Public Sector Debt Regulation in Ukraine: Immediate Problems and Their Solutions

Executive summary
Traditionally Ukrainian policy-makers and experts have paid attention predominantly to the Government direct external debt. And today this debt has been kept within acceptable limits and does not pose any danger. But at the present moment Ukraine faces two completely new phenomena – rapid growth of municipal debts and increasing external borrowings of state-owned enterprises. In practical terms it means that the Government should deal with three types of risks to financial stability associated with debt. We argue that under these circumstances the Government has to elaborate adequate comprehensive approach towards public sector debt regulation.

To this aim we propose the following three-part strategy:
1) In order to keep a government debt stable within acceptable limits and avoid a rise in debt service costs in the future the Government should:
   - run a State budget with a deficit not higher than 2% of GDP;
   - reduce the amounts of state guarantees while planning the budget for the next years;
   - increase gradually the share of domestic borrowings in the structure of budget deficit financing.
2) In order to control the local borrowings in Ukraine and increase their efficiency the Government should:
   - set a limit on the local debt payments (both interests and principal) at the level of 15% of the local budget revenues excluding intergovernmental transfers;
   - require targeted allocations of the municipal borrowings for financing revenue-generating investment projects;
   - specify a clear and effective default regulating mechanism and provide for a possibility of external financial governance.
3) To hedge the risks of the excessive external borrowings by state-owned enterprises the Government should:
   - set 1 month limit on the period of loan authorization;
   - approve predominantly long-term loans that are hardly available at the domestic market;
   - provide authorization of loans for investment purposes exclusively;
   - restrict foreign loans for the state-owned companies which have no receipts in foreign currency from the main operational activity;
   - authorize external loans only for the companies with a confirmed healthy financial position.
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1. Introduction

Government direct debt has been practically stable in nominal terms for the last few years and even declined in relative terms that strengthened government financial position. However, government intentions to run budget with a deficit of 2.55% of GDP in 2007 and to increase it up to 3% of GDP in 2008-2010 may disrupt this positive trend.

Recently municipal debts have been increasing rapidly while the local governments are still highly dependent on the central authorities and the borrowed funds are used in a non-productive way. This phenomenon undermines the efficiency of public finance and requires urgent central government actions.

State-owned enterprises and banks increased their external indebtedness by 4 bn USD over the last 2.5 years. This tendency is quite alarming taking into account the "currency mismatch-problem" that makes corporate finance highly vulnerable to exchange rate and debt rollover risks.

International experience suggests that municipal debts and state-owned enterprises debts if poorly managed and not controlled by the central government incur potential risks for macro-financial stability in the country. Moreover, such debts represent implicit contingent liabilities for the central government that imply high pressure on the State budget in case of economic distress.

In this paper we address these issues and propose the measures to properly regulate debts of the central government, local governments and state-owned enterprises. To this end we analyze the most acute problems associated with government debt in chapter 1. To keep government debt stable and avoid a rise in debt servicing costs we propose a set of specific measures in chapter 2. In chapter 3 and 4 we illustrate the danger of rapidly growing municipal debt and propose some legal restrictions to be implemented. We evaluate benefits and potential losses induced by external borrowings of state-owned enterprises in chapter 5. In the final chapter we propose mechanisms and criteria to be applied in the process of external loan authorization, carried out by the Ministry of Finance, Ministry of Economy and State Property Fund.

2. Immediate Problems Associated with Government Debt

It is necessary to stress that, Government direct debt has been stable in nominal terms for the last few years and has been kept within acceptable limits. And this approach should be preserved in the future. In order to do it we argue that Ukrainian policy-makers in should continuously pay attention to the following three problems and take appropriate steps to further improve Government direct debt management.

**A) High budget deficit**

The budgets for 2006 and 2007 (submitted in September 2006) envision relatively high State budget deficits (2.6% of GDP) and public debt growth in nominal terms. In the Budget Strategy for 2008-2010, the government declares its intention to maintain the nominal value of public debt at the stable level and to run a budget with a deficit below 3% of GDP. In
addition, the government commits to sustain public debt volume at a level not higher than 20% of GDP.

