SELECTED POLICY MEASURES AGAINST THE DEBT DISTRESS IN MONGOLIA

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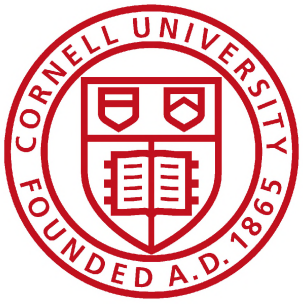

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Abstract: *The objective of this report is to examine the public external debt sustainability of Mongolia, and to propose appropriate regulatory actions for ongoing debates about economic reform. Following sharp external shocks that include a drop in foreign direct investment and a depreciation of the national currency, the country is at a critical moment of determining whether to default on its external debts or correct structural policy failures. Therefore, it is important that Mongolia identify its level of debt distress and determine which structural reforms should take place.*

This report examines the external public debt sustainability of Mongolia using the Debt Sustainability Framework for Low-Income Countries (DSFLC) [32], the methodology presented jointly by the International Monetary Fund (IMF) and World Bank in 2005. This method of debt sustainability assessment is conducted based on current and future debt burden indicators under baseline and alternative scenarios, stress tests, and vulnerability to exogenous shocks. This analysis enables us to determine a country's appropriate strategy for borrowing and appropriate policy responses. It should be noted that the analysis is limited to external public and publicly-guaranteed debts only. The analysis includes a discussion of dual policy measures consisting of privatization and financial market liberalization.

Debt sustainability analysis (DSA) has not been performed for Mongolia since March, 2015; despite the fact that it is supposed to be updated annually for each member country by the IMF according to its Article IV consultation report. The March 15 report concluded that the country faced a high risk of debt distress, and that its debt dynamics exhibit a high vulnerability to external shocks. It also suggested some appropriate policy measures addressing the possible debt distress [34]. Even though the report emphasized upcoming distress and counteractions, the debt situation has worsened to this date according to a statement in August 2016 by Mongolia's Finance Minister, Choijilsuren Battogtokh. He eventually confirmed that the country is in the midst of economic crisis. Therefore, this

paper emphasizes the importance of identifying Mongolias level of external debt distress using standardized methodology.

This paper presents the following topics: 1) a literature review on external debt sustainability; 2) a discussion of the method of debt sustainability analysis; 3) an overview of Mongolia's current macroeconomic situation; 4) the existing external debt level, its management, and policy; 5) an assessment of debt sustainability under alternative scenarios, stress tests, and vulnerability to exogenous shocks; 6) selected policy recommendations; 7) conclusion.

1 Literature review

Active interest in determining what would constitute a sustainable level of external public debt has received longstanding interest. Concern exists given that, although certain levels of indebtedness could promote economic growth, at some point an increase in public debt could not only harm economic growth, but also spark a full-blown debt crisis [10].

Governments constantly face borrowing constraints measured against the amount of surplus they can accumulate in the future. Thus, they must intertemporally balance their budgets by maintaining a present value of debt equal to a discounted sum of expected future surpluses [24].However, as increasing levels of debt service become harder to finance, they can lead to further economic distress because the value of debt increases much faster than the growth of the economy [12]. The literature argues that increased external debt beyond a sustainable level causes an increase in a countrys risk premium, which results in a continuous increase in the value of debt service [10].

Several reasons are deemed to cause a rise in debt to an unsustainable level. Traditionally, these include war financing and maintaining consumption through business cycles [16]. Also, overconfidence in future tax revenues as well as political impatience leading to

funding infrastructure or social benefit programs that could eventually result in increased debt levels. Moreover, increasing financial liberalization of financial markets has made lending and borrowing transactions much easier and more liquid [16]. Reinhart et al. (2011) argue that a banking crisis often triggers a sovereign debt crisis [23].

Yet the question of the optimal level of indebtedness for an economy is still controversial. According to Cottarelli et al. [13], the appropriate level of debt is different for every economy given that vulnerabilities of debt are not homogenous across countries. Reinhart et al. [24] argue that real GDP growth starts to decline at an external debt-to-GDP ratio of 60 percent in both advanced and emerging economies. Also, Pattillo et al., [21] find that the contribution of foreign debt to growth becomes negative at a point between 35 to 40 percent of GDP.

The World Bank and IMF categorize countries into different external debt thresholds depending on the quality of their institutions and policy-making capacities [33]. According to this standard, the external debt-to-GDP ratio benchmarks for the countries that have weak, medium, and strong capacity are 30, 40 and 50 percent, respectively.

2 The Methodology of Debt Sustainability Analysis

Debt Sustainability Analysis (DSA) is a standard methodology developed jointly by the IMF and World Bank for assessing debt stress levels in low-income countries. The DSA framework mainly emphasizes the risk factors of solvency risk and liquidity risk by calculating a countys present value of income stream against its expenditures and existing debts.

The framework has two components: external debt and public debt. The foreign debt section covers total external debt in the economy by both the public and private sectors. Government debt is limited to foreign debt owed and guaranteed by the government. The

DSA does not include private domestic debt.

DSA considers the major debt stock indicators of present value (PV) and grant element (GE). The PV of debt is the discounted sum of all future debt services using a discount rate. The analysis uses a uniform discount rate of 5 percent according to a decision by the Executive Boards of the World Bank and IMF since 2013. A grant element (GE) is an indicator of the concessionality of debt, which is the ratio of the difference between the nominal and present value to nominal value. The higher the grant element is, the higher probability that the loan is provided with concessionality.

$$PV_t = \sum_{i=1}^{n} \frac{DS_n}{(1+\beta)^n} \tag{1}$$

where PV is present value, DS is debt service, β is discount rate.

$$GE = \frac{nominal\ value - PV}{nominal\ value} \tag{2}$$

In order to examine solvency and liquidity positions, the framework employs a series of debt burden indicators, including the present value of public debt to GDP, exports, and fiscal revenue; and public debt service to exports and budget revenue. The Funds set the thresholds for each of the indicators based on a Country Policy and Institutional Assessment (CPIA) index.

According to the framework, the benchmark for public debt to GDP level is advised as shown in *Table 1.*

Moreover, the DSA is conducted based on a baseline scenario and stress tests. The baseline scenario shows the most probable projection of a country's debt without any significant policy changes or exogenous shocks. It is estimated based on projections of main macroeconomic variables. The stress tests represent the sensitivity of the baseline scenario

Table 1: Public Debt Benchmarks

Quality of policies and institutions CPIA	PV of external debt in percent of			External debt service in percent of	
	GDP	Exports	Revenue	Exports	Revenue
Weak	30	100	200	15	18
Medium	40	150	250	20	20
Strong	50	200	300	25	22

Source: [33]

to the shocks mentioned above and macroeconomic assumption changes in the baseline scenario variables.

The methodology provides two standardized stress tests, namely, alternative scenarios and bound tests. Alternative scenarios allow researchers to modify macroeconomic assumptions used in the baseline scenario. Bound tests are subject to short-term shocks to the variables, which eventually reset to the baseline assumption.

Several different alternative scenarios can be conducted. First, key variables are modified to the historical average. Second, the primary balance-to-GDP ratio remains unchanged from the projection period. Third, long-term growth deteriorates. Furthermore, we can employ bound tests based on shocks of real output, primary balance, combined one standard deviation, real exchange rate depreciation, and contingent liability.

Finally, an overall assessment provides the general picture of the overall risk of debt distress in the economy. The methodology classifies countries as having a low, moderate, or high external risk rating and debt distress.

3 Current macroeconomic situation

According to a statement by Mongolias Finance Minister in August 2016, Mongolia, a country once dubbed as the fifth Asian tiger, is now in a deep state of economic crisis.

Only five years ago, Mongolia's 17.5 percent growth rate, abundant mineral resources, and strategically desirable location next to China made it one of the prospering emerging markets in the world. Yet today Mongolia faces a real risk of debt default and a severe crisis rooted in economic mismanagement and populism.

