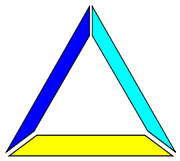
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**V 19**

# The currency structure of government debt in Ukraine: Why the share of hryvnia bonds should be increased

## Executive Summary

The central government in Ukraine shows a clear preference towards foreign currency indebtedness. In 2006, the Ministry of Finance issued only 14% of its new bonds in domestic currency - despite the budgetary plan of issuing 47% domestically. This paper argues that this strong focus on foreign debt is not optimal from an economic point of view. The main reason is that the low volumes of government bonds in hryvnia are a key impediment for the development of Ukraine's domestic bond market. A functioning sovereign bond market, however, is crucial for the financial sector as a whole, i.e. for the money market, corporate bond markets, the banking and insurance sector as well as pension and mutual funds. Liquid domestic government bonds serve as a benchmark for pricing and investment decisions. Additionally, they fulfil the crucial function of a risk-free asset needed to manage investments, liquidity and risks. A further important reason against an excessive stock of foreign debt is that it implies considerable fiscal and macroeconomic risks and may constrain the strategic leeway of exchange rate and monetary policy.

Worldwide, emerging market countries have increased their share of domestic debt in recent years and put effort in developing liquid domestic bond markets. We believe that Ukraine should do the same. In our view, the fundamental measure to foster domestic bond markets in the present situation is to increase liquidity by issuing higher volumes of standardized government bonds in hryvnia. For this reason, we recommend that the government strictly follows its budgetary plans for 2007 and issues (at least) 33% of its new debt in domestic currency. It would be imprudent to issue an even smaller share domestically this year. Using simple calculus and realistic assumptions, we show that the additional interest cost of domestic debt as compared to foreign debt is minor when compared to the overall budget. The amount of extra spending can easily be justified by the many benefits of a more developed domestic bond market and should be seen as a rewarding investment for financial sector development. In the medium run, we recommend to increase the share of domestic debt in total debt issuance to over 50%.

## Contents

1. Introduction
2. The currency structure of government debt in Ukraine - Overview and trends
3. Understanding the trend towards foreign debt: What are the main arguments in favour?
4. Arguments against a high share of debt in foreign currency
5. Domestic versus foreign currency debt - Weighting costs and benefits for Ukraine
6. Policy Recommendations

## 1 Introduction

In emerging markets the development of domestic bond markets and the choice between domestic and foreign currency debt have received much attention in recent years. In an attempt to better protect their economies from global risks, many Asian and Latin American countries have shifted their debt structure away from foreign currency towards domestic currency debt. In parallel, they put substantial efforts to develop a liquid domestic bond market for these new domestic securities. Today, the worldwide trend towards debt issuance in domestic currency and the growth of domestic bond markets is stronger then ever and has reached countries of Central Europe and the Commonwealth of Independent States (CIS). In 2006, the Czech and Slovak Republics, Poland and Hungary all had reached a share of domestic currency debt in the range of 70 to 80% of total debt. Also Russia shows a trend towards domestic currency indebtedness. Between 2003 and 2006, it more than doubled its share of domestic debt from about 19% to more than 40%.

Also in Ukraine, the development of domestic bond markets is an increasingly debated issue. The discussion in the press, among politicians and by international organisations raises many problems, including questions of bond market regulation and surveillance, market organisation, the choice of a primary dealer system or the potential problem of a missing investor base. We see that these problems are important and, in fact, they are typical for countries in an early stage of bond market development. However, the discussion has often focussed on too detailed, technical issues and failed to identify the fundamental strategic question - that on the currency structure of debt issuance. In our view, the key challenge for Ukrainian policymakers regarding bond markets is to identify an appropriate strategy regarding foreign and domestic currency debt. The reason for this is that in an initial stage, the government's issuance strategy in terms of currency is decisive for domestic bond market development.

This paper discusses the pros and cons of the debt issuance strategy in Ukraine with regard to its currency structure. By currency structure we mean the share of debt that is denominated in national and in foreign currency.[1] The paper is structured as follows. Part 2 describes recent trends of debt issuing by the central government. In part 3, we present and challenge the main arguments that are put forth in favour of foreign currency debt issuance in Ukraine. In part 4, we lay out potential advantages of increased hryvnia bond issuance. Part 5 weights the advantages and disadvantages of domestic debt against each other. Lastly, in part 6, we formulate concrete policy recommendations.

