Bank of Mongolia

Special Review of Quasi-Fiscal Policy Activities

15 November 2018

KPMG Audit LLC

Glossary

AML	Anti-Money Laundering	**No.**	Number
ASEM	Asia-Europe Meeting	**NPV**	Net Present Value
BOM	Bank of Mongolia	**PD**	Probability of Default
CKB	Chinggis Khan Bank	**PL**	Performing Loan
DBM	Development Bank of Mongolia	**PSP**	Price Stabilization Program
DIC	Deposit Insurance Corporation	**QFP**	Quasi-Fiscal Policy
ETT	Erdenes Tavan Tolgoi JSC	**QFPA**	Quasi-Fiscal Policy Activity
FX	Foreign Currency Exchange	**RMBS**	Residential Mortgage-Backed Security
GASWS	General Agency for Social Welfare and Services	**SIFS**	Strategic Import and Financing Scheme
GOM	Government of Mongolia	**SHCM**	State Housing Corporation of Mongolia
IMF	International Monetary Fund	**SME**	Small and Medium Sized Enterprise
LGD	Loss-Given Default	**SOE**	State Owned Enterprise
MCUD	Ministry of Construction and Urban Development	**SPV**	Special Purpose Vehicle
MIK	Mongolian Mortgage Corporation	**TARP**	Troubled Asset Relief Program
MOF	Ministry of Finance	**TBA**	To Be Agreed
n/a	Not applicable	**TDB**	Trade and Development Bank of Mongolia LLC
NIB	National Investment Bank LLC	**UBCB**	Ulaanbaatar City Bank LLC
NPL	Non-Performing Loan	**Yrs**	Years

Note on the names of government ministries:

During the period of the QFP activities (2012 to 2016), a number of ministries were restructured, merged with other ministries or renamed. The names used in this report are based on the names of the ministries at the time a particular QFP activity was initiated.

Contents

1 Introduction

1.1 Overview

In accordance with the contract between the Bank of Mongolia (BOM) and KPMG Audit LLC (KPMG) dated 23 July 2018 (the Contract), KPMG has been engaged to provide Consulting Services for Special Review of Quasi-Fiscal Policy Activities (QFPA) of the BOM. This report comprises the main findings prepared solely for the BOM as referred to in the Contract.

This report is prepared solely for the attention of the Bank of Mongolia under the terms of the Contract dated 23 July 2018. Our report is not intended for any other parties, and it should not be used by any other parties except as specified in this paragraph. Our report may be distributed to the World Bank in its capacity of providing support to the Government of Mongolia, and to the Government of Mongolia's Ministry of Finance, but these are not specified parties to the Contract and any reliance placed is that party's sole responsibility. There are no third party beneficiaries of this report, and KPMG disclaims all responsibility for the consequences of any action, or of any decisions made or not made, by any third parties based on this report.

1.2 Project summary

- Project name: "Consulting Services for Special Review of QFPA of the BOM"
- Consultant firm: KPMG Audit LLC
- Kick-off meeting date: 26 July 2018
- Completion date of project: originally planned for 1 October 2018 and subsequently deferred due to delays in receipt of necessary information for the project, and certain updates to information following the draft report.

Set out below is a summary of the main phases of the project:

- Phase 1 Stock-taking: identification, verification and understanding of QFPA performed by the BOM.
- Phase 2 Impact analyses: analysis of impact of QFPA.

1.3 Scope of work

Set out below is the agreed scope of work as specified in the Contract dated 23 July 2018 and discussed in the kick off meetings with the BOM:

1.3.1 Phase 1: Stock-taking

Identification, verification and understanding of QFPA performed by the BOM:

- Prepare and provide a template for a Schedule to the BOM to be filled out:
  - Develop a template for a Schedule of all QFPA performed by the BOM in the period of 2012-2016 (based on information provided by the BOM) that will be divided into individual programs and other activities as appropriate;
  - The Schedule shall contain a description of the activity, showing companies and banks, and cross-reference to contracts and other available material which relate to those activities.
- Prepare and provide a template for a Schedule to commercial banks to be filled out:

  - Develop a template for a Schedule of all loans issued by commercial banks related to QFPA performed by the BOM in the period of 2012-2016 that will be divided into individual programs and other activities as appropriate;
  - For each commercial bank the Schedule will contain a description of the activity showing large individual borrowers who directly received the benefit of the QFPA (a large individual borrower refers to a businessman or an individual who owe a significant amount of loans to the BOM) and cross-reference to contracts and other available material which relate to those activities.

— Analyse the completeness of the Schedule filled out by the BOM and commercial banks:

  - Agree the schedule of lending and other funding provided to Mongolian commercial banks and corporate entities for the period of 2012- 2016 (the "Schedule"), provided by the BOM with amounts in the audited IFRS financial statements to check completeness of transactions reported in the Schedule;
  - Obtain representations on the completeness of the Schedule from the BOM management;
  - Obtain the register of all agreements entered by the BOM with commercial banks and corporate entities signed in the period of 2012 – 2016 and compare information from the register with the information in the Schedule;
  - Examine certain agreements with commercial banks or corporate entities, when necessary.

— Identify and obtain understanding of quasi-fiscal activities performed by the BOM:

  - Examine the schedule above in order to identify quasi-fiscal activities performed by the BOM;
  - Enquire the BOM management and responsible personnel on the substance (nature) and other details of transactions recorded in the schedule (in order to identify and obtain an understanding of quasi-fiscal activities performed by the BOM);
  - Discuss with the World Bank personnel and the BOM management on transactions representing QFPA of the BOM so as to ensure alignment on understanding.

1.3.2 Phase 2: Impact analyses

Analysis of impact of QFPA:

— Quantify the impact of QFPA on the State Budget and BOM's equity:

  - Quantify the impact of QFPA on the State Budget of Mongolia;
  - Perform calculations of loss arising from each main type of QFPA and related impact on the BOM's equity using the following approaches and frameworks:
    — Accounting under IFRS;
    — Economic loss (representing lost income since origination of transaction) calculated as the difference between interest income at market interest rate and interest income at contractual (below market) interest rate.

— Identify business processes, internal controls and areas for improvement of processes and controls related to the QFPA:

  - Enquire of the BOM management and responsible personnel about the business processes and internal controls over lending/funding (including approval process, credit risk and repayment monitoring process, controls over use of funds by end-users) for each type of QFPA and identify related internal controls or related areas for improvement of processes and internal controls.

— Select and analyze samples of loans:

- Select the sample for each type of QFPA and perform the following procedures for selected sample (following a Non-Disclosure Agreement between KPMG and commercial banks if requested):
  - Test the effectiveness of internal controls for each type of activity through examination of documentation, including examination of the BOM's internal regulations;
  - Examine loan contracts signed by relevant parties, including loan contracts between commercial banks and end-users;
  - Examine credit files related to ultimate beneficiaries (end-users) of the BOM's QFPA, including supporting documents related to use of funds (such as deposit bank accounts of beneficiaries), financial information of beneficiaries, and collateral. Credit files with relevant documents/information will need to be made available to KPMG by the commercial banks for this purpose, based on information requests prepared by the KPMG;
  - Check reliability of financial information of beneficiaries by comparing it to supporting documents and publicly available information about business and financial conditions of the beneficiary and its industry;
  - Obtain information from commercial banks on maximum overdue days (based on credit history) of loans issued to end-users based on information request prepared by KPMG; enquire from personnel of the respective commercial bank about recoverability of loans issued to end-users and examine records on collection of these loans and assessed level of provision; co-operation will need to be provided to KPMG by the commercial banks;
  - Check whether impairment indicators defined by IAS 39 exist, and if impairment indicators are identified, assess recoverability of loans due from end-users;
  - Check existence of collateral through a sample of on-site visits and, where possible, assess value of collateral based on publicly available information using market approach, in case if loans given to end-users are assessed to be non-recoverable from projected future cash flows from their operations; co-operation will need to be provided by the commercial banks and corporate entities to achieve this step; achievement of collateral value assessment is dependent on relevant, publicly and readily available information; thereafter, calculate non-recoverable amount of loan (i.e. impairment provision) based on both the IFRS (IAS 39) and the BOM provisioning methodology.

— Project non-recoverable amount of loans for homogenous loans:

- For homogenous loans project non-recoverable amount of loans (i.e. impairment provision) calculated on sampled loans to the remaining (not selected) loans for each type of QFPA taking into consideration maximum overdue days based on information obtained from commercial banks, or based on information on debt repayment obtained from credit files.

1.3.3 Sample selections

For the impact analysis procedures, sampling of loans/receivables, aim, where possible, to select representative samples for each type of QFPA considering size, purpose and terms of loans, and type of borrowers and industries.

For the testing of loans disbursed by the commercial banks, the commercial banks prepare and send to KPMG detailed reports on loans/funding representing QFPA, as well as loans included in selected sample, based on information requests submitted by KPMG.

The sampling methods for each quasi-fiscal program are defined below:

Figure 1: Sample selection

#	Activity name	Sampling method
1	Price Stabilization program	Non statistical sampling (coverage not less than 50% in terms of the monetary values)
2	Supply of Construction program	Non statistical sampling (coverage not less than 50% in terms of the monetary values)
3	Other activities	Targeted sampling
4	Retail Mortgage loans	Non statistical sampling covering at least 0.1% of the Mortgage population number

1.3.4 Coordination of borrowers

For the purpose of this project, KPMG provided information requests and the BOM, given its regulatory authority over the banking sector and relationships with commercial banks, requested full cooperation of the commercial banks during the subsequent visits of commercial banks and corporate entities by KPMG, including provision of all requested documents and provision of written and verbal explanations by commercial banks and corporate entities.

In cases that information was not provided or information was of insufficient quality, KPMG regularly informed the BOM about the progress at frequent status meetings, including about encountered difficulties and their implications on the result and completion of the special review.

1.4 Disclaimer

1.4.1 Third party reliance

This report is prepared solely for the purpose set out in the Contract dated 23 July 2018, and is addressed to and for the use of the Bank of Mongolia only. Our report is not intended for use by any other parties, nor distribution to any other parties except as specified in this paragraph. Our report may be distributed to the Ministry of Finance and to the World Bank but they are not specified parties to the engagement letter referred to above, and any reliance placed on our report is that party's sole responsibility. If you request that additional specified users of the report be added, we will require that they acknowledge, in writing, their agreement to the terms and conditions of the Contract including the scope of work and procedures, and their acceptance of responsibility for the sufficiency and appropriateness of these procedures for their purposes.

1.4.2 Inherent limitations

This report has been prepared as outlined in the terms of the Contract dated 23 July 2018. The services provided in connection with this engagement are based on the agreed scope of work specified in the Contract and set out in section 1.3 above, which differ from an audit or an assurance engagement. As such, no assurance of any kind, or other opinion or conclusions intended to convey assurance, are expressed in this report.

Our fieldwork was based on information provided to us at 31 December 2016 and earlier periods, with limited subsequent information up to 31 July 2018. We have not undertaken to update our report for events or circumstances arising after 31 December 2016. Our findings should not be extrapolated to future periods after 31 December 2016, and outstanding loans are subject to change which may alter the validity of our findings subsequent to the date of our procedures.

In preparing our report, our primary source has been limited to data received from the Bank of Mongolia and from commercial banks in Mongolia, as well as interviews with personnel from the Bank of Mongolia. We do not accept responsibility for such information which remains the responsibility of management of those entities. We have satisfied ourselves, so far as possible, that the information presented in our report is consistent with other information which was made available to us in the course of our work. We have not, however, sought to establish the reliability of the sources by reference to other evidence, nor have we sought to verify the information in any other way. The scope of our work was different from that for an audit and, consequently, no assurance is expressed.

This report has been prepared in English and Mongolian. If there is a discrepancy between the English and Mongolian versions of this report, the English version shall prevail.

2 Executive Summary

2.1 Key findings

Stock-taking	
Quasi-Fiscal Policy Activities	— 17 QFPAs, programs and sub-programs were identified from 2012 to 2016. 7 of these (excluding Retail Mortgage) were sub-programs of the Price Stabilization program. — MNT 7.2 trillion of funds were disbursed by the BOM from 2012 to 2016. — The majority of funds were disbursed in 2013 (MNT 3.0 trillion) and 2016 (MNT 1.7 trillion). — Most QFP activities have completed or the BOM no longer disburses new funds. — 58% (MNT 4.2 billion) of disbursed funds were still owed to the BOM at 31 December 2016 due to the long term nature of the largest activities. — Two of the largest activities, Retail Mortgage and TARP, are very long term, and 86% of the disbursed funds under these activities remained outstanding at 31 December 2016. — Most commercial banks in Mongolia participated in the QFPAs, particularly in the Retail Mortgage (11 banks), Price Stabilization (9 banks), and Supply of Construction (9 banks) programs.
BOM's Role	— The BOM acts as an administrator and financier of the QFPAs, providing funds and assisting the relevant ministries. — The QFPAs were set up by the GOM, and the relevant ministries determined the nature of, and approved, the end-borrowers. The BOM provided the funds which enabled the GOM's QFPAs to be realized. — Under most QFPAs, the funds were provided to the commercial banks by placing "new money" on their current accounts held at the BOM, which the commercial banks could then draw on. — The BOM management informed us that the BOM funded the various QFPAs through "money creation", i.e. new money which was placed onto the current accounts of the commercial banks, and this money creation had a significant inflationary impact.
Credit Risk	— Outstanding loan principal and securities due to the BOM as a result of the QFPAs totaled MNT 4.2 trillion at 31 December 2016. This comprised MNT 2.3 trillion due mainly from the commercial banks and large corporations, and MNT 1.9 trillion due from MIK's SPVs. — Under most QFPAs, the commercial banks were responsible for the relationship with end-borrowers including related credit risk. The commercial banks were required to repay the BOM on the agreed repayment date, whether or not the end-borrowers paid to the commercial banks.

	— The BOM is exposed to counterparty credit risk from the commercial banks, MIK, state owned institutions, and 6 large corporations. Security over repayment principally comprised access to a commercial bank's current account held at the BOM. Should a commercial bank not repay timely, the BOM had a right to withdraw funds from the commercial bank's current account. — Other security was provided to the BOM under some QFPAs such as bonds issued by the DBM, promissory notes issued by the commercial banks, or pledged assets and shares of corporations. — For some QFPA funds, these forms of security did not prevent recoverability issues arising once a commercial bank did not repay: - A default by a commercial bank on a repayment to the BOM arose in 2016, followed by forbearance and new payment terms. - Savings Bank, to which QFPA funds were distributed under the Price Stabilization program, was unable to pay its liabilities in 2013. — The BOM may not be able to withdraw funds for repayment from a commercial bank's current account, or claim on other security, without endangering the financial health of the particular commercial bank. As such, acting as the financier of the QFPAs, and the associated credit risks this brings, creates a potential conflict with the BOM's own role as regulator of the commercial banks and guardian of the financial health of the banking sector. — For the largest QFPA, the Retail Mortgage program, the BOM is principally exposed to credit risk from MIK's SPVs under senior RMBS. Commercial banks have the initial exposure with 10% junior RMBS. MIK is itself majority owned by the commercial banks. — Under TARP, the BOM has direct exposure to 6 large corporations which received TARP loans. The commercial banks helped to administer the TARP funds as intermediaries.
Funds disbursed	— In reconciling funds received by the commercial banks to amounts disbursed to end-borrowers, differences were identified. These mainly related to: • loans issued to end-borrowers from the proceeds of repaid loans from other borrowers in the QFPA • funds received by the commercial banks from the BOM for which end-borrowers did not fully draw on their credit facilities • loans issued by the commercial banks before funds were received from the BOM • loans issued for which funds were never received from the BOM as the QFPA was cancelled (part of the Good program) • funds received by the commercial banks in 2016 for which loans to end-borrowers were provided in 2017

Largest QFPAs in size order			
QFPA name		**Disbursed Funds**	**Due to BOM – loan principal and securities**
(in MNT billion)		**2012 to 2016**	**31 December 2016**
Retail Mortgage	Commercial banks	3,559	1,040
	MIK SPVs RMBS	n/a	1,917
Price Stabilization, 7 sub-programs		1,169	38
TARP		815	815
Supply of Construction		535	-
Other QFPAs		1,140	433
Total		**7,218**	**4,243**

Impact analyses - BOM	
Accounting loss based on IFRS	MNT 3,268 billion
Economic loss	MNT 3,736 billion
Maximum proportion of the State Budget expenditures – accounting loss	2013 – 16.6% 2014 – 12.8%

Impact analyses – Commercial banks		
Impairment based on IFRS (IAS 39) at 31 December 2016		
(in MNT billion)	**Number loans**	**Value**
Total credit files reviewed	150	1,665
Identified non-performing loans	31	604
Repaid (before or after end of 2016)	(23)	(349)
NPL exposure at 31 December 2016	**8**	**255**
Recoverable from projected cash flows	-	-
Recoverable from assessed collateral	6	161
Impairment provision under IAS 39	**2**	**94**
Impairment based on BOM methodology		
(in MNT billion)		**Value**
Impairment provision at 31 December 2016		115
Impairment provision reduced by loans repaid after 2016		**113**

The two loans impaired under IFRS were part of the Price Stabilization – Meat sub-program and Price Stabilization – Fuel sub-program. These two impaired loans were due from two companies related to each other.

Over 90% of the impairment under the BOM provision methodology relates to the Price Stabilization program. The impairment provision of MNT 113 billion under the BOM methodology includes the two loans impaired under IFRS, in the amount of MNT 94 billion.

Impact analyses – Commercial banks		
Homogenous loans at 31 December 2016		
(in MNT billion)	**Good program**	**Retail Mortgage**
Total loans outstanding at 31 Dec. 2016	95	2,929
Lower boundary of impairment	-	-
Middle level	0.0004	13.8
Upper boundary of impairment	0.955	14.1

The projection of non-recoverable amounts for homogenous loans was performed for the QFPAs with loans of this nature, which comprised the Retail Mortgage program and the Good program. The projection led to relatively small levels of impairment provision:

— Applying the results of our sample of credit file reviews across these QFPAs, the projection resulted in nil impairment (lower boundary).

— We therefore applied two alternative projection methods based on PD and LGD data provided by the commercial banks at 31 December 2016, and other data sources, as shown above (middle level and upper boundary). The results came to a maximum impairment of 1% (MNT 0.96 billion) and 0.5% (MNT 14 billion) of the total loans for each of the Good program and Retail Mortgage program, respectively.

2.1.1 Process and controls at the BOM

We identified weaknesses in the design and operation of internal controls over the QFPA at the BOM. Overall, the processes and internal controls at the BOM are sub-optimal to the level of risks which the BOM undertakes, the high volumes of financing it provides, and the BOM's role and responsibilities.

Further, the BOM's role as financier of the QFPAs can create potential conflicts with its other duties and responsibilities such as maintaining financial stability and regulating the commercial banks. Suitable processes and controls should be in place to manage such conflicts.

Although some risks to the BOM are mitigated through the structure of the QFPAs, direct and indirect credit risks exist, as well as various other risks such as interest rate, foreign exchange rate, effective oversight of the commercial banks and to the effective application of monetary policy. Therefore, we recommend the BOM should improve the design and effectiveness of its internal controls over the QFPAs, particularly over their initiation and monitoring.

The BOM management informed us that it is committed to not re-introducing the QFPAs, and under the amendment to the Central Bank Law dated 12 January 2018 it is effectively prohibited from doing so. Should the BOM be requested in the future to assist in administering government programs or subsidies, we recommend that the BOM establish specific processes and controls dedicated to those programs, from initiation to collection of funds. Meantime, the BOM should concentrate on mitigating its remaining risks through effective monitoring of the commercial banks' activities over existing QFPAs, and effective monitoring and control over its own credit exposures particularly to end-borrowers under TARP, and to commercial banks and MIK SPVs under the Retail Mortgage program.

We noted a lack of documented evidence and support for key decisions and approvals, including missing documents for some QFPAs. These issues were exacerbated by turnover of personnel, which makes it even more imperative to properly maintain thorough supporting documentation.

Examples of our specific recommendations, set out in detail in section 5, include:

- To formalize policies and procedures specifically in relation to QFPAs
- To perform a comprehensive assessment of the advantages and disadvantages of funding a QFPA, including the expected impacts on the BOM, the economy, and the State Budget, prior to approving the QFPA and its funding. The comprehensive assessment should be reviewed by a panel of independent, objective experts who can provide independent advice to the BOM on the approval decision
- To assess more rigorously the potential impacts of a QFPA on each commercial bank and on the BOM's exposure to that bank, before approving a commercial bank to be included in the QFPA
- To introduce a commercial bank certification process to enable a bank to be included into a QFPA, together with regular certification updates and monitoring of performance
- To exercise more control over the commercial banks' exercise of their credit processes including more precise requirements for credit risk management and segregation of responsibilities
- To develop and implement checklists for reviewers to help ensure key steps are performed and documented prior to approvals
- To monitor the commercial banks' checks on the target use of loans by end-borrowers.

2.1.2 Examination of credit files

We examined 150 end-borrower credit files at the commercial banks and the BOM, and applied our developed methodology and checklists to these credit files. We incorporated the results of these examinations into assessments of non-recoverability, estimated impairment provisions, and collateral assessments, as well as into recommendations on areas for improvement in the quality of credit processes, monitoring of borrowers, and effective use of the funds at the commercial banks.

Some of the main qualitative findings common across multiple banks and credit files comprised:

- Insufficient involvement of the Risk management functions in independent assessments of the loan applications and to final decision-making
- A lack of quantitative risk measurement and use of risk models: the volumes of loan applications under the Retail Mortgage and Good programs justify the application of quantitative risk models to improve decision-making
- Insufficient efforts in monitoring loans and end-borrowers after loan disbursement including use of funds
- Differences across the various QFPAs and the different banks in the effective use of the funds, measured through the speed of loan approvals and disbursements
- Differences across the various QFPAs and the different banks in the credit process quality

As a result, our recommendations include:

- Increased segregation of responsibilities and involvement of risk management into the key credit lending processes and decisions

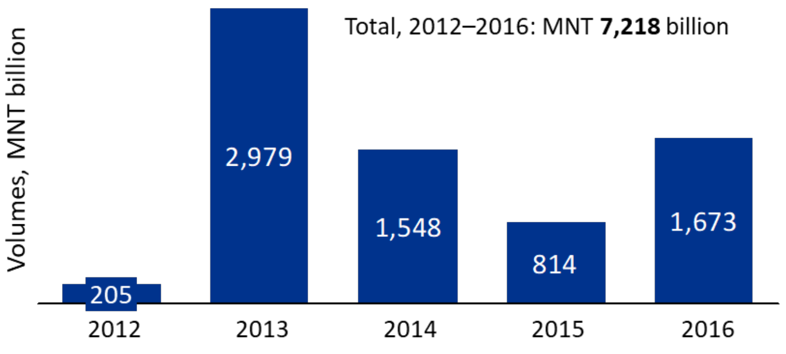
- Increased use of scoring or rating models to improve decision-making. These processes start with collection of detailed and granular data on risk event occurrences. Provided that sufficient volume of statistical data is collected by the banks, well-known algorithms can be applied to develop risk quantification models and improve efficiency of loan decision-making. In addition to traditional regression models, machine-learning algorithms can easily be applied. However, the quality of data in terms of length of period, comprehensive collection of various attributes, and correctness of each field, is key. Such criteria need to be defined by the BOM in order to have reliable inputs for a consistent assessment
- Mandatory AML and credit bureau checks of applicants
- Regular, robust monitoring of loans and the state of end-borrowers after loan disbursement, with a particular focus on the targeted use of the loan funds
- Regular verification and reassessment of collateral values
- Greater involvement of the BOM in overseeing the quality and consistency of the commercial banks' credit processes, either through definition of standards or active involvement in second review of the credit files

2.2 QFPAs Stock-taking

The QFPAs were identified based on the IMF's definition of quasi-fiscal policy and a criteria which we developed and applied. In general, these activities were identified as QFPAs because they were initiated by the GOM, outside the regular budgeting process, involved subsidized conditions, and benefited a specific, and usually narrow, group.

The chart below shows the annual volumes of disbursed funds from 2012 to 2016 under the identified QFPAs.

Figure 2: Volumes of disbursed funds by year



Source: BOM's data.

The peak of QFP funds disbursement was 2013, when almost MNT 3 trillion of funds were disbursed by the BOM. These principally comprised the Retail Mortgage program (MNT 1.6 trillion in 2013) and the Price Stabilization program (MNT 0.7 trillion in 2013). Volumes of funds disbursed declined in 2015 and increased again in 2016 due to the Good program and TARP.

The largest BOM funded QFPAs comprised:

- Retail Mortgage: MNT 3,559 billion, being 49.3% of total volume
- TARP: MNT 815 billion, being 11.3% of total volume

- Supply of Construction: MNT 535 billion or 7.4% of total volume
- Price Stabilization - Construction Materials sub-program: MNT 384 billion, being 5.3% of total volume
- Good Share: MNT 374 billion, being 5.2% of total volume.

