Source: Annual reports of each bank, and BOM

Table IV.2: Financial Statements (Khan Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	13.5	3.9	83.8	51.1	8.5	278.7	118.1	14.1	131.2	164.6
Short-term liquid assets	69.2	20.1	24.0	22.8	3.8	-67.0	66.1	7.9	190.0	49.0
Loans (net)	242.6	70.4	81.7	490.1	81.6	102.0	608.7	72.5	24.2	69.3
Other assets	19.4	5.6	123.3	36.6	6.1	88.4	46.1	5.5	25.8	79.2
Total assets	**344.7**	**100.0**	**67.9**	**600.6**	**100.0**	**74.3**	**839.0**	**100.0**	**39.7**	**60.6**
Deposits from customers	291.3	84.5	75.5	493.4	82.1	69.4	679.2	81.0	37.7	60.9
Due to banks & FIs	4.5	1.3	-74.1	20.3	3.4	347.2	2.6	0.3	-87.1	62.0
Other liabilities	16.4	4.7	140.6	29.2	4.9	78.3	77.1	9.2	164.4	127.7
Total liabilities	**312.2**	**90.6**	**64.1**	**542.8**	**90.4**	**73.9**	**758.8**	**90.4**	**39.8**	**59.3**
Share capital	11.6	3.4	125.2	12.3	2.0	5.9	12.3	1.5	0.3	43.8
Other reserves	5.9	1.7	225.5	11.1	1.9	87.3	11.1	1.3	-0.6	-
Retained earnings	14.9	4.3	85.7	34.4	5.7	130.1	56.7	6.8	65.0	93.6
Total equity	**32.5**	**9.4**	**116.2**	**57.8**	**9.6**	**77.9**	**80.1**	**9.6**	**38.6**	**77.6**
Total liab. & equity	**344.7**	**100.0**	**67.9**	**600.6**	**100.0**	**74.3**	**839.0**	**100.0**	**39.7**	**60.6**
Income Statement										
Interest income	55.2	91.2	50.6	88.1	91.1	59.6	130.0	91.8	47.5	52.6
Non-int. income	5.3	8.8	47.2	8.6	8.9	61.7	11.6	8.2	34.0	47.7
Total gross income	**60.6**	**100.0**	**50.3**	**96.8**	**100.0**	**59.8**	**141.6**	**100.0**	**46.3**	**52.1**
Net interest income	32.6	53.8	65.3	51.4	53.1	57.7	77.0	54.4	49.9	57.6
Net non-interest income	5.3	8.8	47.2	8.4	8.7	57.2	11.2	7.9	33.7	46.0
Total net income (=operating income)	**37.9**	**62.6**	**62.5**	**59.8**	**61.8**	**57.6**	**88.3**	**62.4**	**47.6**	**55.9**
Operating expenses	-19.2	-31.7	40.0	-31.2	-32.3	62.7	-48.4	-34.2	55.0	52.5
Contingent risk exp.	-0.8	-1.3	-	-3.1	-3.2	281.8	-10.2	-7.2	234.7	-
Net non-operating income	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-	-
Profit bfr tax	**17.9**	**29.6**	**152.2**	**25.5**	**26.4**	**42.2**	**29.7**	**20.9**	**16.2**	**70.2**
Net profit	**12.0**	**19.8**	**157.9**	**19.4**	**20.0**	**61.8**	**22.3**	**15.7**	**14.7**	**78.1**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	13.1		6.5	11.4		-13.0	12.4		8.8	12.3
Liquidity	24.0		-	13.1		-45.4	21.9		67.2	19.7
Single borrower exp. (<20%)	11.7		-37.1	1.4		-88.0	4.6		228.6	5.9
Forex exposure (<40%)	9.3		-71.3	13.6		46.4	13.9		2.2	12.3
Loan to deposit	83.3		3.5	99.3		19.3	89.6		-9.8	90.7
NPL	2.0		-76.7	1.1		-45.0	2.9		163.6	2.0
RoE	57.4		298.6	45.9		-20.0	34.2		-25.5	45.8
RoA	4.5		309.1	3.9		-13.3	3.2		-17.9	3.9

Source: Khan Bank Annual Report

Table IV.3: Financial Statements (Golomt Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	40.1	11.4	92.8	74.5	11.4	85.7	72.8	10.4	-2.3	58.8
Short-term liquid assets	129.8	36.7	137.0	243.6	37.4	87.7	165.0	23.7	-32.3	64.2
Loans (net)	174.7	49.5	79.6	323.0	49.5	84.9	447.8	64.2	38.6	67.7
Other assets	8.6	2.4	24.2	10.9	1.7	27.0	11.6	1.7	6.4	19.2
Total assets	**353.2**	**100.0**	**96.5**	**652.1**	**100.0**	**84.6**	**697.2**	**100.0**	**6.9**	**62.7**
Deposits from customers	283.7	80.3	94.2	512.5	78.6	80.6	505.2	72.5	-1.4	57.8
Due to banks & FIs	20.9	5.9	425.4	58.7	9.0	180.7	8.0	1.2	-86.3	173.2
Other liabilities	17.2	4.9	23.1	26.0	4.0	50.7	120.4	17.3	363.9	145.9
Total liabilities	**321.9**	**91.1**	**96.1**	**597.2**	**91.6**	**85.5**	**633.6**	**90.9**	**6.1**	**62.6**
Share capital	21.9	6.2	116.5	21.9	3.4	0.0	21.9	3.1	0.0	38.8
Other reserves	0.0	0.0	-	16.2	2.5	-	12.7	1.8	-21.8	-
Retained earnings	9.4	2.7	70.4	16.7	2.6	78.8	28.9	4.2	72.9	74.0
Total equity	**31.3**	**8.9**	**100.3**	**54.9**	**8.4**	**75.3**	**63.5**	**9.1**	**15.8**	**63.8**
Total liab. & equity	**353.2**	**100.0**	**96.5**	**652.1**	**100.0**	**84.6**	**697.2**	**100.0**	**6.9**	**62.7**
Income Statement										
Interest income	27.0	85.1	37.3	44.6	84.0	65.3	69.3	86.4	55.5	52.7
Non-int. income	4.7	14.9	-4.6	8.5	16.0	79.7	10.9	13.6	28.6	34.6
Total gross income	**31.7**	**100.0**	**28.9**	**53.0**	**100.0**	**67.5**	**80.2**	**100.0**	**51.2**	**49.2**
Net interest income	8.7	27.4	464.6	14.3	27.0	65.3	25.7	32.1	79.6	203.2
Net non-interest income	3.7	11.7	385.9	7.2	13.6	95.5	8.9	11.1	23.2	168.2
Total net income (=operating income)	**12.4**	**39.1**	**438.5**	**21.6**	**40.7**	**74.3**	**34.7**	**43.2**	**60.7**	**191.2**
Operating expenses	-10.1	-31.8	689.2	-10.1	-19.0	0.0	-15.2	-18.9	50.6	246.6
Contingent risk exp.	-2.6	-8.1	-	-3.0	-5.6	16.7	-4.0	-4.9	32.4	-
Net non-operating income		0.0	-	0.0	0.0	-	0.0	0.0	-	-
Profit bfr tax	**3.6**	**11.5**	**255.7**	**9.2**	**17.3**	**153.3**	**15.5**	**19.4**	**69.0**	**159.3**
Net profit	**2.5**	**8.0**	**147.1**	**7.4**	**13.9**	**192.8**	**12.2**	**15.2**	**65.4**	**135.1**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	16.7		35.8	14.4		-13.8	12.8		-11.1	14.6
Liquidity	53.2		-	49.3		-7.3	37.0		-24.9	46.5
Single borrower exp. (<20%)	18.3		-1.6	17.5		-4.4	19.5		11.4	18.4
Forex exposure (<40%)	39.7		22.5	8.1		-79.6	11.9		46.9	19.9
Loan to deposit	61.6		-7.5	63.0		2.4	88.6		40.6	71.1
NPL	6.7		-22.1	4.2		-37.3	3.9		-7.1	4.9
RoE	10.7		-25.7	17.3		61.7	24.3		40.5	17.4
RoA	0.8		-27.3	1.6		100.0	1.8		12.5	1.4