## 2 The currency structure of government debt in Ukraine – Overview and trends

The stock of debt of the central government in Ukraine as of January 2007 is composed of 83% debt denominated in foreign currency and 17% debt in domestic currency. But when looking at debt flows (see Table 1), the share of issuances in domestic currency varies considerably from year to year. There was a strong increase in domestic bond issuance in 2005, when foreign investors appeared on the market. Due to the Orange Revolution in late 2004 and because of expectations that the hryvnia would appreciate, foreign creditors and mutual funds became increasingly interested in the country. Accordingly, in the first half of 2005, the government placed a record amount of UAH 6.9 bn of domestic currency bonds (so called OVDP bonds).[2]

[1] Note that the currency structure of foreign debt, i.e. the choice on whether to issue foreign debt in US dollar, Euro, Japanese Yen, Swiss Francs or other currencies, is not discussed in this paper. However, it is a very important topic for debt managers in Ukraine, which also requires further research and analysis.

[2] The net purchases of domestic currency bonds by non-residents went up considerably, reaching close to USD 1 bn between January and April of 2005. In all of 2004, net purchases by non-residents amounted to USD 407 m only.

**Table 1**
Bond Issuance by the central government 2003-2006 (flows)

| Year | Foreign currency bonds, USD m | Domestic currency bonds, USD m | Share of domestic bonds in total issuance, % |
|---|---|---|---|
| 2003 | 1000.0 | 217.8 | 17.9 |
| 2004 | 1100.0 | 373.6 | 25.4 |
| 2005 | 718.8 | 1270.9 | 63.9 |
| 2006 | 1923.1 | 313.4 | 14.0 |

Source: Own calculations based on data by the NBU and the Ministry of Finance

Thereafter, the government's primary market activity in domestic currency bonds came to a halt, as only small amounts were issued over the last 18 months. One reason for this was the successful re-sale of Kryvorizhstal in October 2005, as part of privatisation proceeds of USD 4.8 bn were used to finance deficits and repay government debt.[3] Additionally, the bond conditions offered by the government were not able to attract domestic or foreign investors. All over 2006, the government had problems in placing the OVDP bonds at yields around 9%. Accordingly, there were a series of unsuccessful auctions, particularly for longer maturities.

In contrast, the conditions for Ukrainian foreign currency bonds generated substantial demand on international markets. In November of 2006, the government managed to place a USD 1 bn Eurobond at a maturity of ten years and at a low rate of 6.58%. After a successful roadshow, the demand for the bond was more than double the placement volume. There were also two issues in Swiss Francs amounting to CHF 784 m, and one issue in Japanese Yen amounting to JPY 35 bn (approx. USD 300 m), all placed in the last quarter of 2006 at low yields.[4]

**Table 2**
Average Weighted Maturities and Yields of Government Bond Issues 2003-2006

| | Eurobonds | | Domestic bonds | |
|---|---|---|---|---|
| Year | Average maturity (years) | Weighted average yield (%) | Average maturity (years) | Weighted average yield (%) |
| 2003 | 10.00 | 7.65 | 1.17 | 9.76 |
| 2004 | 6.09 | 7.15 | 2.31 | 10.35 |
| 2005 | 10.00 | 4.95 | 2.86 | 6.91 |
| 2006 | 6.75 | 5.48 | 2.70 | 9.26 |

Source: Own calculations based on data by the NBU and the Ministry of Finance

For a clearer overview, Table 2 provides average maturities and interest paid for both domestic and foreign bonds in the period 2003 – 2006. As can be seen, bonds issued in foreign currency had considerably longer maturities and were on average paying lower interest rates. Generally, it should be noted that the overwhelming proportion of domestic OVDP bonds are owned by the NBU or commercial banks and that only very little trading takes place.

All in all, the government's issuance activity reveals a clear trend towards foreign currency debt in Ukraine. Moreover, it looks like that this trend is likely to continue. For 2007, the budget foresees issuing only 33% in domestic but 67% in foreign currency. This is a formal shift away from the original plan in 2006, which targeted a share of 47% in domestic currency.