We think that preserving financial stability in the medium term and keeping the national external debt under control require a stable public debt to GDP ratio (including guaranteed debt) and a moderate budget deficit consistent with a given debt target.

Our calculations suggest that the public debt to GDP ratio will not grow if the State budget deficit doesn't exceed 2.1% of GDP (see Annex I). In this case, the fiscal sustainability condition for Ukraine is somewhat tighter than that proposed by the government. However, we should take into account that the criteria of 2.1% of GDP is applied only to the part of the budget deficit financed via borrowing. As long as the government receives privatization receipts, its deficit target may be higher.

B) Growth of the guaranteed debt

In 2006 the government has increased the amount of state guarantees significantly. The 2006 budget envisions state guarantees for the loans of international financial organizations for UAH 2.04 bn, the obligations of State Mortgage Agency for UAH 1 bn, as well as foreign loans to the State Service of Automobile Roads for UAH 1.8 bn. The majority of above guarantees have been released already.

Taking into account the high probability that the government will take financial responsibility for the loans granted to State Mortgage Agency and State Service of Automobile Roads, debt pressure on the budget could be significant. Moreover, public debt growth via government borrowings and guarantees is not desirable in a period of economic growth.

C) Unbalanced Debt Structure

Up to now Government borrowing policy has not been consistent with a main principle of public debt management: minimization of debt service costs under the prudent degree of risk. The dominance of external debt in total government debt may substantially increase the cost of public debt service in case of unfavorable macroeconomic changes.

In the last years the share of foreign borrowing exceeded 80%. In January-August 2006, the Government floated exclusively foreign loans, and the 2006 budget provides for a share of foreign financing of 60%. In 2007, the Government plans to increase the share of foreign financing up to 67%. The Budget Strategy for 2008-2010 also emphasizes foreign financing. In an earlier paper we have demonstrated that government reliance on foreign sources of financing incurs high currency and debt refinancing risks that make public debt structure crisis prone.1

The government explicitly prefers the currency with a lowest coupon yield. International commercial loans in 2005 were euro-denominated and in 2006 Swiss frank-denominated. However, this is not necessarily the best choice in terms of reducing budgetary expenditures. If the currency of the government debt denomination appreciates, debt service and redemption costs will increase (the exchange rate appreciation may far exceed the difference in nominal interest rates). The currency choice for newly issued Government debt must be based on thorough exchange rate forecasts.

3. Recommendations for Prudent Management of Government Debt

In order to keep government debt stable and avoid a rise in the debt service costs associated with a significant amount of government guarantees and distorted structure of government direct borrowings we propose the following:

1. To run a State budget with a deficit not higher than 2% of GDP. Implementation of this proposal will keep the government debt to GDP ratio stable and reduce the cost of debt service. Consequently it will positively affect macroeconomic stability and economic growth.

2. To reduce the amount of state guarantees while drafting the budget for the next years. It will allow avoiding a sharp rise in government contingent liabilities and eliminating a pressure for the State budget.

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3. **To increase gradually the share of domestic borrowings** in the structure of budget deficit financing. Changing public debt structure in favor of domestic debt would make government’s financial position less prone to crisis. Lower external debt would reduce the vulnerability to exchange rate dynamics and shocks on international capital markets. It would also relieve pressure on the exchange rate and raise credit ratings, leading to lower external borrowing costs.

4. **Poorly-Managed Municipal Debt and the Need for its Regulation.**

Current municipal debt in Ukraine is not high by international comparisons. However, it is growing quite rapidly. Being almost absent at the beginning of 2003, local governments’ debt approached 650 mn UAH and 600 mn USD (equivalent to 0.87% of GDP) as of 01.09.2006.² In 2004-2006 local bonds have been issued by Chercassky (5 mn UAH), Donetsk (115 mn UAH), Ivano-Frankivsk (5,5 mn UAH), Kharkov (100 mn UAH), Kyiv (450 mn USD), Komsomolsk (8 mn UAH), Odessa (150 mn UAH), Vinnitsa (20 mn UAH), Zaporizhya (100 mn UAH).