Source: Golomt Bank Annual Report

Table IV.4: Financial Statements (TDB)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	25.4	6.0	115.5	110.4	19.6	335.0	140.8	21.4	27.6	159.4
Short-term liquid assets	137.2	32.2	16.6	46.4	8.2	-66.2	38.8	5.9	-16.4	-22.0
Loans (net)	240.1	56.3	53.2	382.3	67.8	59.2	440.3	66.8	15.2	42.5
Other assets	23.7	5.5	41.9	24.4	4.3	3.1	39.4	6.0	61.5	35.5
Total assets	**426.3**	**100.0**	**40.8**	**563.5**	**100.0**	**32.2**	**659.3**	**100.0**	**17.0**	**30.0**
Deposits from customers	324.7	76.2	43.5	373.0	66.2	14.9	383.3	58.1	2.7	20.4
Due to banks & FIs	36.0	8.5	234.6	22.6	4.0	-37.2	35.0	5.3	54.7	84.1
Other liabilities	15.9	3.7	-43.1	107.6	19.1	577.3	172.5	26.2	60.3	198.2
Total liabilities	**376.6**	**88.3**	**42.1**	**503.2**	**89.3**	**33.6**	**590.8**	**89.6**	**17.4**	**31.1**
Share capital	6.6	1.6	0.0	6.6	1.2	0.0	6.6	1.0	0.0	0.0
Other reserves	12.2	2.9	0.1	6.3	1.1	-47.9	14.6	2.2	130.6	27.6
Retained earnings	30.9	7.3	62.1	47.3	8.4	53.1	47.3	7.2	-0.1	38.3
Total equity	**49.7**	**11.7**	**31.3**	**60.3**	**10.7**	**21.3**	**68.5**	**10.4**	**13.7**	**22.1**
Total liab. & equity	**426.3**	**100.0**	**40.8**	**563.5**	**100.0**	**32.2**	**659.3**	**100.0**	**17.0**	**30.0**
Income Statement										
Interest income	36.0	80.3	64.6	47.3	81.9	31.3	71.2	100.0	50.5	48.8
Non-int. income	8.9	19.7	25.4	10.4	18.1	17.6	0.0	0.0	-100.0	-19.0
Total gross income	**44.9**	**100.0**	**55.0**	**57.7**	**100.0**	**28.6**	**71.2**	**100.0**	**23.3**	**35.7**
Net interest income	21.4	47.8	37.5	20.6	35.8	-3.7	37.6	52.8	82.0	38.6
Net non-interest income	8.9	19.7	25.4	10.4	18.1	17.6	24.0	33.7	130.2	57.7
Total net income (=operating income)	**30.3**	**67.5**	**33.7**	**31.1**	**53.8**	**2.5**	**37.6**	**52.8**	**21.0**	**19.1**
Operating expenses	-12.2	-27.1	18.9	-13.7	-23.7	12.4	-15.9	-22.3	15.8	15.7
Contingent risk exp.	-1.6	-3.6	-22.1	2.6	4.5	-257.7	-1.8	-2.6	-170.6	-150.1
Net non-operating income	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-	-
Profit bfr tax	**16.5**	**36.7**	**59.8**	**19.9**	**34.5**	**21.0**	**19.9**	**28.0**	**-0.2**	**26.9**
Net profit	**11.8**	**26.2**	**59.6**	**16.4**	**28.4**	**39.3**	**16.3**	**22.9**	**-0.4**	**32.8**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	18.6		-19.5	13.8		-25.8	14.7		6.5	15.7
Liquidity	27.5		-32.9	26.0		-5.5	37.0		42.3	30.2
Single borrower exp. (<20%)	14.2		-28.3	18.0		26.8	18.3		1.7	16.8
Forex exposure (<40%)	1.9		192.2	0.6		-69.5	7.8		1,268.4	3.4
Loan to deposit	74.0		6.8	102.5		38.6	114.9		12.1	97.1
NPL	4.4		-38.9	2.0		-54.5	1.5		-25.0	2.6
RoE	27.2		39.5	32.1		18.0	26.2		-18.4	28.5
RoA	3.1		29.2	3.5		12.9	2.8		-20.0	3.1

Source: TDB Annual Report

Table IV.5: Financial Statement (Zoos Bank)

(in MNT billion)

	2006	Shares (%)	Growth (%)	2007	Shares (%)	Growth (%)	2008**	Shares (%)	Growth (%)	Avg. Growth (%)
Balance Sheet										
Cash and cash equiv.	15.9	12.4	142.9	26.1	11.1	64.2	31.0	13.4	19.0	75.4
Short-term liquid assets	22.5	17.6	-4.8	40.2	17.1	78.6	0.0	0.0	-100.0	-8.7
Loans (net)	80.5	63.0	30.4	150.1	63.9	86.4	168.5	73.1	12.3	43.0
Other assets	9.0	7.0	-11.3	18.7	8.0	108.3	31.1	13.5	66.2	54.4
Total assets	**127.9**	**100.0**	**25.3**	**235.0**	**100.0**	**83.8**	**230.6**	**100.0**	**-1.9**	**35.7**
Deposits from customers	100.5	78.6	31.1	162.5	69.1	61.6	148.7	64.5	-8.5	28.1
Due to banks & FIs	4.8	3.8	-51.3	33.8	14.4	599.9	22.6	9.8	-33.1	171.8
Other liabilities	10.4	8.1	71.7	18.4	7.8	77.5	25.7	11.1	39.6	62.9
Total liabilities	**115.7**	**90.5**	**24.9**	**214.1**	**91.4**	**85.0**	**197.0**	**85.5**	**-7.9**	**34.0**
Share capital	10.0	7.8	56.9	10.0	4.3	0.0	14.7	6.4	46.7	34.5
Other reserves	1.8	1.4	1.4	7.1	3.0	294.2	15.4	6.7	117.7	137.8
Retained earnings	0.4	0.3	-70.3	3.3	1.4	791.8	3.5	1.5	7.7	243.1
Total equity	**12.2**	9.5	**29.7**	**20.3**	**8.6**	**67.2**	**33.5**	**14.5**	**65.1**	**54.0**
Total liab. & equity	**127.9**	**100.0**	**25.3**	**235.0**	**100.0**	**83.8**	**230.6**	**100.0**	**-1.9**	**35.7**
Income Statement										
Interest income	13.8	82.7	20.0	21.9	82.5	58.7	29.5	83.2	34.4	37.7
Non-int. income	2.9	17.3	71.7	4.7	17.5	61.7	5.9	16.8	27.3	53.5
Total revene	**16.7**	**100.0**	**26.6**	**26.6**	**100.0**	**59.2**	**35.4**	**100.0**	**33.2**	**39.7**
Net interest income	6.2	37.1	11.8	9.1	34.2	46.8	8.6	24.3	-5.3	17.8
Net non-interest income	1.0	5.7	-5.8	2.7	10.1	179.6	2.6	7.2	-4.4	56.5
Total net income (=operating income)	**7.1**	**42.8**	**9.1**	**11.8**	**44.2**	**64.6**	**11.2**	**31.5**	**-5.1**	**22.9**
Operating expenses	-4.6	-27.7	20.5	-6.4	-24.1	38.5	-5.7	-16.0	-11.7	15.8
Contingent risk exp.	-1.3	-7.8	42.1	-1.6	-5.9	19.2	-1.6	-4.5	1.2	20.8
Net non-operating income	0.0	0.0	-	0.0	0.0	-	-0.2	-0.5	-	-
Profit bfr tax	**1.2**	**7.2**	**-32.6**	**3.8**	**14.2**	**214.2**	**3.8**	**10.6**	**-0.7**	**60.3**
Net profit	**0.4**	**2.2**	**-70.3**	**3.3**	**12.3**	**791.8**	**3.3**	**9.3**	**1.1**	**240.9**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	13.8		15.0	12.8		-7.2	15.9		24.2	14.2
Liquidity	29.2		5.5	28.3		-3.1	15.6		-44.9	24.4
Single borrower exp. (<20%)	18.6		-4.6	55.4		197.8	18.9		-65.9	31.0
Forex exposure (<40%)	11.1		9.9	9.6		-13.5	27.0		181.3	15.9
Loan to deposit	80.1		-0.5	92.4		15.3	113.3		22.7	95.3
NPL	4.5		-4.3	3.7		-17.8	2.1		-43.2	3.4
RoE	2.6		-80.3	13.7		426.9	9.9		-27.7	8.7
RoA	0.3		-75.0	1.4		366.7	1.4		0.0	1.0