As shown in *Figure 1*, , the country's economic growth rate has plummeted dramatically over the last three years. In 2016, the economy grew by only 0.01%, and since July 2016 deflation followed the economic downturn. Moreover, *Figure 2* shows that, compared to a surplus present in 2010, in 2016 the country had a budget deficit that reached nearly 16%, largely due to extravagant expenditure increases in social welfare programs, pensions, housing services, and government salaries. The only way to finance the resulting large budget imbalance was borrowing. Since 2012, the Mongolian government has raised 4.7 billion US dollars as external securities. This amounts to nearly half of GDP, of which, around $2.6 billion of external debt service is scheduled to come due in the next three years, which is equal to two-thirds of total government revenue each particular year [31].

Figure 1: Real GDP growth

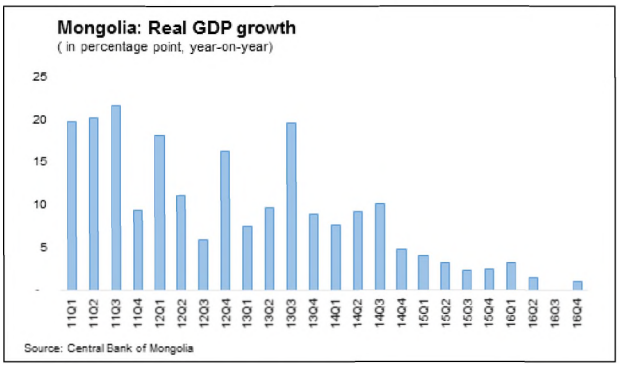
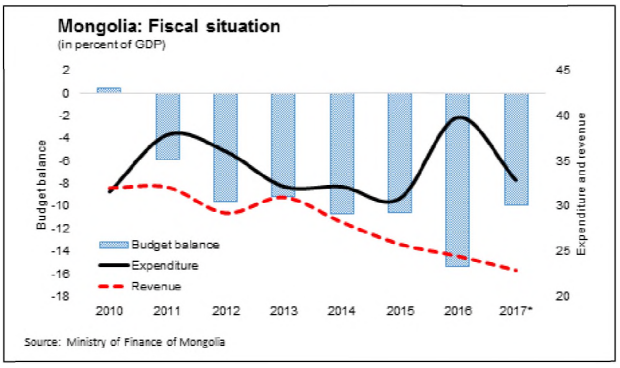


Figure 2: Fiscal Situation



Meanwhile, the recent drop in mining commodity prices and foreign direct investments has triggered a sharp decline in currency inflow to the economy. *Figure 3* shows that in 2016 foreign direct investment decreased by a monthly average of 0.9 percent, and by 94 percent compared to 2012. Also, *Figure 4* shows that the economy experienced a continuous contraction in its balance of payments since 2012.

Figure 3: Foreign Direct Investment

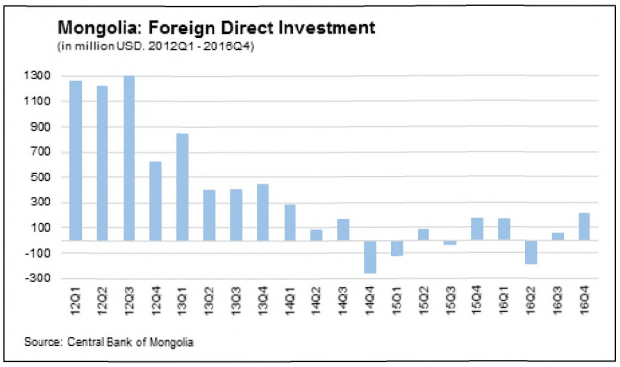
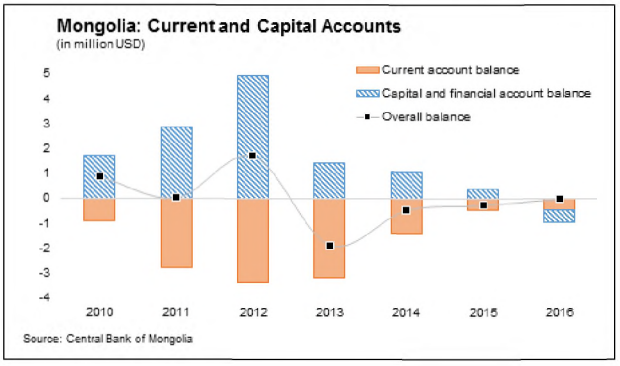


Figure 4: Current and Capital Accounts



By the end of 2016, the national currency depreciated against the US dollar by 25 percent year-on-year, which has deteriorated the external debt condition immensely. Following the sharp drop in investment and a balance of payment deficit, the Central Bank of Mongolia regularly intervened using its foreign exchange reserves in an effort to stabilize the strong depreciation of the Mongolian currency since 2013. *Figure 5* illustrates that Mongolia's foreign reserves have declined by 68 percent since January 2013 and has no further capacity to assuage ongoing depreciation. As a result, the Central Bank increased its policy rate sharply by 450 basis points in August 2016. As the situation is becoming more dire, the country's capacity to sustain its debt condition is continuously deteriorating.

Figure 5: FX Reserve and Exchange Rate

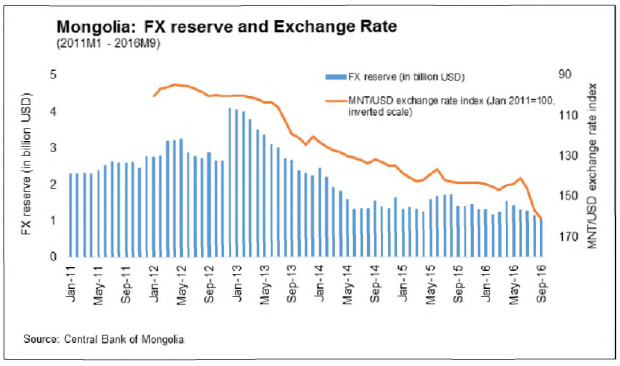
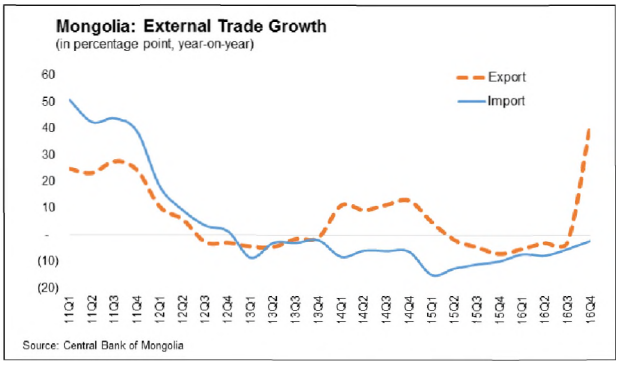


Figure 6: External Trade



Export volume had increased until the end of 2014 due to currency depreciation. However, since 2015 temporary growth has been negative due to the sharp decline in mining commodity prices in the global market. By the end of 2016, an upward trend in mineral

prices severs as a positive sign for the economy. It should be noted that copper, gold, coal and iron ore make up 85% of Mongolian exports. A steady contraction of exports caused further deterioration in the currency rate, government revenue, and the capacity to service external debt until the end of 2016.

4 Mongolia's debt situation

The Mongolia's latest Debt Sustainability Analysis prepared jointly by IMF and World Bank staff in March 2015 concludes that Mongolia suffers from the high risk of external public debt distress [34]. The key debt indicators had exceeded the appropriate thresholds since 2013. Moreover, the report states that the debt indicators are highly susceptible to various standard shocks including sharp exchange rate depreciation and decline of the balance of payment inflows. More importantly, the debt risks call for immediate policy actions as the baseline scenario were not sufficient to safeguard macro-financial stability and to ensure debt sustainability [34].