[3] For details, see our advisory paper V11 on privatisation receipts at: http://ier.org.ua/papers_en/v11_en.pdf
[4] Note that the latter issues of more moderate size where placed privately, i.e. offered to a restricted circle of investors and not intended to be traded on secondary markets.

## 3 Understanding the trend towards foreign debt: What are the main arguments in favour?

In an attempt to understand the clear trend towards foreign currency debt, this section discusses the main arguments for high shares of foreign currency issuance that have been put forth in the discussions in Ukraine. These are (i) the possibility of easier and cheaper financing abroad (ii) the problem of missing domestic demand and (iii) the danger of crowding out.

(i) Market access conditions (length and cost of borrowing)

The key argument in favour of a large share of foreign currency bond issuance is that the conditions of market access are better abroad than in Ukraine. As shown, interest rates for foreign currency bonds tend to be lower, and maturities tend to be longer than domestic bonds. By and large, this is a typical setting for emerging markets that have not developed their domestic bond markets. Additionally, one should underline that the situation for sovereign borrowers of emerging markets is particularly favourable at the moment. With global liquidity at record levels and a high risk affinity of international investors, spreads for sovereigns are at historically low levels. Today's creditors are also willing to lend their money for very long periods.[5] In addition, Ukraine itself is regarded to have relatively sound macroeconomic figures and its rating has been significantly upgraded in recent years.

With a view to the above, the government appears to take advantage of the favourable situation by borrowing overwhelmingly in foreign currency. Unfortunately, there is no guarantee that the conditions in Ukraine and the world economy as a whole will remain as positive as they are currently. Unexpected shocks at home or abroad can lead to a hryvnia depreciation, which raises the servicing costs of foreign debt and may jeopardize the fiscal budget. Then, foreign debt might result much less cheap than expected.

In addition, it should be noted that the interest rate on domestic currency bonds in Ukraine can indirectly be influenced by the government. Currently, investors may have difficulties when they intend to sell their bonds at a desired date and for a fair price due to the low liquidity in the market. Due to the liquidity risk they face, current creditors will thus demand an interest rate premium. This means that a certain part of the interest rate differential between domestic and foreign debt issues can be explained by the low liquidity of the domestic bond market. However, the government - as the key player on the primary market - is largely responsible for the situation of domestic markets and could boost liquidity by an active issuance strategy. In other words, a higher share of OVDP issues is likely to lower the interest rate premium on domestic currency debt that the government has to pay.[6] In a similar vein, maturities will tend to increase if the government cares for the bond market by providing liquidity.

(ii) Lack of demand on the domestic debt market

Another argument frequently heard is that "there simply is no market", i.e. too little demand for issuing debt domestically. Often, this position is strengthened by pointing to numerous past government auctions for hryvnia bonds, which have failed to find investors. We agree that the investor base in Ukraine remains quite small and that much has to be done to foster the number and diversity of potential investors. However, we think that this argument is flawed. Why so? A major reason why the government did not succeed in placing more domestic currency debt is that it offered below-market interest rates. In the second half of 2006, the Ministry of Finance offered two and three-year OVDP bonds at yields in the range of 9% to 9.5%, which is very low when compared to the interest paid on most corporate bonds (11% to 16%) or most municipal bonds (11% to 13%). The accelerating corporate bond market shows that there is enough demand for large bond placements in Ukraine, if only they are priced at market rates. As a result of the unattractive yields and the limited volume of government securities, a series of Ukrainian banks have also shifted their investment portfolio towards corporate bonds in recent months.

Besides the unattractive yields, the missing demand of hryvnia bonds may also be explained by obstacles to foreigners willing to invest. In fact, non-residents who want to purchase

[5] Many Latin American countries have succeeded in exchanging near-dated securities for longer-dated instruments in the last years. Poland even managed to place a 50-year bond in 2005.

[6] It goes without saying that the conduct of sustainable fiscal and monetary policies is of even greater importance for the size of the domestic risk premium.

domestic bonds face a considerable amount of paperwork and an inherent 1.0 % currency tax on their capital. The so called “pension fund tax” on non-cash purchases of foreign currency implies that foreigners entering and exiting the market require a higher yield for Ukraine’s bonds as compared to assets of a similar risk class. A promising development in this regard is a draft law which aims to gradually abolish this tax until 2010.[7] However, it remains an impediment for market development in the short run.