The full list of QFPA annual financing disbursed across each QFPA is shown below.

Figure 3: Annual volumes of QFPA financing

QFPA	2012	2013	2014	2015	2016	Total
(in MNT million)						
Price Stabilization	204,702	676,351	241,613	46,679	-	1,169,345
Construction Materials	-	*300,072*	*75,100*	*9,000*	-	*384,172*
Fuel (loans part)	*93,702*	*98,283*	*34,432*	-	-	*226,417*
Food Storage Capacity	-	*98,578*	*38,400*	-	-	*136,978*
Coal	-	*71,085*	*15,262*	-	-	*86,347*
Meat	*87,000*	*61,600*	*17,341*	*28,859*	-	*194,800*
Trade Logistics and Facility	-	*22,000*	*12,000*	-	-	*34,000*
Flour	*24,000*	*24,733*	*49,078*	*8,820*	-	*106,631*
Supply of Construction	-	534,500	-	-	-	534,500
Retail Mortgage	-	1,562,978	755,900	707,400	532,331	3,558,609
Other:						
ASEM	-	-	-	60,000	173,425	233,425
Cashmere	-	-	29,700	-	-	29,700
DBM	-	-	171,007	-	-	171,007
Good program	-	-	-	-	502,000	502,000
DIC	-	204,900	-	-	-	204,900
TARP	-	-	350,000	-	465,000	815,000
Total	**204,702**	**2,978,729**	**1,548,220**	**814,079**	**1,672,756**	**7,218,486**

Source: BOM's data.

By the date of our procedures, no new funds were being disbursed by the BOM and the BOM does not currently plan to fund or administer any new QFPAs. The QFPAs, except Retail Mortgage, were discontinued and in "run off" phase. For the Retail Mortgage program, the volume of new disbursements was limited to the repayments received, i.e. existing disbursed funds could be re-used, but new funds were not provided.

2.3 Impact Analyses

2.3.1 Estimation of losses

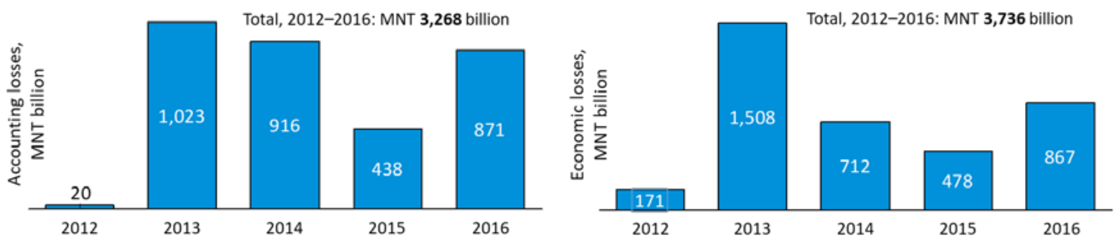
The impact of the QFPAs on the BOM's losses was estimated from two perspectives:

a) accounting under IFRS
b) applying an economic loss approach.

Both approaches are based on the same concept of fair market valuation of loans or other financial instruments, however there are a number of methodology differences:

— The accounting approach focuses on an ex-ante estimate of an instrument's fair value, while the focus of economic analysis is ex-post or realized cash flows. However, if sufficient evidence of major deviations from contractual cash flows were encountered, corrections were made to our impact estimates.
— IFRS estimates are always in nominal or current money terms, while due to the nature of its approach, economic impact estimates are in real money terms of a QFPA's beginning year.
— Discount rate estimates: IFRS requires the application of estimated market rates based on comparable transactions with the same level of risk and from the same or similar markets; under the economic approach, individual components of the rate are estimated, including risk-free rate, credit risk spreads, and the cost of capital.

Figure 4: Accounting and economic impact of QFPA 2012-2016



Source: BOM's data, KPMG analysis.

The estimated impact amounted to MNT 3.27 trillion under the IFRS accounting approach, and MNT 3.74 trillion under the economic approach. The programs that contributed the most to this impact are set out below.

Figure 5: QFPAs with largest loss impacts

QFPA with largest loss impacts				
(in billion MNT)	**Accounting impact**		**Economic impact**	
Retail Mortgage program	1,936	59%	2,300	61%
Price Stabilization – Fuel	388	12%	402	11%
Good share sub-program	299	9%	326	9%
Other activities	645	20%	708	19%
Total	**3,268**	**100%**	**3,736**	**100%**

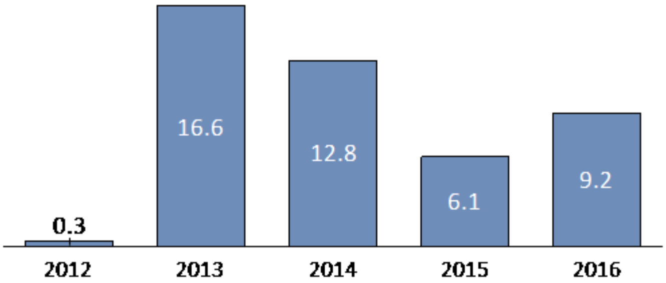
Source: BOM's data, KPMG analysis.

The peak of the losses under QFPAs was in 2013, when the QFPA impact was estimated as MNT 1.02 trillion under the accounting approach, and MNT 1.51 trillion under the economic approach.

2.3.2 State Budget and BOM's operations

In 2013 the estimated accounting impact of QFPAs reached 16.6% of the total State Budget expenditures, and 5.3% of Mongolian GDP. In the following years, the impact was more moderate, but still relatively large. The chart below shows the relative impact:

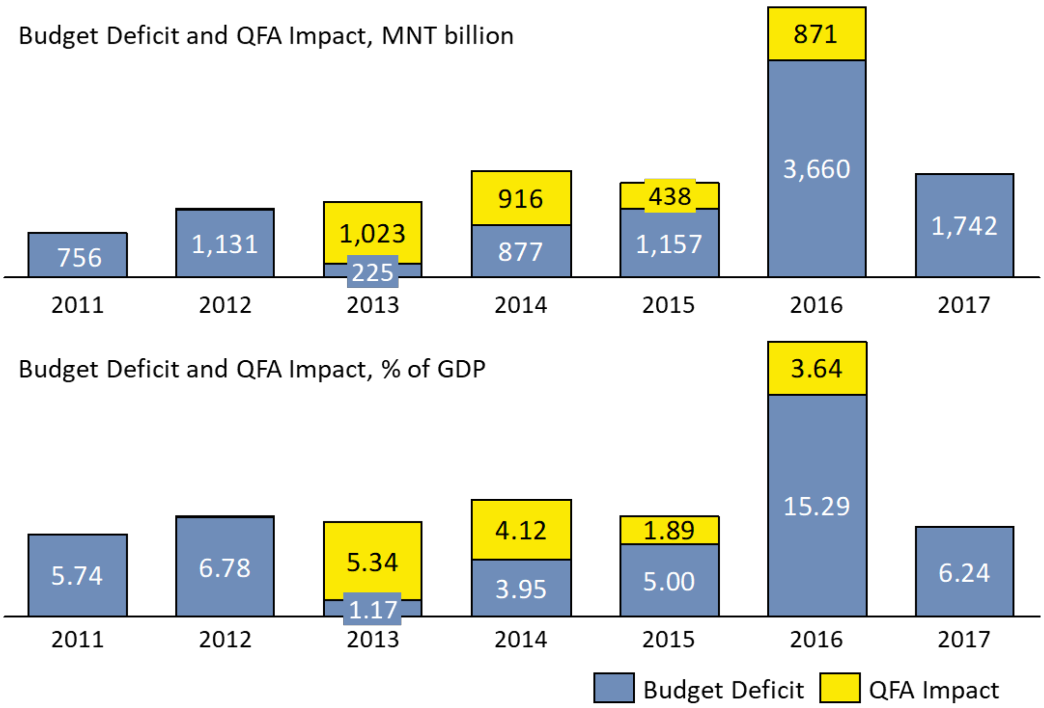
Figure 6: QFPA accounting losses as percentage of annual State Budget Expenditures



Source: KPMG analysis, Mongolian Statistical Information Service http://1212.mn/

As QFPAs are unbudgeted subsidies which mask the "real" State Budget expenditures and deficit, it is generally considered good practice to keep QFPAs to a relative minimum level. In 2016, the impact of QFPAs increased the official reported budget deficit of 15.3% to almost 19%. The chart below shows the accounting loss impact of the QFPAs on the budget deficit over the period 2012 to 2016.

Figure 7: QFPA impact and Budget deficit in absolute figures and as percentage of GDP



Source: BOM's data, KPMG analysis, Mongolian Statistical Information Service http://1212.mn/

On average, across 2013 to 2016 the Government expenditures were under-budgeted by 11.2%, or MNT 812 billion per year, due to these “hidden expenditures” on QFPAs, which notably distorts the real picture of the State Budget balance and fiscal consolidation, and raises the question of budgeting process efficiency.

We understand the QFPAs were funded primarily through “money creation”, which entailed placing new funds on the accounts of the commercial banks and recording a related receivable from the relevant bank. The input of these relatively large amounts of “new” money from QFPAs into the economy, such as 17% (2013) and 13% (2014) of the Government’s expenditures, increases the challenges to manage the impacts on price and banking stability. Price growth and prudential oversight of the commercial banks need significant additional attention in order that the BOM can manage the impacts within its remit. It is highly likely that this “new” money denominated in Mongolian Tugrik contributed to the significant weakening (79%) of the Mongolian Tugrik over the period 2013 to 2016, which influenced the BOM’s levels of foreign currency reserves, and contributed to inflationary pressures.

3 Stock-taking

3.1 Methods of QFPA identification

3.1.1 Definitions of quasi-fiscal policy

We initially considered the various definitions of quasi-fiscal policy, based on which we identified a criteria against which to assess activities of the BOM in order to assess if they should be included as QFPA.

According to the definition from the IMF, a quasi-fiscal policy is “any policy action that affects central banks’ balance sheets, with the exception of the traditional monetary policy” (IMF Working Paper *Central Banks Quasi-Fiscal Policies and Inflation*, January 2012).

We considered principally this definition by IMF when seeking to identify QFPA and using our own knowledge and further research, we expanded the definition to incorporate several criteria as follows:

- benefit a narrow group
- involve subsidized conditions
- government directed rather than Parliamentary approved
- miss the rigor and scrutiny of regular state budget process
- usually non-transparent and outside the scope of regular public scrutiny
- loosely controlled and not subject to the rigor of traditional policy
- may have positive social or economic impact

As a framework for identifying QFPAs, activities and programs which potentially could fall into the category of QFPA were assessed against the above criteria.

3.1.2 Procedures to identify QFPA

Initially the BOM provided us a list of the programs and activities which the BOM identified as QFPAs. Through studying the documentation provided to us and various meetings with program managers, to the extent they were available, and with management of the BOM, we assessed whether the list of programs and activities provided to us by the BOM were QFPAs. We also performed procedures to identify further QFPAs not included in the list provided by the BOM.

The following procedures were performed to identify QFPAs:

- Inquiries and discussions with the BOM’s management
- Review of the BOM’s financial statements and annual reports for 2012 – 2017
- Inquiries of commercial banks’ managers if they are aware of any other QFPAs performed by the BOM during 2012 – 2016
- Reconciliation of financial information between data provided by the BOM and data provided by the commercial banks
- Internet searches
- Application of our local own knowledge and understanding of the BOM’s activities in Mongolia during these years

3.2 Overview of results

Set out below is the list of QFPAs identified as a result of the stock-taking, showing funds disbursed by the BOM from 2012 to 2016 and the number of commercial banks in each activity.

Figure 8: QFPA summary

QFPA	Period	Disbursed amounts	No. banks in the QFPA
(in MNT million)			
Price Stabilization	2012 – 2016	1,169,345	9
Supply of Construction	2013 – 2015	534,500	9
Retail Mortgage	2013 – present	3,558,609	11
Other:			
ASEM	2015 – present	233,425	5
Cashmere	2014 – 2015	29,700	4
DBM	2015 – 2016	171,007	2
Good Program	2016 – present	502,000	3
DIC	2013 – present	204,900	0
TARP	2014 – present	815,000	3
Total		**7,218,486**	

Source: BOM's data and KPMG analysis.

The Price Stabilization program consisted of a number of sub-programs, as set out below:

Figure 9: Price Stabilization sub-programs summary

Price Stabilization sub-program	Period	Disbursed amounts	No. banks in the QFPA
(in MNT million)			
Construction Materials	2013 – 2015	384,172	9
Fuel	2012 – 2014	226,417	8
Food Storage Capacity Increase	2013 – 2016	136,978	7
Coal	2013 – 2015	86,347	7
Meat	2012 – 2015	194,800	5
Trade Logistics and Facility	2013 – 2015	34,000	2
Flour	2012 – 2015	106,631	7
Total		**1,169,345**	

Source: BOM's data and KPMG analysis.

The table below summarizes the nature of the end-borrowers (ultimate beneficiaries) for each QFPA including the sub-programs within the Price Stabilization program.

Figure 10: Nature of end-borrowers under QFPAs

QFPA	Disbursed amounts	Nature of end-borrowers
(in MNT million)		
Price Stabilization:	1,169,345	
Construction Materials	384,172	SMEs and Corporates
Fuel	226,417	SMEs and Corporates
Food Storage Capacity Increase	136,978	SMEs and Corporates
Coal	86,347	SOEs
Meat	194,800	SMEs and Corporates
Trade Logistics and Facility	34,000	SOE
Flour	106,631	SMEs and Corporates
Supply of Construction	534,500	SMEs and Corporates
Retail Mortgage	3,558,609	Individuals
Other:		
ASEM	233,425	SMEs and Corporates
Cashmere	29,700	SMEs and Corporates
DBM	171,007	SOE
Good Program	502,000	Individuals
DIC	204,900	SOE
TARP	815,000	Corporates
Total	**7,218,486**	

Source: BOM's data and KPMG analysis.

3.2.1 Reconciliation of disbursed funds

3.2.1.1 Funds disbursed by BOM to commercial banks

As part of our stock-taking procedures, we reconciled between amounts disbursed by the BOM to the commercial banks and amounts received by the commercial banks from the BOM, based on data provided to us by each of the BOM and the commercial banks. Initially there were some large differences, especially relating to the Good program, and these differences were subsequently reconciled and cleared.

An overview of the reconciliation results is set out below.

Figure 11: Reconciliation of disbursed funds

QFPA	Disbursed by BOM	Received by banks	Difference
(in MNT million)			
Price Stabilization	1,169,345	1,169,345	-
Supply of Construction	534,500	534,500	-
Retail Mortgage	3,686,117	3,686,117	-
Other:			
ASEM	233,425	233,425	-
Cashmere Support	29,700	29,700	-
DBM	171,007	171,007	-
Good	502,000	502,000	-
DIC	204,900	204,900	-
TARP	815,000	815,000	-

Source: BOM's data, commercial banks' data and KPMG analysis.

The Retail Mortgage funds of MNT 3,686 billion in Figure 11 above includes amounts disbursed by the BOM on behalf of the FPRF, of which MNT 127 billion comprises funds provided by the FPRF that are not part of the QFPAs under this project. The commercial banks recorded together all funds received from the BOM for the Retail Mortgage program, without distinguishing how they were financed. Therefore, the amounts above are reconciled in total including the FPRF funded portion.

3.2.1.2 Funds disbursed to end-borrowers

We also reconciled between funds disbursed by the BOM to the commercial banks and amounts disbursed by the commercial banks to the end-borrowers. Differences were identified between the volumes of funds received by the commercial banks from the BOM, and volumes distributed by the commercial banks to the end-borrowers.

Most of these difference were explained and reconciled during the course of the project. Generally, they related to the following areas:

- Some of the large commercial banks provided funding from their own resources and subsequently received the related funds from the BOM. This was mainly for the Retail Mortgage program and the Good program.
- Under part of the Good program, Good Herder, not all the loans provided to end-borrowers by the two participating commercial banks, State Bank and Khan Bank, were funded by the BOM as the program was cancelled.
- In some cases, amounts were returned back to the BOM if they were not disbursed to the end-borrowers.
- In other cases, the end-borrowers repaid the loans before their due dates, and commercial banks used the repaid funds to issue loans to new end-borrowers.

Figure 12: Reconciliation of funds disbursed to end-borrowers

QFPA	Received by commercial banks	Disbursed to end-borrowers	Difference	Explanations
(in MNT million)				
Price Stabilization	1,169,345	1,166,347	2,998	See explanation below the table
Supply of Construction	534,500	589,296	(54,796)	2 banks provided loans to end-borrowers from funds repaid early by other borrowers. 2 banks did not disburse the funds because end-borrowers did not draw their full credit line
Retail Mortgage	3,686,117	3,815,295	(129,178)	Mostly timing differences: banks funded from their own resources and later received from BOM. A precise reconciliation of the timing differences was not achievable by the banks
Other:				
ASEM	233,425	233,425	-	
Cashmere	29,700	29,700	-	
DBM	171,007	171,007	-	
Good	502,000	425,003	76,997	See explanation below the table
DIC	204,900	204,900	-	
TARP	815,000	815,000	-	
Total	**7,345,994**	**7,449,973**	**(103,979)**	

Source: Commercial banks' data and KPMG analysis.

Price Stabilization program: the difference in the Price Stabilization program related to Construction Materials and Coal sub-programs at 4 banks where MNT 3,177 million was returned to the BOM as it was not disbursed to the end-borrowers. For the remaining difference of MNT 179 million, we were not provided with further explanations, see Figure 13 below.

Retail Mortgage program: refer to information in section 3.2.1.1 about the amount of funds disbursed and received by the commercial banks under the Retail Mortgage program, part of which was financed by the FPRF.

Good program: the difference in the Good program is the net result of several factors. First, MNT 33 billion was provided by State Bank and Khan Bank as loans to individuals under the Good Herder sub-program, but these commercial banks did not receive the related funds from the BOM as the program was cancelled. As a result, State Bank and Khan Bank funded subsidized loans to individuals themselves, and generated losses on this sub-program. Second, MNT 8 billion of funds were received by the commercial banks from the BOM under the Good Student sub-program in late 2016 but disbursed by the commercial banks in 2017. Lastly, the BOM disbursed funds via a purchase of MOF bonds, for the Good Share sub-program, in an amount MNT 102 billion greater than the citizens' applications to sell their shares.

Figure 13: Reconciliation of funds disbursed to end-borrowers under Price Stabilization sub-programs

Activity	Received by commercial banks	Provided to end-borrowers	Difference	Explanations
(in MNT million)				
Construction materials	384,172	382,852	1,320	Khan Bank returned MNT 1.5 billion to BOM. MNT 0.2 billion difference unexplained
Fuel	226,417	226,417	-	
Food Storage Capacity	136,978	136,978	-	
Coal	86,347	84,669	1,678	Golomt Bank returned MNT 1.68 billion to BOM
Meat	194,800	194,800	-	
Trade Logistics	34,000	34,000	-	
Flour	106,631	106,631	-	
Total	**1,169,345**	**1,166,347**	**2,998**	

Source: Commercial banks' data and KPMG analysis.

4 Descriptions of quasi-fiscal policy activities

4.1 Price Stabilization program

On 20 October 2012 the GOM issued resolution #104 to establish a working group for implementation of the Price Stabilization program. A Memorandum on the Price Stabilization program was issued by the GOM and the BOM on 22 October 2012.

There were 8 sub-programs approved within the Price Stabilization program. For the most-part, these sub-programs followed the same overall structure and principles. The Retail Mortgage program was implemented differently and the Fuel Price sub-program involved an additional subsidized instrument in the form of foreign exchange swaps.

The Retail Mortgage program was a sub-program of the Price Stabilization program. We have included it as its own category in this section consistent with the project terms of reference and in consideration of its substantial size.

4.1.1 Common principles across the Price Stabilization sub-programs

Under each sub-program except for Retail Mortgage, a government ministry was primarily responsible for implementing the program including approval of the end-borrowers to whom funds should be provided by the commercial banks. A contract was entered into between the BOM and the relevant ministry which set out the main terms between these parties for the sub-program funds disbursement.

A set of criteria for companies to meet in order to participate in the program was typically established by the relevant ministry. The BOM approved the commercial banks for participation in the program.

Repayment terms from end-borrowers to commercial banks and by commercial banks to the BOM followed the same general timeframe. Interest rates were set separately for each sub-program and were usually announced by joint resolutions of the BOM and relevant ministry. In general, the BOM decided the interest rates to be charged to the commercial banks and from the commercial banks to end-borrowers.

The BOM transacted the disbursement of funds by placing money onto the current account of the relevant commercial bank held with the BOM.

The end-borrower credit risk was borne by the commercial banks, while the BOM bore the credit risk of the commercial banks i.e. in case a commercial bank would have insufficient funds to repay the BOM. Security for the BOM for repayment by a commercial bank was the current account of the commercial bank held at the BOM plus a promissory note issued by the commercial bank to the BOM. Should a commercial bank not repay the funds to the BOM, the BOM would be able to transfer the due funds out of the commercial bank’s current account.

The commercial banks should make the repayments to the BOM regardless of whether they received the related loan repayments from the end-borrowers. The commercial banks were responsible for assessing the credit risk of the end-borrowers.

Main parties and their roles

We identified the following principal roles for each of the main parties in a sub-program which were generally followed for most sub-programs:

BOM:

- Provision of finance to end-borrowers through the commercial banks based on companies approved by the relevant ministry

- Approval of commercial banks to implement the program by assessing their requests and monitoring contracts with commercial banks by preparing monthly funding reports
- Setting of monthly limits for disbursement amounts for Retail Mortgage (see section 4.3)
- Jointly with the relevant ministry, announcing applicable interest rates
- Setting interest rates between the BOM and the commercial banks, and between the commercial banks and the end-borrowers.

Relevant ministry:

- Reporting activities implemented by the GOM related to the program on a monthly basis
- Setting standards for the quality of materials and selection requirements for implementing entities
- Assessment of submitted applications and selection of benefitting entities based on the criteria set out in the price stabilization program
- Signing contracts with the selected benefitting entities
- Coordination and implementation of the program
- Monitoring program implementation through government agencies
- Monitoring volumes and sales prices of the major construction materials, fuel, flour, meat and other assets subject to the Price Stabilization program
- Reporting to the BOM whether there are changes in the volumes and prices of assets subject to the Price Stabilization program

Commercial banks:

Companies approved by the relevant ministry under the role above should choose a commercial bank and apply for the loans to the commercial bank. Commercial banks could decide not to participate in the sub-program, and in this case companies could choose to apply to another commercial bank.

- Lending money to the approved companies based on resources received from the BOM using warehouse products and other assets as collateral
- Reporting the repayment process to the BOM
- Bearing the credit risks associated with the end-borrowers
- Monitoring borrowers on a regular basis to ensure the loan was utilized in accordance with the financing purpose

Companies:

- Fulfilling obligations under loan agreements made with commercial banks by making repayments in accordance with the payment schedules
- Using the loan in accordance with its purpose stated in the loan agreement
- Informing and reporting annual financial results to commercial bank. In practice we noted that commercial banks usually required quarterly financial statements from end-borrowers

Sub-programs by ministry

Set out below is a list of the relevant ministry responsible for each sub-program within Price Stabilization, excluding the Retail Mortgage sub-program as it is separately described in this section consistent with the project terms of reference and in consideration of its substantial size.

Figure 14: Price Stabilization – Sub-program by ministry

Sub-program	Relevant Ministry	Disbursed amounts
(In MNT million)		
Construction Materials	Ministry of Construction and Urban Development	384,172
Fuel (SIFS)	Ministry of Mining and Heavy Industry	226,417
Food Storage Capacity Increase	Ministry of Food and Agriculture	136,978
Coal	Ministry of Energy	86,347
Meat	Ministry of Food and Agriculture	194,800
Trade Logistics & Facility	Ministry of Road and Transport Development	34,000
Flour	Ministry of Food and Agriculture	106,631
Total		**1,169,345**

Source: BOM's data and documentation, and KPMG analysis.