At the same time in the context of preserving fiscal stability two circumstances are to be highlighted:

- **Rapid growth of municipal debt under conditions of high centralization of the Ukrainian fiscal system and low responsibilities of the local governments** for performing their tasks. In such an institutional environment the “credit illusion” phenomenon is particularly dangerous;
- **Lack of clearly defined investment purposes for local borrowings.** The governments of Vinnitsa and Ivano-Frankivsk placed the borrowed funds into the bank’s deposits and declared that they issued debt for the purpose of establishing a “credit history”. The Kyiv city administration allocated the disbursements from external loans to the “Khreshatyk” bank and used funds for investments only partially (in 2005 Kyiv administration floated eurobonds for 250 mn USD, although 65 mn USD of 2004 loan have not been spent). In other cases investment projects financed via borrowings were not the priorities for the local communities, since they were not even considered in the period of budget formulation and approval.

To our opinion, chaotic local borrowings would inevitably generate rather serious risks:

- high indebtedness of the local governments may result in the need to attract loans for debt redemption purposes (due to non-productive use of earlier borrowed funds and the high costs of these borrowings);
- inability of local government to deal effectively with local problems because local budgets are tied up in the provision of funds for debt repayment;
- local government defaults that deteriorate the investment climate in the country;
- possible shift of financial obligations of local governments to service local debts to the Central budget.

The danger of poor control of municipal debts has been proven by international experience. For example, in the late 1980s financial crisis in Brazil was caused by mass defaults of the Brazilian states, which had accumulated high debts. Strict control of the central government and financial aid to the defaulted states yielded only a temporary relief. During the 1988-1999 period, municipal debt crises struck Brazil three times.

Though the Ukrainian Budget Code contains a “no-bail-out” legal commitment of the central government, its credibility is doubtful due to low fiscal autonomy of the local governments in Ukraine and weak responsibility for the performance of assigned tasks. Both factors contribute to a real possibility for local government insolvency and increase the risk of pressure on the central budget in case of local defaults.

² At the end of 2001 sub-national governments debt constituted 2,25% of GDP in Czech Republic, 2,09% of GDP in Estonia, 1,29% of GDP in Slovak Republic.
5. How to make Regulation of the Municipal Borrowings Efficient.

The high risks associated with local borrowing in Ukraine must be met by imposing legal restrictions on this type of borrowing. We argue that the central government should restrict the amount of borrowing, require a targeted use of the borrowed funds for revenue-generating investments, and stipulate clear default regulation procedures.

Recently the Ministry of Finance has proposed a new draft law “On Local Borrowings and Local Guarantees”. In the framework of this law, the government intends to set a number of limits: a) on the amount of local debt – it must not exceed the amount of annual local budget revenues excluding intergovernmental transfers; and b) on local debt service and redemption – it must not exceed the sum of revenues of the investment (or development) budget (average for 5 years).

To our opinion such limits are rather soft and do not alleviate the threat to financial stability. If we assume that debt-refinancing risks occur and all local debts must be repaid within 1 year, then all local budget revenues excluding intergovernmental transfers would have to be used for debt repayment, leaving nothing for public services’ provision. How could a local government operate under these conditions?

Restrictions on debt payments are also poorly grounded. If the entire development budget may be used for debt payments, how will investments be financed?

Such regulations hardly set a basis for prudent fiscal management at the local level and risks for the central budget may be significant.

We propose to set a limit on local debt payments (both interest and principal) at the level of 15% of the local budget revenues excluding intergovernmental transfers. These criteria will ensure that debt burden growth will not outpace the accumulation of resources necessary for debt servicing. Restrictions on the stock of debt are not expedient, since the debt stock ratio performs the same function as debt service ratio. Both ratios represent measures of creditworthiness and their simultaneous application is not well grounded.3

Current provisions of the Budget Code of Ukraine and the draft law “On Local Borrowings and Local Guarantees” allow local governments to use borrowed resources to finance investments that are not revenue generating. In our opinion, in this case, the risk of local government default is rather high.