(iii) Crowding out

A third argument against increased domestic currency financing is the risk of “crowding out” private investors. There is the fear that once considerable amounts of hryvnia bonds are placed at higher yields, Ukrainian banks and enterprises will prefer to invest in these low-risk bonds instead of investing their money in investment projects or private sector debt. Additionally, domestic enterprises who issue debts on the corporate bond market may face increased financing costs, since investors will demand higher overall yields.

The problem of crowding out is important and has to be kept in mind when designing the overall debt issuance strategy. Yet, we do not believe that a reasonable increase of domestic bond issuance, i.e. to 50% of total yearly bond issuance, would lead to considerable crowding out in the current situation in Ukraine. First, the additional demand for bonds could easily be generated from foreign investors - once market-oriented yields are offered. Second, it is reasonable to assume that corporate bond markets will largely benefit from more liquid domestic government bond markets. In fact, corporate and government bond markets should be seen as complements not as substitutes (see the discussion in the next section).

## 4 Arguments against a high share of debt in foreign currency

There are three main arguments against very high shares of foreign currency debt. The first is that the excessive focus on foreign debt dries out the domestic bond market, a problem that might hamper Ukraine’s financial sector as whole. Second, large stocks of foreign debt in a country pose serious constraints on the viability of monetary and exchange rate policy. Third, foreign currency debt involves high fiscal and macroeconomic risks, which can be reduced by issuing debt in domestic currency.

(i) A weak domestic bond market delays financial sector development

Both in developed and emerging economies, domestic bond markets play a key role in a country’s financial system. First of all, domestic bonds serve as an indispensable (risk-free) benchmark to the entire financial market. Liquid and sizeable government bond markets provide a so-called yield curve, a graph depicting how interest yields for similar bonds are related to maturity length. In essence, the yield curve shows the markets' expectations of future interest rates and is therefore an essential tool for analysts.[8] Without a bond yield curve the economy misses a crucial source of information for pricing and investment decisions. In Ukraine, the lack of a functional yield curve can best be observed in the corporate bond market. Given that there is only sparse information on a risk-free rate, it takes a large effort for analysts and investors to figure out, which interest rate is appropriate for a given corporate bond issuance. Each pricing decision on the non-sovereign bond market has to be determined on a case by case basis, which is highly inefficient. A more liquid domestic market for sovereigns would have large spill-over effects for the corporate debt market, which, on its own, is an important and efficient source of long-term financing for companies and large investment projects.[9]

Domestic sovereign bonds also serve as a security for banks and as a risk-free asset to invest in. Currently, banks and potential institutional investors in Ukraine do not have enough

[7] Please see our policy paper V7 on the pension fund tax at: http://ier.org.ua/papers_en/v7_en.pdf

[8] The yield curve shows the relationship between the cost of borrowing money and the amount of time the money is being borrowed for. Normally the yield curve has a positive slope (i.e., upwards) because yields on long-term maturities tend to exceed short-term yields. In fact, a usual investor expects a higher return for holding an asset for a longer time, so that yields increase with maturity length.

[9] It should be kept in mind that developed corporate bond markets, with a dispersed investor structure, help to avoid an overly concentration of risk on banks, which are highly leveraged institutions and more vulnerable to crises. Moreover, a liquid corporate bond market may lower financing costs for the real sector. In fact, by definition, bonds can be bought and sold in the secondary market, so that they tend to have a lower liquidity premium than commercial bank debt for which normally no secondary market exists.

investment opportunities to choose from, particularly when it comes to low-risk assets. Given the lack of a functional government bond market, risk free medium term investments in hryvnia and risk pooling is practically not possible. However, in case there are not sufficient fairly priced and liquid government bonds to invest in, mutual funds, pension funds and insurance companies are unlikely to develop in Ukraine. This is not only bad for overall financial sector development but has to be seen as a crucial problem for the introduction of the second and third pillar of the pension system. Another difficulty is that, in the absence of a functioning bond market, banks are deprived of the possibility of holding liquid, risk-free securities (government bonds) on their balance sheets. This, in turn, is an obstacle to the proper functioning of the interbank market, which is crucial for liquidity management. Lastly, standardized and liquid government bonds might also contribute to raise domestic (household) savings in hryvnia, since they are an alternative to diversify investment portfolios away from bank deposits.