Source: Zoos Bank Annual Report

Table IV.6: Financial Statements (Xac Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	5.3	6.0	152.4	12.4	8.6	133.7	7.5	3.6	-39.5	82.2
Short-term liquid assets	13.5	15.2	20.0	18.6	13.0	38.1	32.3	15.5	73.1	43.7
Loans (net)	60.8	68.4	57.6	100.0	69.6	64.4	149.6	72.0	49.7	57.2
Other assets	9.3	10.4	27.9	12.7	8.9	37.1	18.6	8.9	45.8	37.0
Total assets	**88.9**	**100.0**	**50.2**	**143.8**	**100.0**	**61.7**	**208.0**	**100.0**	**44.7**	**52.2**
Deposits from customers	43.1	48.4	37.2	62.9	43.8	46.1	77.0	37.0	22.3	35.2
Due to banks & FIs	34.4	38.7	95.2	65.5	45.5	90.3	106.1	51.0	62.0	82.5
Other liabilities	0.6	0.6	-10.5	2.1	1.5	269.5	3.0	1.5	42.0	100.3
Total liabilities	**78.1**	**87.8**	**57.2**	**130.5**	**90.8**	**67.2**	**186.1**	**89.5**	**42.6**	**55.7**
Share capital	8.0	9.0	0.0	8.0	5.6	0.0	10.9	5.3	36.3	12.1
Other reserves	1.1	1.2	-	2.3	1.6	117.1	7.8	3.7	237.8	-
Retained earnings	1.8	2.0	19.1	2.9	2.0	63.1	3.2	1.5	9.5	30.6
Total equity	**10.9**	**12.2**	**13.8**	**13.2**	**9.2**	**21.7**	**21.9**	**10.5**	**65.5**	**33.7**
Total liab. & equity	**88.9**	**100.0**	**50.2**	**143.8**	**100.0**	**61.7**	**208.0**	**100.0**	**44.7**	**52.2**
Income Statement										
Interest income	13.9	87.4	41.0	18.2	88.4	31.4	29.5	92.2	61.8	44.8
Non-int. income	2.0	12.6	128.0	2.4	11.6	19.7	2.5	7.8	4.3	50.6
Total gross income	**15.9**	**100.0**	**61.3**	**20.6**	**100.0**	**30.0**	**32.0**	**100.0**	**55.1**	**48.8**
Net interest income	8.4	52.9	50.5	10.1	49.0	20.4	14.9	46.6	47.5	39.5
Net non-interest income	1.3	8.2	48.7	1.8	8.5	34.5	2.5	7.8	42.3	41.8
Total net income (=operating income)	**9.7**	**61.1**	**50.2**	**11.9**	**57.5**	**22.3**	**17.4**	**54.4**	**46.7**	**39.7**
Operating expenses	-6.7	-42.4	51.3	-8.2	-39.8	22.0	-12.3	-38.4	49.7	41.0
Contingent risk exp.	-0.4	-2.5	-	-0.3	-1.6	-14.4	-1.1	-3.4	218.5	-
Net non-operating income			-			-			-	-
Profit bfr tax	**2.6**	**16.2**	**19.9**	**3.3**	**16.1**	**28.8**	**4.0**	**12.6**	**21.7**	**23.5**
Net profit	**1.8**	**11.2**	**19.1**	**2.9**	**14.2**	**64.7**	**3.2**	**9.9**	**8.5**	**30.8**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	15.8		28.5	11.1		-29.7	15.4		38.7	14.1
Liquidity	24.1		-	23.2		-3.7	21.2		-8.6	22.8
Single borrower exp. (<20%)	3.7		-80.1	3.1		-16.2	3.3		6.5	3.4
Forex exposure (<40%)	8.7		-73.1	8.9		2.3	3.0		-66.3	6.9
Loan to deposit	141.2		14.9	158.9		12.5	194.4		22.3	164.8
NPL	1.3		-84.9	0.9		-30.8	2.0		122.2	1.4
RoE	19.5		35.4	27.9		43.1	21.6		-22.6	23.0
RoA	2.4		118.2	2.6		8.3	1.8		-30.8	2.3

Source: Xac Bank Annual Report

Table IV.7: Financial Statements (Capitron Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	5.6	6.7	-44.1	9.5	9.9	70.1	8.9	8.6	-6.3	6.6
Short-term liquid assets	47.8	56.8		12.5	12.9	-73.9	2.6	2.5	-79.5	-51.1
Loans (net)	26.8	31.9	-0.3	69.4	72.1	158.7	84.5	81.8	21.8	60.1
Other assets	4.0	4.7	-37.1	4.9	5.1	23.1	7.3	7.1	50.3	12.1
Total assets	**84.1**	**100.0**	**94.8**	**96.2**	**100.0**	**14.4**	**103.3**	**100.0**	**7.4**	**38.8**
Deposits from customers	30.4	36.1	0.6	44.6	46.4	47.0	43.4	42.0	-2.8	14.9
Due to banks & FIs	44.4	52.8	627.1	41.4	43.0	-6.7	47.0	45.5	13.6	211.3
Other liabilities	1.3	1.7	-54.2	1.4	1.5	9.2	3.5	3.4	151.6	35.6
Total liabilities	**76.0**	**90.5**	**94.5**	**87.4**	**90.9**	**15.0**	**93.9**	**90.9**	**7.4**	**39.0**
Share capital	8.0	9.4	100.0	8.0	8.3	0.0	8.0	7.7	0.0	33.3
Other reserves	0.0	0.0	-25.0	0.3	0.3	11,033.3	0.3	0.3	0.0	3,669.4
Retained earnings	0.1	0.1	9.4	0.5	0.5	341.9	1.0	1.0	124.8	158.7
Total equity	**8.1**	**9.5**	**97.8**	**8.8**	**9.1**	**8.5**	**9.4**	**9.1**	**6.6**	**37.6**
Total liab. & equity	**84.1**	**100.0**	**94.8**	**96.2**	**100.0**	**14.4**	**103.3**	**100.0**	**7.4**	**38.8**
Income Statement										
Interest income	7.2	92.7	**38.3**	9.8	97.1	35.6	13.7	94.0	39.9	37.9
Non-int. income	0.6	7.3	**-58.6**	0.3	2.9	-48.9	0.9	6.0	200.0	30.8
Total gross income	**7.8**	**100.0**	**18.1**	**10.0**	**100.0**	**29.5**	**14.5**	**100.0**	**44.6**	**30.7**
Net interest income	3.1	40.4	**46.8**	4.1	40.8	30.7	4.6	31.7	12.2	29.9
Net non-interest income	0.6	7.3	**45.4**	0.3	7.1	-48.9	0.9	18.9	200.0	65.5
Total net income (=operating income)	**3.7**	**47.7**	**46.6**	**4.4**	**43.7**	**18.6**	**5.5**	**37.6**	**24.6**	**29.9**
Operating expenses	-3.0	-39.2	**18.3**	-2.4	-23.8	-21.6	-2.6	-17.7	7.8	1.5
Contingent risk exp.	-0.8	**-10.0**	**10.4**	-1.5	-14.7	90.0	-2.2	-15.1	48.1	49.5
Net non-operating income	0.3	3.7	**-69.9**	0.0	-0.2		0.0	-0.3		-23.3
Profit bfr tax	**0.2**	**2.1**	**-13.7**	**0.5**	**5.0**	**204.3**	**0.7**	**4.6**	**32.9**	**74.5**
Net profit	**0.1**	**1.4**	**16.7**	**0.5**	**4.6**	**314.3**	**0.6**	**4.1**	**27.2**	**119.4**
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	19.1		6.5	11.0		-8.1	10.0		-1.0	13.4
Liquidity	62.3		62.3	19.0		-43.3	12.2		-6.8	31.2
Single borrower exp. (<20%)	16.2			18.8		16.0	20.3		8.0	18.4
Forex exposure (<40%)	13.6			16.5		21.3	14.3		-13.3	14.8
Loan to deposit	88.3		-0.8	155.5		76.0	194.9		25.3	146.2
NPL	6.7		6.7	5.7		-1.0	6.8		1.1	6.4
RoE	1.4		1.4	5.8		4.4	10.4		4.6	5.9
RoA	0.1		0.1	0.5		0.4	0.8		0.3	0.5

Source: Capitron Bank Annual Report

Table IV.8: Financial Statements (Anod Bank)

(in MNT billion)

	2006	Share (%)	Growth (%)	2007	Share (%)	Growth (%)	2008	Share (%)	Growth (%)	Avg. growth (%)
Balance Sheet										
Cash and cash equiv.	59.3	24.7	62.2	107.8	30.9	81.8	n.a	n.a	n.a	72.0
Short-term liquid assets	15.0	6.2	-52.0	20.9	6.0	39.5	n.a	n.a	n.a	-6.2
Loans (net)	114.2	47.7	34.2	139.5	39.9	22.2	n.a	n.a	n.a	28.2
Other assets	51.2	21.4	176.7	81.2	23.2	58.7	n.a	n.a	n.a	117.7
Total assets	**239.6**	**100.0**	**39.9**	**349.4**	**100.0**	**45.8**	n.a	n.a	n.a	42.9
Deposits from customer	169.5	70.7	45.7	248.3	71.1	46.5	n.a	n.a	n.a	46.1
Due to banks & FIs	9.0	3.8	-66.7	8.0	2.3	-11.8	n.a	n.a	n.a	-39.2
Other liabilities	48.2	20.1	173.5	76.1	21.8	57.9	n.a	n.a	n.a	115.7
Total liabilities	**226.7**	**94.6**	**40.8**	**332.4**	**95.1**	**46.6**	n.a	n.a	n.a	43.7
Share capital	11.5	4.8	21.0	13.8	3.9	20.0	n.a	n.a	n.a	20.5
Other reserves	0.1	0.0	-11.6	0.1	0.0	-14.8	n.a	n.a	n.a	-13.2
Retained earnings	1.4	0.6	106.1	3.2	0.9	137.0	n.a	n.a	n.a	121.6
Total equity	**12.9**	**5.4**	**26.2**	**17.1**	**4.9**	**32.1**	n.a	n.a	n.a	29.2
Total liab. & equity	**239.6**	**100.0**	**39.9**	**349.4**	**100.0**	**45.8**	n.a	n.a	n.a	42.9
Income Statement										
Interest income	27.5	86.0	21.9	32.0	84.4	16.5	n.a	n.a	n.a	19.2
Non-int. income	4.5	14.0	332.4	5.9	15.6	32.4	n.a	n.a	n.a	182.4
Total gross income	**32.0**	**100.0**	**35.4**	**37.9**	**100.0**	**18.8**	n.a	n.a	n.a	27.1
Net interest income	7.1	22.1	-11.1	3.9	10.1	-45.5	n.a	n.a	n.a	-28.3
Net non-interest income	4.5	14.0	332.4	5.9	15.6	32.5	n.a	n.a	n.a	182.4
Total net income	**11.5**	**36.0**	**28.3**	**9.8**	**25.7**	**-15.3**	n.a	n.a	n.a	6.5
(=operating income)								n.a	n.a	0.0
Operating expenses	-6.2	-19.3	**18.2**	-6.1	-16.0	-1.8	n.a	n.a	n.a	8.2
Contingent risk exp.	-3.4	-10.7	**40.9**	-0.9	-2.3	-74.7	n.a	n.a	n.a	-16.9
Net non-operating incor	-0.8	-2.5	**65.2**	-0.7	-1.9	-10.4	n.a	n.a	n.a	27.4
Profit bfr tax	**1.1**	**3.5**	**33.4**	**2.1**	**5.5**	**88.7**	n.a	n.a	n.a	61.1
Net profit	**0.7**	**2.2**	**134.1**	**1.8**	**4.9**	**166.7**	n.a	n.a	n.a	150.4
Operational Ratios										(Avg. 3 yrs)
Capital adequacy (>10%)	11.3		n.a	12.2		8.0	n.a		n.a	n.a
Liquidity	n.a		n.a	n.a		n.a	n.a		n.a	n.a
Single borrower exp. (<20%	18.2		n.a	19.9		9.2	n.a		n.a	n.a
Forex exposure (<40%)	37.3		n.a	21.1		-43.4	n.a		n.a	n.a
Loan to deposit	67.4		n.a	56.2		-16.6	n.a		n.a	n.a
NPL	8.0		n.a	n.a		n.a	n.a		n.a	n.a
RoE	5.4		n.a	10.8		101.1	n.a		n.a	n.a
RoA	0.3		n.a	0.5		82.8	n.a		n.a	n.a

