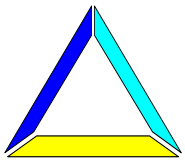
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W6

Changing the Status of Government debt to the NBU: Budgetary Implications

Executive Summary

The Ukrainian government owes its central bank around UAH 9 bn in the form of internal state debt. This debt originates from the unhealthy practice of financing budget deficits by printing money over 1991-1996. Both the government and the National Bank agree in principle on the necessity for restructuring and securitizing this debt. This is hardly surprising, since both institutions would gain much from restructuring this debt. But such a deal can and should only be conducted, once the government and especially the Ministry of Finance possess a clear quantitative assessment of the budgetary implications of the restructuring process. In this paper we provide such an assessment.

When it comes to the possible budgetary cost of a debt restructuring, it is analytically crucial to distinguish between interest payments and repayments of the principal. Currently there are no interest payments made on this debt. Since any sensible restructuring and securitisation would involve paying market rates, the amount of interest payments paid by the government would go up, which in turn could have budgetary implications. With regard to the repayment of the debt, we assume in our calculations that the repayment is completely financed by issuing new debt (roll over). This assumption allows for a clean economic assessment, since the repayment of debt is not a budgetary expenditure item, but a reduction in the debt stock. Thanks to this sensible assumption, the budgetary implications (if any) are restricted to higher interest payments only.

The budgetary implications of a restructuring deal depend on three main variables: the interest rate of the new bonds; the size of the restructuring deal (i.e. on whether the whole amount of UAH 9 bn is restructured or only part of it); and the share of the new bonds which the NBU would sell outright to private market participants. Based on the assumption of a yearly interest rate of 6%, the yearly budgetary burden can go from UAH 0 m up to a maximum of UAH 540 m. The budgetary burden is practically zero in case of no outright selling of the bonds by the NBU, since the interest payments received by the NBU lead to an increase in its profit by almost the same amount and thus to higher profit payouts from the NBU to MinFin. In the "worse case scenario" (from the point of view of the budgetary implications), in which 100% of the debt is restructured, and 100% of the new bonds are sold outright, the annual budgetary burden would amount to UAH 540 m.

However, the worse case scenario has no practical relevance in the short- and medium term. As shown in our dynamic approach, the yearly budgetary burden is likely to increase from year to year. Under certain plausible assumptions, the yearly burden amounts to UAH 54 m in the first year after restructuring, and increases hence after by UAH 54 m each year, until it reaches the maximum of UAH 540 m 10 years after the restructuring deal.

To conclude, we think that these budgetary implications are manageable. Besides, we should remind that as of today we have optimal preconditions for such a restructuring. The interest rates for state bonds in local currency are at historic lows and the market is developing well. Thus, it is important to go ahead with the restructuring of the debt; and it is important to do it now.

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1. Introduction

The government owes the National Bank of Ukraine (NBU) around UAH 9 bn. This so-called internal state debt originates from loans provided by the NBU to the government in 1991-1996, a time in which budget deficits were partly financed by printing money and inflation was rampant. As we explained in our policy paper W2 "Changing the Status of Government Debt to the NBU: Policy Options", it is both in the interest of the NBU and the government to restructure and securitize this debt. Especially, it is important for the image of the country and for its credit rating to draw a clear line below this dark chapter of Ukraine's macroeconomic history.

But understandingly enough, the government is worried about the budgetary implications of restructuring and securitizing this debt; an agreement on restructuring the debt will only become possible once the Ministry of Finance (MinFin), which acts on behalf of the government, has a clear assessment of the implications of such a deal on public finances.

Following a request by the government and the NBU, we assess in this follow-up paper the budgetary implications of restructuring the debt. In Part 2 we summarize the main characteristics of the debt restructuring proposed by us. In Part 3 we identify the variables on which the budgetary implications depend on and provide using different scenarios a quantitative assessment of the effect of the restructuring deal on the central budget. The analysis will be split into a static and a dynamic view. In Part 4 we conclude.

2. Defining budgetary implications: Interest payments versus redemption of principal

The internal state debt held by the NBU differs substantially from other, more standard forms of government liabilities. Besides its non-securitised nature, no interest payments are made on this debt, and also the repayment terms are not fully agreed upon by the parties involved, i.e. MinFin and NBU. However, a key precondition for creating marketable securities is that the resulting bonds carry market conditions, i.e. terms that make them comparable to other local government bonds available in domestic financial markets. In particular, the bonds should bear market interest rates.