The diagram below shows the typical structure and flow for the disbursement of funds:

Figure 15: Price Stabilization – funding process

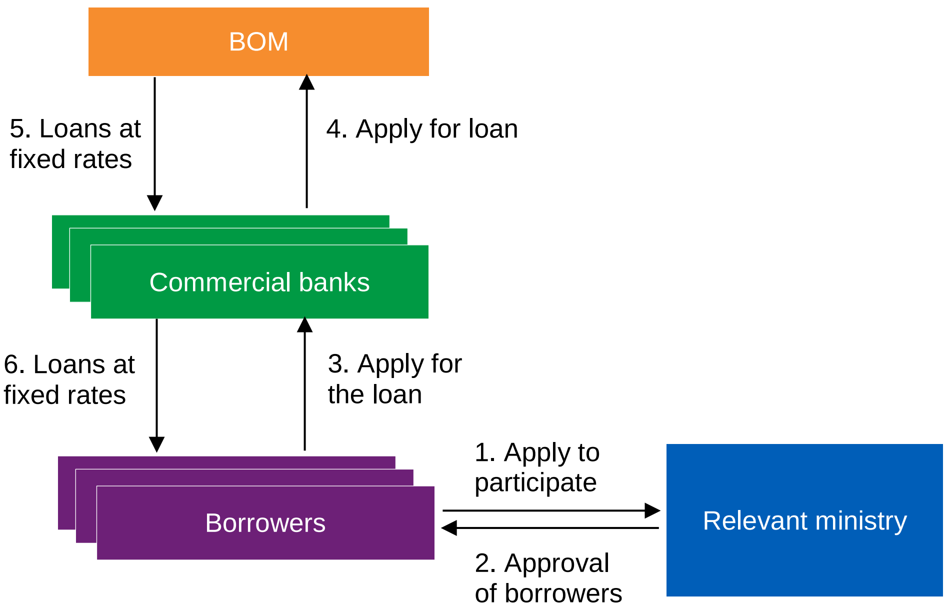


Figure 16: Outstanding loan principal due to BOM by sub-program

Sub-program	31 Dec 2016	31 Dec 2017	31 Jul 2018
(in MNT million)			
Construction Materials	24,627	1,600	1,600
Fuel (SIFS)	-	-	-
Food Storage Capacity Increase	12,921	-	-
Coal	-	-	-

Sub-program	31 Dec 2016	31 Dec 2017	31 Jul 2018
Meat	-	-	-
Trade Logistics and Facility	-	-	-
Flour	-	-	-
Total	**37,548**	**1,600**	**1,600**

Source: BOM's data.

4.1.2 Construction Materials sub-program

The sub-program was approved on 9 January 2013 via a joint resolution, number #A2/06, by the Ministry of Construction and Urban Development and the BOM.

Purpose

The objective of this sub-program set out in joint resolution #A2/06 between the Ministry of Construction and Urban Development and the BOM, was "to support stable prices and support demand for construction materials." The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to construction companies and manufacturers of construction materials.

4.1.2.1 Volume of financing disbursed

Figure 17: Funds disbursed, Price Stabilization – Construction Materials sub-program

Bank	Agreement dates	Period months	Volumes disbursed			
			2013	2014	2015	Total
(in MNT million)						
Capital Bank	05/06/2013 05/06/2013	36 12	32,000	10,300	-	**42,300**
CKB	05/06/2013	36	4,000	-	-	**4,000**
Golomt Bank	09/05/2013 03/05/2013	12 36	29,610	2,000	-	**31,610**
Khan Bank	07/05/2013 08/05/2013	36 12	73,550	-	4,000	**77,550**
Khas Bank	10/05/2013 08/05/2013	12 36	33,242	-	5,000	**38,242**
NIB	29/07/2013	36	-	4,800	-	**4,800**
State Bank / Savings Bank	22/08/2013 25/12/2013	36 36	-	3,000	-	**3,000**
TDB	08/05/2013 13/05/2013	12 36	64,670	-	-	**64,670**
UBCB	08/05/2013 03/05/2013	12 36	63,000	55,000	-	**118,000**
Total			**300,072**	**75,100**	**9,000**	**384,172**

Source: BOM's data.

4.1.2.2 Repayment

The outstanding balances as at 31 December 2017 and 31 July 2018 were MNT 1,600 million at both dates, which was due from one commercial bank. The repayment date was extended by the BOM until November 2018 based on a request from this commercial bank.

4.1.2.3 Outstanding balances due to BOM

Figure 18: Outstanding loan principal under the Price Stabilization – Construction Materials sub-program

Date	Outstanding loan principal
(in MNT million)	
31 December 2013	264,337
31 December 2014	211,719
31 December 2015	147,968
31 December 2016	24,627
31 December 2017	1,600
31 July 2018	1,600

Source: BOM's data.

4.1.3 Strategic Import Financing Scheme sub-program (Fuel)

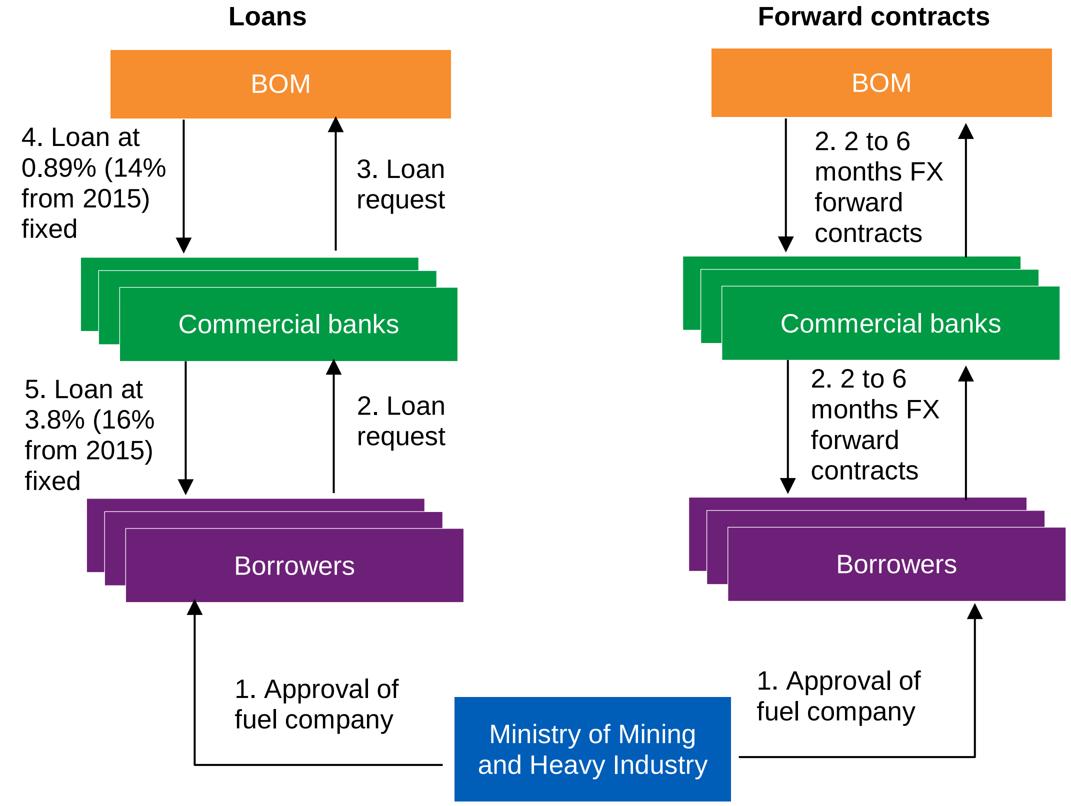
The Strategic Import Financing Scheme sub-program (abbreviated as Fuel sub-program) was approved on 26 October 2012 via a joint resolution, number #A171/46, between the Ministry of Mining and Heavy Industry and the BOM.

Purpose

The objective of this sub-program stated in joint resolution number #A171/46 between the Ministry of Mining and Heavy Industry and the BOM, was "to stabilize fuel prices and reduce foreign currency risk of retail fuel imports in Mongolia". The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to fuel trading companies, thus saving costs for the fuel companies which they should pass onto consumers. We understand that previously taxes were used as a method to maintain fuel price stability to consumers. However due to high fuel prices, taxes alone were not a sufficient instrument for this purpose, therefore low interest loans were introduced to help meet the objective.

As well as providing subsidized loans, under this program the BOM provided foreign currency forward contracts to the commercial banks at lower than market rates, which the commercial banks in turn provided to the end-borrowers.

Figure 19: Price Stabilization – Fuel sub-program financing process



Under this sub-program, the BOM should monitor that the amount of loans disbursed correlated to the retail sales volumes of fuel.

Initially the loans were provided for one year. They were extended until 2015 to make a total period of 36 months. We understand the interest rates were increased from 2015 because fuel prices declined, so the instrument of low interest loans was no longer as important for fuel price stability.

The forward contract terms were established and entered into by the BOM individually for each company within the parameters set by the GOM. The Banks did not receive a margin on the forward contracts, rather charged a transaction fee to the companies for entering into the forward contracts.

4.1.3.1 Volume of financing disbursed

In total, MNT 226,417 million of loans were disbursed by the BOM to the commercial banks under this sub-program (excluding the forward contracts, see below).

Figure 20: Funds disbursed, Price Stabilization – Fuel sub-program

Bank	Agreement date	Period months	Volumes disbursed 2012	2013	2014	Total
(in MNT million)						
Capital Bank	12/12/2012	12	8,511	-	-	**8,511**
CKB	23/08/2013	12	-	1,392	-	**1,392**
Golomt Bank	13/12/2012	12	25,787	-	3,810	**29,597**
Khan Bank	12/12/2012	12	15,735	-	2,675	**18,410**

Bank	Agreement date	Period months	Volumes disbursed 2012	2013	2014	Total
Khas Bank	14/12/2012	12	1,254	-	3,946	**5,200**
State Bank / Savings Bank	12/12/2012	12	7,122	11,597	-	**18,719**
TDB	12/12/2012	12	35,293	71,364	24,001	**130,658**
UBCB	22/04/2013	12	-	13,930	-	**13,930**
Total			**93,702**	**98,283**	**34,432**	**226,417**

Source: BOM's data.

In total, when the forward contracts closed, MNT 2,398 billion was received by the BOM to the commercial banks in exchange for USD 1,571 million as set out below.

Figure 21: Funds disbursed under forward contracts, Price Stabilization – Fuel sub-program

Bank	Forward contract volumes 2013	2014	2015	Total
(in MNT million)				
Capital Bank	8,511	45,620	17,022	**71,153**
CKB	-	5,620	-	**5,620**
Golomt Bank	107,078	194,026	66,939	**368,043**
Khan Bank	71,120	117,698	41,173	**229,991**
Khas Bank	7,659	35,617	11,525	**54,801**
State Bank / Savings Bank	44,563	-	-	**44,563**
TDB	354,662	850,416	270,898	**1,475,976**
UBCB	27,889	94,460	25,365	**147,714**
Total	**621,482**	**1,343,457**	**432,922**	**2,397,861**

Source: BOM's data.

4.1.3.2 Repayments

The commercial banks fully repaid the loans under this sub-program to the BOM by 31 December 2016. The forward contracts were closed and amounts realized as per the table above.

4.1.3.3 Outstanding balances due to BOM

Figure 22: Outstanding loan principal under the Price Stabilization – Fuel sub-program

Bank	Outstanding principal 31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Dec 2015	31 Dec 2016
(in MNT million)					
Capital Bank	8,511	8,511	6,809	-	-
CKB	-	1,392	-	-	-
Golomt Bank	25,787	25,787	26,668	-	-
Khan Bank	15,735	15,735	16,953	16,953	-
Khas Bank	1,254	1,254	5,200	-	-

Bank	Outstanding principal 31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Dec 2015	31 Dec 2016
State Bank / Savings Bank	7,122	-	-	-	-
TDB	35,293	106,657	109,326	109,326	-
UBCB	-	13,930	11,144	-	-
Total	**93,702**	**173,266**	**176,100**	**126,279**	**-**

Source: BOM's data.

4.1.4 Food Storage Capacity Increase sub-program

The sub-program was approved on 26 October 2012 via a joint resolution, number #A-166/A/24, between the Ministry of Food and Agriculture and the BOM.

Purpose

The objective of this sub-program as set out in joint resolution #A-166/A/24 between the Ministry of Food and Agriculture and the BOM, was "to support stable prices and support demand in certain sectors:

— increase the number and improve capacity of food cellar and storage facilities

— promote intensive farming of meat, milk and vegetable production

— establish a stable framework of food production and supply market"

The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to food producers and agricultural companies.

4.1.4.1 Volume of financing disbursed

MNT 136,978 million was disbursed during 2013 and 2014 under the sub-program Food Storage Capacity Increase.

Figure 23: Funds disbursed, Price Stabilization – Food Storage Capacity Increase sub-program

Bank	Agreement date	Period months	Volumes disbursed 2013	2014	Total
(in MNT million)					
Capital Bank	18/11/2013	36	11,880	9,050	**20,930**
CKB	18/11/2013	36	18,709	-	**18,709**
Golomt Bank	18/11/2013	36	14,516	15,400	**29,916**
Khan Bank	18/11/2013	36	19,010	1,500	**20,510**
Khas Bank	8/07/2014	12	-	1,300	**1,300**
State Bank	13/12/2013	36	3,400	6,500	**9,900**
TDB	11/18/2013	36	31,063	4,650	**35,713**
Total			**98,578**	**38,400**	**136,978**

Source: BOM's data.

4.1.4.2 Repayments

MNT 124,057 million was repaid to the BOM by the end of 2016. The remainder was repaid during 2017.

4.1.4.3 Outstanding balances due to BOM

Figure 24: Outstanding loan principal under the Price Stabilization – Food Storage Capacity Increase sub-program

	Outstanding principal				
Bank	**31 Dec 2013**	**31 Dec 2014**	**31 Dec 2015**	**31 Dec 2016**	**31 Dec 2017**
(in MNT million)					
Capital Bank	11,880	20,815	14,624	4,298	-
CKB	18,709	18,534	13,291	-	-
Golomt Bank	14,516	28,505	18,488	5,334	-
Khan Bank	19,010	19,092	11,058	291	-
Khas Bank	-	1,300	1,000	450	-
State Bank	3,400	9,760	7,643	1,467	-
TDB	31,063	34,157	16,096	1,081	-
Total	**98,578**	**132,163**	**82,200**	**12,921**	**-**

Source: BOM's data

4.1.5 Coal sub-program

The sub-program was approved on 9 July 2013 via a joint resolution, number #A148/95, between the Ministry of Energy and the BOM.

Purpose

The objective of this sub-program as stated in joint resolution #A148/95 between the Ministry of Energy and the BOM, was "to support stable prices and support demand in certain sectors:

- increase coal reserves
- support preparation for winter
- reduce inflation of electricity and heating price tariffs"

The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to state owned companies in the energy sectors.

4.1.5.1 Volume of financing disbursed

MNT 86,347 million was distributed by the BOM under the sub-program during 2013 and 2014.

Figure 25: Funds disbursed, Price Stabilization – Coal sub-program

Bank	Agreement date	Period months	Volumes disbursed 2013	2014	Total
(in MNT million)					
CKB	29/11/2013	18	4,000	-	**4,000**
Golomt Bank	05/09/2013	18	26,450	7,548	**33,998**
Khan Bank	03/10/2013	18	5,600	900	**6,500**
Khas Bank	26/11/2014	18	-	400	**400**
State Bank	05/09/2013	18	3,400	1,400	**4,800**
TDB	05/09/2013	18	31,635	1,169	**32,804**
UBCB	14/01/2014	18	-	3,845	**3,845**
Total			**71,085**	**15,262**	**86,347**

Source: BOM's data.

4.1.5.2 Repayments

All the disbursed funds were repaid by the commercial banks to the BOM by the end of 2016.

4.1.5.3 Outstanding balances due to BOM

Figure 26: Outstanding loan principal under the Price Stabilization – Coal sub-program

Bank	Outstanding principal 31 Dec 2013	31 Dec 2014	31 Dec 2015
(in MNT million)			
CKB	4,000	4,000	-
Golomt Bank	24,051	12,764	-
Khan Bank	5,560	2,325	-
Khas Bank	-	366	-
State bank	2,937	2,091	-
TDB	31,352	11,067	-
UBCB	-	3,345	238
Total	**67,900**	**35,958**	**238**

Source: BOM's data.

4.1.6 Meat sub-program

The sub-program was approved on 26 October 2012 via a joint resolution, number #A-166/A/24, between the Ministry of Food and Agriculture and the BOM.

Purpose

The objective of this sub-program as stated in joint resolution #A-166/A/24 between the Ministry of Food and Agriculture and the BOM, was "to maintain stable retail price for meat". The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized working capital loans to meat producing companies.

4.1.6.1 Volume of financing disbursed

MNT 194,800 million was disbursed under the sub-program during 2012 to 2015.

Figure 27: Funds disbursed, Price Stabilization – Meat sub-program

Bank	Agreement date	Period months	Volumes disbursed 2012	2013	2014	2015	Total
(in MNT million)							
Golomt Bank	16/01/2013	36	-	26,400	14,041	5,759	**46,200**
Khan Bank	24/12/2012	36	5,437	4,400	3,300	-	**13,137**
Khas Bank	25/01/2013	36	-	-	-	9,900	**9,900**
State Bank	30/04/2013	36	76,125	-	-	-	**76,125**
TDB	13/12/2012	36	5,438	30,800	-	13,200	**49,438**
Total			**87,000**	**61,600**	**17,341**	**28,859**	**194,800**

Source: BOM's data.

4.1.6.2 Repayments

The disbursed funds were fully repaid to the BOM by the end of September 2015.

4.1.6.3 Outstanding balances due to BOM

Figure 28: Outstanding loan principal under the Price Stabilization – Meat sub-program

Bank	Outstanding principal 31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Dec 2015
(in MNT million)				
Golomt Bank	-	26,400	14,041	-
Khan Bank	5,437	4,400	3,300	-
Khas Bank	-	-	-	-
State Bank	76,125	-	-	-
TDB	5,438	30,800	-	-
Total	**87,000**	**61,600**	**17,341**	**-**

Source: BOM's data.

4.1.7 Trade Logistics and Facility sub-program

The sub-program was approved on 26 October 2012 via a joint resolution, number #A167/57, between the Ministry of Road and Transport Development and the BOM.

Purpose

The objective of this sub-program as stated in joint resolution #A167/57 between the Ministry of Road and Transport Development and the BOM, was "to maintain sustainable supply and to limit the price increases of commodity consumer products through improvements in international trade transportation and logistics infrastructure". The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to trade logistics companies.

4.1.7.1 Volume of financing disbursed

MNT 34,000 million of funds were disbursed during 2013 and 2014. Greater volumes of loans were initially planned to be issued, however in the end only one borrower, state owned entity Ulaanbaatar Railways JSC, received loans.

Figure 29: Funds disbursed, Price Stabilization – Trade Logistics and Facility sub-program

Bank	Agreement date	Period months	Volumes disbursed 2013	2014	Total
(in MNT million)					
Golomt Bank	08/07/2014	12	-	12,000	**12,000**
TDB	21/03/2013	36	22,000	-	**22,000**
Total			**22,000**	**12,000**	**34,000**

Source: BOM's data.

4.1.7.2 Repayments

The disbursed funds were fully repaid to the BOM by the end of 2016.

4.1.7.3 Outstanding balances due to BOM

Figure 30: Outstanding loan principal under the Price Stabilization – Trade Logistics and Facility sub-program

Bank	Outstanding principal 31 Dec 2013	31 Dec 2014	31 Dec 2015	31 Dec 2016
(in MNT million)				
Golomt Bank	-	9,231	-	-
TDB	12,000	6,667	1,333	**-**
Total	**12,000**	**15,898**	**1,333**	**-**

Source: BOM's data.

4.1.8 Flour sub-program

The sub-program was approved on 26 October 2012 via a joint resolution #A-166/A/24 by the Ministry of Food and Agriculture and the BOM.

Purpose

The objective of this sub-program as stated in joint resolution #A-166/A/24 between the Ministry of Food and Agriculture and the BOM, was "to support stable retail sales prices of flour and to expand the capacity of flour production to fully supply the flour demand of Ulaanbaatar City". The GOM and BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to flour supply companies.

4.1.8.1 Volume of financing disbursed

MNT 106,631 million of funds were disbursed during 2012 to 2015 under this sub-program.

Figure 31: Funds disbursed, Price Stabilization – Flour sub-program

Bank	Agreement date	Period months	Volumes disbursed 2012	2013	2014	2015	Total
(in MNT million)							
Golomt Bank	15/05/2014	12	12,000	6,400	48	3,000	**21,448**
Khan Bank	06/05/2014	12	12,000	5,017	12,400	300	**29,717**
Khas Bank	05/02/2013	12	-	75	-	-	**75**
NIB	17/12/2014	12	-	-	1,800	-	**1,800**
State Bank	13/05/2014	12	-	2,122	3,200	2,520	**7,842**
TDB	06/05/2014	12	-	11,119	27,630	3,000	**41,749**
UBCB	16/06/2014	12	-	-	4,000	-	**4,000**
Total			**24,000**	**24,733**	**49,078**	**8,820**	**106,631**

Source: BOM's data.

4.1.8.2 Repayments

The disbursed funds were fully repaid to the BOM by the end of 2015.

4.1.8.3 Outstanding balances due to BOM

Figure 32: Outstanding loan principal under the Price Stabilization – Flour sub-program

Bank	Outstanding principal 31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Dec 2015
(in MNT million)				
Golomt Bank	12,000	1,730	48	-
Khan Bank	12,000	1,640	11,400	-
Khas Bank	-	40	-	-
NIB	-	-	1,800	-
State Bank	-	1,020	3,200	-
TDB	-	7,590	27,060	-
UBCB	-	-	3,520	-
Total	**24,000**	**12,020**	**47,028**	**-**

Source: BOM's data.

4.2 Supply of Construction program

The Supply of Construction program was approved on 13 April 2013 by the GOM in accordance with resolution number #135.

Purpose

The objective of this program as stated in the GOM's resolution #135, was "to promote housing supply". The GOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to construction companies.

4.2.1 Main parties and Roles

We identified the following roles for each of the main parties in this program.

State Housing Corporation of Mongolia (SHCM):

- Performing research on housing construction in Mongolia
- Preparing a list of construction companies for receiving funding from the BOM through commercial banks
- Submitting this list of construction companies to the BOM

We were not provided with a set of criteria applied by the State Housing Corporation of Mongolia used for selecting the construction companies.

BOM:

- Approval of commercial banks to implement the program by assessing their requests
- Monitoring contracts with banks through the preparation of monthly funding reports
- Disbursement of funds to the selected commercial banks so that the commercial banks could provide funding to end-borrowers (companies) from the list as described above
- Setting interest rates for financing provided by the BOM to the commercial banks

Commercial banks:

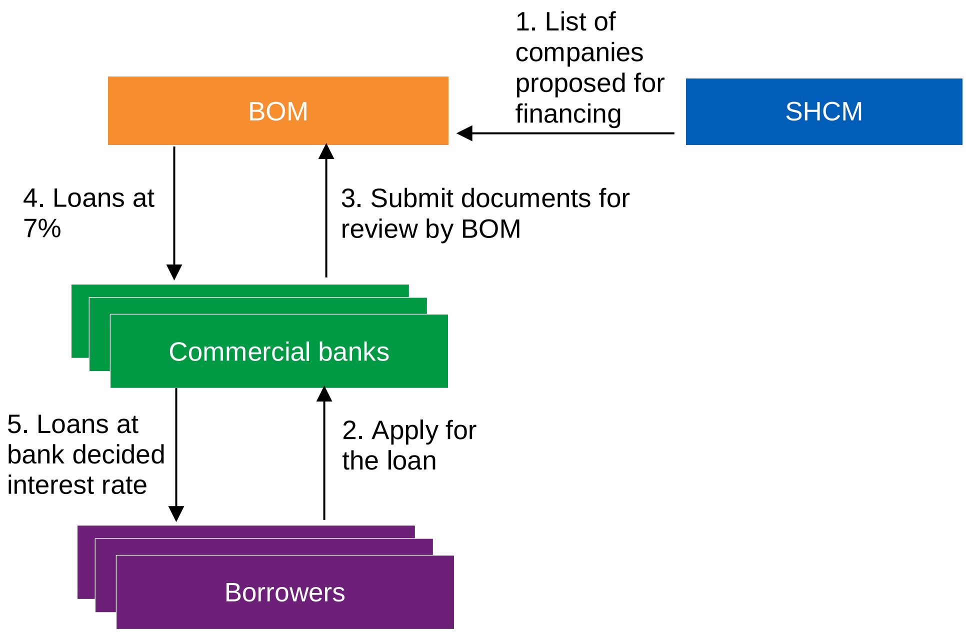
Companies proposed by the State Housing Corporation of Mongolia chose commercial banks and applied for the loans at the chosen commercial banks. Commercial banks could decide not to participate in the program, and in this case companies could choose to apply to other commercial banks.

- Lending money to the approved companies based on resources received from the BOM using buildings under construction, land ownership rights and future cash inflows as collateral
- Setting interest rates for financing provided to end-borrowers
- Reporting the repayment process to the BOM
- Bearing the credit risks associated with the end-borrowers
- Monitoring borrowers on a regular basis to ensure loans were used in accordance with the financing purpose

Companies:

- Fulfilling obligations under the loan agreements made with commercial banks including making repayments in accordance with payment schedules
- Using the loans in accordance with the purposes stated in the loan agreements
- Informing and reporting annual financial results to the commercial bank. In practice, we noted that commercial banks usually requested quarterly financial statements from end-borrowers

Figure 33: Supply of Construction program financing process



The commercial banks were required to disburse the funds to end-borrowers within 3 months of receipt from the BOM. Interest rates were fixed at 7% for funding provided by the BOM to commercial banks and commercial banks could set their own rates when providing financing to the end-borrowers.