Source: Anod Bank Annual Report

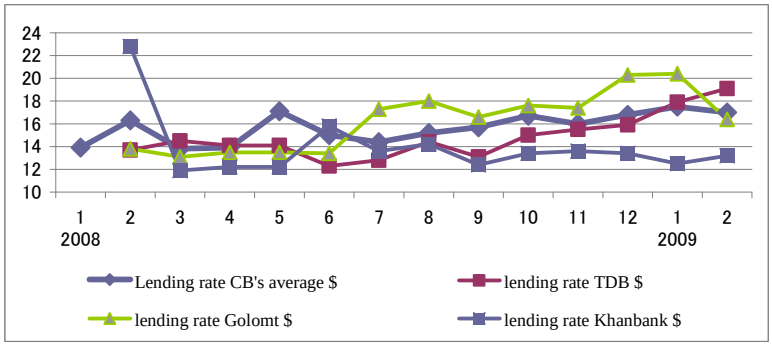


Figure IV.1 (a) Comparative lending rates of average CBs & 3 major PFIs (USD)

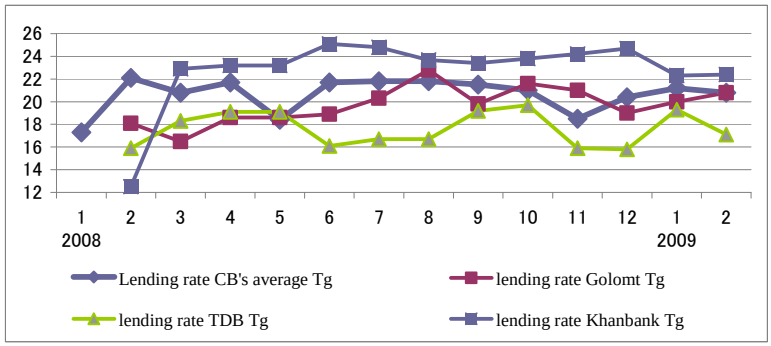


Figure IV.1 (b) Comparative lending rates of average CBs & 3 major PFIs (MNT)

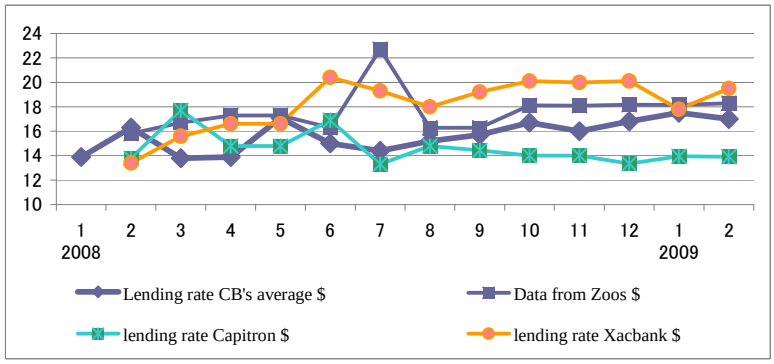


Figure IV.1 (c) Comparative lending rates of average CBs & 3 middle sized PFIs (USD)

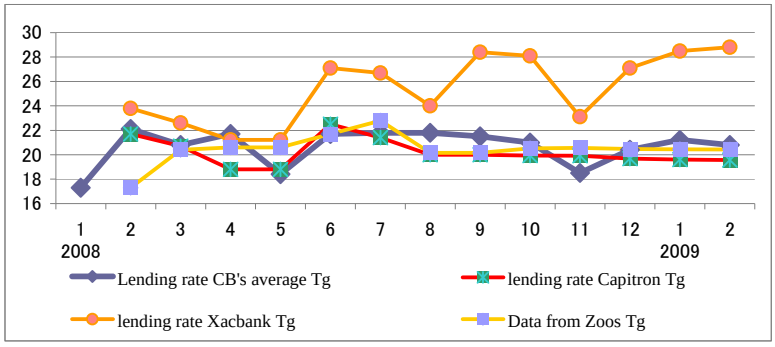


Figure IV.1 (d) Comparative lending rates of average CBs & 3 middle sized PFIs (MNT)

Source: BOM Monthly bulletin Feb. 2009

Figure IV.1: Comparative Lending rates of Average CBs & PFIs

Table IV.9: Maturity Analysis of Assets and Liabilities of PFIs

(in MNT million)

	Khan Bank						Trade & Development Bank					
	31st December, 2007			31st December, 2008			31st December, 2007			31st December, 2008		
	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total
Financial Assets												
Cash & short term assets	13,477	-	13,477	118,115	-	118,115	110,376	260	110,636	140,812	-	140,812
Loans & advances	9,320	-	9,320	414,704	193,950	608,654	217,593	4,000	221,593	224,574	215,685	440,259
Other receivables	347,777	143,324	491,101	20,633	-	20,633	46,164	164,715	210,879	37,472	1,344	38,816
Other assets	56,140		56,140	45,218	264	45,482	7,707	-	7,707	12,557	4,000	16,557
Total financial assets	**426,713**	**143,324**	**570,037**	**598,670**	**194,214**	792,884	**381,840**	**168,975**	**550,815**	**415,415**	**221,029**	**636,444**
Financial Liabilities												
Due to customers & banks	512,572	1,067	513,639	681,771	-	681,771	303,007	85,274	388,281	325,274	93,033	418,307
Borrowed funds & derivatives	10,380	14,918	25,298	8,601	64,457	73,058		96,021	96,021	10,140	94458	104,598
Other liabilities	-	-	0	-	-	0	13,884	3,592	17,476	59,060	8337	67,397
Total financial liabilities	**522,952**	**15,985**	**538,937**	**690,372**	**64,457**	**754,829**	**316,891**	**184,887**	**501,778**	**394,474**	**195,828**	**590,302**
Net Balance	**(96,239)**	**127,339**	**31,100**	**(91,702)**	**129,757**	**38,055**	**64,949**	**(15,912)**	**49,037**	**20,941**	**25,201**	**46,142**

	Golomt Bank						Zoos Bank					
	31st December, 2007			31st December, 2008			31st December, 2007			31st December, 2008		
	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total
Financial Assets												
Cash & short term assets	303,289	14,863	318,152	237,781	46	237,827	65,918	315	66,233	15,807		15,807
Loans & advances	210,328	112,698	323,026	273,247	174,540	447,787	95,439	54,649	150,088	108,847	61,263	170,110
Other receivables	1,265	-	1,265	743	-	743	20	-	20	3,346	-	3,346
Other assets	-	-	0	-	-	0	-	-	0	18,566	317	18,883
Total financial assets	**514,882**	**127,561**	**642,443**	**511,771**	**174,586**	**686,357**	**161,377**	**54,964**	**216,341**	**146,566**	**61,580**	**208,146**
Financial Liabilities												
Due to customers & banks	548,080	1,224	549,304	510,221	2,974	513,195	195,762	529	196,291	160,492	15	160,507
Borrowed funds & derivatives	9,181	12,731	21,912	42,872	49,299	92,171	2,701	9,244	11,945	19,067	14,024	33,091
Other liabilities	26,002	15,985	41,987	25,150	12,376	37,526	5,766	566	6,332	1,876	3,837	5,713
Total financial liabilities	**583,263**	**29,940**	**613,203**	**578,243**	**64,649**	**642,892**	**204,229**	**10,339**	**214,568**	**181,435**	**17,876**	**199,311**
Net Balance	**(68,381)**	**97,621**	**29,240**	**(66,472)**	**109,937**	**43,465**	**(42,852)**	**44,625**	**1,773**	**(34,869)**	**43,704**	**8,835**