At maturity, the bonds need to be repaid, similar to the redemption of any state debt held with the private sector. This can be done from funds which will be borrowed for this purpose (i.e. a roll-over of the debt) or from funds previously accumulated at the treasury account. However, these refinancing activities, which affect cash-flow only, must not be confused with budget expenditure items. Therefore, the relevant costs for the budget relate to interest payments only and not debt repayments at maturity. While the former are the cost of debt servicing, and therefore included in budget expenditures ("above the line" item), the latter is a part of the financing side of the budget ("below the line") and therefore not included in budget expenditures. Accordingly, in the following analysis we will focus only on interest payments of these new securities as potential cost factor for the budget.

3. Budgetary implications

3.1 Identification of relevant factors

In the last chapter, it was argued that a precondition for a successful restructuring is the payment of interest on the newly created bonds. However, these regular interest payments can have budgetary implications for the government, which need to be analysed carefully and

are therefore in the focus of this paper. In this respect, there are **three variables** that determine the budgetary implications:

It is obvious that interest payments depend on both **(i) the interest rates** on the restructured bonds, and **(ii) the amount of bonds to be restructured**. However, treating these interest payments simply as additional budgetary expenditures neglects a crucial fact in the institutional framework in Ukraine, as well as in any other country in the world. Taking a total public sector perspective, i.e. treating NBU and MinFin as parts of the public sector, these interest payments stay in a first step inside the public sector. The NBU is required by the Law of Ukraine "On the National Bank of Ukraine" to transfer its annual profits[1] to the budget. This needs to be taken into account for calculating the budgetary impact, since these interest payments form part of the operating income of the NBU and will be channelled therefore back to the budget.

Above said is strictly true only as long as the NBU decides to hold these bonds on its balance sheet. If it decides to **(iii) sell them outright** to the private sector (e.g. to a bank), the budget might be differently affected, since these payments now have to be made to an entity outside the public sector[2]. Different budget scenarios depend therefore on what the NBU does with these securities[3].

In order to show the quantitative budgetary implications of a restructuring of the debt, one needs therefore to make certain numerical assumptions about the three relevant variables:

(i) Interest rates

Since a crucial feature of the new securities- as opposed to the previous practice- is the payment of a market-related interest rate by MinFin, these payments affect in a first step the budget. The higher the interest rate, the heavier the potential budgetary burden will be. Therefore, the interest rate offered on these bonds plays a crucial role for assessing the budgetary impact.

For all calculations, we assume a market interest rate of 6% p.a. This assumption follows from a recent issuance of local bonds by MinFin on 20 August 2007, where bonds with 3 years maturity were auctioned at an issuance yield of 6.05%. While the exact applicable interest rate will very likely be somewhat different at the concrete time of the restructuring, this figure is more of an indicative nature, taking current market conditions into account.

(ii) Amount to be restructured

It is still subject to negotiations and therefore unclear whether the whole amount of UAH 9 bn will be restructured, or only part of it. Since the interest payments will only apply to the restructured part of the debt, we can conclude: The higher the share of debt to be restructured, the higher the potential budgetary implications can be.

The total amount of internal state debt (i.e. 100%) in domestic and foreign currency (before provisions) amounted to UAH 9,042 m as of 31 December 2006. Since we recommended in our previous paper a currency unification in local currency, we will assume in the following calculations a total amount of UAH 9 bn. Two scenarios are being discussed here: the securitisation starts with a) 50% of internal state debt or b) 100%.

(iii) Amount sold outright by NBU after restructuring

As was discussed above, the future actions of the NBU regarding these securities have also indirect budgetary implications, since one possibility is that these bonds are being sold to private market participants and leave the public sector. In such a case, the higher the share of outright sales, the stronger the budgetary implications will be.

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[1] The profit to be distributed to the state budget consists of the excess of budgeted income over budgeted expenditure based on the results for the preceding year. This is derived from the NBU income statement as profit available for distribution, less funds used for financing capital investments and formation of funds. For the year ended 31.12. 2005, this amounted to UAH 1.6 bn, whereas for the year ended 31.12. 2006, the corresponding figure is UAH 2.1 bn.