The BOM transacted the disbursement of funds by placing money onto the current account of the relevant commercial bank held with the BOM.

The end-borrower credit risk was borne by the commercial banks, while the BOM bore the credit risk of the commercial banks, i.e. in case a commercial bank would have insufficient funds to repay the BOM or in case a commercial bank went into bankruptcy. Security for the BOM for repayment by a commercial bank was the current account of the commercial bank held at the BOM. Should a commercial bank not repay the funds to the BOM, the BOM would be able to transfer the amount of money from the commercial bank's current account.

Commercial banks should make the repayments to the BOM regardless of whether they receive the loan repayments from the end-borrowers. The commercial banks were responsible for assessing the credit risk of the end-borrowers.

4.2.2 Volume of financing disbursed

MNT 534,500 million of funds were disbursed during 2013.

Figure 34: Funds disbursed, Supply of Construction program

Bank	Agreement dates	Period months	Volumes disbursed
(in MNT million)			
Capital Bank	25/12/2013	18	15,000
CKB	05/06/2013	18	15,000
Golomt Bank	13/05/2013	18	80,000
Golomt Bank	25/12/2013	18	30,000
Khan Bank	13/05/2013	18	80,000
Khas Bank	16/05/2013	18	40,000
NIB	21/08/2013	18	9,500
State Bank	24/12/2013	18	20,000
TDB	13/05/2013	18	80,000
TDB	20/12/2013	18	30,000
UBCB	13/05/2013	18	60,000
UBCB	08/07/2013	18	30,000
UBCB	30/07/2013	18	35,000
UBCB	20/12/2013	18	10,000
Total			**534,500**

Source: BOM's data.

4.2.3 Repayments

All the disbursed funds were repaid by the commercial banks to the BOM before the end of 2015.

4.2.4 Outstanding balances due to BOM

Figure 35: Outstanding loan principal under the Supply of Construction program

	Outstanding principal		
Bank	**31 Dec 2013**	**31 Dec 2014**	**31 Dec 2015**
(in MNT million)			
Capital Bank	15,000	15,000	-
CKB	15,000	-	-
Golomt Bank	110,000	30,000	-
Khan Bank	80,000	-	-
Khas Bank	40,000	-	-
NIB	9,500	9,500	-
State Bank	20,000	15,700	-
TDB	110,000	30,000	-
UBCB	135,000	75,000	-
Total	**534,500**	**175,200**	**-**

Source: BOM's data.

4.3 Retail Mortgage program

The Retail Mortgage program is one of the sub-programs under the Price Stabilization program. It was approved on 9 January 2013 under a joint resolution, number #A2/06, between the Ministry of Construction and Urban Development and the BOM.

Purpose

The objective of this sub-program as stated in joint resolution #A2/06 between the Ministry of Construction and Urban Development and the BOM, was "to support housing supply and the real economic sector activity, increase the savings of the middle class and create a strong foundation for a long term sustainable mortgage system". The GOM and the BOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized mortgage loans to individuals, and for portfolios of mortgage loans in the program to be subsequently purchased by SPVs of a newly established entity, Mongolian Mortgage Corporation (MIK).

Conditions and terms for mortgages to be part of the subsidized program, were established by the BOM.

4.3.1 Main parties and their roles

We identified the following roles for each of the main parties in this program.

<u>BOM:</u>

— Establishing fund for individual mortgage loans
— Provision of finance to end-borrowers (individuals) through the commercial banks based on criteria set up by the BOM
— Approval of commercial banks to implement the program by assessing their requests
— Monitoring contracts with the commercial banks through monthly funding reports
— Setting of monthly limits for disbursement amounts

- Monitoring the purpose, utilization, and repayments of funding issued to commercial banks and implementation process of loans granted to individuals by commercial banks
- Setting interest rates for the funding from the BOM to the commercial banks and from the commercial banks to the end-borrowers
- Jointly with the Ministry of Construction and Urban Development, announcing applicable interest rates for end-borrowers

GOM (MCUD):

- Fulfilling and implementing the program's market environment and policy/legislation actions
- Coordination and implementation of the program
- Setting applicable interest rates for end-borrowers

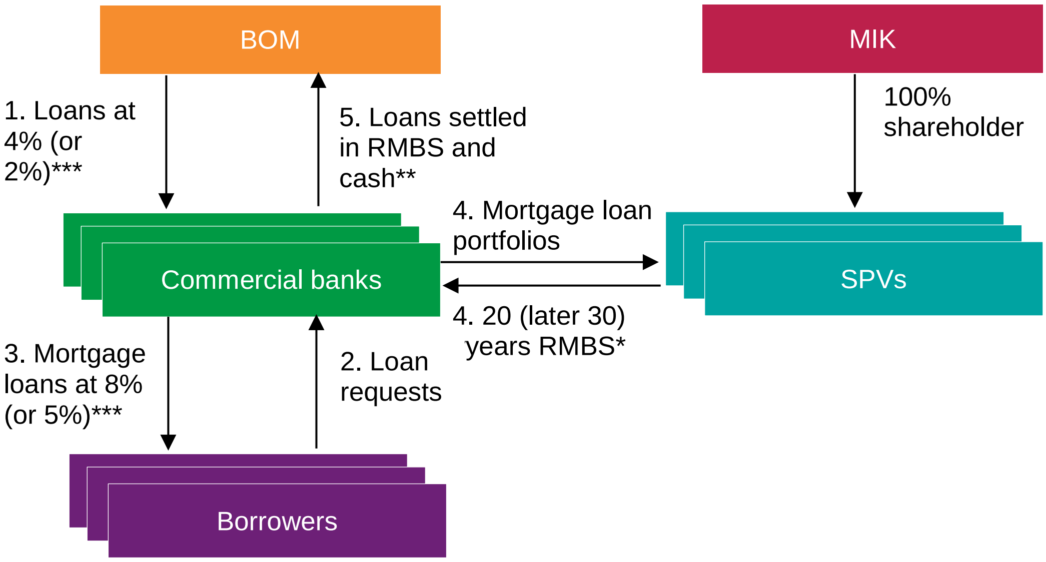
Commercial banks:

- Conducting lending surveys and issuing loans to individuals
- Signing contracts with MIK to sell mortgage portfolios and obtaining retail mortgage backed securities (RMBS) in return
- Providing mortgage loans to individuals for apartments based on the BOM set criteria and resources received from the BOM
- Settlements of funding to the BOM in senior RMBS and cash
- Facilitating mortgage related services for MIK under respective contracts and servicing the loans
- Making decisions which individuals to issue new loans and refinancing to, independently of BOM or the government
- Monitoring borrowers on a regular basis to ensure loans are used in accordance with the financing purpose

MIK:

- Creating SPVs which would securitise the mortgage portfolios
- Arranging the purchase of mortgage portfolios by SPVs from the commercial banks

Figure 36: Price Stabilization – Retail Mortgage program financing process



Notes

* Retail Mortgage Backed Securities issued by SPVs. Each tranche of the mortgage loans purchased by MIK's SPVs is purchased by a separate SPV. RMBS for each tranche consisted of Senior RMBS (90%) with 4% coupon rate and Junior RMBS (10%) with 10.5% coupon rate.

** The repayment of loans by commercial banks to the BOM consists of Senior RMBS (90%) and cash (10%). Junior RMBS remain with the commercial banks.

*** During 2016, MNT 547.2 billion was administered under the Future Pension Reserve Fund (FPRF) where loans from the FPRF to commercial banks were at 2% and 4% interest rates, and loans from commercial banks to individuals were at 5% and 8% interest rates. Financing from the BOM to the commercial banks from 2012 to 2016 was at 4% interest.

At the end of a funding round, senior tranches of RMBS are on the BOM's balance sheet, as they were used as the form of repayment of the BOM's subsidized finance, while junior RMBS are on the commercial banks' balance sheets.

The lending period from the BOM to commercial banks was between six to nine months, and from the commercial banks to individuals (subsequently in loan portfolios of the SPVs) was up to 360 months (30 years).

The BOM transacted the disbursement of funds by placing money onto the current account of the relevant commercial bank held with the BOM.

The credit risk from end-borrowers is with MIK's SPVs, which should receive mortgage repayments from individual borrowers. In case the SPVs would not be able to repay the RMBS from the mortgage repayments they receive, and in the absence of alternative funding for the SPVs, the credit risk is ultimately borne by the BOM (senior RMBS) and by the commercial banks (junior RMBS). The majority of RMBS (90%) is held by the BOM, however the first losses would be incurred by the commercial banks (10% junior RMBS), after which the BOM would incur losses.

4.3.2 Volume of financing disbursed

MNT 3,686,117 million was disbursed to the commercial banks from 2012 to 2016, of which MNT 127,508 million was funded by the FPRF, as set out below:

Figure 37: Funds disbursed, Retail Mortgage program

Bank	2013 4%	2014 4%	2015 4%	2016 FPRF 2%	2016 FPRF 4%	2016 BOM 4%	Total
(in MNT million)							
Arig Bank	12,840	-	3,300	992	11,243	113	**28,488**
Capital	51,786	36,500	19,500	-	-	-	**107,786**
Capitron	11,365	-	-	18,285	8,000	314	**37,964**
CKB	4,291	6,000	-	-	-	-	**10,291**
Golomt	408,000	287,100	120,000	37,161	94,991	52,753	**1,000,005**
Khan	407,047	79,000	179,000	46,565	77,887	24,150	**813,649**
Khas	135,722	67,200	70,500	17,046	24,497	7,792	**322,757**
NIB	3,000	900	2,500	156	1,698	219	**8,473**
State Bank / Savings	126,064	73,100	57,600	27,233	49,776	11,383	**345,156**
TDB	362,000	165,700	184,000	27,710	103,942	14,968	**858,320**
UBCB	40,863	40,400	71,000	-	-	965	**153,228**
Disbursed	**1,562,978**	**755,900**	**707,400**	**175,148**	**372,034**	**112,657**	**3,686,117**
Funded by FPRF				(127,508)			
Total BOM	**1,562,978**	**755,900**	**707,400**	**419,674**		**112,657**	**3,558,609**

Source: BOM's data.

The FPRF administered the Retail Mortgage program for part of 2016, in which time it administered funding to the commercial banks at both 2% and 4% interest rates. Funding with a 2% interest rate was intended for apartments in rural areas. The administration of the Retail Mortgage program under FPRF was transferred back to the BOM in September 2016.

Funds issued by the FPRF to the commercial banks until September 2016 were mostly financed by the BOM in a form of a loan of MNT 419,674 million, and partially by the FPRF's own funds in an amount of MNT 127,508 million which included income from repayments of previously issued mortgage loans. The part financed by the loan from the BOM falls under the scope of the QFPAs for this project.

4.3.3 Repayments

The program is still in progress, though since 2017 further rounds of financing by the BOM are limited to using funds obtained through repayments received by the BOM (rather than new funds).

Figure 38: Settlements made to the BOM, Retail Mortgage program

Bank	2014 RMBS	2014 Cash	2015 RMBS	2015 Cash	2016 RMBS	2016 Cash
(in MNT million)						
Arig Bank	8,535	948	2,386	265	1,046	116
Capital	27,550	3,061	29,715	3,302	9,063	1,007

	2014		2015		2016	
Bank	RMBS	Cash	RMBS	Cash	RMBS	Cash
Capitron	5,934	5,431	-	-	596	66
CKB	3,739	415	-	-	2,222	247
Golomt	130,961	95,165	437,833	48,648	49,246	5,472
Khan Bank	202,636	22,515	248,042	27,560	73,376	8,153
Khas Bank	60,911	15,977	105,378	11,709	36,735	4,082
NIB	1,663	705	1,604	178	790	88
State Bank / Savings	55,501	27,343	95,690	10,632	20,434	2,270
TDB	255,375	89,898	210,957	23,440	54,939	6,104
UBCB	26,313	11,226	39,969	4,441	14,779	1,642
Total	**779,118**	**272,684**	**1,171,574**	**130,175**	**263,226**	**29,247**

Source: BOM's data.

4.3.4 Outstanding balances due to BOM

Figure 39: Outstanding loan principal under the Retail Mortgage program

	31 Dec 2013	31 Dec 2014	31 Dec 2015	31 Dec 2016	
Bank	4%	4%	4%	*2%	4%
(in MNT million)					
Arig Bank	12,840	3,357	4,006	1,429	13,763
Capital Bank	51,786	57,675	44,158	5,298	28,790
Capitron	11,365	-	-	18,285	7,652
CKB	4,291	6,137	6,137	-	3,668
Golomt Bank	408,000	468,974	102,493	52,989	179,691
Khan Bank	407,047	260,896	164,294	95,565	135,802
Khas Bank	135,722	126,034	79,447	36,380	51,585
NIB	3,000	1,532	2,250	402	3,043
State Bank	126,064	116,320	67,598	48,133	85,153
TDB	362,000	182,427	132,030	44,710	172,897
UBCB	40,863	43,724	70,314	-	54,858
Total	**1,562,978**	**1,267,076**	**672,727**	**303,191**	**736,902**

Source: BOM's data.
* MNT 128 billion was transferred from the 4% to 2% interest rate category during 2016.

As well as the outstanding balances due from the commercial banks to the BOM shown above, the BOM has senior RMBS bonds owed by MIK SPVs in an amount of MNT 1,917,155 million at 31 December 2016.

The outstanding balances due to the BOM include balances financed by the FPRF in the amount of MNT 127,508 million, as the BOM took over the portfolio from the FPRF.

4.4 ASEM

The QFPA was approved on 2 June 2015 by the GOM via a Government resolution number #226.

Purpose

The objective of this QFPA as stated in resolution #226 of the GOM was "to fund construction of villas and hotels in order to organize the ASEM meeting in Mongolia". The GOM intended to achieve this by the provision of subsidized loans to commercial banks, which were collateralized by security from the Development Bank of Mongolia, in order that the commercial banks could provide subsidized loans to companies constructing villas and hotels for the upcoming ASEM meeting.

4.4.1 Main parties and their roles

We identified the following roles for each of the main parties in this QFPA.

DBM:

- Issuing bonds and granting loans to commercial banks

MOF:

- Approving the list of criteria to be met by end-borrowers so as to receive loans under the QFPA

Commercial banks:

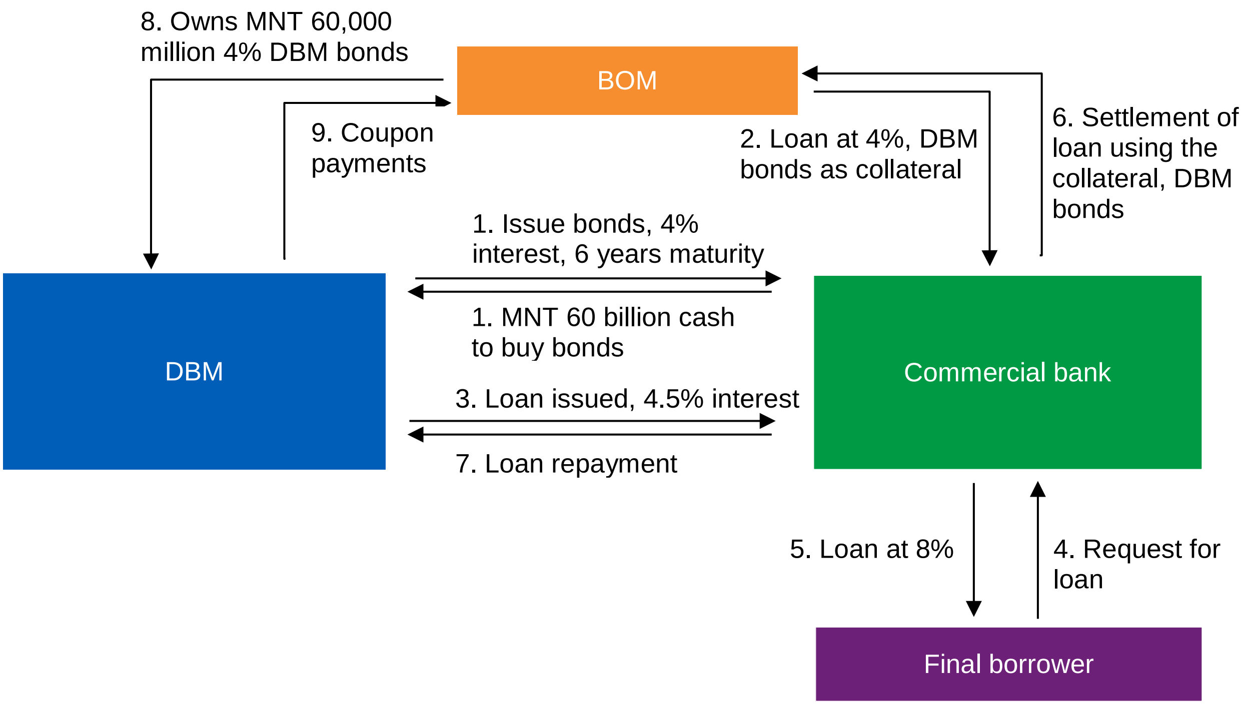
- Purchasing bonds of DBM and selling them to the BOM under REPO agreements
- Receiving loans from DBM
- Issuing financing to the final borrowers
- Reporting the status of the repayments to DBM
- Making repayments of funding to DBM
- Bearing credit risks associated with the end-borrowers
- Monitoring the borrowers on a regular basis including if the loans were utilized in accordance with the financing purpose

BOM:

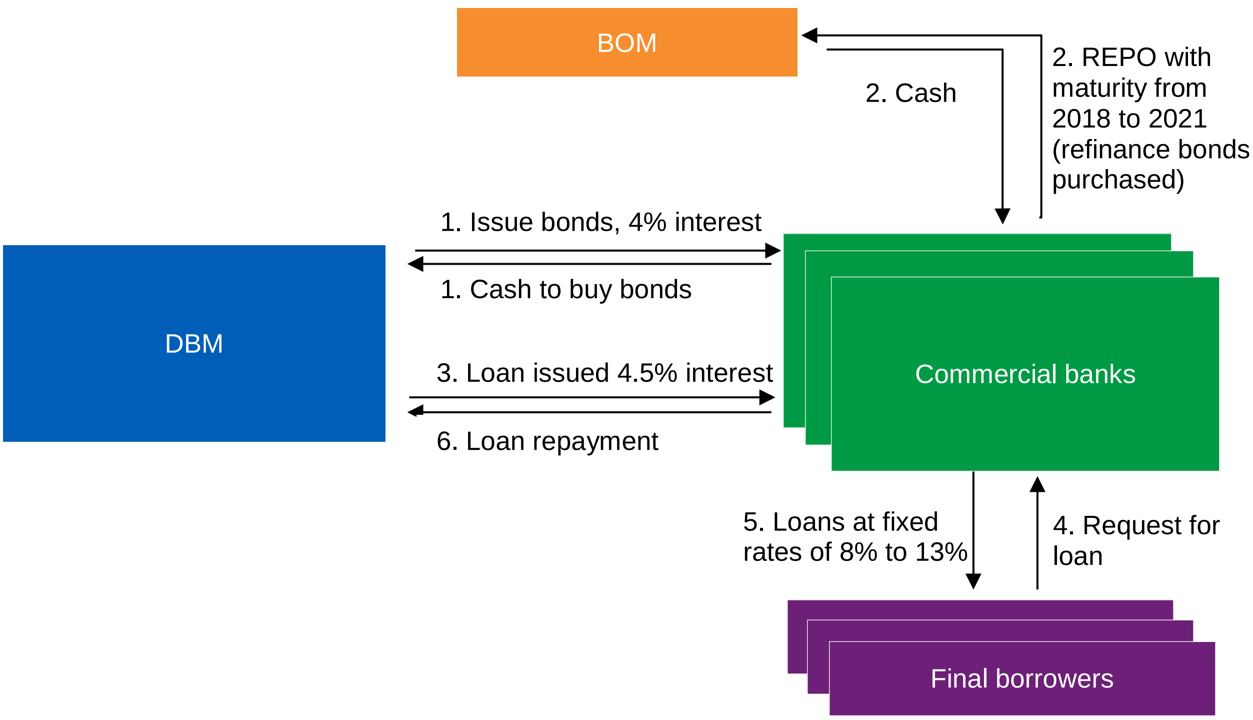
- Purchasing bonds of DBM from commercial banks and thus providing finance to the commercial banks
- Settling the finance receivable from commercial banks using the collateral (DBM bonds) or cash

Figure 40: ASEM financing process

First MNT 60 billion of financing



Further financing – MNT 65 billion for villas and MNT 108.4 billion for hotels



The BOM transacted the disbursement of funds via a loan with collateral, and via a REPO loan, by placing money onto the current account of the relevant commercial bank held with the BOM.

The end-borrower credit risk was borne by the commercial banks. In the first tranche of finance (MNT 60 billion) the BOM was exposed to the credit risk of DBM, which is a state owned entity. In the second tranche of further finance, BOM was exposed to the credit risk of the commercial banks, with security of the DBM bonds under REPO agreements i.e. in case a commercial bank would have insufficient funds to repay the BOM. Security for the BOM for repayment by a commercial bank was the DBM bonds held as collateral or under REPO agreements In both tranches of financing, therefore, the ultimate credit exposure for the BOM is to the DBM, which is a fully state owned entity.

Commercial banks should make the repayments of the REPO loan to the BOM regardless of whether they receive the loan repayments from the end-borrowers. The commercial banks were responsible for assessing the credit risk of the end-borrowers.

4.4.2 Volume of financing distributed

The volumes disbursed totaled MNT 233,425 million, as follows:

— MNT 60,000 million: first tranche in September 2015

— MNT 173,425 million: further financing of hotels and villas construction in 2016

Figure 41: Funds disbursed, ASEM QFPA – ASEM villas

Bank name	Agreement date	Maturity date	Interest rate	Volumes disbursed 2015	Volumes disbursed 2016
(in MNT million)					
TDB	25/09/2015	23/09/2021	4.00%	60,000	-
TDB	23/03/2016	14/12/2021	7.50%	-	10,000
TDB	25/02/2016	23/11/2021	7.50%	-	20,000
TDB	03/03/2016	29/11/2021	7.50%	-	20,000
TDB	08/02/2016	06/10/2021	7.50%	-	15,000
Total				**60,000**	**65,000**

Source: BOM's data.

Figure 42: Funds disbursed, ASEM QFPA – ASEM hotels

Bank name	Agreement date	Maturity date	Interest rate	Volumes disbursed 2016
(in MNT million)				
Golomt Bank	23/02/2016	21/09/2018	7.50%	22,000
Khan Bank	09/05/2016	29/01/2019	7.50%	2,429
State Bank	09/05/2016	06/02/2019	7.50%	6,500
State Bank	10/05/2016	07/02/2019	7.50%	1,216
TDB	08/02/2016	21/09/2018	7.50%	64,960
UBCB	26/02/2016	23/11/2018	7.50%	11,320
Total				**108,425**

Source: BOM's data.

4.4.3 Repayments

Under the first tranche (MNT 60,000 billion), the DBM bonds are still held by the BOM as they have not yet matured. For the second tranche, the full amount disbursed is owed to the BOM by the commercial banks at 31 July 2018 (under REPO agreements using DBM bonds).

4.4.4 Outstanding balances due to BOM

Figure 43: Outstanding loan principal due to BOM under the ASEM QFPA

Bank	Construction purpose	Outstanding principal 31 Dec 2015	31 Dec 2016
(in MNT million)			
DBM	ASEM villas	60,000	60,000
Golomt Bank	ASEM hotels	-	22,000
Khan Bank	ASEM hotels	-	2,429
State Bank	ASEM hotels	-	7,716
TDB	ASEM villas		65,000
TDB	ASEM hotels	-	64,960
UBCB	ASEM hotels	-	11,320
Total		**60,000**	**233,425**

Source: BOM's data.

4.5 Cashmere program

The program was approved on 21 March 2014 by the GOM via a Government resolution number #87.

Purpose

The objective of this program as stated in resolution #87 of the GOM was "to finance the cashmere producers with low rate finance in order to introduce and distribute washed and brushed Mongolian cashmere to international markets". The GOM intended to achieve this by the BOM providing subsidized loans to commercial banks in order the commercial banks could provide subsidized loans to cashmere manufacturing companies. Under this program, the cashmere manufacturing companies were able to obtain subsidized working capital loans from the commercial banks by pledging their inventory raw materials.

4.5.1 Main parties and Roles

We identified the following roles for each of the main parties in this program.

<u>MOF</u>

— Guaranteeing to the BOM 50% of the funding provided by the BOM to commercial banks, up to a maximum total of MNT 100,000 million

<u>BOM:</u>

— Provision of finance to end-borrowers (companies) through the commercial banks based on companies approved by the Ministry of Food and Agriculture
— Approval of commercial banks to implement the program by assessing their requests and monitoring contracts with banks by receiving and analysing monthly funding reports

— Setting applicable interest rates for funds from the BOM to the commercial banks and for commercial banks to the end-borrowers

Ministry of Food and Agriculture:

— Reporting activities implemented by the GOM related to the program on a monthly basis
— Setting standards for the quality of produced goods
— Assessment of submitted applications and selection of entities based on the criteria set out in the cashmere program
— Coordination and implementation of the program
— Monitoring program implementation through government agencies

Commercial banks:

Commercial banks could decide not to participate in the sub-program, and in this case the companies could choose to apply to other commercial banks.