	Xac Bank						Capitron Bank					
	31st December, 2007			31st December, 2008			31st December, 2007			31st December, 2008		
	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total	Less than one year	More than one year	Total
Financial Assets												
Cash & short term assets	5,530	-	5,530	7,487	-	7,487	22,813		22,813	12,862	30	12,892
Loans & advances	61,281	39,916	101,197	84,587	65,087	149,674	34,096	32,158	66,254	59,282	23,801	83,083
Other receivables	23,913	-	23,913	9,825	74	9,899	948		948	-	1,291	1,291
Other assets	1,215	691	1,906	29,125	794	29,919		1,330	1,330	-		0
Total financial assets	**91,939**	**40,607**	**132,546**	**131,024**	**65,955**	**196,979**	**57,857**	**33,488**	**91,345**	**72,144**	**25,122**	**97,266**
Financial Liabilities												
Due to customers & banks	63,391	14,619	78,010	57,175	19,231	76,406	75,349	343	75,692	59,679	3,740	63,419
Borrowed funds & derivatives	9,726	42,285	52,011	16,616	87,312	103,928	2,104	6,965	9,069	5,750	21,216	26,966
Other liabilities	-	-	0	2,880	3,475	6,355	-	-	0	-	-	0
Total financial liabilities	**73,117**	**56,904**	**130,021**	**76,671**	**110,018**	**186,689**	**77,453**	**7,308**	84,761	**65,429**	**24,956**	90,385
Net Balance	**18,822**	**(16,297)**	**2,525**	**54,353**	**(44,063)**	**10,290**	**(19,596)**	**26,180**	**6,584**	**6,715**	**166**	**6,881**

Source: Annual reports of each PFI

ANNEX V

Identified Investment needs

TableV.1 Identified Investment Needs for Mongolian SMEs (in USD)

Sector	Sub-sector	Sub-sector's general market orientations (IMS = import substitution, EX = export)	MOFALI Survey ('08)			PFIs' unprocessed loan requests ('07-'08)			Loan requests to SME Development Fund ('08)			Total 3 sources			Total larger 2 sources (MOFALI + PFIs' unprocessed)		
			No.	Total amount	Average	No.	Total amount	Average	No.	Total amount	Average	No.	Total amount	Average	No.	Total amount	Average
Agriculture	*Agriculture*	IMS (crops / vegetables)	25	29,758,251	1,190,330	7	2,517,810	359,687	3	267,960	89,320	35	32,544,020	929,829	32	32,276,060	1,008,627
	Animal husbandry	EX, IMS (realized through processing)	9	8,645,919	960,658	10	1,068,069	106,807	13	442,826	34,064	32	10,156,814	317,400	19	9,713,988	511,263
Agriculture sub-total			**34**	**38,404,169**	**1,129,534**	**17**	**3,585,879**	**210,934**	**16**	**710,786**	**44,424**	**67**	**42,700,834**	**637,326**	**51**	**41,990,048**	**823,334**
Mining & quarry sub-total		EX (mined minerals execpt for sand / gravel)	**1**	**1,260,121**	**1,260,121**	**9**	**9,407,054**	**1,045,228**	**1**	**12,924**	**12,924**	**11**	**10,680,099**	**970,918**	**10**	**10,667,175**	**1,066,718**
Food Processing	*Dairy processing*	IMS	9	6,288,329	698,703	13	6,366,116	489,701	14	704,163	50,297	36	13,358,608	371,072	22	12,654,445	575,202
	Meat processing	EX (frozen meat), IMS (processed meat)	18	20,934,558	1,163,031	10	4,910,612	491,061	5	852,110	170,422	33	26,697,280	809,008	28	25,845,170	923,042
	Fruit & vegetable processing	IMS	13	8,716,163	670,474	3	924,478	308,159	8	605,903	75,738	24	10,246,543	426,939	16	9,640,641	602,540
	Flour processing	IMS	4	5,428,474	1,357,118	7	2,004,305	286,329	2	369,358	184,679	13	7,802,137	600,164	11	7,432,779	675,707
	Confectionary		2	717,300	358,650	7	1,363,516	194,788	5	61,391	12,278	14	2,142,206	153,015	9	2,080,816	231,202
	Packaging & others	IMS (packaging)	10	4,561,833	456,183	0	0	#DIV/0!	2	113,476	56,738	12	4,675,309	389,609	10	4,561,833	456,183
Bevarage & Animal Feed	*Beverage*	IMS	0	0	#DIV/0!	4	1,145,419	286,355	3	68,499	22,833	7	1,213,918	173,417	4	1,145,419	286,355
	Feed & fertilizer	IMS	7	11,976,000	1,710,857	2	814,622	407,311	3	1,105,029	368,343	12	13,895,651	1,157,971	9	12,790,621	1,421,180
Food-processing sub-total			**63**	**58,622,655**	**930,518**	**46**	**17,529,068**	**381,067**	**42**	**3,879,928**	**92,379**	**151**	**80,031,651**	**530,011**	**109**	**76,151,723**	**698,640**
Manufacturing	*Textile & Apparel*	EX, IMS (to the lesser extent)	15	12,425,378	828,359	10	7,767,847	776,785	22	579,414	26,337	47	20,772,639	441,971	25	20,193,225	807,729
	Leather, Skin & Fur	EX (raw / processed), IMS (final product)	3	4,382,637	1,460,879	1	323,108	323,108	9	384,499	42,722	13	5,090,244	391,557	4	4,705,746	1,176,436
	Wood & Furniture	IMS	2	1,163,189	581,594	8	2,932,205	366,526	10	365,371	36,537	20	4,460,765	223,038	10	4,095,394	409,539
	Paper, Pulp & Printing	IMS (paper products / pulp)	5	3,596,580	719,316	4	861,176	215,294	4	122,773	30,693	13	4,580,529	352,348	9	4,457,756	495,306
	Chemical, Coal, Plastic & Rubber	IMS (drug / medicine, plastic /rubber product)	4	6,276,891	1,569,223	5	2,633,782	526,756	5	428,525	85,705	14	9,339,198	667,086	9	8,910,673	990,075
	Construction Material	IMS	7	4,782,968	683,281	18	5,290,680	293,927	6	380,298	63,383	31	10,453,947	337,224	25	10,073,649	402,946
	Steel, Fabricated Metal Products	IMS	1	516,973	516,973	5	1,783,537	356,707	4	431,672	107,918	10	2,732,182	273,218	6	2,300,510	383,418
	Machinery, Other Manufacturing		3	1,227,811	409,270	1	161,554	161,554	6	189,341	31,557	10	1,578,706	157,871	4	1,389,365	347,341
Manufacturing sub-total			**40**	**34,372,427**	**859,311**	**52**	**21,753,890**	**418,344**	**66**	**2,881,893**	43,665	**158**	**59,008,210**	**373,470**	**92**	**56,126,317**	**610,069**
Services	*Utilities, Telecom, Transport*		0	0	#DIV/0!	5	462,044	92,409	1	12,924	12,924	6	474,969	79,161	5	462,044	92,409
	Trade		1	744,441	744,441	6	1,567,720	261,287	0	0	#DIV/0!	7	2,312,161	330,309	7	2,312,161	330,309
	Tourism	EX (through foreign visitors)	1	592,322	592,322	10	3,676,323	367,632	5	136,675	27,335	16	4,405,320	275,332	11	4,268,645	388,059
	Medical Care & Education		0	0	#DIV/0!	16	1,871,716	116,982	3	38,773	12,924	19	1,910,489	100,552	16	1,871,716	116,982
	Other Services		0	0	#DIV/0!	11	4,664,664	424,060	2	19,386	9,693	13	4,684,050	360,312	11	4,664,664	424,060
Services sub-total			**2**	**1,336,763**	**668,381**	**48**	**12,242,467**	**255,051**	**11**	**207,758**	18,887	**61**	**13,786,989**	**226,016**	**50**	**13,579,230**	**271,585**
Others (inc. environmental protection)			**2**	**2,119,589**	**1,059,794**	**4**	**464,043**	**116,011**	**0**	**0**	**#DIV/0!**	**6**	**2,583,632**	**430,605**	**6**	**2,583,632**	**430,605**
		Total	**142**	**136,115,724**	**958,561**	**176**	**64,982,401**	**369,218**	**136**	**7,693,290**	**56,568**	**454**	**208,791,416**	**459,893**	**318**	**201,098,126**	**632,384**

Source: Reviewed and compiled by JICA study team based on the data of MOFALI's study on the recent conditions and prospects for nationwide SMEs, the list of unprocessed projects presented by each PFI under Phase I, and the list of loan applications for SME Development Fund, excluding the incomplete data from these lists.