[2] The case that the new bonds mature and need to be rolled-over by issuing new state debt is similar to an outright sale from an analytical point of view. Also in this case, interest payments need to be made to the private sector. If we talk in the following about "outright sale", we cover implicitly also the situation when restructured bonds mature and have to be rolled-over by issuing new standard government debt securities.

[3] The answer to this question, however, depends on the general conduct of monetary policy from the side of the NBU to reach its legal objectives.

While the concrete future policy actions of the NBU cannot be forecasted with a high degree of precision, we assume in the following static view that the NBU keeps a) 0% b) 50% and c) 100% of the securities in its portfolio, selling the rest of the bonds immediately outright in monetary policy operations.

3.2 Budget implications: Static View

With the assumptions from the last section, we are now able to calculate the budgetary implications of the different scenarios in a static view. The results of these calculations, which are based on the formula given in the appendix, are shown in Table 1:

Table 1
Annual budgetary costs of securitisation in a static view, UAH m

NBU sells outright:	0%	50%	100%
Restructured amount:			
50%	0	135	270
100%	0	270	540

Source: own calculations, assuming an interest rate of 6% p.a.

As can be seen from Table 1, the annual budgetary impact of a debt securitisation ranges between no impact at all and a maximum value of UAH 540 m, depending on the assumptions made. Let's discuss these very different results in turn:

a) NBU sells outright 0%

The case where the NBU decides to leave the new securities on its balance sheet is analytically the simplest one. The impact of the securitisation on the state budget is, independently of the amount restructured, equal to zero. This follows from the fact that the additional interest payments from the budget are at the same time additional operating revenues for the NBU. The budget gets these interest payments therefore back when NBU profits are distributed[4].

b) NBU sells outright 100%

The opposite scenario to a) is that the NBU decides to sell all new securities obtained in outright operations to the private sector. In such a scenario, interest payments to private holders of the bonds have to be made (i.e. outside the public sector). The impact on the budget depends now on the amount to be restructured. While a restructuring quota of 50% would lead to additional expenditures of UAH 270 m, this amount could increase up to a maximum of UAH 540 m, in case all debt is restructured. This translates into 0.4% of planned budgetary expenditures for 2007. While this figure seems already relatively low, taking the rapid growth of nominal budget expenditures into account (expenditures increased by 25% in nominal terms between 2006 and 2007), this ratio is expected to decline further in the future.

However, this maximum amount of additional budget expenditures seems unlikely to realize in the short- to medium term due to several reasons. First, an outright sale of these bonds seems unlikely, since open market operations are often conducted in the form of temporary (reverse-repo) operations. In this case, as we saw above, the bonds (and interest payments) stay inside the public sector, not affecting the budget. Second, the NBU would only be able to sell 100% of the new bonds over a longer period of time. Otherwise, a very high discount on their prices seems likely, since the market would be awash with government debt titles in such a situation. It is not in the interest of the NBU to sell the new titles at prices much below the face value[5].

[4] This result assumes further that the additional operating interest income does not cause additional operating costs for the NBU, which might decrease profits. These costs seem negligible.

[5] Even if we assume the extreme case of a 100% outright sale of the bonds, the budgetary impact depends also on the underlying reasons for the sale: if the NBU simply wants to change the asset side in a balance sheet management operation without changing its liabilities (the monetary base) there should be no budget impact. Only if the purpose of this sale is to conduct a contractive monetary policy (i.e. the monetary base shrinks by the same amount), the budget will be affected by the costs given in Table 1.

c) NBU sells outright 50%

This intermediate case can be seen as a combination of scenario a) and b). Consequently, the annual budget impact is UAH 135 m for the case of a 50% restructuring quota, or UAH 270 m when the whole amount of internal state debt is being restructured.

3.3 Budget implications: Dynamic View

The above calculations showed clearly the annual budgetary costs for different combinations of the influencing factors. While this analysis is important for assessing the budget risks in terms of minimum and maximum payouts, it suffers also from certain drawbacks regarding the static view taken: The annual budget burdens calculated were dependent on a fixed share of bonds sold outright by the NBU right after obtaining them. This led to the (unlikely) case that the maximum budgetary risk could already realize in the year after the restructuring, when the sale occurs. While the static view is important for assessing the possible range of budgetary impacts, it needs to be complemented by a dynamic analysis showing the concrete time path of the budget impact. A more differentiated analysis would take a more realistic view and look at the effects of a step-by-step approach on the part of the NBU with respect to sales.