Altogether, the government bond market has to be seen as a prerequisite of successful financial market development. The Ukrainian government has followed market supporting policies in several areas in recent years, including banking, mortgage markets and the stock exchange and has now started to focus on money and derivatives markets too. Contrarily, domestic bond markets were heavily neglected in the last one and a half years. However, the entire financial sector will be hindered by the lack of domestic risk-free assets and missing information on interest rates expectations and security pricing. It would hence make much sense to place a strong focus on domestic bond markets too. As stated, a key to such development is an active and market-friendly strategy of domestic debt issuance. Hence, from a financial sector perspective, a decreasing share of foreign currency debt might prove highly beneficial for the country.

(ii) Constraints on monetary and exchange rate policy

A second main argument against the current strategy of mainly issuing foreign currency debt is that it imposes serious constraints on monetary and exchange rate policy in Ukraine. Large stocks of debt denominated in foreign currency hinder the adoption of a new, possibly more flexible exchange rate system. Even with today's relatively low stock of foreign currency debt[10], any change in the hryvnia exchange rate will have an immediate impact on the budget. The more foreign currency debt is piled up, the stronger the fiscal consequences of exchange rate variation. Accordingly, a change in the exchange rate system away from the current de facto peg to the US dollar becomes more problematic the longer the current debt issuance strategy continues. In line with many politicians in Ukraine, we believe that a more flexible exchange rate system is necessary in the medium run.[11]

A shift towards a flexible exchange rate policy would also require a more active monetary policy through open market operations and repo loans.[12] These indirect instruments can however only be implemented if a tradable, risk-free collateral, such as domestic government bonds is widely available. Due to the high share of foreign debt, this is not currently the case in Ukraine. The lack of a liquid government bond market makes it difficult for a central bank to influence interest rates across many maturities. In addition, it means that the central bankers do not have reliable information on long-term interest pricing, i.e. on market expectations of macroeconomic developments, inflation and monetary policy. In Ukraine, the absence of suitable government securities has forced the NBU to introduce unsecured overnight lending to banks, a measure that does not correspond to good international practice. Likewise, the NBU has to rely mainly on its own papers (certificates of deposits) to sterilize foreign exchange inflows. All this underlines that without a liquid domestic bond market, monetary policy cannot be conducted smoothly. A switch towards an internally oriented system of monetary policy, such as inflation targeting, is almost impossible without this precondition.

[10] As of 31.12.2006, central government debt in foreign currency made up 13.6% of estimated 2006 GDP (direct and guaranteed foreign currency debt).

[11] See our advisory paper V10 on Exchange Rate Policy in Ukraine at http://ier.org.ua/papers_en/v10_en.pdf

[12] Open market operations involve the sale or purchase of government bonds by the central bank, in exchange for domestic currency or central-bank deposits. The operation changes the monetary base and therefore the domestic money supply, contracting it with a bond sale and expanding it with a bond purchase. A so called "repo" is a repurchase agreement in which the seller of securities, such as a government bond, agrees to buy them back at a specified time and price. Repos provide flexibility in that they allow the central bank (or other parties) to inject liquidity on one day and withdraw it on another with a single transaction.

(iii) Foreign indebtedness entails fiscal and macroeconomic risks

It is also commonly known, that foreign debt implies higher macroeconomic and fiscal risks than domestic currency debt. The main reason is exchange rate risk - which can never be excluded in an open and non-diversified emerging economy such as that of Ukraine. Even though there are good reasons to expect appreciation pressure on the hryvnia in the short- and medium term, there is no guarantee that an unfavourable political or economic shock, be it at home or abroad, leads to an economic downturn in the next years. In case of an unforeseen harsh depreciation, debt servicing and principal repayment in hryvnia will rise proportionately and may put substantial pressure on the budget. The fiscal risks may be particularly large, since real depreciations tend to occur in bad economic times. In such case, the budget gets squeezed from two sides (i) decreasing tax revenues due to the economic downturn an (ii) increasing costs to service the foreign currency debt. This might then lead to a serious macroeconomic crisis in the country triggering tax increases, spending cuts or even default.