TableV.2 Potential EPL Projects (in USD)

EPL Classification / Project Type	MOFALI Survey Total 142 Projects (USD 136.1 mil)			PFI Unprocessed Loan Requests Total 176 Projects (USD 65.0 mil)			Requests to SME Development Fund Total 136 Projects (USD 7.7 mil)			Requests to GCGF Total 91 Projects (USD 2.1 mil)			Total		
	No.	Total Amount	Average	No.	Total Amount	Average	No.	Total Amount	Average	No.	Total Amount	Average	No.	Total Amount	Average
Environmental Awareness Approaches															
Cleaner Production	-	-	-	-	-	-	-	-	-	3	140,100	46,700	3	140,100	46,700
Reforestation	-	-	-	1	222,137	222,137	-	-	-	1	2,326	2,326	2	224,463	112,232
Others	1	827,157	827,157	-	-	-	-	-	-	4	134,477	33,619	5	961,634	192,327
Subtotal	**1**	**827,157**	**827,157**	**1**	**222,137**	**222,137**	**-**	**-**	**-**	**8**	**276,903**	**34,613**	**10**	**1,326,197**	**132,620**
Energy Saving Investments															
Alternative energy sources	-	-	-	-	-	-	-	-	-	1	9,693	9,693	1	9,693	9,693
Subtotal	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**9,693**	**9,693**	**1**	**9,693**	**9,693**
3R Initiative															
Insulating Materials	1	439,427	439,427	2	659,140	329,570	2	25,848	12,924	2	66,431	33,216	7	1,190,846	170,121
Production of semi-coke and smokeless fuel	-	-	-	1	303,722	303,722	-	-	-	1	96,932	96,932	2	400,654	200,327
Waste Recycling	-	-	-	1	80,777	80,777	-	-	-	3	362,980	120,993	4	443,757	110,939
Oil Recycling	-	-	-	1	148,630	148,630	-	-	-	-	-	-	1	148,630	148,630
Others	1	840,081	840,081	-	-	-	-	-	-	-	-	-	1	840,081	840,081
Subtotal	**2**	**1,279,508**	**639,754**	**5**	**1,192,269**	**238,454**	**2**	**25,848**	**12,924**	**6**	**526,343**	**87,724**	**15**	**3,023,968**	**201,598**
Environmental Regulation Compliance															
Centralized Wastewater Facility Rehab (Khargia)	1	1,292,432	1,292,432	-	-	-	-	-	-	-	-	-	1	1,292,432	1,292,432
Wastewater treatment structure production/ service	**-**	**-**	**-**	1	12,500	12,500	**-**	**-**	**-**	2	28,951	14,476	3	41,451	13,817
Subtotal	**1**	**1,292,432**	**1,292,432**	**1**	**12,500**	**12,500**	**-**	**-**	**-**	**2**	**28,951**	**14,476**	**4**	**1,333,883**	**333,471**
TOTAL	**4**	**3,399,097**	**849,774**	**7**	**1,426,906**	**203,844**	**2**	**25,848**	**12,924**	**17**	**841,890**	**49,523**	**30**	**5,693,741**	**189,791**

Source: Reviewed and compiled by JICA study team based on the data of MOFALI's study on the recent conditions and prospects for nationwide SMEs, the list of unprocessed projects presented by each PFI under Phase I, and the list of loan applications for SME Development Fund, excluding the incomplete data from these lists.

ANNEX VI

Potential EPL Projects and Market Situation

Potential EPL Projects and Market Situation

Classification	Project Type	Major Environmental Purposes	Market Situation	Relevant Policy/Regulations
Environmental Awareness Approaches	Cleaner Production	Corporate Social Responsibility effort, Energy Saving or 3R effects depending on the project	• MNCCI Green Initiative: 17 projects (2000 - 2008) • Intensive technical assistance is required for project formulation	• National Action Plan • MONET Implementation Program
	Reforestation	Forest resources conservation, prevention of soil degradation, conservation of groundwater pathways	• Relevant legal framework and promotional measures for private sector activities are pre-conditions for development of these sectors	• National Action Plan • MONET Implementation Program
	Biodiversity Protection	Protection of endangered species, conservation of flora and fauna		• National Action Plan • MONET Implementation Program
	Organic Farming	Conservation of soil and water qualities		• National Action Plan • MONET and MOFALI Implementation Program
Energy Saving Investments	Replacement of Heat-Only Boilers (HOBs)	Energy efficiency improvement and compliance with gas emission standards	• Heat supply service for schools, kindergartens, and other facilities • Ulaanbaatar City: 23 Privatized, 33 Private, 27 Public (military and detention facilities, etc.) out of 89 HOB stations in total. 12 HOB stations wish to be replaced in 2 years • Regional: 1,100 HOB units (330 stations) almost all remain with public sector • 24 boiler providers (1 local manufacturer) • Energy efficiency: 45%-83% • Unit cost: US$ 100,000 (Best Available Technology)	• Establishment of Air Quality Management Bureau of Ulaanbaatar City (2006) • Privatization process held in 2006 • Air emission quality standards (CO, NO_X, SO_2, SPM) • Ulaanbaatar City intending to restrict raw coal consumption from 2011
	Improvement of Heat Stoves for Buildings and Households	Energy efficiency improvement and compliance with gas emission standards	• 1,005 coal burning water heating stoves • 55 stove types available • Owners' willingness for replacement: 685 stoves (planned in near future: 421 stoves) • Local manufacturers/suppliers: 13	• Air quality standards (CO, NO_X, SO_2, SPM) • Ulaanbaatar City intending to restrict raw coal consumption from 2011
	Development of Alternative Energy Sources	Development of clean and renewable energy sources	• Undeveloped market and technology	• National Action Plan • MONET Implementation Program

Classification	Project Type	Major Environmental Purposes	Market Situation	Relevant Policy/Regulations
3R Initiative	Clean Coal Briquette (CCB) Production	Reduction of coal consumption, improvement of energy generation and quality of gas emission	• Estimated current demand for CCB: 150,000-200,000 t/year • Estimated demand tied to prohibition of raw coal consumption: 300,000 t/year • Sharyngol Energy project production capacity: 50,000 t/year • EBRD-supported MAK project production capacity: 100,000 t/year	• Air quality standards (CO, NO_X, SO_2, SPM) • Ulaanbaatar City intending to restrict raw coal consumption from 2011
	Heat Insulating Construction Materials Production	Reduction of energy consumption by end users	• Four SME Loans for heat insulating window production in Phase I	-
	Alternative Igniters Production	Reduction of wood consumption and conservation of forest resources by end users	• Underdeveloped market	• National Action Plan • MONET Implementation Program
	Sewage Treatment for Water Reuse	Reuse of treated water for limited purposes	• Sewage water treatment units normally operated: 27 (2004)	• National Action Plan • MONET Implementation Program
	Used Lubricant Oil Recycling	Reduction of lubricant oil consumption by end users	• Industrial lubricant oil demand: 10,000 t/year • Target share: 2,000-3,000 t/year • Major demand: Erdenet Mining Corp., Mongolrosetmet Mining JSC, UB Railway JSC, Mongolian Airlines, 300 mining companies • Facility investment for 20 t/year recycling oil production: US$ 200,000	• Effluent discharge to soil: VOCs
	Used Plastics Recycling	Recycling of plastic waste for plastic products or transformed use such as bio-diesel	• Plastic waste in Ulaanbaatar Winter: 120 t/day Summer: 35 t/day • Small-scale plastic recycling businesses are emerging • One recycling business developed through MCCI Green Initiatives • Further studies required for business development on centralized recycling system	• National Action Plan • MONET Implementation Program
	Used Paper Recycling	Recycling of paper waste for paper products or transformed use	• Paper waste in Ulaanbaatar Winter: 66 t/day Summer: 50 t/day • Further studies required for business development on centralized recycling system	

Classification	Project Type	Major Environmental Purposes	Market Situation	Relevant Policy/Regulations
	Wastewater Recycling in Cement Factories	Reduction of water consumption in the water cooling system	• Two private large-scale cement companies are requiring close-loop system for their existing water-cooled systems, consisting of open flow circuit	
Environmental Regulation Compliance	Wastewater Treatment Facilities for Leather and Wool Processing Factories	Effluent standards compliance (chrome, alkali, organics)	• 26 SMEs (14 leather, 12 wool-washing) • Monopolistic 15% Ulaanbaatar City-owned wastewater treatment facility (Khargia) capacity: 13,000 m^3/d (current treatment volume: 8,000 m^3/d)	• Effluent standards (pH, COD, BOD, Cr)
	Wastewater Treatment Facilities for Food Processing and Textile Factories	Effluent standard fulfillment (organics)	• A large-scale textile manufacturer, established in Ulaanbaatar, is planning to install treatment facility for its effluent with hazardous chemicals and organic wastes. • Lack of reliable technology and finance	• Effluent standards (COD, BOD, coliforms)
	Dust Prevention in Copper Mining and Cement Production	Dust prevention in tailing impoundments	• Erdenet Mining Corp. (Bulgan aimag) copper ore processing: 27 million t/y	• Air emission quality standards (SPM) • Commitment to prevention of soil degradation
		Dust prevention in cement plants	• Two large-scale cement plants are planning dust prevention in their facilities	• Air emission quality standards (SPM) • Commitment to prevention of soil degradation
	Cyanide Leak Prevention in Gold Mineral Processing	Cyanide solution leak prevention	• Boroo Gold Co. (Selenge aimag) gold metal production: 10 t/y • Altan Dornod Mongolia Co., Ltd. and Mongolrostsvetmet Corp. (Tuul river) placer deposit production: 5 t/y	• Effluent standards (pH, CN)
	Mercury Amalgam Leak Prevention in Informal Micro-scale Gold Mining	Mercury amalgam leak prevention	• Informally operating small and micro-scale miners	• GASI has no enforcement capacity over this sector
	Air Pollution Control of Heat Supply Facilities	Compliance with gas emission standards	• Privatized HOBs in Ulaanbaatar comply with emission standards after replacement • Public sector HOBs (Ulaanbaatar and regional) need replacements	• Air emission quality standards (CO, NO_X, SO_2, SPM)
		Improvement of monitoring activities	• Facilities to accommodate monitoring activities of public inspectors	• Technical standards for gas emission monitoring system