— Lending money to the approved companies using resources received from the BOM with warehouse products and other assets accepted as collateral
— Reporting the repayment process to the BOM
— Bearing the credit risk associated with the end-borrowers
— Monitoring borrowers on a regular basis to ensure the loans were utilized in accordance with the financing purpose

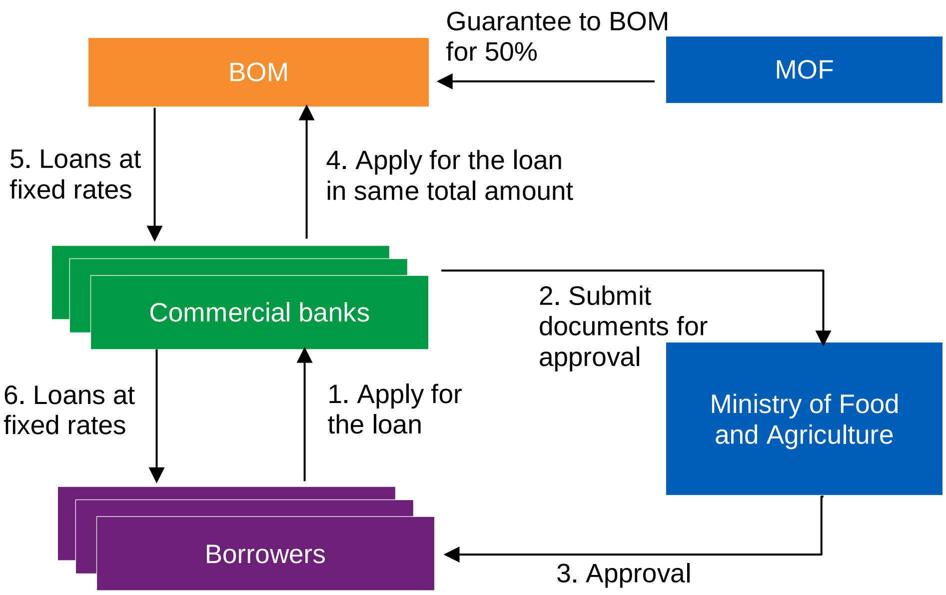
Companies:

— Fulfilling obligations under loan agreements made with commercial banks by making repayments in accordance with the payment schedules
— Using the loan in accordance with its purpose stated in the loan agreement
— Informing and reporting annual financial results to commercial bank. We noted that in practice, commercial banks usually requested quarterly financial statements from end-borrowers

Agriculture Commodity Exchange / broker

— Purchasing raw materials and transporting to the manufacturers’ warehouses (selling raw materials to manufacturers at fixed rate).

Figure 44: Cashmere program financing process



The BOM approved a commercial bank's participation in the QFPA. The BOM transacted the disbursement of funds by placing money onto the current account of the relevant commercial bank held with the BOM.

Interest rates for the commercial banks and the end-borrowers were determined by the BOM, with a 3% margin provided for the commercial banks.

The end-borrower credit risk was borne by the commercial banks, while the BOM bore 50% of the credit risk of the commercial banks, i.e. in case a commercial bank would have insufficient funds to repay the BOM, while 50% of this credit risk was borne by the MOF up to a maximum of MNT 100,000 million. Security for the BOM for repayment by a commercial bank was the current account of the commercial bank held at the BOM plus the 50% guarantee from the MOF.

Commercial banks should make the repayments to the BOM regardless of whether they received the loan repayments from the end-borrowers. The commercial banks were responsible for assessing the credit risk of the end-borrowers.

4.5.2 Volume of financing disbursed

MNT 29,700 million of funds was disbursed under the program during 2014.

Figure 45: Funds disbursed, Cashmere program

Bank	Agreement date	Period (months)	Volumes disbursed 2014
(in MNT million)			
Golomt Bank	22/04/2014	8	1,267
Khan Bank	22/04/2014	8	600
TDB	22/04/2014	8	19,590
UBCB	26/05/2014	10	8,243
Total			**29,700**

Source: BOM's data.

4.5.3 Repayments

The loans were fully repaid to the BOM by the commercial banks by the end of March 2015.

4.5.4 Outstanding balances due to BOM

Figure 46: Outstanding loan principal under the Cashmere program

Bank	Outstanding principal 31 Dec 2014	Outstanding principal 31 Dec 2015
(in MNT million)		
Golomt Bank	-	-
Khan Bank	-	-
TDB	-	-
UBCB	6,243	-
Total	**6,243**	**-**

Source: BOM's data.

4.6 DBM Promissory Note

The QFPA was approved on 16 August 2013 by the GOM via a government resolution number #299.

Purpose

The objective of this activity as stated in resolution #299 of the GOM was "to finance purchase of a 239 km road from Ukhaa Khudag to Gashuun Sukhait and the Gashuun Sukhait ports infrastructure by Erdenes Mongol LLC". The GOM and BOM intended to achieve this by the BOM providing a subsidized loan to Erdenes Mongol LLC through a commercial bank.

4.6.1 Main parties and Roles

We identified the following roles for each of the main parties in this QFPA.

<u>DBM:</u>

— Issuing a promissory note to Erdenes Mongol LLC on 12 February 2014, with maturity date 14 February 2015

Erdenes Mongol LLC:

- Purchasing the DBM promissory note upon issuance by DBM and selling it to the commercial bank in order to obtain funding at a rate of 4%

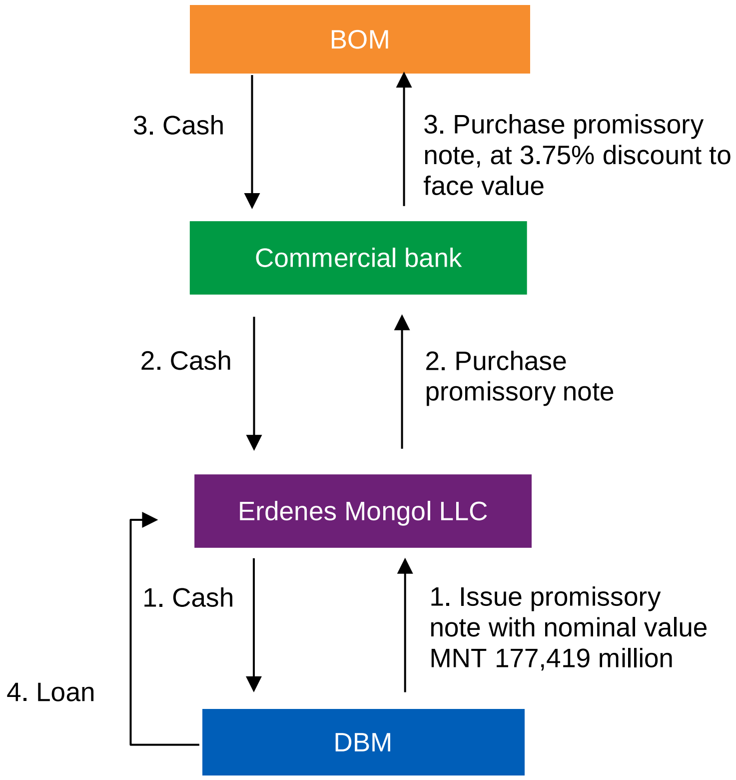
Commercial bank:

- Purchasing the DBM promissory note from Erdenes Mongol LLC on 12 February 2014 and selling it to the BOM

BOM:

- Purchasing the promissory note from the commercial bank on 12 February 2014

Figure 47: DBM Promissory Notes financing process



Erdenes Mongol LLC, DBM and BOM are all 100% state owned entities. Following the transactions, BOM had a receivable in the form of a promissory note due from DBM, which was subsequently settled by DBM.

4.6.2 Volume of financing disbursed

MNT 171,007 million of funds was disbursed by the BOM during 2014 through the above process.

4.6.3 Repayments

The promissory note was fully settled in June 2015 by DBM to the BOM in the form of GOM bonds. Erdenes Mongol LLC did not yet repay its liability to DBM.

4.6.4 Outstanding balances due to BOM

The outstanding balance as at 31 December 2014 was MNT 176,636 million which was subsequently settled in 2015.

4.7 Good program

The “Good program” comprised four sub-programs:

- Good Share sub-program
- Good Herder sub-program
- Good Student sub-program
- Good Fence sub-program.

The Good Fence sub-program was not yet financed.

The general financing principle for the Good program was that the GOM issued bonds which were used as financing instruments to enable the BOM to provide cash to the commercial banks in exchange for ownership of the government bonds.

4.7.1 Good Share sub-program

The sub-program was approved on 16 June 2016 by the GOM via a Government resolution number #334.

Purpose

The objective of this program as stated in resolution #334 of the GOM was “to purchase up to 30% of 1,072 shares of Erdenes Tavan Tolgoi JSC (ETT) owned by each Mongolian citizen at a fixed price of up to MNT 300,426”. 30% of the 1,072 shares previously distributed to each citizen was available for citizens to sell for MNT 300,426. The GOM intended to achieve this by purchasing the ETT shares from Mongolian citizens through the commercial banks with finance from the BOM.

4.7.1.1 Main parties and Roles

We identified the following roles for each of the main parties in this sub-program.

MOF:

- Issuing government bonds and purchasing shares from citizens via commercial banks

Commercial banks:

- Selling low interest government bonds to the BOM
- Receiving applications from citizens for the purchase, and acting as an intermediary between the GOM and citizens for the purchase of ETT’s shares

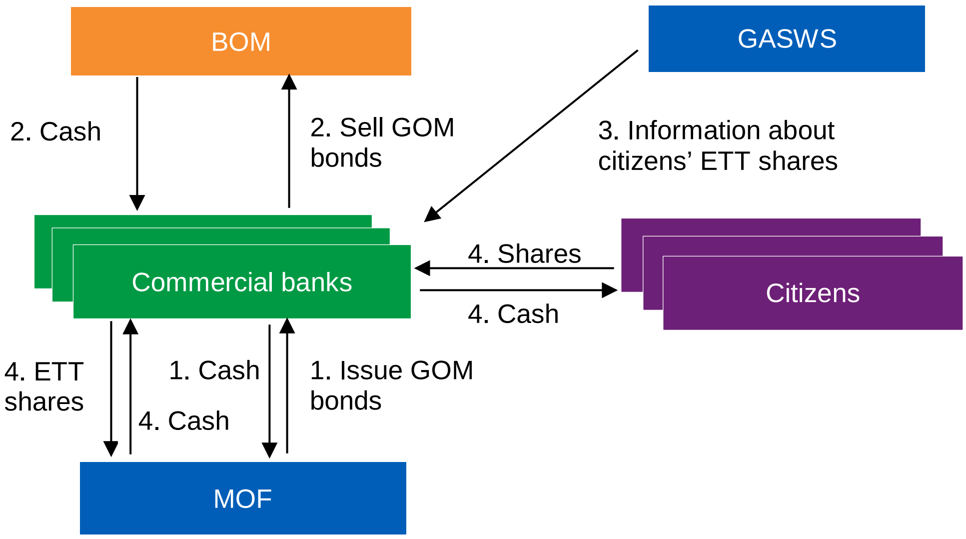
BOM:

- Purchasing the GOM bonds from commercial banks

The General Agency for Social Welfare and Services (GASWS):

- Providing information to commercial banks about ETT shares owned by the citizens

Figure 48: Good Share sub-program financing process



Under this Good share sub-program, the BOM purchased GOM bonds of MNT 374 billion, with 1% interest rate and a 15 years maturity. After the financing process:

- the BOM holds government bonds and its credit exposure is to the government
- the MOF owns ETT shares sold by the citizens and has a liability to the BOM for the government bonds it issued
- the commercial banks have acted as intermediaries and should not have a remaining balance sheet position.

4.7.1.2 Volume of financing disbursed

Figure 49: Funds disbursed under the Good Share sub-program

Bank	Agreement date	Volumes disbursed 2016
(in MNT million)		
Khan Bank	17/06/2016	73,000
Khan Bank	24/06/2016	75,000
Khan Bank	05/07/2016	76,000
State Bank	17/06/2016	50,000
State Bank	24/06/2016	50,000
State Bank	05/07/2016	50,000
Total		**374,000**

Source: BOM's data.

4.7.1.3 Repayments

The maturity date of the government bonds is in 2031 (180 months).

4.7.2 Good Herder sub-program

The sub-program was approved on 22 February 2016 by the GOM via a Government resolution number #155.

Purpose

The objective of this program as stated in resolution #155 of the GOM was "to improve the income and livelihoods of herders and farmers". The GOM intended to achieve this by allowing herders and farmers to apply for subsidized loans from the commercial banks, financed by the BOM on the basis of government bonds issued by the MOF.

4.7.2.1 Main parties and Roles

We identified the following roles for each of the main parties in this sub-program.

MOF:

- Issuing government bonds to commercial banks
- Approving the list of criteria to be met by end-borrowers under the program

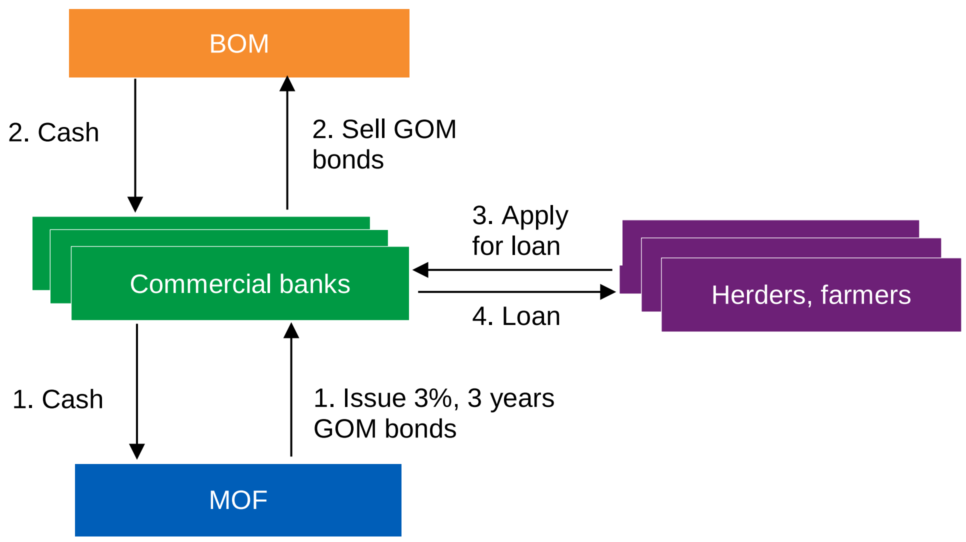
Commercial banks:

- Selling low interest government bonds to the BOM
- Receiving loan applications from herders and farmers, providing loans to them if they meet the criteria

BOM:

- Purchasing the GOM bonds from commercial banks

Figure 50: Good Herder sub-program financing process



Under the Good Herder sub-program, the BOM purchased from commercial banks government bonds in the value of MNT 120 billion, with 3% interest rate and 3 years maturity. Following the financing process:

- the BOM held government bonds with 3% coupon interest and a 3 year maturity, and its credit exposure is to the government

— the MOF had a liability to the BOM for the government bonds it issued

— the commercial banks had loan receivables from herders and farmers, and bore the end-borrower credit risk.

4.7.2.2 Volume of financing disbursed

Figure 51: Funds disbursed under the Good Herder sub-program

Bank	Bond sale agreement date	Volumes disbursed 2016
(in MNT million)		
Khan Bank	20/05/2016	30,000
State Bank	14/03/2016	30,000
State Bank	20/04/2016	30,000
State Bank	18/05/2016	30,000
Total		**120,000**

Source: BOM's data.

4.7.2.3 Repayments

The Good program was terminated by GOM Resolution #33 dated 10 August 2016. Under this resolution, the MOF purchased back the four GOM bonds held by the BOM for cash of MNT 10,900 million and an exchange for the following two bonds:

Figure 52: Settlement in bonds under the Good Herder sub-program

Agreement date	Maturity dates	Interest rate	Bond price
(in MNT million)			
31/08/2016	30/09/2016 to 31/08/2018	3%	26,587
31/08/2016	30/09/2016 to 31/01/2018	3%	82,555
Total			**109,142**

Source: BOM's data.

4.7.3 Good Student sub-program

The sub-program was approved on 25 April 2016 by the GOM via a Government resolution number #229.

Purpose

The objective of this program as stated in resolution number #229 of the GOM was "to improve the support to the individuals who are studying at the universities, and to increase their competitiveness and learning opportunities". The GOM intended to achieve this by the GOM and the BOM providing subsidized loans to citizens through commercial banks.

4.7.3.1 Main parties and Roles

We identified the following roles for each of the main parties in this program.

GOM via MOF:

— Issuing bonds to commercial banks

— Approving the set of criteria to be met by end-borrowers under the program

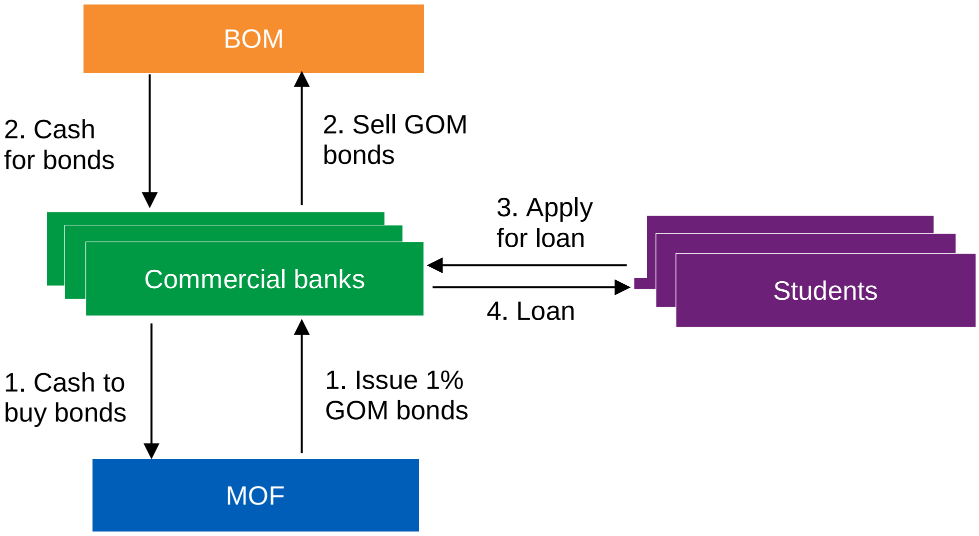
Commercial banks:

- Selling low interest government bonds to the BOM
- Receiving applications from students, and providing loans to students if they meet the criteria

BOM:

- Purchasing the GOM bonds from commercial banks

Figure 53: Good Student sub-program financing process



Under the Good Student sub-program, the BOM purchased GOM bonds in value MNT 8 billion, with 1% interest rate and a 1 to 1.5 years maturity.

The end-borrower credit risks are borne by the commercial banks.

4.7.3.2 Volume of financing disbursed

Figure 54: Funds disbursed under the Good Student sub-program

Bank	Bond sale agreement date	Volumes disbursed 2016
(in MNT million)		
Golomt Bank	19/05/2016	1,000
Golomt Bank	19/05/2016	1,000
Golomt Bank	19/05/2016	1,000
Khan Bank	18/05/2016	1,000
Khan Bank	18/05/2016	1,000
Khan Bank	18/05/2016	1,000
State Bank	16/06/2016	1,000
State Bank	16/06/2016	1,000
Total		**8,000**

Source: BOM's data.

4.7.3.3 Repayments

The Good program was terminated by a GOM Resolution #33 dated 10 August 2016. Under this resolution, the MOF purchased back GOM bonds held by the BOM in cash of MNT 8,000 million.

4.8 Loans to DIC

This QFPA was approved on 31 July 2013 by the Ministry of Finance via an official letter number 7-1/4312.

Purpose

The objective of this activity as stated in the MOF's letter was to provide financial support to DIC so that DIC could pay the difference between the assets and liabilities of Savings Bank in amount of MNT 120 billion, which was insolvent and merged with State Bank in 2013, and to increase the capital of State Bank by MNT 85 billion. The MOF intended to achieve these outcomes by the BOM providing a subsidized loan to DIC.

4.8.1 Main parties and Roles

We identified the following roles for each of the main parties in this QFPA.

DIC:

- Repayment of the difference between assets and liabilities of Savings Bank LLC
- Receiving loans from the BOM
- Injecting equity into State Bank before the merger

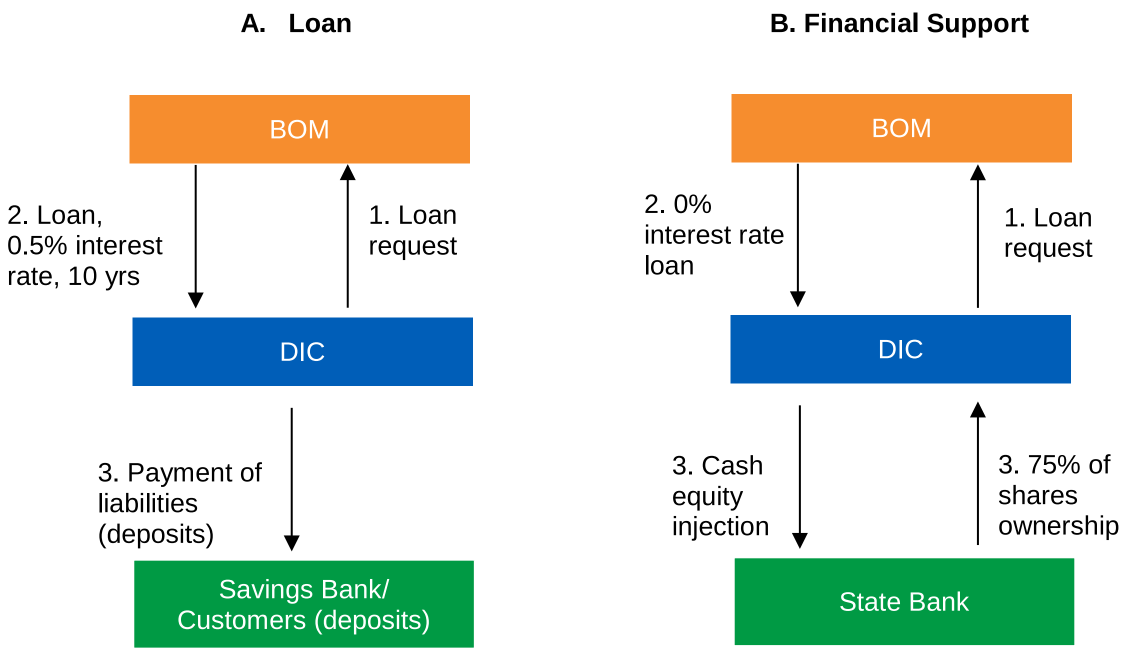
BOM:

- Providing low interest loans to DIC

State Bank:

- Merging with Savings Bank which was insolvent; both banks were owned by the GOM at the merger date

Figure 55: Loans to DIC financing process



The main features of the above arrangements were as follows:

<u>A. Loan</u>

- Loan amount: MNT 119,900 million
- Interest rate: 0.5% interest rate
- Issued date: 30 September 2013
- Maturity date: 30 September 2023

The BOM received as collateral for its loan to DIC the future income generated from assets repaid to Savings Bank, other income of DIC, and any profit from a future privatization of State Bank.

The source of repayment of DIC's loan from the BOM is intended to be income from a sale of shares under a future privatization of State Bank. By the date of this report, this privatization did not yet take place.

<u>B. Financial support</u>

- Loan amount: MNT 85,000 million
- Use of loan: DIC received shares for a capital contribution into State Bank with this loan
- Interest rate: 0%
- Issued date: 30 September 2013
- Maturity date: 25 December 2014 if privatized before this date, or upon privatization if subsequent to this date

The source of repayment of DIC's loan from the BOM is a share of income from a future privatization of State Bank. By the date of this report, this privatization did not yet take place.

4.8.2 Volume of financing disbursed

MNT 204,900 million of funds was disbursed by the BOM to DIC in 2013.

4.8.3 Repayments

No repayment was yet received for the Financial Support (part B). From the Loan (part A), the following were repaid:

- MNT 5,700 million was repaid by DIC in 2016.
- MNT 5,500 million was repaid by DIC in 2017.

4.8.4 Outstanding balances due to BOM

Figure 56: Outstanding loan principal under DIC QFPA, comprising both Loans and Financial Support

Date	Outstanding balance
(in MNT million)	
31 Dec 2012	-
31 Dec 2013	204,900
31 Dec 2014	204,900
31 Dec 2015	204,900
31 Dec 2016	199,200
31 Dec 2017	193,700

Source: BOM's data.