## 5 Domestic versus foreign currency debt - Weighting costs and benefits for Ukraine

In the current situation in Ukraine, there are good reasons for and against issuing large shares of foreign currency debt. It is clear that the government should continue issuing a considerable amount of its debt in foreign currency. Yet, the question we pose in this section is whether the current practice, that of issuing 86% of new debt in foreign debt, is overall beneficial for the country. First, we evaluate how much the government saves by issuing in foreign currency from a narrow point of view of a debt manager. Second, we adapt a broader economic policy perspective taking into account problems of the current issuance strategy for the country's overall development.

From a debt management perspective, there are several standard tools to determine an optimal government debt portfolio and its optimal currency composition.[13] International best practice combines (i) an asset and liability management approach (ALM) aimed to reduce future budgetary risks of the government and (ii) a portfolio management approach to analyze the existing trade-offs between costs and risks of different debt issuance strategies (based on Value-at-risk and Cost-at-risk de thods). Additionally, stress testing methods are employed to provide essential information on potential risks. Here, we will not present any sophisticated statistical simulation techniques, as such models require extensive analysis and data work, which is beyond the scope of this paper.

Nevertheless, before going on, we would like to provide a basic intuition on the fiscal benefits of large shares of foreign currency debt issuance. Concretely, using a simple scenario and basic calculus, we aim to assess how much the government saves by issuing in foreign currency and what it would cost to issue a higher share of debt in hryvnia. Box 1 provides a brief overview.

[13] Note that debt management is concerned only with the structure of government debt, not its level. Concretely, debt management implies optimizing a debt portfolio in terms of maturities, interest rate structure (fixed vs. floating) and currency composition. As stated, this paper discusses only the latter aspect.

**Box 1**
How much does the government save by issuing in foreign currency? A simple illustration for 2007

**Assumptions:**

- Gross issuance in 2007: UAH 11.63 bn of debt (as foreseen in the budget 2007)
- Scenario 1: Last years practice is continued, i.e. 86% is issued in foreign currency
- Scenario 2: The government follows its budgetary plan of 2007, i.e. 67% is issued in foreign currency
- Interest rate for issuance abroad: 5.48% (weighted average of the government's foreign currency bond placements in 2006 – see Table 2)
- Interest rate for issuance in UAH domestically: 11%

**Key question:**

How much can the central government save in 2007 by issuing 86% in foreign currency instead of only 67% (as planned in the budget)?

To exemplify the budgetary (short-term) cost of domestic currency debt as compared to foreign currency debt, we calculate a simple scenario under relatively generous assumptions. We take the budget for 2007 as a basis, which foresees the gross issuance of UAH 11.63 bn of debt, of which 33% in domestic currency (UAH 3,829 m) and 67% in foreign currency (UAH 7,798 m). The official plan of issuing 67% abroad is our basic scenario. However, with a view to the government practice of 2006, we develop a second scenario in which we assume that the Ministry of Finance will continue placing a high 86% of its new debt in foreign currency.[1]

What would the government save in 2007 by issuing only 14% (UAH 1.62 bn) as compared to 33% (UAH 3.83 bn) in domestic currency? To evaluate this, we take the average weighted yield of government bonds in foreign currency as a benchmark, which was 5.48% in 2006 (see Table 2). Now, we assume that the domestic debt could easily be placed at a yield of 11% on the domestic market, be it as 2 or 3 year OVDP bonds. Note, that this rate is 5.52% higher (more than double) than the average rate paid for foreign currency bonds and 2% higher than the standard rate recently offered by the government for 2 year OVDP bonds. With a view to the markets as of today, it is very likely that a rate of 11% would attract enough domestic and foreign demand.

**Answer:**

For this scenario, simple calculus tells that the additional costs of domestic bonds as compared to foreign currency bonds would amount to **UAH 122 m per year, which corresponds to 0.08% of planned government expenditures** in 2007.[2] Issuing an even higher share, say 50% in domestic currency bonds, would amount to UAH 230 m additional interest payments or 0.14% of planned 2007 expenditures.