ANNEX VII

Guideline for Formulation and Evaluation of EPLs

1. Objective of the Guidelines

The objective of the guidelines is to facilitate the formulation, appraisal, evaluation and monitoring of Environmental Protection Loans (EPLs) of the JICA-TSL. Contents of the guidelines consist of the following:

- Classification of EPL projects and indicative list of EPL project type
- Evaluation and monitoring process
- Applied indicators and required information by project type

Correspondingly, guidance on concepts of Corporate Social Responsibility (CSR), Life Cycle Assessment (LCA), 3R Initiative and Best Available Technology (BAT) are briefly introduced to help in the implementation of environmentally-sound projects (see Section 4 below).

2. Classification of EPL Projects

EPL projects are classified in the following four groups, from the viewpoint of expected positive environmental impacts from their project activities.

It should be noted that this classification is only an indicative description and not strictly excluding other activities mentioned below. Likewise, one project can be grouped in more than one classification depending on its purposes or environmental effects.

2.1 Environmental Awareness Approaches

Corporate social responsibility (CSR) is a concept whereby private entities consider the interests of the society by taking responsibility for the impact of their activities in relation with their customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment. EPL projects categorized in the Environmental Awareness Approaches are the investments related to practice the CSR concept to environment. Examples are:

- Cleaner Production Techniques
- Organic Farming
- Reforestation
- Biodiversity Protection

2.2 Energy Saving Investments

Projects categorized in this group are investments to introduce new technology to save energy consumption in their own production process. Typical energy saving investment implemented by the private sector is replacement of degraded Heat-Only Boilers (HOBs) and smaller-scale heat stoves with new energy-efficient units. The mitigation of air pollution is also brought about as a major positive impact by such investment. Another project type that will fall in this group in the much longer-term perspective is the government proposal for the development of alternative energy sources, or so-called renewable energy projects such as wind power, solar energy, geothermal energy, etc. in the Action Plan 2008-2012.

Examples of this group of project are:

- Replacement of Heat-Only Boilers (HOBs)
- Improvement of Heat Stoves for Individual Buildings and Households
- Development of Alternative Energy Sources

2.3 3R Initiative

The “3R initiative” aims at the promotion of “reduce”, “reuse” and “recycle” of materials so as to build sustainable society through the effective use of resources and materials.

Examples of this group of project are:

- Clean coal briquette (CCB) production
- Heat insulating construction materials
- Alternative igniters production
- Wastewater treatment for water reuse
- Lubricant oil recycling
- Solid waste recycling
- Wastewater recycling in cement plants

2.4 Environmental Regulation Compliance

Air and water pollution is the most urgent environmental issue in Mongolia, especially in Ulaanbaatar City. To cope with this serious situation, efforts towards enhancement of the regulatory enforcement, such as the reorganization of General Agency for Specialized Inspection (GASI), have been recently initiated by the new administration. The projects classified in this group are investments in pollution prevention measures to comply with the environmental regulation.

Examples of this group of project are:

- Wastewater treatment facility for leather and wool processing factories
- Wastewater treatment facility for food processing and textile factories
- Dust prevention in copper mining sites and cement plants
- Cyanide leak prevention in gold mineral processing plants
- Mercury amalgam leak prevention in micro-scale informal mining groups

- Mitigation of particulate matter and sulfur/nitrogen oxides in HOBs
- Facilities and equipment for emission monitoring

3. Evaluation and Monitoring Process

Regardless of their category, all TSL sub-projects must follow the environmental impact assessment (EIA) procedure established in Mongolia. Additional requirements for EPL projects are as follows:

3.1 General Environmental Consideration for EPL projects

In addition to the EIA procedure mentioned above, all EPL projects are required to make appropriate consideration on anticipated negative environmental impacts to ensure its overall environmental performance.

All EPL project owners, i.e. sub-borrowers, must provide baseline information on the influenced area and mitigation measures to be applied in case that negative impacts are anticipated. This information should be compiled jointly with estimated benefits and positive impacts expected from the project.

These baseline data and proposed mitigation measures (including countermeasures for contingencies) will be used for ex-ante evaluation of the loan application to assess the eligibility of the applied sub-loan as an EPL, and also for the monitoring during the project preparation, implementation and operation stages as well as ex-post evaluation.

3.2 Evaluation and Monitoring of EPLs

All EPL projects must have positive environmental effects that vary by project type classification. Presented below are basic indicators to be used for ex-ante evaluation of their eligibility as EPLs and for further monitoring and ex-post evaluation.

3.2.1 Environmental Awareness Approaches

(1) Cleaner Production

Cleaner production is the continuous application of an integrated preventive environmental strategy applied to processes, products, and services to increase overall efficiency and reduce risks to humans and the environment.

Basic Indicator(s)

Cleaner production projects have various positive impacts depending on their project components. They may bring about the same sorts of impacts as those of Energy Saving Investments, 3R Approaches, Environmental Regulation Compliance, or combination of these classifications. In that sense, the subject project activities must be carefully reviewed to determine the indicators to be applied for monitoring and evaluation. Appropriate indicators should be selected from those for the said classifications presented in the respective sections below.

Required Information

- Flowchart of the process of production before and after the improvements;

- Additional information depending of the nature of the expected environmental impact as explained below for the cases for energy-saving investment, 3R initiative approach or environmental regulation compliance.

The concept of Best Available Technology (BAT) can help the formulation and evaluation of Cleaner Production projects, in order to assure that technology applied in the process is adequate from the viewpoint of sustainability and awareness with the environment. Please see the Section 4 for the definition of BAT by the UNEP-Expert Group on Best Available Techniques and Best Environmental Practices.

(2) Organic Farming

Basic Indicator

Although the legal requirement of organic farming is not yet established, the following basic indicators must be verified:

- No usage of agrochemicals in planting and harvesting
- No usage of hazardous materials for packaging

Required Information

- Current situation of the market regarding the target agricultural product;
- Baseline data on the farmland, including its relation with the classification of protected areas;
- Methodology for planting and harvesting;
- A brief description of the irrigation system and its impact on surface water and groundwater; and
- A brief description of the packaging, transporting and distribution network for the product.

(3) Reforestation and Biodiversity Protection

Basic Indicator

The project activities must be in line with the laws and regulations on protected areas and endangered species. The basic indicators envisaged for this project type are:

- Biomass increase rate
- Specimen community/individual increase rate

3.2.2 Energy Saving Investments

Basic Indicator

Change in the energy balance on a before/after-project basis must be evaluated to show energy efficiency effect of the project. The basic indicator is:

- Energy saving rate

Required Information

- Energy source: Regardless of the fuel type, the caloric value for the energy source must be informed. It is advantageous to submit a certified test result from authorized entities such as the laboratories administered under the Agency for Standardization and Metrology.
- Energy efficiency and unit consumption: In case the energy source used is solid/liquid fuel, energy efficiency must be estimated, preferably with a technical support. In addition, estimation on the unit consumption of the energy (e.g., kW-h/kg, kcal/unit of final product) is required. Complementarily, information on the consumption of energy for the transportation of raw materials from the sources to the production facility, and for the distribution of the product to the consumers is also required. The former, for raw materials, must be expressed as unit of production, and the transportation of goods with targeted market points, also expressed by unit produced.
- Flowchart of the process of production, showing energy input/output points: A brief description of the production process with a diagram of flow is required for better understanding of the project. Because the purpose of the investment lies in energy saving, the energy balance is a primordial issue to be evaluated. In that sense, the flowchart of the process must show the points for energy input and output with related quantitative data.
- Methods used for the treatment of waste generated: Solid wastes, gas emissions, and wastewater discharge, if any generated due to the production process, must be specified with description of type and in quantities referred to the produced unit of the final products. Additionally, cases that needed to follow emission standards must describe the level of compliance with them.

3.2.3 3R Initiative

The difference of 3R initiatives involving energy-saving components from those classified in Energy Saving Investment is that, in the 3R initiative projects, their energy saving effects are achieved not in the project's own production process but in the end user's consumption of the products. To evaluate the environmental impacts of this type of project, it is necessary to estimate the overall balance of material or energy consumption through the product's life cycle.