Figure 7: External Debt

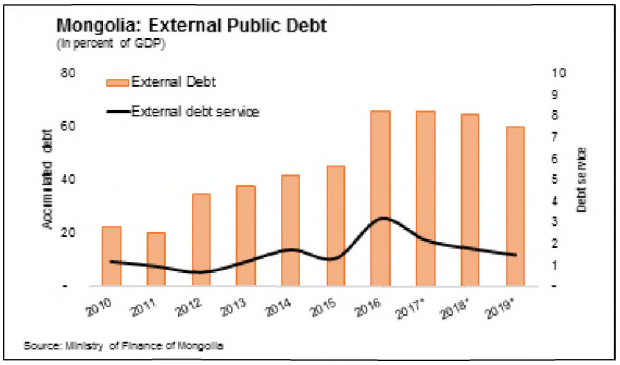


Figure 8: External Debt Ratios

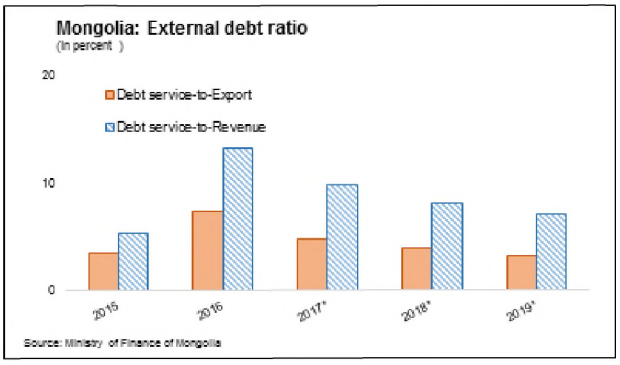


Figure 7 and *Figure 8* show that the expected debt service from 2017 to 2019 would pose massive pressure in the economy. Declining economic growth, contracting balance of payment, and deteriorating government revenue would make fiscal situation insufficient to finance the remaining debt service, all of which are denominated in foreign currency.

Therefore, we may assume that there is a high probability of an external debt default in 2018 unless the government raises additional borrowings to refinance the existing debt repayments. However, a marginal cost of capital of this massive amount of borrowings would be at least 12%, which is likely to drag the country into a further debt spiral, due to the continuous decline in Mongolia's sovereign credit ratings and current economic condition. It is evident that new Eurobonds would be costlier than the previous bond with 10.875% annual coupon rates issued in April 2016.

Moreover, it should be considered the external concessional loan and commercial securities separately. First, the massive amount of external bonds maturing in upcoming few years may cause the biggest problem of debt distress. It can be seen in *Table 2* that Mongolia is facing the principal payment of $660 million in 2018. Together with the interest payment, the total repayments would cost nearly 46% of total government revenue, which the government cannot finance from the existing resource.

Table 2: Government External Securities

No.	Issuer	Amount	Coupon	Issued	Maturity
1.	Government of Mongolia	500M USD	4.125%	12/5/2012	**2017**
2.	Government of Mongolia	1,000M USD	5.125%	12/5/2012	2022
3.	Development Bank of Mongolia	161.2M USD	5.960%	6/30/2015	**2018**
4.	Government of Mongolia	500M USD	10.875%	4/6/2016	2021

Source: Ministry of Finance of Mongolia

Table 3: Government Guaranteed Debt

No.	Issuer	Amount	Coupon	Issued	Maturity
1.	MIAT Mongolian Airlines	77.5M USD	2.520%	12/24/2013	2023
2.	MIAT Mongolian Airlines	24M USD	5.300%+LIBOR	12/24/2013	2020
3.	MIAT Mongolian Airlines	20M USD	9.380%+LIBOR	12/24/2013	2018
4.	Development Bank of Mongolia	30B JPY	1.520%	1/6/2014	2024
5.	Development Bank of Mongolia	162M USD	6.000%	9/3/2014	2022
6.	Development Bank of Mongolia	300M USD	4.250%+LIBOR	9/5/2014	2019
7.	Trade & Development Bank of Mongolia	500M USD	9.375%	5/19/2015	2020
8.	Erdenes Mongol LLC	35M USD	LIBOR	4/1/2016	2031

Source: Ministry of Finance of Mongolia

Second, the well-diversified portfolio of external concessional loans lowers the credit and liquidity risk. However, the net present value of the external loan reaches $2.3 billion, which is 10% of total GDP; the different maturities of total 197 different loan agreements will not have any repayment pressure in any single year till 2050. It can be seen in *Figure 9* and *Figure 10* that the major creditors are Asian Development Bank, Japanese International Cooperation Agency, and World Bank, which provide development loans with substantially more generous than the commercial securities.

Figure 9: External loan by creditors

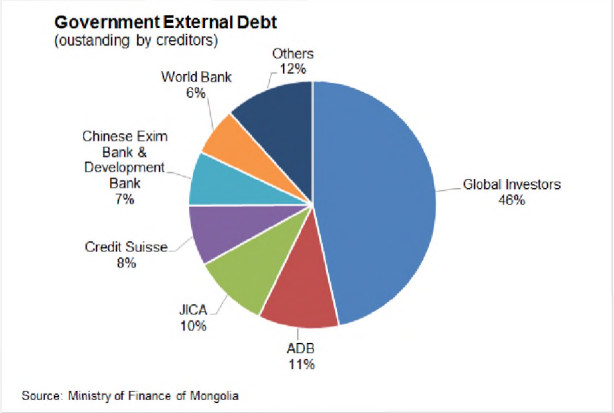


Figure 10: External loan by currencies

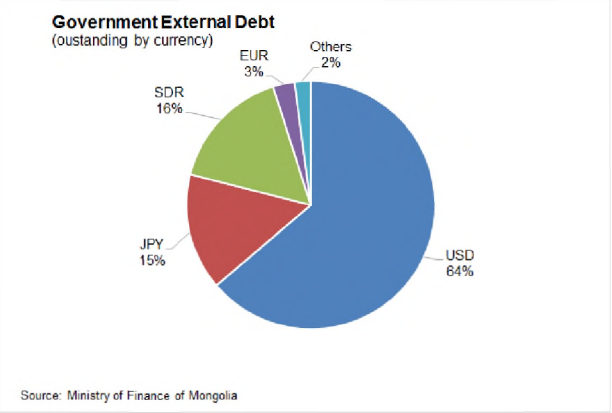


Figure 11: Maturity Schedule of External Loans

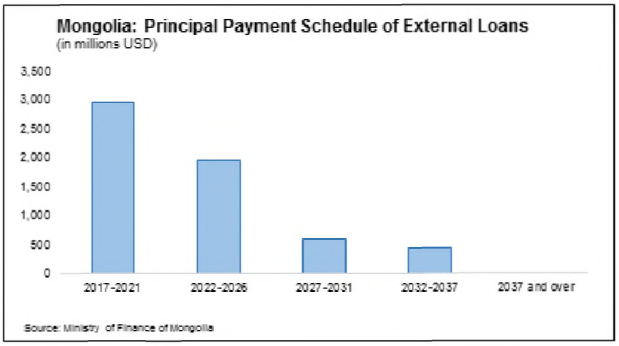
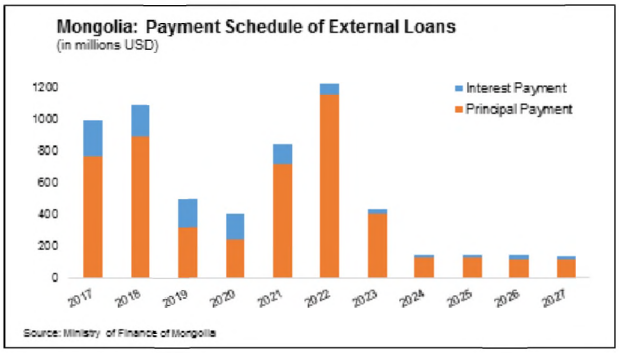


Figure 12: Payment Schedule of External Loans



Therefore, based on the current situation, it can be assumed that Mongolia is likely to confront the debt default if the country does not take any decisive policy actions or make new securities to refinance existing external securities. Although, given the debt distress, it would be much costly to raise new Eurobonds in the external market. The required rate of

return from investors would be much higher than the previous bond, which had 10.875% coupon with five years maturity denominated in US dollars. Moreover, the continuously declining sovereign credit ratings would make additional borrowings much costlier than before.