4.9 Troubled Asset Relief Program (TARP)

The program was approved on 13 November 2014 by the Parliament via a Parliament resolution number #69.

Purpose

The objective of this program as stated in Parliament resolution #69 was "to increase economic activity by preventing the arising of credit risk and systemic instability specifically in the banking sector". The GOM intended to achieve this by the BOM providing subsidized loans to large corporates approved by the BOM through the commercial banks.

4.9.1 Main parties and Roles

We identified the following roles for each of the main parties in this program.

BOM:

— Assessing loan requests received from commercial bank on behalf of the companies
— Approving and granting the loans to companies via the commercial banks

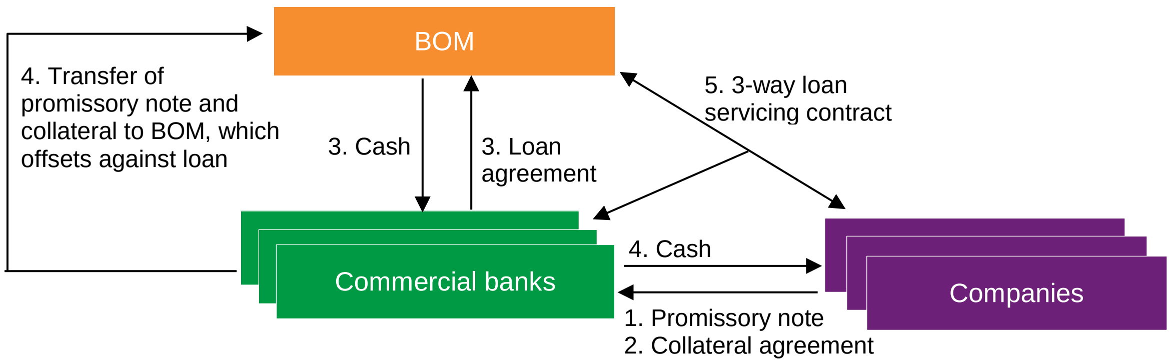
Commercial banks:

— Assessing management plans and requests for funding from companies and selecting end-borrowers under the criteria set out in the TARP program
— Transferring to the BOM repayments made by end-borrowers to the commercial banks
— Entering to three-way agreement with the BOM and the companies

Companies:

- Entered into three-way agreement with the BOM and the relevant commercial bank
- Fulfilling obligations under the loan agreements
- Making repayments in accordance with loan repayment schedules
- Using the loans for the purposes stated in the loan agreements

Figure 57: Loans to TARP financing process



Companies pledged a portion of their own shares, and in the case of one company also equipment, as collateral under the loan agreements with the BOM and commercial banks.

Interest rates, loan periods, repayment schedules, purpose of the loans, and collateral for each loan were agreed individually with each end-borrower, i.e. the companies.

For most of the loans under TARP, three-way contracts between the BOM, a commercial bank and the end-borrower (a company) were signed. In these cases, the commercial banks effectively acted as intermediaries, and after step 4 above, the BOM recorded the loan receivable from the end-borrower. As a result, the BOM holds the end-borrower credit risk.

In one case, for the purpose of refinancing loans made by a commercial bank to two corporations, a loan agreement was signed between the BOM and the commercial bank. For these loans, the commercial bank is the borrower from the BOM under TARP, and in turn bears the credit risk to the two corporations.

The BOM monitors that companies use the loans for their intended purposes, and that these borrowers submit regular reports to the BOM.

4.9.2 Volume of financing disbursed

Under TARP, six companies received financing in a total amount of MNT 815,000 million.

Figure 58: Funds disbursed, TARP

	Period	Volumes disbursed		
Borrower	**months**	**2014**	**2016**	**Total**
(in MNT million)				
Company 1	72	150,000	-	**150,000**
Company 2	72	100,000	-	**100,000**

Borrower	Period months	Volumes disbursed 2014	2016	Total
Company 3	60	-	80,000	**80,000**
Company 4	60	-	160,000	**160,000**
Company 5	60	-	125,000	**125,000**
Company 6 (two agreements)	60	100,000	100,000	**200,000**
Total		**350,000**	**465,000**	**815,000**

Source: BOM's data.

4.9.3 Repayments

Repayments are made by the end-borrowers to the commercial banks rather than directly to BOM, and commercial banks pass the money to BOM.

As at 31 July 2018, two companies have made principal repayments as shown in the table below. For the remaining financing, only interest is being paid, which is in accordance with the repayment schedules.

Figure 59: Funds repaid, TARP

End-borrower	Volumes repaid 2017	2018	Total
(in MNT million)			
Company 3	**-**	5,000	**5,000**
Company 6	12,500	12,500	**25,000**
Total	**12,500**	**17,500**	**30,000**

Source: BOM's data.

4.9.4 Outstanding balances due to BOM

Figure 60: Outstanding loan principal under TARP

End-borrower	Outstanding principal 31 Dec 2014	31 Dec 2015	31 Dec 2016
(in MNT million)			
Company 1	150,000	150,000	150,000
Company 2	100,000	100,000	100,000
Company 3	-	-	80,000
Company 4	-	-	160,000
Company 5	-	-	125,000
Company 6	100,000	100,000	200,000
Total	**350,000**	**350,000**	**815,000**

Source: BOM's data.

5 Processes and controls at BOM over QFPA

As part of the analysis of QFPAs of the BOM, we have analysed internal processes and key controls at the BOM starting from initiation of QFPAs and finishing with review and monitoring of the loan performance. The purpose of this work was to review the overall control environment over QFPAs in line with best practices, identify areas for improvement and provide recommendations to the BOM.

5.1 Identification and testing of controls at BOM

5.1.1 Processes and controls examined

To identify key processes and controls, we examined documentation and held interviews with the BOM management including the personnel below at the following departments:

- Boldbaatar D., Senior at Monetary Policy Department (previously Head of Monetary Policy Department)
- Erdenebayar G., Senior at Legal Department (previously Head of Legal Department)
- Batsaikhan N., Head of Supervision Department (previously Head of Risk Management Department)
- Ganbat D., Senior of Supervision Department (previously Head of Supervision Department)

Based on these steps, we sought to identify key processes and controls in the following areas:

- Initiation of QFPAs
- Assessment of borrowers
- Disbursement of funds
- Monitoring the loans, including targeted use, repayments and financial position of the borrowers

5.1.2 Tests of effectiveness of controls

Due to limited availability of information about the operation of processes and controls during 2012 to 2016, including documented evidence over the performance of controls, and that some program managers and other personnel responsible for the QFPAs were not available, we were not able to test the effectiveness of internal controls for the majority of key controls identified/ expected.

We tested a key control over disbursement of funds by the accounting department, which involved accounting personnel confirming that authorizations were in place for the transaction, including a signed approval document and supporting contract and resolution, before transferring funds to a commercial bank. No issues were identified in the operation of this internal control.

5.2 Findings

5.2.1 Overview

For the majority of QFPAs, the BOM does not have direct credit exposure to the end-borrowers. The BOM sees its role as an administrator and financing party of the activities, with responsibility largely limited to providing funds, while key decisions, including end-borrower approvals, lie with the relevant ministries, and for most QFPAs the credit exposure to end-borrowers is with the commercial banks.

While the BOM is the provider of funds, and for most activities it is not significantly exposed to the end-borrowers (except for TARP), its participation in QFPAs exposes the BOM to direct credit risk from the commercial banks, and indirect credit risks from end-borrowers. It also impacts the operations of the commercial banks, as well as creates implications for the wider economy. The BOM has responsibilities in relation to these areas in its role as the financial regulator, in overseeing the financial system and in its role in monetary policy.

Therefore, in performing its role within the QFPAs, the BOM should have appropriate processes, checks and controls to address these risks, taking into account also implications for the BOM's role as the financial regulator and in monetary policy. This is particularly acute for the major, long term programs such as the Retail Mortgage program given its impact on the total economy, on the commercial banks' operations, and the BOM's 20 to 30 years credit exposure to SPVs owned by MIK.

Additionally, there has been an occasion of default by a commercial bank to the BOM under a QFPA in 2016, and a bank became insolvent in 2013 and was unable to repay the BOM without further state financial support. These indicate some of the potential risks to the BOM from the QFPAs.

We identified there are limited established processes and controls for the funding of QFPAs and lending to the commercial banks under these activities. In our examination of documentation and our interviews, there were weaknesses identified in the internal controls especially over initiation of QFPAs, assessment of borrowers (commercial banks), and monitoring. Some weaknesses related to a lack of documentation evidencing if controls were performed, while other weaknesses related to whether key controls were in place during the period 2012 to 2016.

Overall, the strength of policies, processes and internal controls at the BOM over the QFPA is sub-optimal relative to the risks which the BOM takes, the high volumes of financing it provides, and its overall roles and responsibilities.

5.2.2 Recommendations

At the initiation and approval stage, we recommend to perform a comprehensive assessment of the advantages and disadvantages of funding the QFPA, before deciding if to proceed. This assessment should include calculations of how the measures will affect the BOM and the economy, covering short term and long term impacts, how much will directly and indirectly come back to the State Budget, and the risks and potential exposures that the BOM will undertake in providing funds. We also recommend that the assessment be reviewed by a panel of independent, objective experts who should help formulate recommendations based on the analysis and will advise on the decision if to approve funding the QFPA.

To improve the quality of QFPA administration, reduce the BOM's exposure to risk, and maximize the QFPA's intended effects, we recommend the BOM to exercise more control over commercial banks' execution of their credit processes, and to assess more rigorously the potential impacts of a QPFA on each commercial bank, as well as on the BOM's associated exposure to that bank, before approving a commercial bank to be included in the QFPA.

In relation to exposure to the commercial banks and their credit activities, and appropriate target use of funds, in particular we recommend:

- A commercial bank certification by the BOM (including, at minimum, a maturity assessment of the risk management and credit systems) before including the commercial bank into the GOM QFPA (primarily maturity of risk management and quality of credit process). The BOM may apply a selective approach in nominating banks to different programs, as not all banks show equal efficiency, and their efficiency also varies between each QFPA.
- Greater control over the recipient selection, target use, monitoring, and statistic data collection
- Implementing more precise regulations and requirements for commercial banks under the QFPAs in terms of risk management involvement, segregation of responsibilities within the credit process, and similar areas
- Collecting data on all credit events from commercial banks

Recommendations in relation to further specific areas are set out below.

Area	QFPA	Deviation from best practice	Recommendations
All	All	We noted a lack of readily available documented evidence with support for key decisions and approvals.	To maintain documentation which evidences the performance of the controls and support to key decisions.
Initiation of QFPA	All	Formally written internal procedures and policies were not developed for initiating each QFPA.	To develop written policies and procedures covering initiation, review and approval for each QFPA. Roles and responsibilities of each person participating in the review and approval process should be listed. This would minimize the risk of override of controls and formalize the entire process.
Initiation of QFPA	All	When approving a QFPA and/or banks, the BOM uses a formal "Introductory document" which is signed by persons who approved the decision (heads of departments). However, there is no further information documented about reviews and checks these approvers performed, discussions of pros and cons of the QFPA, minutes of meetings, and similar.	To develop checklists for each review where the reviewer marks what he reviews and adds comments. The checklists would remind the reviewer which items should be checked, as well as improve documentation of the control. Document minutes of meetings where a QFPA or bank is discussed, and document assessments of the pros and cons of the

Area	QFPA	Deviation from best practice	Recommendations
			activities and bank being approved.
Initiation of QFPA	Price Stabilization - Fuel; DBM Promissory Note; Supply of Construction	We were provided with “Introductory documents” for the majority of QFPAs. However, for these three QFPAs/ sub-programs the signed “Introductory documents” were not available, or it required an extended time period to find them as they were not in the appropriate files.	To ensure documentation is appropriately maintained and available in the respective files (it may be securely archived) which supports internal processes and controls, especially approvals and decisions over the initiation of each activity.
Initiation of QFPA	Supply of Construction	When initiating QFPAs, interest rates were established by the BOM, except for DIC and Good program. We were provided with the respective BOM resolutions, except for Supply of Construction. Also, resolutions from two other QFPAs took an extended period of time to identify and were not maintained in the respective QFPA files.	
Assessment of borrowers	All	The BOM should approve a commercial bank’s participation in QFPAs. We were informed the program managers identify if a commercial bank meets the regulatory ratios before funds are disbursed. However, evidence of such review or other assessment of a commercial bank prior to its approval in the QFPA, or prior to disbursing funds, was not available.	To implement a formal policy and procedure for assessment of the counterparties prior to approving a bank in a QFPA, and an updated assessment immediately prior to disbursement of funds. This should include documented co-ordination with the Supervision department, related checklists and approval documentation.
Monitoring the loans	All except TARP	We were informed that monitoring the loans was performed by the BOM. However, except for TARP, we were not provided with evidence of monitoring repayments, target use of loans, and the financial position of borrowers.	To establish a formal policy and procedure for monitoring the targeted use of loans, the repayments of funds, and the financial position of BOM’s borrowers, including documents which would support this

Area	QFPA	Deviation from best practice	Recommendations
Monitoring the loans	All	The BOM received various reporting information from commercial banks to monitor the loans including the target use of funds. However, we were not provided with documents supporting BOM's review of this reporting, and we were informed that after a period of time, the information received from commercial banks was no longer processed or reviewed.	monitoring, such as internal memoranda. To monitor the commercial banks' checks on the targeted use of loans by the end-borrowers. The above procedures would help prevent an inappropriate use of funds, or similar problem, at a commercial bank, or end-borrower levels becoming of a size which risks an impact at the BOM's level.

Source: BOM's data and documentation, Interviews with BOM management/ former management, KPMG analysis.

6 Impact Analyses Quantification

6.1 Accounting under IFRS

6.1.1 Methodology under IFRS accounting framework

QFPA from IFRS perspective

From the accounting point of view, the analyzed QFPAs generated the following types of transactions:

- Issuing loans to local banks
- Purchasing government or corporate securities (promissory notes or bonds)
- Entering into derivative contracts: currency exchange forwards or swaps

The key international standards regulating accounting of these transactions are

- IAS 39, Financial Instruments: Recognition and Measurement, before 2018,
- IFRS 9, Financial Instruments, starting 01/01/2018,
- IFRS 13, Fair Value Measurement

Sources of QFPA losses under IFRS and approaches to measurement

The analyzed QFPAs were undertaken at a loss or below a market-expected rate of profit. In this analysis, the following categories of losses related to QFPAs were identified:

a) Losses arising from issuing loans with interest rates below market
b) Losses arising from purchasing securities at a price which is higher than their fair value
c) Losses arising from the negative netting effect of a non-hedged derivative contract
d) Credit risk losses realized when loans were not repaid, or expected when there is probability that contractual obligations under loan agreements will not be fulfilled.

Under (a) and (b), if a loan is issued at a rate that is knowingly below observed market interest rates on the same market and denominated in the same currency, or if a security is purchased above its fair value, IFRS requires to recognize the difference between fair value and transaction price as a gain or loss [IFRS 9, B5.1.2A; IAS 39, 43A, AG64, AG76]. In this analysis, we recognized losses at the time the BOM executed a transaction or entered into a legally binding agreement, i.e. on day one.

In case (c) the impact was calculated as realized losses on closed derivative contracts. The assessment was based on the BOM's disclosure.

Under (d), IFRS 9 requires entities to recognize loss allowances equaling the 12-month expected credit losses [IFRS 9, 5.5.5] or lifetime expected credit losses if the credit risk, associated with a financial instrument has increased significantly since its initial recognition [IFRS 9, 5.5.3], while IAS 39 requires loss allowance recognition only when losses are incurred: "Losses expected as a result of future events, no matter how likely, are not recognized" [IAS 39, 59, 63]. In this analysis, we applied the IAS 39 approach, as being the effective standard during the period 2012–2016, and accounted for incurred losses in the period when the BOM recognized an impairment of a loan or instrument related to QFPA. Although the BOM was not exposed to end-borrower credit risk (except DIC and TARP activities), the BOM is exposed to counterparty credit risk, i.e. the risk of defaults by the commercial banks.

6.1.2 Results of impact assessment

The cumulative losses of QFPAs over 5 years during 2012–2016 was estimated to be MNT 3.27 trillion (see Figure 61).

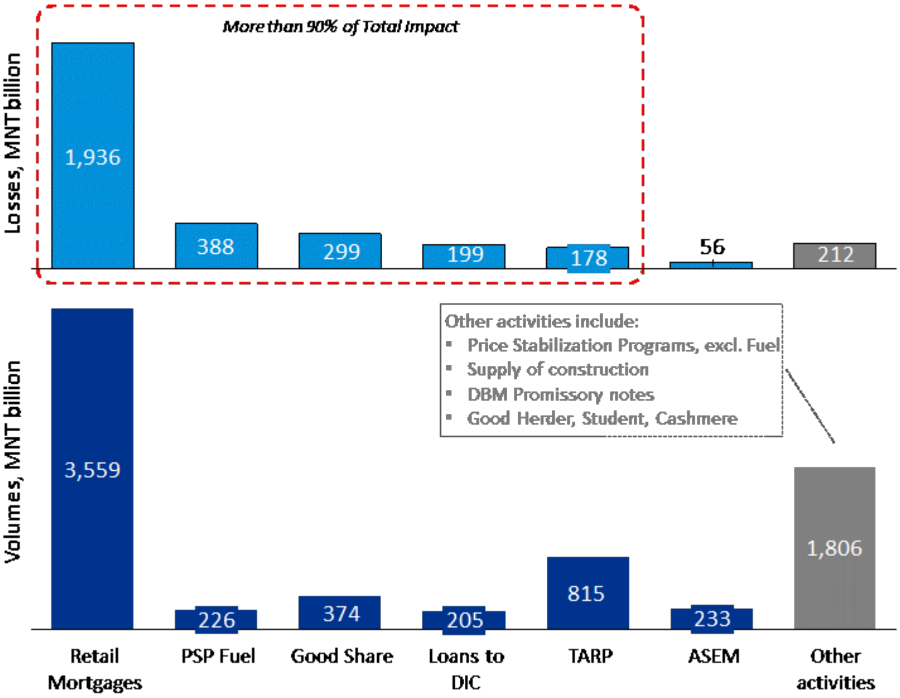
By far the largest estimated impact is attributable to the Retail Mortgage program (MNT 1.94 trillion, being 59.3% of the overall impact). This is a large-volume, long-term program providing subsidized affordable mortgage financing to citizens. The role of the BOM is to provide long-term financing to local commercial banks by purchasing senior tranches of securitized loans at face value with coupon rates significantly below the market rate.

The QFPAs with the next largest accounting impacts are:

- Fuel Price Stabilization sub-program (MNT 388 billion, being 11.9% of the total impact), a program focused on stabilization of retail fuel prices through financing retail fuel imports with favorable interest rates and minimizing exchange rate related risks
- Good Share program (MNT 299 billion, 9.1%), a program to partially buy back ETT company shares from citizens and return them to economic circulation

These three largest impact programs account for more than 80% of the total estimated accounting impacts:

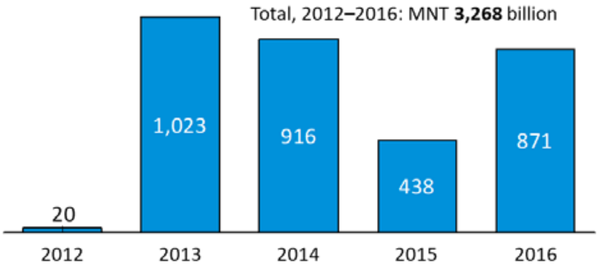
Figure 61: Six QFPAs with largest accounting losses



Source: BOM's data; KPMG analysis

The largest impact was in 2013 (MNT 1,023 billion; being 31.3% of the total five-year loss impact estimates).

Figure 62: QFPA accounting losses by year



Source: BOM's data, KPMG analysis.

Detailed impact estimates by QFPA and by year are presented in Figure 63 below.

Figure 63: Annual accounting impact of BOM funded QFPAs

Activity	2012	2013	2014	2015	2016	Total
(in MNT million)						
Price Stabilization	(20,098)	(141,282)	(330,715)	(34,570)	-	(526,665)
Construction Materials	-	*(42,839)*	*(10,722)*	*(1,285)*	-	*(54,846)*
Fuel	*(10,848)*	*(46,129)*	*(300,497)*	*(30,164)*	-	*(387,638)*
Food Storage	-	*(30,079)*	*(11,717)*	-	-	*(41,796)*
Coal	-	*(8,473)*	*(1,819)*	-	-	*(10,292)*
Meat	*(7,772)*	*(5,503)*	*(1,549)*	*(2,578)*	-	*(17,402)*
Trade Logistics	-	*(6,736)*	*(1,389)*	-	-	*(8,125)*
Flour	*(1,478)*	*(1,523)*	*(3,022)*	*(543)*	-	*(6,566)*
Supply of Construction	-	(42,992)	-	-	-	(42,992)
Retail Mortgage	-	(838,798)	(405,666)	(379,638)	(312,270)	(1,936,372)
Other:						
ASEM	-	-	-	(23,548)	(32,464)	(56,012)
Cashmere	-	-	(751)	-	-	(751)
DBM	-	-	(17,282)	-	-	(17,282)
Good program	-	-	-	-	(311,114)	(311,114)
DIC	-	-	(85,000)	-	(114,200)	(199,200)
TARP	-	-	(76,482)	-	(101,370)	(177,852)
Total	**(20,098)**	**(1,023,072)**	**(915,896)**	**(437,756)**	**(871,418)**	**(3,268,240)**

Source: BOM's data, KPMG analysis.

6.2 Economic impact assessment

6.2.1 Methodology for economic impact assessment

Economic losses arise from earning significantly lower return on investment than on alternative market investments into projects and instruments with similar risk levels.

Economic losses from QFPAs can be defined as the value of benefits transferred to borrowers or intermediaries. The impact is calculated as the Net Present Value (NPV) of cash flows discounted by a discount rate which takes into account marketing and project characteristics, such as cost of funding, project risks and other components. Hereafter this rate will be referred to as the "economic rate".

The general formula applied for the economic losses calculation is:

$$\mathrm{NPV} = \sum_{t=0}^{n} \left(\frac{\mathrm{CFt}}{(1+\mathrm{R})^{\mathrm{t}}}\right) \qquad (1)$$

where:

CF_t – net aggregated cash flow between the BOM and commercial banks. Includes both principle and interest payments. Principles for the construction of cash flows are defined in 6.2.1.1,

R – economic (discount) rate. Approach for calculation of economic rate described in 6.2.1.2,

t – ordinal number of time period,

n – number of time periods. Cash flows are aggregated annually – for Retail Mortgage program, monthly - for other QFPAs.