We recommend that the draft law explicitly demand targeted allocation of municipal borrowings to finance revenue-generating investment projects. Borrowings should be assigned to concrete investment projects that create a sufficient financial basis for debt repayment. Local borrowings should be allowed only to a special budget fund and should be authorized by the Ministry of Finance only if a relevant investment project is backed by users’ fees and approved by local council. Local governments should be obliged to submit detailed documentation on any investment project financed through borrowing, including expected returns and the project’s payback period, forecasted debt payments, etc. The heads of the local councils and directors of the public financial departments should bear personal responsibility for the targeted use of the funds borrowed. As Ch. Zimmermann wrote: “The only argument in favor of debt financing (at the local level) relates to the existence of self-liquidating objects. In this case credit financing is not only possible, but even desirable”.4

As for investment projects that are not backed by users’ fees, for their financing local governments should accumulate the necessary funds (reserves) from the regular payments to the local budgets. In this case, local communities would avoid expenditures on accumulated debt service that may be quite significant in Ukraine.

In order to make the local governments responsible for their borrowing decisions, and to protect creditors’ rights, the law should specify a clear and effective default regulating mechanism and provide for the possibility of external financial governance. The draft

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law worked out by the Ministry of Finance does not contain a clear procedure for the
settlement of outstanding creditors’ claims in the event of local government default.

Provisions on municipal insolvency should define the stages of the settlement of local
governments’ arrears. First of all, debt obligations should be met with the existing assets
pledged as collateral. If creditors agree, local governments may resort to debt restructuring
and rescheduling of liabilities. If creditors’ claims remain unsettled, creditors should be allowed
to appeal to the Ministry of Finance to appoint an external governor and implement external
financial governance for troubled local governments. The law should strictly specify both the
rights and responsibilities of the external governor.\(^5\)

Recapitulating, to preserve financial stability in the country and to ensure prudent
management of municipal debt we propose the following:

- to set an upper limit for the debt payments (both interests and principal) at the level of
  15% of annual revenues to the local budgets without intergovernmental transfers and cancel
  the restrictions on the stock of municipal debt;
- to ensure the targeted allocation of the municipal borrowings for financing revenue-
  generating investment projects, and to channel municipal borrowings only to special funds of
  the local budgets;
- to define clear-cut procedures to be used in the event of local government default,
  including the sale of assets pledged as collateral, debt rescheduling upon mutual agreement,
  and external financial governance.

Central government regulation of the municipal debt may be modified in the course of
intergovernmental fiscal relations’ reform. Under conditions of increased fiscal autonomy of the
local governments and their increased responsibility for the execution of the clearly defined
tasks, they may be given more freedom in the field of local borrowings, funds’ allocations and
debt redemptions.


External borrowing by state-owned enterprises (SOEs) creates implicit contingent central
government liabilities. Such liabilities imply that the Government does not have a contractual
obligations to pay, but may provide assistance if the social and economic costs of SOE
insolvency are high.

For example, in Greece poor financial performance of public enterprises has required financial
assistance from the central government, equivalent to nearly half of Greece’s large debt
burden (amounting to 110% of GDP). From 1984 to 1997, the annual gross financing needs of
nearly 50 public enterprises averaged about 4% of GDP per year, and current capital transfers
from the state budget average about 2% of GDP annually.\(^6\)

According to the IMF and the World Bank, debt managers should consider the impact that
contingent liabilities have on the government’s financial position, including its overall liquidity.\(^7\)
They argue that contingent liabilities are, in fact, potential financial claims against the
government. In this regard note that international credit agencies give state-owned companies
higher ranks (in comparison with private firms with similar economic and financial indicators)
due to the implicit possibility of government support for such companies.

Thus, the government should closely monitor the total amount of SOEs’ debts and be aware of
the conditions that could trigger its implicit contingent liabilities.

Recently the process of accumulation of external debts by SOEs has accelerated. If the amount
of this debt was almost negligible at the beginning of 2004, by the end of June, 2006, long-
term non-guaranteed external debt of SOEs and state-owned banks reached 4,7 bn USD,
including 0,5 bn USD accounts for Naftogaz euro-bonds; 0,6 bn USD – Ukreximbank

\(^5\) For details see: IER. Setting Regulatory Framework for Municipal Borrowing and Debt in Ukraine. – Policy Paper
eurobonds; 0,3 bn USD - foreign banks credits to Ukreximbank; and 3,3 bn USD – foreign banks credits to SOEs. What is alarming is that the external debts of SOEs far exceed their debts to Ukrainian commercial banks. At the end of June 2006, SOEs owed 3,27 bn USD to non-resident banks and only 1,35 bn USD to domestic banks.