Table 4: Sovereign credit ratings of Mongolia

Rating agency	Dec 2016	2016	2015	2014	2013	2012	2011
S&P	B-	B-	B	B+	BB-	BB-	BB-
Moody's	Caa1	B3	B2	B2	B1	B1	B1
Fitch	B-	B	B	B+	B+	B+	B+

Source: S&P Financial Services LLC, Moody's Investors Service, and Fitch Ratings Inc

The sovereign credit ratings for Mongolia have continuously downgraded since 2014. Moody's Investors Service and Fitch Ratings Inc., announced to reduce Mongolia's government bond rating to Caa1 from B3 and to B- from B, respectively, in November 2016. The corresponding press release on 8 December 2016 concludes that the Mongolian fiscal strength and the economy's external position have deteriorated significantly. The capability to finance its external debt service to multilateral and bilateral borrowings is uncertain. Moreover, it states that the failure of debt repayment would increase the risks of a balance of payments crisis.

From the institutional framework perspective, the Parliament of Mongolia enacted the Law on Fiscal Stability in 2010 to ensuring fiscal stability and special fiscal requirements including debt ceilings. Initially, the net present value of government debt including any securities guaranteed by the government shall not exceed 40% of nominal GDP of the particular year excluding any public borrowings for the purpose of contributing into paid-in-capital of a foreign invested mining companies. However, the authorities have continuously altered the debt threshold and its calculation method. First, the amendment to the Fiscal Stability Law in January 2015 changed the debt target to 58.3% in 2015, 55% in 2016, 50% in 2017 and 40% after that. Second, another amendment was enacted to

increase the debt ceiling to 88% in 2016, 85% in 2017, 80% in 2018 and the general threshold to 60% from 40%. Moreover, the subsequent changes to the law narrowed the definition of government debt by excluding government guarantees that secured any borrowings and state-owned enterprises' loans on energy, railroad, mining industries. These law amendments provided additional room for the government to issue more guarantees. Also, the external borrowings of the Development Bank of Mongolia, a 100% state-owned development bank, had been excluded from the calculation of government debt level.

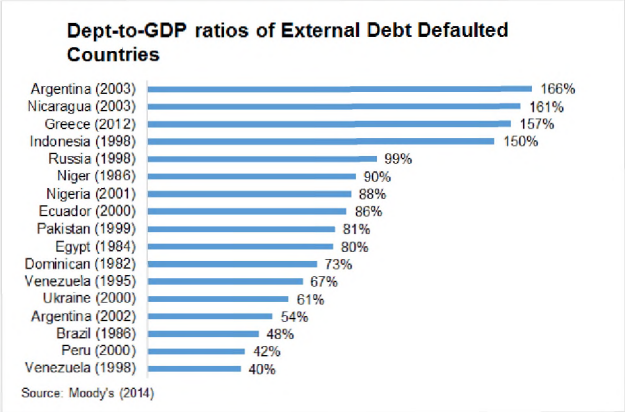
In February 2015, the Parliament enacted the Debt Management Law to set out a comprehensive institutional framework that facilitates the regulations, implementations and monitoring the government debt related issues. The law provided a broader definition of state total external debt, which is quite similar to the IMF's definition: "Payment obligations of the government, local community, Bank of Mongolia, and entities registered in Mongolia to all unregistered non-residents." However, the government debt definition remains unchanged by excluding government guarantees as per the Fiscal Stability Law. Furthermore, the Parliament approves the Government's Medium-term Debt Management Strategy in every three years. The law regulates all debt related issues and procedures including state and local government debt issues, government guarantee procedures and duties and responsibilities of authorities; however, the main challenge for excessive external public debt remains vulnerable due to altered calculation of debt NPV and unconventional exclusion of borrowings to specific industries.

5 Empirical results

In general, we can conclude that Mongolia's debt dynamics have deteriorated since the last DSA report and still in a high risk of debt distress based on the assessment. Due to a sharp depreciation of the national currency, the external debts denominated in US dollars

soared significantly. The external public and publicly guaranteed debt reached 61.1% of GDP. It is projected to exceed 125% of GDP from 2017 due to the refinancing of existing debts and stay above the benchmark for almost the entire projection horizon. Also, if the economic condition and credit rating negative outlooks continue as the baseline scenario, the level debt-to-GDP ratio is likely to increase more. As shown in *Figure 13*, the Mongolia's external public debt to GDP ratio is relatively higher than most of the debt defaulted countries. Moreover, the debt service indicators including debt service-to-exports and debt service-to-revenue breach the threshold level significantly till 2022, when 1 billion US dollars bonds mature.

Figure 13: Debt-to-GDP ratios of External Debt Defaulted Countries



Under the baseline scenario, we predict the GDP growth would be less than 1% percent until 2018 as shown in *Figure 14*, when the massive debt services are due. However, the longer-term growth will stay around 8% given the promising prospects of the mining sector and fiscal discipline. The public debt to GDP ratio will be 130%, in average. Mongolia's all external debt indicators breach the thresholds and remain above them during the projected period.

We conduct the debt sustainability by using alternative scenarios and bound tests as follows

1. Alternative scenarios

    A1. Key variables at their historical averages in 2017-2037

Figure 14: A Debt Indicator under alternative scenarios

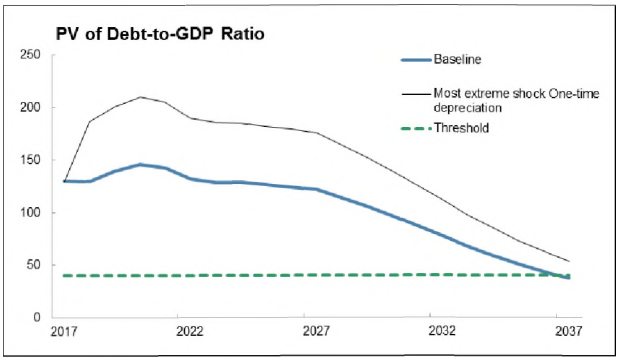
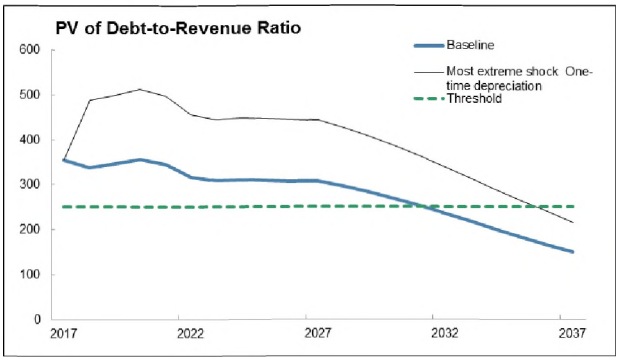


Figure 15: A Debt Indicator under alternative scenarios



A2. New public sector loans on less favorable terms in 2017-2037

2. Bound tests

B1. Real GDP growth at historical average minus one standard deviation

B2. Export value growth at historical average minus one standard deviation

B3. US dollar GDP deflator at historical average minus one standard deviation

B4. Net non-debt creating flows at historical average minus one standard deviation

B5. Combination of B1-B4 using one-half standard deviation shocks

B6. One-time 30 percent nominal depreciation relative to the baseline in 2018

The debt dynamics show a high vulnerability to shocks and bound tests. The debt indicators are highly sensitive to GDP deflator shock and sharp exchange rate depreciation. Given one standard deviation in GDP deflator, the present value of external public debt would peak at 147% of GDP from 129% in 2018. Also, if one-time 30 percent nominal depreciation occurs in 2018, the present value will increase by 57% of GDP. The bound test results exhibit the macro-financial stability highly susceptible to the fluctuation and balance of payments flow.