6.2.1.1 Aggregated cash flows calculation

Two types of cash flows were used in this impact assessment:

- Realized cash flows, representing cash transactions in the scope of each QFPA were reconstructed from general ledger entries, provided by the BOM
- Future cash flows, forecasted based on contractual term and assessment of past behavior of borrowers if sufficient history is available for the analysis

6.2.1.2 Principles of economic rate calculation

Another component is the discounting concept for reconstructed cash flows, of both principle and interest repayments. In our approach, we applied an economic rate (R) for discounting defined by the following formula:

$$Economic\ rate\ (R) = (1 + Rf) * (1 + Rccr) * (1 + Cc) - 1 \qquad (2)$$

where:
Rf – risk free rate,
Rccr – Counterparty credit risk,
Cc – cost of capital

6.2.2 Results of impact assessment

The cumulative economic impact of QFPAs was estimated to be MNT 3.74 trillion, see Figure 64 below

Figure 64: Annual economic impact of BOM funded QFPAs

Activity	2012	2013	2014	2015	2016	Total
(in MNT million)						
Price Stabilization						
Construction Materials	-	(49,010)	(13,262)	(1,494)	-	(63,766)
Fuel	(166,370)	(174,505)	(61,134)	-	-	(402,009)
Food Storage	-	(23,707)	(9,235)	-	-	(32,942)
Coal	-	(7,497)	(1,610)	-	-	(9,107)
Meat & Flour	(4,675)	(4,817)	(9,559)	(1,718)	-	(20,769)
Trade Logistics	-	(2,833)	(1,545)	-	-	(4,378)
Supply of Construction	-	(71,040)	-	-	-	(71,040)
Retail Mortgage	-	(1,010,107)	(488,516)	(457,172)	(344,030)	(2,299,825)
Other:						
ASEM	-	-	-	(17,628)	(50,952)	(68,580)
Cashmere	-	-	(756)	-	-	(756)
DBM	-	-	(23,123)	-	-	(23,123)
Good program	-	-	-	-	(337,887)	(337,887)
DIC	-	(164,843)	-	-	-	(164,843)
TARP	-	-	(103,044)	-	(134,310)	(237,354)
Total	**(171,045)**	**(1,508,360)**	**(711,784)**	**(478,012)**	**(867,179)**	**(3,736,379)**

Note: Due to general ledger specifics (provided by the BOM) and similar nature of QFPAs, Meat and Flour were consolidated for economic impact analysis

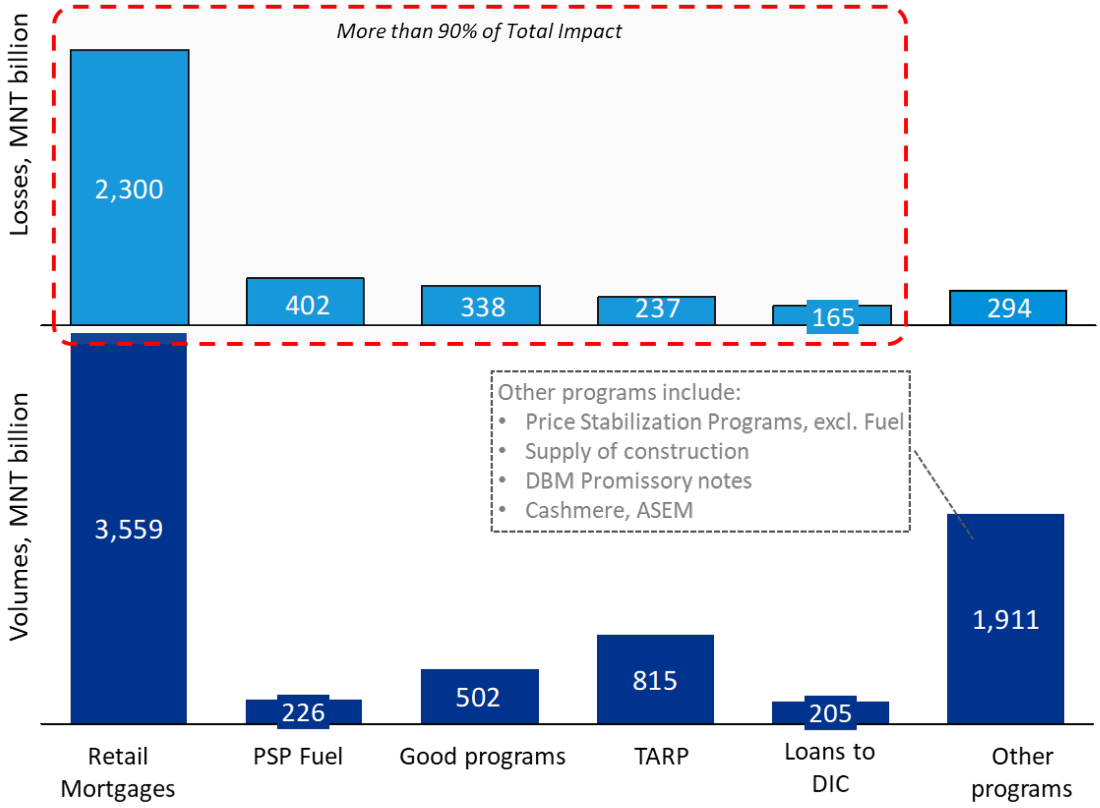
Source: BOM's data, KPMG analysis.

The cumulative economic losses (MNT 3.74 trillion) exceeded the accounting losses under IFRS (MNT 3.27 trillion) by 14%.

Range of economic losses

More than 90% of the total economic losses were generated by six QFPAs. The largest economic impacts are attributable to the following three QFPAs and sub-programs: Retail Mortgage, Price Stabilization Fuel, and Good programs.

Figure 65: Six QFPAs with largest economic losses



Source: BOM's data, KPMG analysis.

The Retail Mortgage program has the largest effect among the QFPAs (62%). Despite the lower interest rate gap between the program rate and the economic rate, the high volumes of financing provided under this program led to estimated losses of MNT 2.3 trillion. The Fuel sub-program under the Price Stabilization program generated 11% of total losses mostly because of realized losses on highly leveraged derivative instruments.

Analysis of relative impact

By relative impact (calculated as a percentage of economic losses to disbursed volumes) the most loss-making QFPAs are Price Stabilization – Fuel sub-program and DBM Promissory Note. The largest QFPAs by volume (Retail Mortgage, Good program, Price Stabilization) showed average relative impact.

Figure 66: Analysis of QFPA relative effects

QFPA	Relative economic losses, %	Weighted av. QFP duration, months	Average annual effect, %
(in MNT million)			
Price Stabilization			
Construction Materials	(16.6)	48	(4.1)
Fuel	(176.9)	32	(66.3)
Food Storage Capacity	(24.0)	43	(6.7)
Coal	(10.5)	26	(4.8)
Meat & Flour	(6.9)	32	(2.6)
Trade Logistics Facility	(12.9)	29	(5.3)
Supply of Construction	(13.3)	21	(7.6)
Retail Mortgage	(64.6)	305	(2.6)
Other:			
ASEM	(29.4)	60	(5.9)
Cashmere	(2.5)	8	(3.8)
DBM	(16.6)	16	(12.5)
Good program			
Share	(87.1)	189	(5.5)
Herder	(10.0)	28	(4.3)
Student	(3.7)	3	(14.8)
DIC	(80.5)	122	(7.9)
TARP	(29.1)	63	(5.5)

Note: Due to general ledger specifics (provided by the BOM) and similar nature of programs, Meat and Flour were consolidated for economic impact analysis.
Source: KPMG analysis.

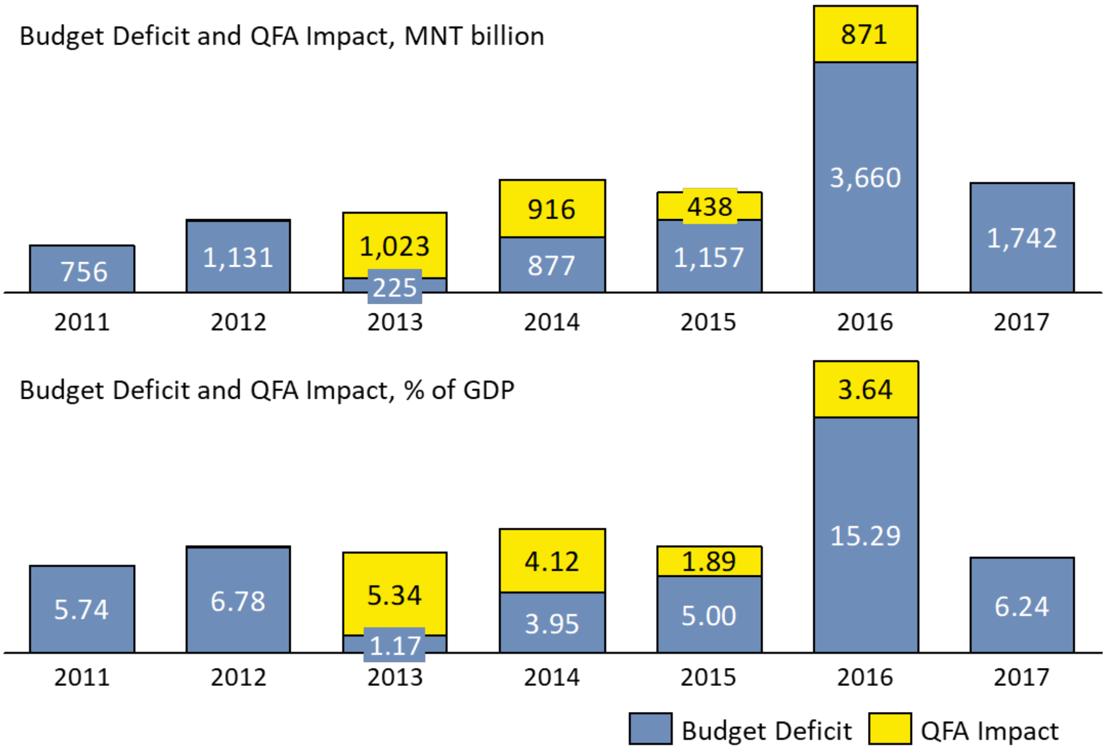
6.3 Impact of QFPAs on the State Budget

All activities in this report are quasi-fiscal activities, partly because they represent unbudgeted subsidies, administered by the Government of Mongolia. Key reasons generally considered why QFPAs should be kept at a relative minimum level are:

— QFAs miss the rigor and scrutiny of the budget process and consequently are often sub-optimal and thus without such scrutiny rarely produce long-lasting socio-economic effects
— QFAs often benefit narrow groups, while producing losses or profit below the normal rate expected for market transactions
— QFAs mask real state budget expenditures and budget deficit levels

According to our estimates, the QFPAs' accounting loss impact was material to the State Budget, reaching 5.3% of GDP in 2013 and 3.6% in 2016, which increased the officially reported budget deficit of 15.3% to almost 19% in 2016 (see below).

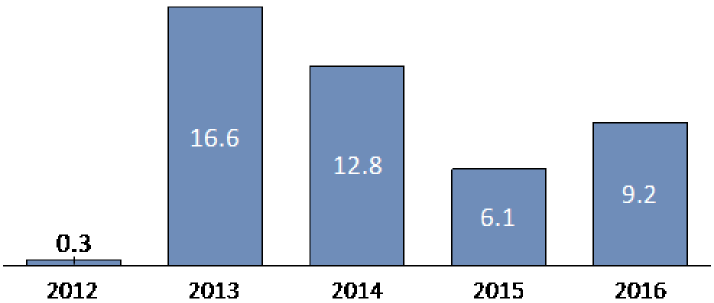
Figure 67: QFPA impact and Budget deficit in absolute figures and as percentage of GDP



Source: BOM's data; KPMG analysis; Mongolian Statistical Information Service http://1212.mn/

As shown in Figure 68, the "hidden expenditures" on QFPAs reached approximately 1/6th of the officially reported Government budget expenditures in 2013.

Figure 68: QFPA accounting losses as a percentage of Government Expenditure



Source: KPMG analysis; Mongolian Statistical Information Service http://1212.mn/

On average, in 2013–2016 the Government expenditures were under-budgeted by 11.2%, which notably distorts the real picture of the State Budget balance and raises the question of budgeting process efficiency.

7 Analysis of loan samples

7.1 Sample selection

As set out in our Contract, we selected samples for analysis based on the following method:

Figure 69: Sample selection

#	QFPA	Sampling method
1	Price Stabilization program	Non statistical sampling (coverage not less than 50% in terms of the monetary values)
2	Supply of Construction program	Non statistical sampling (coverage not less than 50% in terms of the monetary values)
3	Other QFPAs	Targeted sampling
4	Retail Mortgage	Non statistical sampling covering at least 0.1% of Mortgage population number

Source: Terms of Reference and Contract dated 23 July 2018.

Through the sample selections, we aimed for coverage of all the commercial banks in each QFPA.

7.1.1 Price Stabilization program

We initially selected the top 25 loan disbursements by value during the period 2012 to 2016. From the resulting sample, we identified that four commercial banks were not included in the sample. In order to cover also these commercial banks, we selected the largest disbursement at each of these four banks under this program.

A Parliamentary Working Group reviewed the BOM's operations including the QFPAs in May 2017 and identified 48 loans where end-borrowers did not meet the criteria set up by the related ministry, breached the contractual obligations, or did not use funds for their intended purposes. We selected additionally five of these potentially risky loan disbursements. Thus, in total we selected for further analysis 34 loans from the Price Stabilization program, which comprised 50.5% of the total population in monetary amount.

7.1.2 Supply of Construction Program

We initially selected the top loan disbursements by value, which covered slightly more than 50% of the total population. From the resulting sample, we identified four banks Bank were not included in the sample. In order to cover also these banks, we selected the largest loan disbursements at each of these four banks under this program.

As a result, 15 loan disbursements were selected for the Supply of Construction program, which comprised 50.9% of the total population in monetary amount.

7.1.3 Retail Mortgage Program

We initially sorted the disbursements based on size, from the largest to the smallest. Starting from the largest loans, we selected disbursements based on defined regular intervals. From the resulting sample, we identified four banks were not included in the sample. We then selected the largest loan disbursements at each of these four bank in order to cover also these banks. As a result, we selected 71 loans which covered 0.11% of the total population in monetary amount.

7.1.4 Other QFPAs

Other than the Good program, we selected the largest loan disbursements based on size across each bank and QFPA. The numbers of selected samples differed depending on the number of loans at banks under each QFPA.

For the Good program, a large number of very small loans were disbursed to end-borrowers (from MNT 1 million up to MNT 25 million). We selected 14 loans across all the sub-programs, covering both smaller and larger loans and both banks which participated in the Good program.

Figure 70: Selected samples coverage

Activity	Disbursed by commercial banks	Selected for analysis	No. loans selected for analysis	Coverage
(in MNT million)				
Price Stabilization	1,166,347	589,132	34	50.5%
Supply of Construction	589,296	299,967	15	50.9%
Retail Mortgage	3,815,295	4,365	71	0.11%
Other:				
ASEM	233,425	156,017	6	66.8%
Cashmere	29,700	26,304	4	88.6%
Good Program	425,003	64	14	0.02%
DBM	171,007	171,007	1	100%
DIC	204,900	204,900	2	100%
TARP	815,000	588,672	6	72.2%
Total	**7,449,973**	**2,040,429**	**153**	

Source: Commercial banks' data, KPMG analysis.

7.2 Examination of credit files related to end-borrowers

The goal of credit files examination was to evaluate strengths and typical issues with the lending practices at commercial banks under the QFPAs, and to develop recommendations for banks to improve their credit processes and for the BOM to exercise controls and strengthen oversight over the QFPAs' execution.

For this purpose, we examined a sample of 150 credit files to collect evidence on:

- Execution of key process steps
- Lack of conflicts of interest
- Correctness of responsibilities distribution
- Application evaluation timeline

For the analysis, we developed a questionnaire covering the following major steps of the credit process including, amongst others:

- Application submission and assessment
- Borrower's documentation collection and assessment
- Collateral check and evaluation
- Anti-money laundering check and economic security check
- Key ratios analysis

- Loan decision process
- Loan and collateral agreements preparation and signing
- Monitoring of borrowers' financial state/ debt servicing/ collateral
- Restructuring/ forebearance agreements process (where applicable)
- Regular impairment provisioning assessment
- Loan repayment and closure
- Delinquencies

7.2.1 Results

7.2.1.1 Missing steps in credit process

We evaluated the credit files from the process steps perspective including their availability, order, and content and applied our developed methodology as set out below.

Key steps of the credit process were assessed in each credit file, applying a score from 0 to 3 for each step (3 – the closest to leading practices, 0 – an absence of a clear step). The available credit files were grouped by corporate loans and loans to individuals. The percentage of each missing step was calculated across all credit files of the groups and weighted against total answers (i.e. 100% would mean a total absence of such step in all credit files of this group).

A detailed analysis of the results is set out in the tables in Appendices A.1 to A.3.

The most common issues identified in the steps of the credit process were as follows:

- Lack of an independent collateral evaluation report when issuing the loan
- No memos on provision of loan available in credit dossiers
- Mostly banks implemented scoring system since 2016. Before that, almost no scoring was made by commercial banks
- Missing AML checks especially for individuals
- No evidence of proper loan servicing monitoring
- No final memos for loan closure available in credit files

7.2.1.2 Segregation of responsibilities and independence

To establish and define the Credit Process Quality Index, we evaluated the credit files from the segregation of responsibilities perspective.

The appropriate execution and responsibility for the key steps in the credit process were assessed across all credit files, applying a score from 0 to 3 for each step responsibility (3 – the closest to leading practices, 0 – an absence of a clear step). The available credit files were grouped by corporate loans and loans to individuals. For each group the percentage of answers matching with leading practices was calculated across all credit files of the groups and weighted against the total (i.e. 100% would mean all credit files of this group demonstrated the execution of this step at a leading practice level).

A detailed analysis of the results is set out in the tables in Appendix A.4.

The most common issues identified in this area were:

- Risk management is often not involved in the assessment of collateral for pledge, especially for retail mortgages, where the assessment is made by the loan officer based on coefficients established by a commercial bank
- Risk management is not involved sometimes in the scoring or financial standing economic security check, and key ratios calculation

— AML process is executed by some other departments, but not by compliance department (compliance department is mentioned only in 1% of dossiers)

— Economic security check is often performed by corporate banking department or by a branch, which can a) be inefficient b) creates a conflict of interest

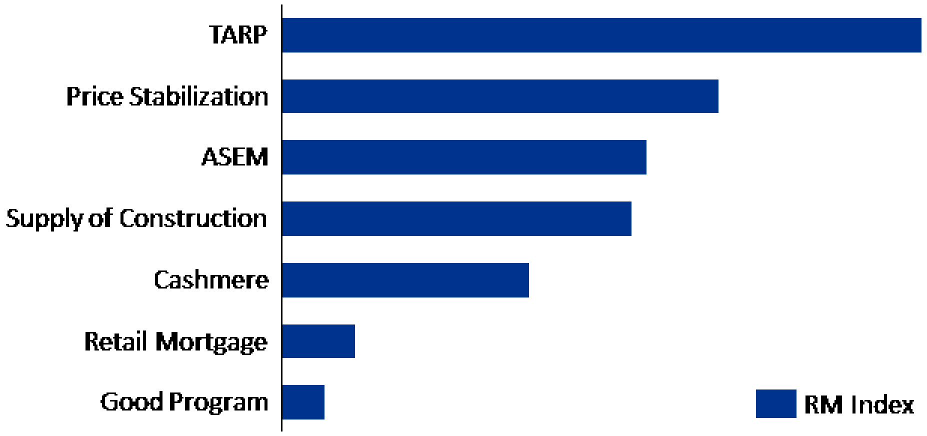
The quality of process execution and segregation of responsibilities varies between different banks and also depends on a QFPA type. In general, the larger the bank, the QFPA and the average loan size, the better is the credit process quality.

The number of executed credit process steps also depends on each QFPA, for example the credit bureau report was almost never requested for the Good programs under which the average loan sizes to end-borrowers were small.

For the larger QFPAs, the number of credit process steps was higher. Evidently, the commercial banks appear to have allocated more resources, also for those process steps, that are not executed for smaller QFPAs (such as business case evaluation). The quality of the process in larger QFPAs appears to be higher based on the analysis.

The graph below demonstrates the average level of risk management involvement into the credit process, calculated using KPMGs internal methodology for each QFPA.

Figure 71: Average Risk Management involvement Index



Source: Commercial banks' data, KPMG analysis.

7.2.1.3 Credit process quality

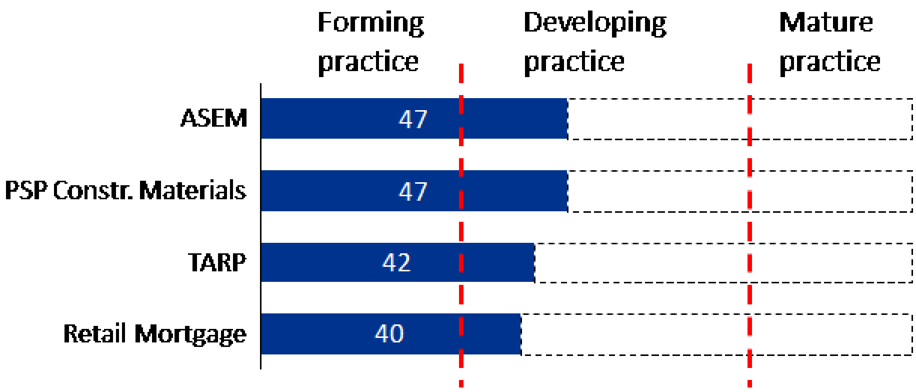
We further investigated quality of credit process. From this analysis, we identified some additional common issues:

— A lack of quantitative risk measurement: the volumes and number of loans applications under the Retail Mortgage and Good programs justify the application of quantitative risk models to improve decision-making. Quantitative risk measurement starts with collection of detailed and granular data on risk event occurrences. Provided that sufficient volume of statistical data is collected by the banks, well-known traditional regression models and/or rapidly developing machine-learning algorithms can be applied to develop risk quantification models and decision-making engines. However, a key success factor is the quality of data in terms of length of period, comprehensive collection of various attributes and correctness of each field. Such criteria need to be defined by BoM in order to have a reliable input for a consistent assessment

— Insufficient efforts to monitor the loans and borrowers after the loan disbursement

The graph below represents the General Quality Index calculated across four of the largest QFPAs.

Figure 72: Average Quality Index, percentage of maximum

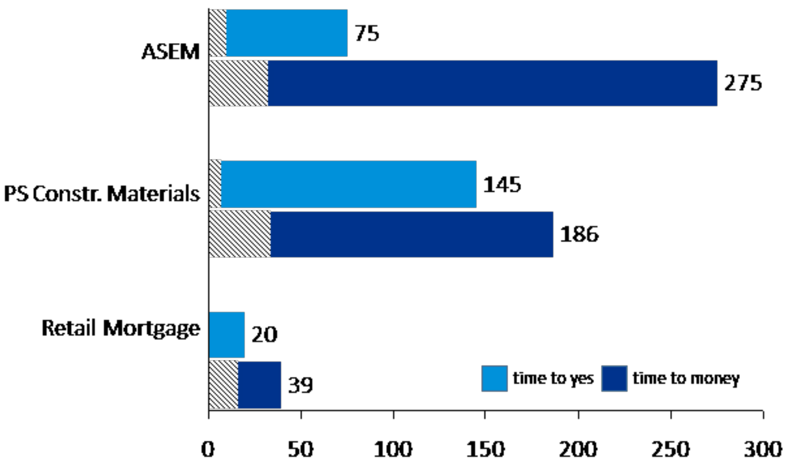


Source: Commercial banks' data, KPMG analysis.

7.2.1.4 Credit process efficiency

Credit process efficiency was measured by calculating the indicators TTY (time-to-yes) and TTM (time-to-money), which show how fast banks are at loan approvals and disbursements. TTY and TTM depend on QFPA types and the specific banks. Between activities and between commercial banks, we noted different speeds of decision-making and funds disbursement. Set out below are graphs of TTY and TTM for three major activities. The scale represents the range (in days) of TTY and TTM duration for each QFPA.

Figure 73: TTY and TTM ranges for three activities, in days



Source: Commercial banks' data, KPMG analysis.

7.2.2 Recommendations

We recommend implementation of the following steps within the credit process at commercial banks as being critical for high quality of QFPA administration:

— Mandatory AML checks

— Mandatory credit bureau checks of applicants

- Increased use of scoring or rating models to improve decision-making. At an early stage, the banks should focus on establishing a reliable process of comprehensive and quality data collection
- Regular verification and reassessment of collateral values and condition
- Increased involvement of Risk Management in the execution of credit processes, e.g. independent assessment of applications, financial ratios, collateral assessments, risk measurement, decision-making and pricing

7.3 Recoverability of loans

7.3.1 Indicators of impairment (IAS 39)

During credit file reviews of loans provided to end-borrowers by the commercial banks, we assessed the following indicators of impairment, as set out in IAS 39 *Financial Instruments: Recognition and Measurement:*

- Significant financial difficulty of the issuer or obligor
- A breach of contract, such as a default or delinquency in interest or principal payments
- The lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider
- It becoming probable that the borrower will enter bankruptcy or other financial reorganization
- The disappearance of an active market for that financial asset because of financial difficulties
- Observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group

As a result of review of the selected 150 credit files across the major QFPAs in the period 2012 to 2016, we have identified the following numbers of loans with impairment indicators:

Figure 74: Impairment indicators by QFPA

Activity	Number of credit files reviewed	Number credit files with impairment indicators
Price Stabilization	34	26
Supply of Construction	15	13
Retail Mortgage	71	-
Other:		
ASEM	6	3
Cashmere	4	4
Good program	14	-
TARP	6	5
Total	**150**	**51**

Source: Commercial banks' data, KPMG analysis.

7.3.2 Assessment of recoverability

We classified the loans into four categories:

1. Loans classified as performing (PL)
2. Loans classified as non-performing (NPL) but repaid by the end of 2016

3. Loans classified as NPL but repaid by 31 July 2018
4. Loans classified as NPL with remaining outstanding balances as at 31 July 2018

Out of 150 credit files reviewed and categorized as above, 119 loans were classified as performing (category 1), as follows:

Figure 75: Category 1 - PL from samples selected for credit file review

Activity	№ of loans	Principal value
(in MNT million)		
Price Stabilization:		
Meat	2	52,800
Flour	4	45,600
Storage	-	-
Construction materials	4	45,500
Fuel	4	53,419
Trade Logistics and Facility	2	34,000
Coal	1	29,935
Supply of Construction	8	158,397
Retail Mortgage	71	4,365
Other:		
ASEM	5	149,517
Cashmere	2	11,518
DBM	-	-
Good	12	61
DIC	-	-
TARP	4	475,000
Total	**119**	**1,060,112**

Source: Commercial banks' data, KPMG analysis.