Growth in SOEs’ external debts contributes to continuous increase in public sector external debt, which may endanger financial stability and hamper economic growth. In Ukraine such debt is not high by international comparisons, but it is growing rapidly and could become dangerous.

According to our estimates, public sector external debt was about 12 bn USD at the beginning of 2004. However, in the middle of 2006 it exceeded 16 bn USD and reached 19,5% of GDP (see table 1). Thus, public sector external debt increased by 4 bn USD for 2 years and a half that indicates substantial public sector external deficit. This tendency is alarming given that the accumulated current account surplus for this period equaled 8,54 bn USD and government received substantial funds from privatization.

Table 1
Public Sector External Debt in Ukraine, as of 01.07.2006

<table>
<thead>
<tr>
<th>Type of Debt</th>
<th>Million USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government direct and guaranteed debt</td>
<td>11058</td>
</tr>
<tr>
<td>Municipal debt</td>
<td>600</td>
</tr>
<tr>
<td>Debt of non-financial state-owned enterprises</td>
<td>3769</td>
</tr>
<tr>
<td>Debt of state-owned banks</td>
<td>945</td>
</tr>
<tr>
<td><strong>Total Public Sector External Debt</strong></td>
<td><strong>16372</strong></td>
</tr>
</tbody>
</table>

Source: IER estimates.

Moreover, external non-guaranteed debt of state-owned enterprises and state-owned banks represents a part of corporate debt, whose volume is also quite significant.

In Ukraine total external long-term corporate debt (not guaranteed by the state) made up 12,3 bn USD by the end of 2005 (including private enterprises). External debt amounted to 14,6% GDP and 27,6% of exports. The ratio of Ukrainian external long-term corporate debt to GDP was almost equal to the average indicators for transition countries at the end of 2003 (14,4% of GDP and 30,2% of exports). In 2005 external indebtedness of the Ukrainian banks increased by 3,56 bn USD, reaching 6,22 bn USD by the beginning of 2006. External debts of non-financial enterprises increased by 3,58 bn USD and approached 18,11 bn USD.

Because of the rapid accumulation of corporate external debt, Ukraine’s national external debt reached the level of 35,3% of GDP as of 01.01.2006. As we have shown in a previous study, to ensure financial stability and promote economic growth, the external debt of a transition or developing country should not exceed 35% of GDP.

These data do not mean that further external borrowings are to be stopped, since nominal growth in corporate external debt may be offset by value-added growth. However, they do suggest that Ukraine’s external debt position is approaching a critical level and the government should carefully monitor the amount of corporate external debts and properly manage the macro-financial risks associated with foreign borrowings.

Long-term resources borrowed by Ukrainian residents on international capital markets have become a valuable source for financing investments. Going to the international capital markets firms can reduce the cost of capital, expand the investor base and increase liquidity. However, external corporate borrowings entail large exchange rate and debt rollover risks,

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8 IER calculations on the base of “Global Development Finance 2005” data.
9 NBU data that is based on IMF methodology.
thus contributing to the increase of national economy’s vulnerability to external shocks. Excessive private sector external debt has played a central role in most recent emerging market crises at the end of the 20th and beginning of the 21st centuries.

Depreciation affects firms’ performance through a number of channels, such as raising costs of imported inputs, growing borrowing costs and contraction in lending. A firm’s financial position is highly sensitive to devaluation in the case of high foreign indebtedness. Exchange rate risk and debt roll-over risks are closely related. In most cases sharp devaluation is followed by credit rating decline that reduces the borrowers’ access to international capital market. International experience proves that when devaluation occurs, borrowers form emerging markets’ can lose access to international capital markets for several months to five years and more.13

National currency depreciation and sudden reversals in capital flows are particularly dangerous in the event of a large asset-liability mismatch. Goldstein and Turner argue that currency “mismatch” is a main potential problem with foreign currency debt. Countries that have foreign currency liabilities that are not offset by foreign currency assets may be more likely to find it difficult to repay their foreign currency debts in the event of deprecation. According to empirical estimates, a higher mismatch measure is correlated with more financial crisis.14