(1) "Reduce" Approach

Basic Indicator

Change in the material balance before and after or with / without the project must be evaluated through the LCA methodology. It is required to estimate overall balance of material or energy usage through the life cycle of the subject product to show its positive impacts to the environment. The basic indicator is:

- Material/energy consumption reduction rate

Required Information

- Material or type of energy object of reduction: A brief description on the material or energy type target for the reduction must be submitted. Material or energy reduction must be specified at the level of raw material, with the amount

expressed as a coefficient of reduced quantity by unit of produced or traded goods/energy (e.g. kg of raw coal reduction/kg of CCB consumed by the end user, kWh reduced per day in a residence/one unit of insulation slide window).

- Material or energy flow: The flow of the material from the raw materials up to final consumption and disposal of the produced or traded goods must be described. Similar requirement is necessary for energy reduction projects.
- Material and energy balance: Inflow and outflow of material for the production must be described. The mass input per each raw material expressed as a coefficient with unit of produced goods should be estimated. Idem for the energy reduction projects.

(2) "Reuse" Approach

Basic Indicator

Ditto with "Reduce" Approach.

Required Information

- Material or type of energy object of reuse: Reuse is understood as the use of the material or energy after the first use, without physical changes to the original form. A brief description of the material or energy target for the reuse, with a specification on the original use-form and for the reuse-form.
- Material flow: Ditto with "Reduce" Approach case
- Material and energy balance: Ditto with "Reduce" Approach case

(3) "Recycle" Approach

Basic Indicator

Ditto with "Reduce" Approach.

Required Information

- Material or type of energy object of recycle: Recycle is defined as reuse of material or energy, changing from the original physical form with some additional process after the first use of the material or energy. In that sense, a brief description of the process required for the transformation and the way of usage of the regenerated material or energy is required.
- Material flow: Ditto with "Reduce" Approach case
- Material and energy balance: Ditto with "Reduce" Approach case

3.2.4 Environmental Regulation Compliance

Indicators

The most significant issues requiring the compliance of environmental regulation in Mongolia is regarding the preservation of air and water qualities. Compliance with the relevant environmental regulations must be verified depending on the subject project components:

- Air emission standards (MNS 5457-2005, the emission standards for exhaust gases from heating boilers and home stoves)
- Effluent standards (MNS 4943-2000, the effluent standards for the discharge to surface water and groundwater)
- Law on protected areas

Required Information

Air Emission Standards Compliance Projects:

- Flowchart of the process of production, showing gas emission points: A brief description of the process of production showing gas emission points with physical data such as flow rate, and the constitution of principal component is required.
- Quantity and quality of the generated gases: Estimated values of the flow rate of exhausted gas with the corresponding temperature and the concentration of regulated substances under the same condition must be informed, for the current situation before the installation of the treatment facilities. The flow rate must be expressed as a coefficient of volume of exhaust gas by unit of produced good.
- Gas treatment method used and quality of the exhaust gas after treatment: A brief description of the method used for the treatment of generated gases and the expected quality of gas after treatment, must be considered. In case some consumables such as filters and scrubbers are required in the treatment system, these must be specified, including its function, the features of trapped material and the method of its disposal.
- Energy consumption of the treatment facility: Energy consumption of the treatment facility must be informed, expressed as a coefficient of required calorie by volume of exhaust gas and by the unit of produced goods (e.g. kW-h/m^3 of exhaust gas, kW-h/m^3 of supplied hot water for heating).

Effluent Discharge Standards Compliance Projects:

- Flowchart of the process of production, showing effluent drainage points: A brief description of the process of production showing drainage points of effluents with physical data such as flow rate and the constitution of principal component is required.
- Quantity and quality of the generated effluent: Estimated values of the flow rate with corresponding temperature, pH, and the concentration of regulated substances and physical parameters must be informed, for the current situation before the installation of the treatment facilities.
- Effluent treatment method used and quality of the treated water: A brief description of the method used for the treatment of discharged effluents and the expected quality of water after treatment, must be considered. Additionally, information on the method of treatment and disposal of sludge-waste must be informed.
- Energy consumption of the treatment facility: Energy consumption of the treatment facility must be informed, expressed as a coefficient of required calorie

by volume of exhaust gas and by the unit of produced goods (e.g. kW-h/m^3 of effluent, kW-h/ kg of processed leather).

4. Useful Concepts for Implementation of EPLs

4.1 Corporate Social Responsibility (CSR)

While there is no universal definition of corporate social responsibility, it generally refers to transparent business practices that are based on ethical values, compliance with legal requirements, and respect for people, communities, and the environment. Thus, beyond making profits, companies are responsible for the totality of their impact on people and the planet. “People” constitute the company’s stakeholders: its employees, customers, business partners, investors, suppliers and vendors, the government, and the community. Increasingly, stakeholders expect that companies should be more environmentally and socially responsible in conducting their business.

It is about how companies conduct their business in a way that is ethical. This means taking account of their impact socially, environmentally, economically and in terms of human rights. It can involve a range of activities such as:

- Working in partnership with local communities
- Socially responsible investment
- Developing relationships with employees and customers
- Environmental protection and sustainability

Taking responsibility for its impact on society means in the first instance that a company accounts for its actions. Social accounting, a concept describing the communication of social and environmental effects of a company’s economic actions to particular interest groups within society and to society at large, is thus an important element of CSR.

4.2 3R Initiative

A 3R policy typically calls for an increase in the ratio of recyclable materials, further reuse of raw materials and manufacturing wastes, and overall reduction in resources and energy used. These ideas are applied to the entire lifecycles of products and services from design and extraction of raw materials to transport, manufacture, use, dismantling/reuse, and disposal.

A number of factors are critical in influencing the effectiveness of the 3R Approach. These include enabling policy framework; education and raising awareness of all concerned stakeholders; and capacity building and technology support, including human resources, technology, finance and other inputs.

The success of 3R policies and strategies will largely depend on the right mix of policies and programs implemented at the local level. The main strategic issues that need to be addressed are:

- Governance issues include policy instruments such as laws, legislations, rules and procedures, and developing an enabling environment where market-based instruments can also facilitate uptake of the 3R concept. These issues are primarily the responsibility of governments at the national and local levels.

- Education and awareness-building issues among all concerned stakeholders, and the need for comprehensive networking among them at the local level. These issues focus on the provision of appropriate and timely information to decision makers, targeting stakeholders not only in the public and private sectors, but also communities and consumers alike. These issues are primarily the responsibility of universities and research institutions, non-governmental organizations, and citizens and community groups.
- Capacity-building and technology support issues are important to ensure that the appropriate solutions are used in industrial, manufacturing and market activities, and technologies used have a minimum impact on the environment, producing the least amount of wastes possible. These will also include building human resources, decision-making capacities and structures, and other inputs. These issues are also primarily the responsibility of business associations, business intermediary organizations and professional institutions.

Financial issues will be critical as well, in developing innovative financing schemes that promote investment in 3R implementation, easy access to 3R dedicated funds, etc. These issues are the responsibility of banks and financial institutions.

4.3 Life Cycle Assessment (LCA)

Life Cycle Assessment (LCA, also known as life cycle analysis, eco-balance, and cradle-to-grave analysis) [1] is the investigation and valuation of the environmental impacts of a given product or service caused or necessitated by its existence.

The goal of LCA is to compare the full range of environmental and social damages assignable to products and services, to be able to choose the least burdensome one. At present, it is a way to account for the effects of the cascade of technologies responsible for goods and services. It is limited to that, though, because the similar cascade of impacts from the commerce responsible for goods and services is unaccountable since what people do with money is unrecorded. As a consequence, LCA succeeds in accurately measuring the impacts of the technology used for delivering products, but not the whole impact of making the economic choice of using it.

The term “life cycle” refers to the notion that a fair, holistic assessment requires the assessment of raw material production, manufacture, distribution, use, and disposal, including all intervening transportation steps necessary or caused by the product's existence. The sum of all those steps –or phases– is the life cycle of the product. The concept also can be used to optimize the environmental performance of a single product (eco-design) or to optimize the environmental performance of a company. Common categories of assessed damages are global warming (greenhouse gases), acidification, smog, ozone layer depletion, eutrophication, eco-toxicological and human-toxicological pollutants, habitat destruction, desertification, land use as well as depletion of minerals and fossil fuels.

4.4 Best Available Technology (BAT)

The Guidelines on Best Available Techniques (BAT) and Guidance on Best Environmental Practices (BEP) of UNEP[2] defines that “best available techniques” as the most effective and

[1] Refer for details of LCA in ISO 14040:2006 Environmental management - Life cycle assessment - Principles and framework

advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for release limitations designed to prevent and, where that is not practicable, generally to reduce releases of chemicals and their impact on the environment as a whole.

In this regard "techniques" include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

"Available" techniques means those techniques that are accessible to the operator and that are developed on a scale that allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages; and

"Best" means the most effective in achieving a high general level of protection of the environment as a whole.

[2] UNEP-Expert Group on Best Available Techniques and Best Environmental Practices, *Guidelines on Best Available Techniques (BAT) and Guidance on Best Environmental Practices (BEP) relevant to the provisions of Article 5 and Annex C of the Stockholm Convention*. July 2004.