For our estimation, we assume that Mongolia would not take any additional commercial debt from the external market. If so, the required yield would be much higher than 10.875% of the previous bond that would push the country into the much harder debt spiral, and the probability of default becomes clear. Instead of that, the government should

Figure 16: A Debt Indicator under alternative scenarios

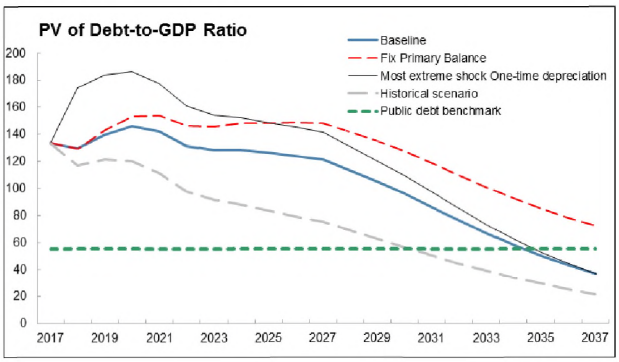
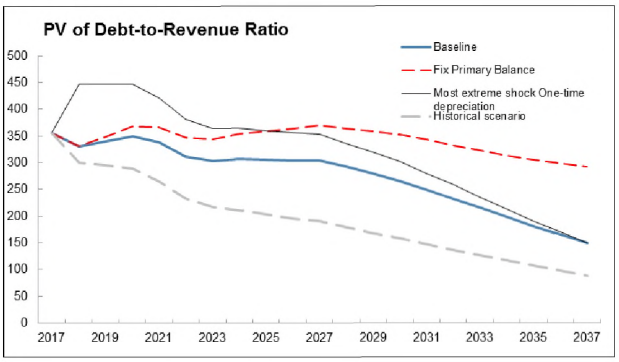


Figure 17: A Debt Indicator under alternative scenarios



actively seek external loans from donor organizations with the concessional term.

6 Selected Policy Recommendations

Mongolia's long-term economic prospects remain promising with high literate and educated young population, the sheer size of mineral wealth remained to be materialized in the future; however, in the short run, our empirical study shows that the economy faces serious challenges such as additional borrowing needs for debt service. The pressure of debt cycle is expected to deteriorate the balance of payment further. Meanwhile, the budget deficit remains high as it lacks fiscal stability against possible external shocks including mineral price volatility and downturn of the Chinese economy. Therefore, the country needs structural economic reforms including public finance and financial sector.

In this section, we examine the selected two areas of structural reform in addition to the debt management. First, based on you empirical results, we propose policy recommendations for debt management issues. Second, the regulation of potential financial sector liberalization is discussed. Second, we analyze how the situation of state-owned enterprises would become favorable both to society and the government.

These topics are selected due to the importance of existing system and current debates

under the spotlight among variety of societal groups. For each topic, first, we discuss existing literature. Second, the current situation of Mongolia is provided. Third, we propose policy recommendations addressing the problems of the selected topics.

6.1 Debt Management

Given the risks mentioned in our study, the immediate policy actions should be taken. First, the budget deficit shall be tightened. The lax fiscal expenditure, social benefit, and cash handouts to some target groups including students and children below an 18 years old should be decreased. Also, avoidance of an increase in monetary base and domestic bond issuance would be critical to lessen the debt distress impact on the economy.

Second, the definition of external government debt should be revised in order to determine the net present value and subsequent ratios accurately. Currently, external publicly guaranteed debt on energy, mining, and railroad sector are excluded from the NPV calculations of external public debt by the subsequent changes to the law. These changes enable the government to raise excessive foreign debt which led the current distressed situation.

Third, the government needs to focus more on raising concessional loans from donor organizations, specifically those who have standard programs to troubled economies. The standard programs conducted by IMF would be an ideal alternative. The benefit of Stand-By or Extended Fund Facility arrangements would be not only additional financial resource but also gives a positive signal to the global investors due to its strong terms and conditions.

Fourth, it is of importance to encourage export and current account inflow at this time. The government needs to resolve the issues that triggered the poor investment inflow including frequent changes to investment-related laws and tax laws, which created legal

uncertainty. A possible resolution can be loosening the requirements for investment agreements and tax stabilization certificates. The tax laws can be changed to encourage export-oriented projects and foreign direct investments. For example, the universal 20% of withholding tax for non-residents income can be reduced to 10%, the level of existing tax treaties.

6.2 Liberalization of Financial Sector

Mongolia has never opened its banking sector door to foreign financial institutions. It has always been controversial whether the country should open its financial market to foreigners. The current structure of financial markets provides nothing but higher interest rates and constraint of access to lending. Domestic banks are criticized for their high lending rate, nepotism, and related party transactions. In fact, excessive lending practices caused several banking failures in the past. Therefore, the major expectation from foreign banks is that they would decrease the overall interest rates and provide long-term financing.

In this section, first, we discuss litarature on the implications of foreign bank operation to a host country, and legal environment of Mongolia towards foreign banks. Second, we propose three regulatory actions that are necessary before permitting any foreign banks.

There are two ways for a country to liberalize its financial market to foreigners. First, foreign direct investment in the banking sector can be permitted, which has already taken place in equities of major Mongolian banks. Second, the country can allow cross-border banking activities through their branch or permanent establishment in the host country. This paper is limited to discuss on the latter way of liberalization in the context of Mongolia.

According to literature, the conventional benefits of foreign bank penetration include efficiency gains by new technologies, imported know-how, management techniques and

more efficient products as well as greater competition stimulated by new firms [1] [8] [9]. These positive gains are of utmost important to Mongolia's underdeveloped financial market and the main arguments of the proponents of allowing foreign bank entries.

However, there are some shortcomings on foreign bank entrance to an emerging market. First, foreign banks are more prone to have "cut and run" behavior when their performance does not meet the expectation [8]. As a result, the host economy would suffer from this sudden pullout of capital. Second, due to lack of information availability of smaller lenders, foreign banks are likely to end up crediting to larger and more transparent firms, which pushes local banks to deal with more informationally opaque and smaller customers [14]. Third, the foreign banks may engage in regulatory arbitrage seizing gaps in regulations among countries [8]. The Central Bank of Mongolia may face difficulties in conducting effective monitoring and coordination among parents, sandwich companies, and their subsidiaries.

Having said that, Mongolia would face some obstacles, if it opens the market to foreign banks. First, the higher reserve requirements and tightened prudential ratios may increase the cost of capital of foreign firms that pressures down the ability to provide longer-term loans with lower interest rates. Second, the public expectation of lowering interest rates cannot be achieved only by allowing foreign bank operation. The interest rates remain high not only because of the banks but also by many macroeconomic reasons including the country risk, high expected inflation, weak financial market. A probable negative outcome might be a deterioration in the competitiveness of domestic banks due to their higher cost of capital.

Regarding the existing legislations, Mongolia does not have any specific regulations for income-generating activities of foreign banks. Under Banking Law of Mongolia, it is prohibited for foreign banks to operate via their branches or subsidiaries in Mongolia without a license issued by the Central Bank. However, it is possible to open a

representative office without performing any banking operations. "The Regulation on Bank Licensing" adopted by the Central Bank of in June 2012 specifies the requirements for establishing a foreign bank representative office. Foreign banks may establish local subsidiaries not earlier than one year after the establishment of their Mongolian representative offices. The foundation of a representative office is a prerequisite for the establishment of a local subsidiary. The minimum equity capital requirement for a Mongolian subsidiary of a foreign bank is approximately $50 million, which is much higher than $12 million from a domestic bank. Currently, there are five foreign banks have been operating in Mongolian financial market since 2008 through their representative offices.

There is an additional legal requirement prevails to foreign state-owned banks. The Investment Law of Mongolia states that any firm dealing business in banking sector owned by more than 33% of the total shares by owned foreign government shall get permission by the Government of Mongolia. The Bank of China, one of the potential license seekers, has its 67.7% of total shares held by the state-owned corporation "Central Huijin Investment Ltd.,". Thus, this bank would need to seek an addition permission from the Government. Moreover, an entry of any Chinese state-owned bank may result in an increased imbalance that conflicts with the National Security Concept of Mongolia. The concept was enacted in 2010 by the Parliament proclaims the Balanced Investment Strategy that designs whereby the investment of any foreign country does not exceed one-third of overall foreign investment in Mongolia. Moreover, the strategy restricts investments by foreign-owned companies and balance the volume of investment by neighboring and highly developed countries within the strategically important sector.