Ukraine’s net international investment position at the end of 2005 was 28,8 bn USD. High net exposure of Ukrainian residents to the rest of the world was supplemented by dollarization of the domestic liabilities. In Ukraine, debts of non-financial enterprises (stemming from foreign currency loans) to Ukrainian commercial banks amounted to 10,1 bn USD or 12% of GDP. If we add non-financial enterprises’ external debt, the total foreign currency debt volume for these enterprises amounts to 29,8 bn USD. This sum is equivalent to 35,4% of GDP and 27% of the circulating capital of Ukrainian enterprises (as of July 1st, 2006).

Thus, the currency mismatch problem makes Ukraine highly vulnerable to exchange rate and debt roll-over risks. This could lead to massive insolvency in the corporate sector and induce output contraction if the domestic currency were to devalue or foreign investors change their sentiments.


In order to hedge the financial risks associated with external commercial loans, the Government should apply mainly market-based indirect methods, because state interventions based on market principles are more efficient and produce less adverse effects than direct administrative control.15

In order to ensure financial stability in the long run, and to ensure prudent management of risks related to private external borrowings, we recommend to:

- accumulate foreign exchange reserves up to the level of 22-23 bn USD that would be sufficient to cover all short-term financial liabilities and maturing long-term debt (during a year);
- strengthen prudential regulation and establish stricter requirements for banking reserves meant to cover the credit risks associated with loans denominated in foreign currency.16

These indirect measures refer mainly to private borrowings. However, external borrowings by SOEs should be regulated directly. Under the current system of corporate governance, SOEs are interested in maximizing the volume of foreign loans, since benefits will go to the companies and their top managers, but possible losses may be shifted to government. Excessive foreign borrowing by some SOEs reflects a desire by management to reach short-

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16 For details see: Вахненко Т. П. Міжнародний кредит у світовій валютно-фінансовій системі // Фінанси України. – 2006. - №10.
term goals and disregard the necessity to preserve a stable, long run financial position of the company. This behavior is caused by a weak institutional environment and an inefficient system of the management of state property. This danger is typical for other post-Soviet states such as Russia (Russian state companies owed to foreign creditors approximately 20 bn USD).

To deal with these problems, the Government of Ukraine decided to strengthen the control over such borrowing by means of the authorization of loan agreements. Resolution of the Cabinet of Ministers N334 of 15.07.2006 obliges the SOEs to obtain approval for foreign currency loans (issued by non-residents) from the Ministry of Finance, the Ministry of Economy and the State Property Fund. Earlier, only the branch ministries were responsible for the approval of external loans for their subordinated enterprises.

In order to prevent rent seeking behavior and increase the efficiency of SOEs’ foreign borrowings, the government should apply a unified approach to all SOEs - potential borrowers from non-residents. In our opinion there is an acute need to establish a clear procedure defining concrete rules and criteria for the approval (or refusal) of external loans. In particular, we recommend to:

a) **Introduce a simultaneous external loans authorization with all involved ministries and establish a limit on the period of loan authorization. Such limit should not exceed 1 month and final decisions on approval should be adopted collectively.**

Without such limits, bureaucrats may attempt to protract loan approval in order to receive unofficial payments from the enterprises’ managers. Besides, delays could undermine the efficiency of entrepreneurial activity and reduce SOEs’ competitiveness.

b) **Authorize mainly long-term loans that are hardly available at the domestic market.** Short-term loans may be received easily at the domestic market at rates comparable to those on foreign loans taking into account all additional expenses.

c) **Authorize exclusively loans meant for investments and make companies responsible for the targeted allocation of the borrowed funds towards these investments.**