Of course, our illustration is only valid for the short term. A calculation for the longer run would require more complicated calculations based on a series of assumptions e.g. future inflation, exchange rate developments and future average maturities and interest rates of domestic bonds. It should also be underlined that cost savings will be cumulative; meaning that each year until the foreign currency bonds mature the government may save interests. However, one should keep in mind that over the longer run costs might change due to exchange rate movement, which have a direct impact on interest and principal payments in UAH. These currency risks are particularly high for the recent bond placements in Swiss Franc and Yen, since policymakers in Ukraine are not able to directly influence the UAH-JPY or UAH-CHF exchange rate.

[1] Note that the budgetary plans regarding the currency choice of debt are not binding and can be easily modified. In 2006, the government announced placing 47% in domestic currency and ended up placing only 14%.

[2] The calculation involves the following simple steps: First, we calculate the difference between issuing 33% and not only 14% of planned 2007 debt in domestic currency, i.e. 19%. The resulting amount of UAH 2.209 m is then multiplied by the estimated interest rate differential between domestic and foreign bonds, i.e. 5.52%. This amounts to the cited sum of UAH 122 m.

Overall, the figures show that issuing a higher share of debt in domestic currency would not result overly expensive - particularly if one takes the currency risks of foreign debt into account. The above estimated additional costs of 0.08% of planned government expenditures in 2007 are minor when compared to the large amounts spent for subsidies to agriculture, coal mining or for infrastructure projects. We believe that the estimated costs of UAH 122 m in 2007 are very well invested, as they are likely to promote the development of a functioning

domestic bond market and herewith Ukraine's financial sector as a whole. A developed government bond market could result highly beneficial for the functioning of the money market, the corporate bond market, and the banking and insurance sector. This, in turn, could induce companies to raise more debt in hryvnia, which lowers overall macroeconomic risks. Note finally, that the disadvantage of domestic bonds due to shorter maturities is not severe from our point of view. In fact, maturities will tend to go up the more liquid the government bond markets become. All in all, when weighting costs and benefits of a higher share of OVDP bonds against each other, benefits appear to outweigh by far.

## 6 Policy Recommendations

In our view, the discussion on domestic bond markets in Ukraine should focus on the government's issuance strategy regarding domestic currency bonds. It will be decisive for Ukraine's domestic bond market development, whether the current government commits to domestic currency financing in the next year(s) or whether it continues relying heavily on bonds denominated in foreign currency. Only if the Ministry of Finance issues a considerable amount of debt in domestic currency, the market will be able to develop properly and fulfil its crucial functions as a benchmark and provider of liquid risk-free assets. For this reason, we put forth the following two policy recommendations:

**Recommendation 1:** The government should strictly adhere to its budgetary plan and issue (at least) 33% of its new debt in domestic currency in 2007. Additionally, the ratio should gradually increase to 50% and higher in the next years.

We have argued that the disadvantages of domestic currency bonds in terms of higher interest costs and shorter maturities can be easily outweighed by the many potential benefits of a more liquid domestic bond market. Additionally, the cost premium of domestic bonds will tend to go down and maturities will tend to lengthen the more liquid the domestic market becomes. To start with, the government should start issuing the higher volumes of domestic debt in 2 or 3 year OVDP bonds.

**Recommendation 2:** The government should conduct a market-oriented issuance strategy.

To place higher shares of bonds on the domestic market it is essential that the government improves the issuance conditions for potential local investors. First of all, yields offered should be in accordance with market expectations and not prohibitively low. Second, market confidence and the dialogue with market participants should be improved, e.g. by following a predictable and reliable auction calendar that is publicly announced. Third, the government should focus its issuance activity on a limited number of standardized bonds to foster market liquidity and the development of a reliable benchmark yield curve.

**Further Steps:**

Issuing more government bonds in domestic currency and adapting a market-oriented issuance strategy are not the only necessary steps to foster domestic bond market development and improve government debt management. Instead, it is also very important that the government develops a holistic reform program to improve the infrastructure and the legal and regulatory environment of primary and secondary bond markets in Ukraine. In addition, the Ministry of Finance should establish an advanced technical infrastructure to optimize overall debt management, such as an asset and liability management approach and portfolio optimization methods.[14]

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[14] As regards government debt management please consult the recent advisory paper V14 on "Public Sector Debt Regulation in Ukraine" at: http://ier.org.ua/papers_en/v14_en.pdf