Out of 150 credit files reviewed and categorized as above, 31 loans were classified as NPL (categories 2 to 4), as follows:

Figure 76: Categories 2 to 4 - NPL from samples selected for credit file review

	Repaid by end 2016		Repaid after 2016*		Outstanding*	
Activity	№ loans	Value	№ loans	Value	№ loans	Value
(in MNT million)						
Price Stabilization						
Meat	1	9,900	-	-	1	76,125
Flour	-	-	-	-	-	-
Storage	2	11,600	-	-	-	-
Construction Materials	2	40,000	2	30,000	2	9,800
Fuel	6	131,734	-	-	1	18,719
Trade Logistics	-	-	-	-	-	-

Activity	Repaid by end 2016 № loans	Repaid by end 2016 Value	Repaid after 2016* № loans	Repaid after 2016* Value	Outstanding* № loans	Outstanding* Value
Coal	-	-	-	-	-	
Supply of Construction	4	82,170	2	28,400	1	31,000
Retail Mortgage	-	-	-	-	-	-
Other:						
ASEM	-	-	-	-	1	6,500
Cashmere	2	14,786	-	-	-	-
DBM	-	-	-	-	-	-
Good	-	-	2	4	-	-
DIC	-	-	-	-	-	-
TARP	-	-	-	-	2	113,672
Total	**17**	**290,190**	**6**	**58,404**	**8**	**255,816**

Note: * Repaid after 2016 refers to the period until 31 July 2018. Outstanding refers to the status at 31 July 2018.
Source: Commercial banks' data, KPMG analysis.

Loans repaid by 31 July 2018 were assessed as recoverable. For the loans classified as non-performing and not repaid by 31 July 2018 (category 4), an impairment provision under IAS 39 was estimated at 31 December 2016.

7.3.3 Estimation of impairment provisions

7.3.3.1 IAS 39

For the loans classified as NPL with outstanding exposures (not repaid or settled), an impairment provision at 31 December 2016 was calculated by assessing the non-recoverability. The going concern and gone concern approaches were applied including, where possible, assessing the value of collateral if loans were assessed as non-recoverable from projected future operating cash flows:

— Under going concern approach, operating cash flows were assessed as continuing with future projected cash flows to be used to repay the financial debt to all creditors, combined with the recoverable value of collateral exercised to the extent it would not influence operating cash flows

— Under gone concern approach, the collateral was considered to be exercised and operating cash flows of end-borrower cease

Eight loans from the total sample of 150 loans were classified as NPL and still had outstanding balances at 31 July 2018. Future projected operating cash flows from these eight loans were considered insufficient to allow repayment of the creditors including the commercial banks' exposures, and therefore assessed collateral values described in section 7.4 were taken into account.

After incorporating the collateral values into the impairment estimate, out of these eight loans we identified:

- one loan was fully impaired by a commercial bank before 31 December 2016, leading to a zero net exposure at 31 December 2016. The amount of such loan before provision was MNT 76,125 million

- for one loan in Price Stabilization – Fuel sub-program, with outstanding amount MNT 18,719 million at 31 December 2016, the value of the collateral was less than this exposure. As a result, an impairment provision of MNT 17,239 million was calculated
- for the other six loans, no impairment was identified

7.3.3.2 Bank of Mongolia provisioning methodology

In accordance with the Banking Law in Mongolia, commercial banks should comply with the Asset Classification and Provisioning Regulation established by the BOM. Under this regulation, commercial banks are required to classify and determine provisions for loans based on their qualitative and quantitative characteristics. Qualitative characteristics include completeness of loan file, financial indicators of the borrower, market conditions of the borrower's business, previous rescheduling of the loan payments, and other areas. Quantitative characteristics are determined based on the number of days past due as follows:

Days past due				
Performing	**Special mention**	**Substandard**	**Doubtful**	**Bad**
> 15 days for individuals > 30 days for corporate	Over 90 days	91-180 days	181-360 days	Over 361 days

The commercial banks should calculate their loan loss provisions based on the quantitative and qualitative factors and the provisioning rates set by the BOM as follows:

Quantitative / Qualitative	Performing	Special mention	Substandard	Doubtful	Bad
Performing	Performing 0.5%	Special 1%	Substandard 15%	Doubtful 35%	Bad 75%
Special mention	Special mention 1%	Special mention 5%	Substandard 25%	Doubtful 35%	Bad 75%
Substandard	Substandard 5%	Substandard 15%	Substandard 25%	Doubtful 50%	Bad 100%
Doubtful	Doubtful 15%	Doubtful 25%	Doubtful 35%	Doubtful 50%	Bad 100%
Bad	Bad 50%	Bad 50%	Bad 75%	Bad 100%	Bad 100%

Commercial banks should assess the loan classification and provisioning rates based on quantitative (time factor) and qualitative factors separately, and the final loan classification and the provisioning rate should be the worse of these two classifications.

Applying this approach, the amount of impairment provision under the BOM's regulation at 31 December 2016 was as follows:

Figure 77: Provision under BOM methodology at 31 December 2016

Activity	Provision 31 Dec 2016
(in MNT million)	
Price Stabilization	105,548
Supply of Construction	4,207
Retail Mortgage	17
Other:	
ASEM	723
Cashmere	-
Good program	-
DBM	-
DIC	-
TARP	4,137
Total	**114,632**

Source: Commercial banks' data, KPMG analysis.

Figure 78: Provision under BOM methodology at 31 December 2016, reduced by loans repaid after 2016

Activity	Provision 31 Dec 2016
(in MNT million)	
Price Stabilization	105,361
Supply of Construction	2,585
Retail Mortgage	16
Other:	
ASEM	672
Cashmere	-
DBM	-
Good program	-
DIC	-
TARP	4,137
Total	**112,771**

Source: Commercial banks' data, KPMG analysis.

7.4 Collateral assessment

Many different types of collateral were pledged under the QFPAs. The table below provides an indication of the collateral types and initial values from the commercial banks' systems, derived from the sample of credit files we reviewed, for four of the major activities: ASEM, Retail Mortgage, TARP, and Price Stabilization - Construction Materials:

Figure 79: Types of collateral, initial values and loan amounts for 4 activities

Activity	Types of collateral	Collateral value	Total loan amounts
(in MNT million)			
ASEM	real estate (residential)	49,730	
	real estate (commercial)	36,599	
	equipment	10,577	
	goods in turnover (all types)	93	
	shares	731	
	other	155,635	
Total ASEM sample		**253,365**	**156,017**
Retail Mortgage	real estate (residential)	6,033	
	auto	14	
	equipment	8	
	other	8	
Total Retail Mortgage sample		**6,063**	**4,365**
TARP	equipment	58,091	
	shares	906,534	
	other	180,413	
Total TARP sample		**1,145,038**	**588,672**
PSP - Construction Materials	real estate (residential)	9,503	
	real estate (commercial)	64,316	
	equipment	6,177	
	goods in turnover (all types)	31,902	
	shares	9,837	
	other	117,199	
Total PSP - Construction Materials sample		**238,934**	**125,300**

Source: Commercial banks' data, BOM's data, Sample of credit file reviews, KPMG analysis.

Not all collaterals are equally liquid and some of them may quickly lose their value during the loan lifetimes. Some collaterals may be termed "soft collaterals" (for example illiquid, high price volatility, close correlation with the asset), such as:

- Shares of borrowers and their related entities
- Goods in turnover
- Guarantees
- Equipment and machinery

- Certain others, such as livestock, parking lots, gas stations, future income

If the value of "soft collateral" would fall or not be realizable for the reasons above, the multiples of loan to value would significantly differ from those implied in the table above. We noted that other than for the Retail Mortgage program, most part of the loans within the QFPAs are secured by soft collaterals, whereby realizable values are uncertain and may quickly change. The loans secured by "soft collateral" might effectively become unsecured in case of collateral value decreases.

The Retail Mortgage program is the only larger QFP activity that is secured by "hard collaterals", hence may be considered from the credit risk management perspective as a "lower risk" activity.

7.4.1 Sample

Our sample of collateral assets started with all loans to end-borrowers for which impairment triggers existed as at 31 December 2016, were not repaid subsequent to 31 December 2016 and for which the projected future cash flows from these end-borrowers' operations were insufficient to recover the outstanding loan exposures as at 31 December 2016.

The collateral assets in the sample comprised a mixture of residential properties, offices, land, factories, equipment and machinery, mining licenses, equity shares, and other real estate.

7.4.2 Approach

7.4.2.1 Existence of collateral

We visited 12 different sampled sites. These site visits revealed no major reportable conditions in the collateral, i.e. we were able to check existence of the sample.

7.4.2.2 Valuation of collateral

In Mongolia, there is limited publicly available information in order to apply the market approach to valuations, thereby placing limitations on this assessment of market values of certain types of collaterals. Therefore, we split our approach into two parts:

- collaterals for which a market approach using publically available information could be applied
- collaterals for which an alternative approach was required

Under both approaches, price indexes, haircuts for forced or quick sales of collateral, and expected sales costs were considered. The haircuts applied and the expected sales costs adjustments were derived from the BOM's 2017 Asset Quality Review (Diagnostic Studies on Commercial Banks) methodology.

Where there existed no evidence supporting the existence of the collateral, zero value was placed on the particular collateral.

Publicly available information

Collateral assets which could be valued using publicly available information comprised mainly residential and commercial real estate. To assess the value using the market approach, we researched publicly available data including advertised prices, and applied comparability adjustments as well as indexing the value back to the valuation date, 31 December 2016. Detailed information about the collateral in the commercial banks' valuation reports prepared by the commercial banks' external valuers, including the narrative reports and respective supporting schedules and exhibits, was taken into account.

If an existing external valuation report complied with a reputable valuation standard, if publicly available information from that time was included in the report, and the methodologies and related adjustments applied were assessed as appropriate, we accepted the externally assessed valuation result and we indexed the value back to 31 December 2016 prior to applying the haircuts from the AQR methodology described above.

Limited or no publicly available information

Where publicly available information was limited, following discussions with the BOM and the World Bank we applied an approach similar to the methodology under the BOM's 2017 AQR (see also above), which was indicated to us would be an acceptable alternative methodology for these cases. This comprised initially reviewing and assessing valuation reports prepared by a commercial bank's external valuer, making adjustments to the valuation result where appropriate and the available information allowed, and applying haircuts according to the AQR methodology.

The valuation assessment is limited by the lack of publicly available information and quality of valuation reports received from the commercial bank. These factors meant that in some cases adjustments to the commercial banks' valuations could not be reasonably assessed. For some collateral assets, therefore, different valuation revisions would likely have resulted.

Equity securities as collateral

If the pledged collateral comprised equity shares (an ownership interest) in the borrower itself, or the borrower's related parties, zero value was applied, on the basis that should a borrower be unable to repay a loan from its projected future cash flow, the equity stake in the distressed borrower most likely has limited reliable value, and the equity ownership of its related parties is also unlikely to be a reliable source of value. Additionally, the portions of equity ownership pledged were a minority stake in the end-borrower, making it difficult to subsequently realize value after obtaining the ownership stake, as well these were unquoted companies which also adds difficulties to realize value from a distressed situation.

There was no case of an independent third party's equity shares being provided as collateral in the sample.

7.4.3 Results

The table below provides an overview of the collateral assets examined at each commercial bank including their values per the commercial banks' internal records and our revised assessment applying the methodology described above.

Figure 80: Collateral valuation assessment by QFPA

QFPA	Number collaterals	Collateral values per banks	Revised collateral values	*Change %*
(in MNT million)				
Price Stabilization:				
Construction Materials	15	68,452	28,606	*(58.2%)*
Fuel	7	40,781	1,633	*(96.0%)*
Food Storage Capacity	-	-	-	-
Coal	-	-	-	-
Meat	-	-	-	-
Trade Logistics & Facility	-	-	-	-
Flour	-	-	-	-
Supply of Construction	2	46,724	35,471	*(24.1%)*
Retail Mortgage	-	-	-	-
Other:				
ASEM	7	31,420	21,207	*(32.5%)*
Cashmere	-	-	-	-
DBM	-	-	-	-
Good program	-	-	-	-
DIC	-	-	-	-
TARP	10	425,017	210,195	*(50.5%)*
Total	**41**	**612,394**	**297,112**	***(51.5%)***

Source: Commercial banks' data, BOM's data, publicly available information, KPMG analysis.

The total value of the sampled collateral assets reported in the commercial banks' systems as at 31 December 2016 amounted to MNT 612,394 million. Applying the methodology described above, the total revised value of the same collateral assets resulted in a 51% negative adjustment, to MNT 297,112 million.

The table below shows an analysis of the collateral values and their revision by type of collateral.

Figure 81: Collateral valuation assessment by collateral type

Collateral type	Number collaterals	Collateral values per banks	Revised collateral values	*Change %*
(in MNT million)				
Apartment – Prime location UB	2	353	270	*(24%)*
Apartment – Secondary location UB	4	51,185	36,321	*(29%)*
Equities	3	138,248	-	*(100%)*
Factory – rural	3	20,434	10,422	*(49%)*
Factory – UB	5	2,451	1,569	*(36%)*
Garage	4	4,380	3,264	*(25%)*

Collateral type	Number collaterals	Collateral values per banks	Revised collateral values	*Change %*
Heavy duty machines – Mining	2	21,209	9,702	*(54%)*
Heavy duty machines - Other	1	1,166	-	*(100%)*
Inventory	2	15,089	3,772	*(75%)*
Land - prime location UB	2	2,846	850	*(70%)*
Land - secondary location UB	1	1,877	1,501	*(20%)*
Licenses for mines – non- operating	1	12,252	-	*(100%)*
Licenses for mines – operating	5	312,995	212,837	*(32%)*
Office – prime location UB only	1	3,517	2,037	*(42%)*
Office – secondary location	2	1,362	500	*(63%)*
Plant and Equipment	1	2,400	-	*(100%)*
Private house – prime location	1	607	251	*(59%)*
Retail/service properties, secondary UB	1	20,023	13,816	*(31%)*
Total	**41**	**612,394**	**297,112**	***(51%)***

Source: Commercial banks' data, BOM's data, publicly available information, KPMG analysis

Downward adjustments resulted mainly from the following areas:

- Commercial banks' valuations not taking into account the forced sale discount
- Absence of evidence confirming the existence of collateral assets
- Commercial banks' valuations containing arithmetic errors
- Valuation reports, including internal valuations, were not available (including from the time of loan origination)
- Mining license valuation reports omitting the sources of key information such as the comparable companies' financials, historical revenue, cost, selling prices of minerals, and assumptions behind the discount rates and future projections
- Assigning value to land usage rights where there exists a building owned by a third party on it

Further issues identified included the following:

- In some cases, there were no internal or external valuation reports available. This appears to indicate that loans were sometimes provided under the QFP activities without the regular loan approval processes that the commercial banks undergo for non-QFPA loans. In particular, there was no valuation report for the collateral assets pledged for a loan issued in 2013 by Savings Bank to Just Oil LLC, where Savings Bank and Just Oil LLC shared a same owner. The initial loan amount issued to Just Oil LLC was MNT 18,719 million.

- There were cases where the loan proceeds were to be used to purchase equipment that should then be pledged as collateral for the loan i.e. a commitment to pledge as collateral the assets purchased with the borrowings. There was no follow up information available indicating that the assets purchased were subsequently pledged as collateral, nor that the purchase had taken place and existence of the purchased assets had been subsequently verified by the commercial banks.

8 Projections for homogenous loans

From the loans under QFPA review, Retail Mortgage loans and loans under Good Program were considered as homogenous loans due to their nature, being smaller balances with similar characteristics (loan to value requirements, duration, interest rates, collateral requirements etc.)

8.1 Approach

To project the non-recoverable amount of homogenous loans and estimate related impairment provisions, we applied three approaches in order to provide an upper and lower boundary:

- Projection based on results of our credit file reviews
- Estimate based on comparable financial statements or financial data provided by the commercial banks
- IAS 39 based estimate of collective provision

8.1.1 Projection based on impairment results from credit file reviews

As described in section 7.1, 71 Retail Mortgage program loans and 14 loans under the Good program were part of the credit file review samples. No impairment provision was identified from the review of these samples. Projecting the results of the credit file review across the whole population led to a projected impairment provision of zero.

8.1.2 Financial statements / data from commercial banks

A middle range for the estimated provision was calculated using information in the consolidated financial statements of MIK and data provided by the commercial banks. In this case, we applied impairment rates for Retail Mortgage program loans disclosed in MIK's consolidated financial statements, and PD and LGD data provided by the relevant commercial banks for the Good program.

8.1.3 IAS 39 collective provision estimation

We estimated the IAS 39 collective impairment through the application of PD and LGD to the loan portfolio. The PD and LGD were applied at the more conservative end of the potential range in order to establish an upper boundary for the potential impairment provision. They were derived from market information published by the BOM, information in MIK's financial statements, data provided by the commercial banks, and market experience of the loan portfolio in Mongolia and other countries.

8.2 Results

Figure 82: Homogenous loans impairment projection at 31 December 2016

	Approach	Good program	Retail Mortgage
(in MNT million)			
Loan program balance		95,489	2,928,822
Lower boundary	Credit files review projection	-	-
Middle	MIK / commercial banks' data	0.4	13,782
Upper boundary	IAS 39 collective provision	955	14,058

A Appendices

A.1 Results from review of credit files of corporate loans

A total of 65 corporate loans were selected for sampling of credit files under the QFPAs.

Corporate loans Description of findings	Number of findings	Percentage
Application stage		
Missing a checklist in a credit file	19	29%
Missing approval documents from a responsible Ministry in a credit file	5	8%
Missing breakdowns of accounts from financial statements	11	17%
Missing evidence that the correctness check and evaluation of financial statements was performed by a commercial bank	13	20%
Missing an independent evaluation report of collateral before a decision was made by the credit committee	61	94%
Missing an internal evaluation report of collateral before a decision was made by the credit committee	11	17%
Missing business case evaluation performed by a commercial bank	7	11%
Decision stage		
Missing front-office application form	6	9%
Missing scoring. The scoring was implemented by the majority of commercial banks starting from 2016	29	45%
Missing ratio calculations and analysis performed on financial statements	24	37%
Missing economic security assessment	49	*75%
Missing AML check	23	35%
Missing evidence that a collateral check performed by a commercial bank including visiting the borrower's premises to assess and check collateral existence/state	12	18%
Missing the report from the Credit Bureau which is dated before the decision was made	22	34%
Missing the overall risk assessment performed by a commercial bank	6	9%
The exposure had a negative opinion from the Risk Management Unit	1	2%
The exposure had not sufficient evidence of performed procedures by the final collegiate decision	1	2%
Disbursement stage		
Missing disbursement memos available in a credit file	65	100%
Monitoring stage		
Missing memo for a conclusion on a targeted use of credit funds	18	28%
Missing evidence that a commercial bank was monitoring borrower's financial position, i.e. financial statements are missing in a credit file	17	26%
No evidence that the commercial bank was monitoring borrower's debt servicing	62	95%

Corporate loans **Description of findings**	**Number of findings**	**Percentage**
Missing memo on monitoring a collateral in a credit file	20	31%
Missing final memo or repayment memo for loan closure in a credit file	50	**77%

Notes: * The economic security assessment is performed only when it is required by the Credit Committee, otherwise it is not required as commercial banks thoroughly review the purpose and use of the loan.
** Not all loans were repaid by 31 July 2018.

Source: Credit files of commercial banks, KPMG analysis.

A.2 Results from review of credit files of individual loans

A total of 85 individual loans were selected for sampling review under the QFPA.

Loans to individuals Description of findings	Number of findings	Percentage
Application stage		
Missing a checklist in a credit file	11	13%
Missing an independent evaluation report of collateral before a decision was made by the credit committee	85	100%
Missing an internal evaluation report of collateral before a decision was made by the credit committee	7	8%
Decision stage		
Missing scoring. The scoring was implemented by the majority of commercial banks starting from 2016	83	98%
Missing ratio calculations and analysis performed on financial statements	7	8%
Missing economic security assessment	36	*42%
Missing AML check.	83	98%
Missing evidence that a collateral check performed by a commercial bank including visiting the borrower's premises to assess and check collateral existence/state	7	8%
Missing the report from the Credit Bureau which is dated before the decision was made	8	9%
Missing the overall risk assessment performed by a commercial bank	53	62%
Disbursement stage		
Missing disbursement memos available in a credit file	85	100%
Monitoring stage		
Missing memo for a conclusion on a targeted use of credit funds	34	40%
Missing evidence that the bank was monitoring borrower's financial position, i.e. monitoring salary changes	40	47%
No evidence that the commercial bank was monitoring borrower's debt servicing	72	85%
Missing memo on monitoring a collateral in a credit file	25	29%
Missing final memo or repayment memo for loan closing available in loan dossier	30	**35%

Notes: * The economic security assessment is performed only when it is required by the Credit Committee, otherwise it is not required as commercial banks thoroughly review the purpose and use of the loan.
** Not all loans were repaid by 31 July 2018.

Source: Credit files of commercial banks, KPMG analysis.

A.3 Missing steps in credit process, by major QFPA

Activity / Area	Retail Mortgage	TARP	Good Herder	PSP Construc'n	PSP Fuel	PSP Meat	PSP Coal
No independent evaluation report of collateral	100%	33%	88%	100%	100%	100%	100%
No internal evaluation report of collateral	3%	67%	38%	0%	10%	25%	0%
Scoring was not calculated	97%	67%	100%	50%	40%	50%	0%
AML check was not performed	96%	67%	100%	0%	0%	75%	0%
No report from the Credit History Bureau was requested	11%	83%	0%	50%	20%	25%	100%
No conclusion in loan dossier on targeted use of credit funds	39%	0%	38%	13%	20%	25%	0%
No monitoring reports in loan dossier on the financial state of a borrower	42%	0%	50%	38%	20%	50%	0%
No monitoring reports in loan dossier on the debt servicing of borrower	94%	100%	88%	88%	100%	100%	100%
No collateral monitoring reports in loan dossier	44%	0%	38%	63%	20%	50%	0%
No provision memos available in loan dossier	85%	67%	100%	100%	100%	100%	100%

Source: Credit files of commercial banks, KPMG analysis.

A.4 Segregation of responsibilities within the credit process, by major QFPA

Segregation of responsibilities within credit process	Retail Mortgage	TARP	Good Herder	PSP Constr'n	PSP Fuel	PSP Meat	PSP Coal
Corporate banking department (for large activities) or a branch loan officer is responsible for filling in the questionnaire	96%	33%	0%	100%	90%	100%	50%
Corporate banking department (for large activities) or a branch is responsible for documents collection, Legal department (for large activities) or a branch loan officer is responsible for borrower's legal documentation check	96%	100%	100%	100%	70%	0%	0%
Corporate banking department (for large activities) or a branch loan officer / Loan / Credit department is responsible for borrower's financial statements collection and check	Jointly with legal check	100%	Jointly with legal check	100%	90%	100%	Jointly with legal check
Legal department or Corporate banking department (for large activities) and Asset Evaluation Unit or a branch loan officer or Loan / Credit department is responsible for collateral evaluation	94%	67%	25%	0%	30%	0%	50%
Corporate banking department (for large activities) or Credit department is responsible for business case evaluation	n/a	0%	n/a	60%	40%	0%	50%
Corporate banking department (for large activities) or a branch loan officer is responsible for filling in the application	99%	33%	0%	100%	80%	100%	50%
Corporate banking department (for large activities) or Back office is responsible for scoring calculation	0%	33%	0%	40%	40%	100%	0%
Risk or Credit / Loan departments are responsible for ratios calculation and analysis	10%	33%	0%	40%	60%	100%	50%
Security department is responsible for economic security check	0%	0%	0%	0%	20%	0%	0%
Compliance department is responsible for AML check	0%	0%	0%	0%	0%	0%	50%
Corporate banking department (for large activities) or a branch loan officer is responsible for collateral check	92%	67%	63%	20%	30%	0%	50%

Segregation of responsibilities within credit process	Retail Mortgage	TARP	Good Herder	PSP Constr'n	PSP Fuel	PSP Meat	PSP Coal
Loan administrative department or a branch loan officer is responsible for requesting report from the Credit History Bureau	64%	17%	0%	40%	40%	100%	100%
Risk department is responsible for risk assessment	15%	33%	0%	100%	50%	100%	100%
Authorized committee / person for loan approval decision includes Risk management department	18%	0%	0%	40%	30%	0%	0%
Head of business, branch manager, loan officer signs loan agreement	100%	100%	0%	100%	90%	100%	100%
Head of business, branch manager, loan officer signs collateral agreement	100%	100%	0%	100%	90%	100%	100%
Monitoring department, or Loan administration department, or a branch loan officer is responsible for monitoring of targeted use of funds	6%	100%	0%	60%	80%	100%	0%
Restructuring/refinancing/collateral changes agreement is signed by the authorized person(s) including Risk manager	0%	17%	0%	0%	10%	0%	0%
Monitoring department, or Loan administration department, or a branch loan officer is responsible for monitoring the financial condition of a borrower	47%	100%	0%	80%	50%	100%	0%
Monitoring department, or Loan administration department, or a branch loan officer is responsible for monitoring the debt servicing of a borrower	4%	0%	0%	0%	0%	0%	0%

Source: Credit files of commercial banks, KPMG analysis.