Taking such a dynamic view regarding the budgetary implications, we assume in the following again an interest rate of 6% p.a. and a restructuring amount of 100%, i.e. all internal state debt will be restructured. The key change in assumptions as opposed to the static case is that we now examine a gradual sale of these bonds to the public on part of the NBU. Specifically, we think that it is plausible that each year an amount of 10% of the restructured bonds will be made available to the private sector. Table 2 shows the development of annual budget expenses for this case:

Table 2
Dynamic time path of annual budgetary costs, UAH m

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Budget costs	54	108	162	216	270	324	378	432	486	540

Source: own calculations, assuming an interest rate of 6% p.a., a restructuring amount of 100% and an outright sale of 10% p.a.

Assuming a successful restructuring deal in 2007, the initial budget impact (assumed to take effect in 2008) will be a mere UAH 54 m, resulting from the sale of 10% of the bonds to the private sector. This amount increases linearly over time, as more and more bonds are sold (or mature and need to be rolled-over). In the medium-term, in about 5 years after restructuring (2012), the nominal budgetary costs will be UAH 270 m. However, taking into account the rapid growth of budget expenditures in Ukraine (see the previous section), this amount seems still very low in comparison. Only in the long-run, in about 10 years after restructuring, our previously calculated maximum burden serves as a realistic estimate of future budget costs. From 2017 onwards, under the assumptions made the annual nominal budgetary burden will amount to the full UAH 540 m.

4. Conclusions

In our recent policy paper W2 we concluded that the restructuring and securitisation of the government debt held by the NBU would in principle be in the interest of the NBU, MinFin and the financial sector. The only remaining question was how such a restructuring would affect the budget. To clarify this question, we analysed the budgetary implications of a restructuring deal in this follow-up paper.

In a first step, we found that the budgetary implications of a restructuring deal depend mainly on three variables: the interest rate offered on the new bonds, the size of the restructuring deal and the share of the new bonds sold by the NBU to market participants in the private sector (e.g. banks). In a further move, the quantitative budgetary implications for different static scenarios were derived. In the "best case scenario", i.e. in the scenario with the minimum budgetary implications, in which the NBU keeps all restructured bonds in its books, the restructuring has practically no financial implications for MinFin. In the "worst case scenario" the total amount of the debt is restructured and the NBU sells the complete new bonds to private market participants. The annual cost for MinFin amounts to UAH 540 m.

Finally, we study the time path of the budgetary costs of a restructuring deal. As shown in this dynamic approach, the best case scenario is only relevant in the short-term, while the worst case scenario can only materialise in the long-term. More concretely, the financial implications of the restructuring deal are likely to increase from year to year. In the first year after restructuring, the deal would under certain plausible conditions cost MinFin around UAH 54 m. This budgetary cost would increase each year by UAH 54 m, until it reaches the maximum, long-term value of UAH 540 m per year. But by the time this maximum amount is reached, its relative importance would however have decreased considerably, due to inflation and economic growth.

To sum up, the budgetary implication of a restructuring of the debt will be very limited, both in the short- and the long-term. Consequently, we come to the conclusion that MinFin can indeed afford the restructuring. Besides, the current conditions on the local debt market offer a window of opportunity for such a deal, given the historical low level of interest rates and the need to increase market liquidity further. In short, we highly recommend going ahead with the restructuring as soon as possible.

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Appendix: Deriving the static annual budget implications

The (static) annual budgetary implications given in chapter 3 can be derived with the following formula:

Annual cost for state budget =	"Interest rate" * "Total internal debt (UAH 9 bn)" * "share to be restructured" * "share to be sold outright".

Or, mathematically:

c = i * UAH 9 bn * x * y

where:

c....annual cost for state budget in Hryvnia
i... interest rate for restructured bonds (e.g. 6%)
x... share of debt to be restructured (out of UAH 9 bn), $0 \leq x \leq 1$
y... share of restructured bonds, which are sold outright by the NBU, $0 \leq y \leq 1$.

Taking the case with a 50% restructuring quote, and an outright sale of 50%, above formula gives:

c = 0.06 * UAH 9 bn * 0.5 * 0.5
= UAH 0.135 bn = **UAH 135 m**.