Our policy recommendation presents three regulatory actions. First, we discuss ex-ante actions including authorization and preparation processes. Second, we examine ex-post issues such as supervisions and operational boundaries. Third, we consider the existing double tax treaties' provisions related to financial business. For every phase of engaging

Table 5: Foreign Banks having a representative office in Mongolia

No	Name of foreign banks	Date of establishment
1	ING Bank N.V	Aug 2008
2	Standard Chartered Bank	Jul 2012
3	Bank of China	Dec 2012
4	Sumitomo Mitsui Banking Corporation	Jul 2013
5	Bank of Tokyo Mitsubishi UFJ	Dec 2013

Source: [5]

foreign financial institutions, the cooperation with supervisory authorities of the countries where parent company incorporates is of utmost importance. The mutual understanding, information exchange, and reciprocal supervising obligations with parent countries are the biggest challenges for developing countries to engage with large foreign banks. However, there is no worldwide agreement on procedures relating to authorization and supervision of new foreign banks in other nations; we mostly refer the principles and guidelines set out by Basel Committee and Bank for International Settlements [2] [3] in this section.

First, in terms of ex-ante actions, Mongolia should update the existing law and regulations by focusing more on foreign bank activities. First, the country should set up legally defined rules that require cooperating agreements with supervisory authorities of the countries, in which parent institutions are established. It is crucial to have active contacts and mutual understandings with the parent authorities as a basis for further cooperative supervision. By doing so, Mongolia shall require a confirmation of parent authorities ensuring that the new establishments will be subject to the consolidated oversight of the parent banks, and relevant information about the activities of such foreign establishments will be available to Mongolian authorities. This confirmation can be requested by either the requested bank or directly from the parent authorities.

Furthermore, there are some additional circumstances [3] in where Mongolia should not give permission to entry or, at least, shall conduct a more meticulous examination. First,

in any case, Mongolia should not allow foreign banks from a country where supervisory arrangements do not exist, or inadequate, or granted a specific exemption from supervision by its parent authority. Second, the parent bank has to be authorized as a bank in its country and subject to the oversight by its parent authorities. Third, Mongolia should ensure that all activities of parent institution are subject to the oversight in their countries on a worldwide consolidated basis. Fourth, as a part of authorization procedure, it is important to identify the beneficial ownership of the parent company instead of intermediate "sandwich" institution.

Second, from the ex-post regulatory perspective, one of the biggest challenges for developing countries to engage with foreign banks is the supervision capacity for cross-border activities. The risk of escaping regulators' sights by using complex types of corporate and financial structures across international borders is not only a problem for developing countries but also even for the most developed economies. It is rigorous and costly to supervise banking institutions across borders.

Followings are the must-consider ex-post rules [2] to be set out into Mongolia's existing legislations towards foreign banks. First, it is essential to classify the foreign establishment as a bank by both host and parent authorities for further examination. There should not be any major definition gap between the countries. Second, Mongolia shall set up a specific rule that enables its authority accessing to information of the parent company or overall structure of banking group and conduct of business related to such establishments. Third, in order to avoid transfer pricing, the Mongolian authorities should have a right to exchange information with the parent's regulators of non-banking activities with financial characters, if necessary.

Since the supervising responsibilities of host and parent authorities are complementary and overlapping, the consolidated and comprehensive supervision is must be taken to monitor the risk exposure of banks, solvency, liquidity, capital adequacy, and foreign exchange

positions by the overall structure of the bank's business. Mongolia should have an approach of supervising subsidiaries as an independent bank; even though, they have access to reinforcements of their parent companies in the event of distress.

Furthermore, it is of importance to set rules against foreign banks to pick the most profitable customers selectively. It is unfavorable to Mongolia if foreign owned banks are less inclined to provide credit to smaller firms [4] [25]. This cherry-picking practices will weaken the domestic banks and further deteriorate the overall access to lending. Therefore, it is probable to set minimum ratio on the composition of foreign banks' asset portfolio to encourage their financing to the retail markets. Meanwhile, the greater penetration of foreign banks is likely to increase financing from domestic banks to small and medium enterprises because of increased competition in the market [20].

Finally, the existing double tax treaties should not have loophole among each other and with the domestic legislations. Foreign bank subsidiaries are subject to business withholding taxes, mainly on dividend and interest payments to outside. Most of the treaty counterparts of Mongolia provide the tax credit for already paid tax in Mongolia to reduce the potential double taxation as per OECD model treaty. However, several existing treaties have a lower withholding tax rates than that of domestic tax rates [30]. It is not a question of whether the tax is high or low. Tax jurisdictions should not have unfavorable treatment for local banks rather than foreign bank subsidiaries. For example, the dividend withholding tax is 20% in domestic law, while 5% of this tax rate applies to Chinese, South Korean subsidiaries according to the treaty. Also, the 20% of domestic withholding tax on interest payment is set as 0% for Belgian, French, Swiss, 5% for Singaporean, 7% for British subsidiaries [30]. Therefore, Mongolian authority should re-consider this differentiated withholding tax rates among the treaties and domestic laws.

6.3 Depoliticization of State-owned Enterprises

Inefficiency in state-owned enterprises has been an epicenter of political debates in Mongolia since 1990. It is not controversial that public enterprises tend to employ excessively, produce goods that market does not need, accumulate overly debts, not update their capital stock, create losses and so on.

Theoretically, enterprises should be owned by governments to remedy monopoly and externality problems. However, the main reason of inefficiency in state-owned enterprises is political pressures by which politicians attain their political agenda over public enterprises [6]. In order to get votes or avoid riots, politicians have an interest to encourage excess employment, transfer pricing, unnecessary procurements, location in economically inefficient places, and underpricing of output rather than efficiency. It is common that politicians subsidize state-owned enterprises in order to convince them to pursue their political goals [26]. In return, executives hire extra employees or procure politicians related goods and services. This bargaining between politicians and managers over firm's operation results in soft budget constraints in return for the desired inefficiency.

Moreover, publicly-owned enterprises are less efficient than private-owned because their managers are strongly protected from the market for corporate control. Most of the publicly-owned company managers are appointed by politicians. Thus, they are not forced to keep up earnings due to the lack of corporate takeovers [7].

Therefore, depoliticization is necessary for those public enterprises engaging with political agenda or inefficient operation. There are several ways to get rid of political pressure from public companies. First, privatization can be a feasible solution of restructuring entities. Giving more or full autonomy for private ownerships may incentivize managers to maximize profits and seek efficiency. Also, by cutting out the political chain, firms might increase their efficiency due to market competition or hard budget constraint [28]. Second, corporatization may empower firm executives to extract more efficiency in the bargain with

politicians by shifting control from politicians to managers [26]. This approach for restructuring public entities increases the cost to politicians for exerting their influence over firms to cater their wishes.

Beyond the changing ownership structure of public enterprises, there are three more strategies of depoliticization: competition policy, equity governance, and capital allocation. First, fostering market competition by deregulation would challenge public state-owned entities [26]. By facing competitors in more liberal markets, the public enterprises would have no choice but to increase their efficiency or seek more subsidies. If they get more subsidies, feeding up inefficient firms in a competitive market will increase the fiscal burden to the government. The resulting debt increase is costly to politicians to get votes. This stipulates the political behavior that restricts market competition to exert their influence more.

Another central depoliticization mechanism is the transfer of equity ownership from state to activist investors [26]. The activists are known as they constantly put hard pressure on managers to increase the firm's efficiency. Third, it is possible to limit or replace political allocation of capital with private allocation. If there is a credit line from state-owned banks or budget, the politically influenced firms would have advantages to get loans and subsidies.