If an enterprise uses the borrowed funds to build up a productive capital stock, it will be able to produce and generate the income needed to repay the debt. J. Frankel and S. Wei point out that a borrower is more likely to get into trouble if capital inflow goes to finance consumption and unproductive investments; East Asian countries were hit by crisis in 1997-98, because much of their finance had gone to investment in unprofitable heavy manufacturing and real estate.17

d) **Restrict foreign loans for SOEs that have no receipts in foreign currency generated by their main operational activity** (foreign indebtedness of a given company, as a rule, should not be higher than amount of annual receipts in foreign currency). Firms and banks that incur liabilities in foreign currencies while their revenues are primarily in domestic currency face the problem of currency mismatch and may become insolvent in some circumstances (see above).

e) **Authorize external loans only for companies with a healthy financial position.** Government officials should carefully evaluate the solvency of state-owned companies that apply for the foreign loans. If economic analysis of an enterprise’s solvency (based on standard coefficients) points to a low capability of the enterprise to meet its financial obligations, foreign loans to this enterprise should be prohibited. In such a situation, the government should work out a range of economic and financial measures to restore the enterprise’s solvency. For some purposes, the government may grant budgetary loans. A mechanism for providing SOEs with budgetary loans in the event of financial distress should be devised in such a way as to minimize the moral hazard problem that encourages borrowers to default even they are able to pay.

Regulations of SOEs’ external borrowings should be based on **strict responsibility** of the companies’ managers and ministry officials who approve the loans in question for any loss-

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making investment projects financed via borrowing and any deferment in debt payments or default on foreign liabilities.

Of course, the risks associated with government contingent liabilities may be reduced via sound governance reform of SOEs and by improving regulatory policy as well as by means of privatization of certain companies. If properly devised and implemented these reforms will generate positive effects in the longer term. However, in the short term Ukraine must face the risks associated with the rapid growth of external corporate debts and take steps to prevent fiscal crises triggered, inter alia, by the accumulation of excessive public sector external debt.

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Lector: October 2006
ANNEX I
Methodology for the Calculation of the Limit for State Budget Deficit

To calculate the level of the budget deficit that complies with the debt policy target, we use the equation of debt dynamics:

\[ B_1 = B_0 + D, \tag{1} \]

where \( B_1 \) = public debt value at the end of period, \( B_0 \) = public debt value at the beginning of period, and \( D \) = budget deficit financed via borrowings. This equation says that the budget deficit (or deficit financing via borrowing) is equivalent to the increment in debt volume.

To put the above equation into relative terms we divide the both sides by nominal GDP \((Y)\):

\[ \frac{B_1}{Y_1} = \frac{B_0}{Y_1} + \frac{D}{Y_1}. \tag{2} \]

We denote the public debt ratio to GDP as \( b_1 \) (at the end of period) and budget deficit ratio as \( d_1 \). This leads to:

\[ b_1 = \frac{B_0}{Y_0 (1+n) \cdot (1+p)} + d_1. \tag{3} \]

where \( n \) = the growth rate of the real GDP, and \( p \) = the inflation rate. Taking into consideration that \( \frac{B_0}{Y_0} = b_0 \) we obtain

\[ b_1 = \frac{b_0}{(1+n) \cdot (1+p)} + d_1. \tag{4} \]

To isolate the relation between the budget deficit and the increase in public debt we deduct \( b_0 \) from both sides of equation (4) and derive the following identity:

\[ \Delta b = \frac{b_0}{(1+n) \cdot (1+p)} + d_1. \tag{5} \]

Rearranging equation (5), we obtain the following equation for the budget deficit:

\[ d = \Delta b + b_0 \cdot \frac{(n + p + np)}{(1 + n + p + np)}. \tag{6} \]

If the government wishes to maintain the current level of the public debt ratio \((\Delta b = 0)\), then budget deficit should equal:

\[ d = b_0 \cdot \frac{(n + p + np)}{(1 + n + p + np)}. \tag{7} \]

If we assume an average growth rate of real GDP in the medium term of 7%, and an average inflation rate 6% (as the government predicts) then the state budget deficit calculated on the basis of equation (7) should equal 2.1% of GDP. The same results are obtained for any combination of real GDP growth and inflation rates that sum to 13%.

Thus, if the budget deficit (financed via borrowing) does not exceed 2.1% of GDP, the public debt to GDP ratio will not grow.\(^{18}\)

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\(^{18}\) This result is based on the assumption of a stable real exchange rate.