Mongolian public enterprises have been blamed for their inefficiency, high level of subsidies and debts, and excessive procurement since the mass privatization in early 90s. Therefore, due to the public demand of getting rid of those entities, politicians keep promising to privatize them in order to get more votes. It has always been an inseparable part of every political election debates. After the elections, privatization fever always become abated.

There are currently 87 wholly or partly state-owned companies operating in Mongolia. Some industries in the economy are fully owned by the state including energy, electricity, their grid systems, road maintenance, stock exchange, clearinghouse, airport and railroad. While, some state-owned enterprises operate in competitive market such as banking,

tourism, construction, agriculture and mining. Also,

The Government officials reportedly announce the high level of indebtedness and loss of public entities. According to the Mongolian Government Agency for Policy Coordination of State Property, the number of state-owned entities with loss is gradually increasing, while the number of profitable public enterprises has decreased as shown in *Table 6*

Table 6: Profits and losses of Mongolia's Public Entities

Number of companies	**2011**	**2012**	**2013**	**2014**	**2015**
With profit	45	45 an	37	51	39
Amount of profit (in bln LCU)	325.7	258.9	206.8	49.6	74.7
With loss	22	27	41	33	44
Amount of loss (in bln LCU)	-32.2	-53.7	-171.8	-159.3	-90.7

Source: Mongolian Government Agency for Policy Coordination of State Property

The privatization is generally perceived by the general population as an example of decisive economic reform that can explicitly benefit them [26]. During annual budget discussions in Mongolia, privatization of several public enterprises becomes one of the most controversial issues. Every year, Government proposes to raise revenue by privatizing state-owned companies and to allocate extra expenditure from this revenue source. As a result, the privatization becomes a political phenomenon rather than economic restructuring action. Nowadays, politicians use this terminology to gain more support and votes. In 2017 State Budget, six large firms are announced to be privatized including state-owned commercial bank, stock exchange, telecommunication and postal service. However, there is no sign to take these actions into place.

Therefore, we propose four policy actions that can effectively address the current drawbacks of public enterprises. First, the government should focus more on depoliticization rather than privatization. The cause of inefficiency in state-owned enterprises is more about political influence rather than ownership structure. Therefore, the government's policy should have a broader array of actions including not only the privatization but also corporatization, competition policy, equity governance, and capital

allocation. For example, hardening the soft budget constraint of state-owned enterprises by cutting out subsidies and concessional credit lines would have more efficient in those which operate in competitive market.

Second, the government should avoid creating privatized natural monopolies. Lack of regulatory apparatus of private natural monopolies may cause tremendous negative effects on welfare. Traditional natural monopolies include electricity generation, transmission and distribution, water and sewer services, telephony services, natural gas distribution and so on. Theoretically, monopolies could price that are higher and output that is lower than the competitive market. Thus, significantly higher price by privatized monopolies will have a negative impact on those who have lower income groups. The deadweight losses due to monopoly pricing by privatized natural monopolies and cost of regulation and administration would be outweighed by the benefits of efficiency improvement [7]. Moreover, there is an empirical study [29] proposed that a comprehensive strategy of reforms including privatization and corporatization instead of sole privatization actions are most likely to improve state-owned enterprise performance across the countries.

Third, if required, fast privatization is necessary in order to gain support and avoid internal political conflicts. Slowing the privatization process down further facilitates the political debates and eventually cause it stop altogether. Also, rapid privatization gets political benefits and thus increases the probability of success [26].

Fourth, there are many cases that had good overall economic and financial performances of the entities remained in government ownership including France, Singapore, and Norway. The commonplace of this success is the legal independence of economic activities with no distinct favor, subsidy, or fiscal treatments. In other words, they take the corporate governance of those entities out of the politicians and treat them as straightforward private companies [15]. Having said that, it would be more effective if the governments take equity governance or corporatization actions such as shifting controls from politicians to managers

or distributing minor shares to active investors. Depoliticized corporate governance would increase the efficiency rather than create natural monopolies.

7 Conclusion

It is evident that Mongolia still suffers from the strong risk of a debt crisis. The probability of debt defaulting is increased than the last assessment in March 2015. The massive amounts of recent borrowings have not been effectively managed to address the future debt service and income sources. A sharp increase in external public debt close to 100% of GDP caused by lax fiscal policy and loosened debt ceilings as a result of alterations of laws. The external public debt position becomes more vulnerable to external shocks. The existing high level of external debt makes Mongolia's macro-financial stability highly sensitive to exchange rate changes and BOP fluctuations.

Therefore, it is of utmost importance to take structural reform in economy. The core of the economic distress is related to the fiscal imbalance, thus it has to decreased gradually. In addition to fiscal policy, the excessive domestic debt level is likely to pose significant risk for the economy in upcoming four years. Therefore, decreased monetary base and domestic bond issuance is necessary.

Moreover, the legal definition and calculation method of debt indicators should to be revised. The exclusiveness of certain sectors from the net present value estimation should be avoided in order to monitor the comprehensiveness of debt sustainability.

From the expenditure side, the sluggishness of state-owned enterprises should be addressed by a comprehensive depolitization policy including privatization, corporatization, competition policy, equity governance, and capital allocation. The inefficiency of public enterprises cannot be solved only by changing ownership but also improving corporate governance, hardening budget constraint and increased opportunities of corporate control

transactions. Regarding privatization, the process should be rapid to avoid political fights. Also, it should be carefully analyzed before establishing privatized natural monopolies that the societal costs borne by increased regulation and higher prices versus benefits from decreased inefficiency.

Furthermore, the highly protectionist financial sector and underdeveloped capital market pull back the cost of capital in the business environment, while political instability and poor creditworthiness make the country's investment climate unfavorable. Therefore, it is of importance to allow foreign financial companies entry to Mongolia. However, there are several policy actions should be taken in advance mostly related to collaboration with the foreign regulators in terms of supervision and information exchange. Also, the cherry-picking practice of foreign banks are necessary to be regulated. Finally, in order to facilitate foreign capital inflow, the existing withholding tax rates in the domestic tax laws and treaties should be reconsidered.

Appendix 1. Mongolian External Debt Sustainability Framework, Baseline Scenario
Analyst's estimation using the IMF template
(in percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2014	2015	2016			2017	2018	2019	2020	2021	2022	2017-2022 Average	2027	2037	2023-203 Average
External debt (nominal) 1/	**30.7**	**45.3**	**61.1**			**125.4**	**164.4**	**182.2**	**194.0**	**194.2**	**185.0**		**171.3**	**62.0**	
of which: public and publicly guaranteed (PPG)	30.7	45.3	61.1			125.4	164.4	182.2	194.0	194.2	185.0		171.3	62.0	
Change in external debt	-32.4	14.6	15.8			64.3	39.0	17.8	11.8	0.1	-9.1		-4.4	-8.2	
Identified net debt-creating flows	10.9	2.6	42.1			-12.4	-14.4	-20.1	-18.2	-20.0	-22.2		-25.8	-18.1	
Non-interest current account deficit	**10.1**	**2.4**	**-0.6**	**11.6**	**11.0**	**-1.9**	**-2.2**	**-2.6**	**-2.6**	**-2.3**	**-1.6**		**-1.6**	**-0.5**	-1.2
Deficit in balance of goods and services	-5.4	-6.6	-8.0			-17.8	-19.4	-21.7	-22.8	-23.2	-24.8		-23.6	-16.1	
Exports	44.0	35.7	34.1			61.8	65.7	70.5	72.6	74.0	74.9		74.2	50.6	
Imports	38.6	29.1	26.0			44.0	46.3	48.8	49.7	50.7	50.1		50.6	34.6	
Net current transfers (negative = inflow)	-1.2	-1.5	-2.3	-2.6	1.3	-4.3	-4.6	-4.9	-5.0	-5.1	-5.2		-5.2	-3.5	-4.6
of which: official	-2.7	-2.7	-3.2			-6.0	-6.4	-6.9	-7.1	-7.3	-7.4		-7.4	-5.0	
Other current account flows (negative = net inflow)	16.7	10.5	9.7			20.3	21.8	24.1	25.3	26.1	28.3		27.1	19.1	
Net FDI (negative = inflow)	**-2.5**	**-2.6**	**38.0**	**-4.5**	**15.7**	**-15.0**	**-16.1**	**-17.2**	**-17.7**	**-18.1**	**-18.3**		**-18.3**	**-12.5**	-16.4
Endogenous debt dynamics 2/	**3.3**	**2.8**	**4.7**			**4.4**	**3.9**	**-0.3**	**2.1**	**0.4**	**-2.3**		**-5.8**	**-5.1**	
Contribution from nominal interest rate	1.4	1.7	2.1			4.6	4.2	4.8	4.6	4.1	3.3		2.5	0.7	
Contribution from real GDP growth	-5.1	-0.8	-0.5			-0.2	-0.3	-5.0	-2.5	-3.8	-5.6		-8.3	-5.7	
Contribution from price and exchange rate changes	6.9	1.9	3.1			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-43.3**	**12.0**	**-26.3**			**76.7**	**53.4**	**37.8**	**30.0**	**20.1**	**13.1**		**21.3**	**9.9**	
of which: exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	57.2			129.8	129.2	139.3	145.5	142.2	131.3		121.2	37.1	
In percent of exports	...	...	167.9			209.9	196.6	197.6	200.6	192.3	175.4		163.4	73.3	
PV of PPG external debt	**...**	**...**	**57.2**			**129.8**	**129.2**	**139.3**	**145.5**	**142.2**	**131.3**		**121.2**	**37.1**	
In percent of exports	**...**	**...**	**167.9**			**209.9**	**196.6**	**197.6**	**200.6**	**192.3**	**175.4**		**163.4**	**73.3**	
In percent of government revenues	**...**	**...**	**235.8**			**355.0**	**338.5**	**347.3**	**356.3**	**345.2**	**317.3**		**307.3**	**150.2**	
Debt service-to-exports ratio (in percent)	**3.2**	**4.5**	**6.1**			**26.5**	**29.1**	**14.6**	**12.2**	**21.1**	**28.1**		**8.3**	**11.8**	
PPG debt service-to-exports ratio (in percent)	**3.2**	**4.5**	**6.1**			**26.5**	**29.1**	**14.6**	**12.2**	**21.1**	**28.1**		**8.3**	**11.8**	
PPG debt service-to-revenue ratio (in percent)	**4.9**	**6.3**	**8.5**			**44.9**	**50.2**	**25.6**	**21.7**	**37.9**	**50.8**		**15.5**	**24.3**	
Total gross financing need (Billions of U.S. dollars)	1.7	0.2	4.4			0.0	0.1	-0.6	-0.7	-0.3	0.1		-1.2	-1.4	
Non-interest current account deficit that stabilizes debt ratio	42.5	-12.3	-16.4			-66.2	-41.2	-20.3	-14.4	-2.4	7.6		2.8	7.7	
Key macroeconomic assumptions															
Real GDP growth (in percent)	7.9	2.4	1.0	7.7	5.7	0.2	0.2	3.0	1.4	2.0	3.0	1.6	5.0	9.0	6.7
GDP deflator in US dollar terms (change in percent)	-9.9	-5.9	-6.4	6.2	20.4	-43.3	-2.4	-4.9	0.5	1.0	0.5	-8.1	0.5	1.0	0.9
Effective interest rate (percent) 5/	2.2	5.3	4.4	1.8	2.1	4.3	3.3	2.8	2.6	2.2	1.8	2.8	1.5	1.0	1.4
Growth of exports of G&S (US dollar terms, in percent)	35.6	-21.9	-9.8	16.2	36.0	3.2	4.0	5.1	4.9	5.0	4.8	4.5	5.0	5.0	4.9
Growth of imports of G&S (US dollar terms, in percent)	-15.1	-27.5	-15.3	14.0	41.8	-4.0	3.0	3.2	3.9	5.1	2.3	2.3	5.0	5.0	5.1
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	32.8	33.0	44.0	44.0	45.1	46.4	40.9	52.6	52.6	52.1
Government revenues (excluding grants, in percent of GDP)	28.2	25.5	24.2			36.6	38.2	40.1	40.8	41.2	41.4		39.4	24.7	34.7
Aid flows (in Billions of US dollars) 7/	0.0	0.0	0.0			0.1	0.1	0.1	0.0	0.1	0.0		0.1	0.1	
of which: Grants	0.0	0.0	0.0			0.1	0.1	0.1	0.0	0.1	0.0		0.1	0.1	
of which: Concessional loans	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			17.1	15.3	9.6	9.3	8.6	7.8		5.0	2.1	4.1
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			34.1	34.3	46.4	46.2	47.6	48.9		55.8	55.8	55.2
Memorandum items:															
Nominal GDP (Billions of US dollars)	12.2	11.8	11.1			6.3	6.2	6.1	6.2	6.4	6.6		8.4	20.0	
Nominal dollar GDP growth	-2.8	-3.6	-5.5			-43.1	-2.1	-2.0	1.9	3.0	3.5	-6.5	5.5	10.1	7.7
PV of PPG external debt (in Billions of US dollars)			5.6			8.6	8.0	8.4	9.0	9.0	8.6		10.1	7.4	
(PVt-PVt-1)/GDPt-1 (in percent)						**27.0**	-10.6	**7.2**	**9.0**	1.0	-6.3	4.5	3.9	-2.6	0.1
Gross workers' remittances (Billions of US dollars)	0.2	0.2	0.1			0.1	0.1	0.1	0.2	0.2	0.2		0.2	0.3	
PV of PPG external debt (in percent of GDP + remittances)	...	...	56.6			127.2	126.4	136.1	142.0	138.7	128.0		118.2	36.5	
PV of PPG external debt (in percent of exports + remittances)	...	...	162.8			203.1	190.2	191.1	194.0	186.0	169.6		158.0	70.8	
Debt service of PPG external debt (in percent of exports + remittanc	...	...	5.9			25.7	28.2	14.1	11.8	20.4	27.2		8.0	11.4	

Appendix 2. Sensitivity Analysis for Key Indicators of Public Debt
Analyst's estimation using the IMF template
(in percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to GDP ratio								
Baseline	130	129	139	146	142	131	**121**	37
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	130	126	132	138	138	132	**144**	112
A2. New public sector loans on less favorable terms in 2017-2037 2	130	138	154	166	167	160	**163**	78
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	130	127	138	144	141	130	**120**	37
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	130	137	162	169	166	155	**144**	44
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	130	147	175	183	179	165	**152**	47
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	130	145	173	179	176	166	**154**	48
B5. Combination of B1-B4 using one-half standard deviation shocks	130	138	161	167	164	154	**144**	44
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	130	186	201	210	205	189	**175**	53
PV of debt-to-exports ratio								
Baseline	210	197	198	201	192	175	**163**	73
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	210	192	187	191	186	176	**194**	221
A2. New public sector loans on less favorable terms in 2017-2037 2	210	210	218	228	226	214	**220**	155
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	210	196	197	200	192	175	**163**	73
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	210	270	392	396	382	353	**331**	149
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	210	196	197	200	192	175	**163**	73
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	210	220	245	247	239	221	**208**	94
B5. Combination of B1-B4 using one-half standard deviation shocks	210	230	273	276	266	247	**232**	105
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	210	196	197	200	192	175	**163**	73
PV of debt-to-revenue ratio								
Baseline	355	338	347	356	345	317	**307**	150
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	355	331	329	339	334	319	**364**	452
A2. New public sector loans on less favorable terms in 2017-2037 2	355	362	384	405	405	387	**413**	317
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	355	332	344	353	342	314	**305**	149
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	355	358	405	414	403	375	**366**	180
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	355	384	437	448	434	399	**386**	189
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	355	379	430	439	428	401	**392**	192
B5. Combination of B1-B4 using one-half standard deviation shocks	355	363	401	409	399	373	**364**	179
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	355	488	500	513	497	457	**443**	216

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