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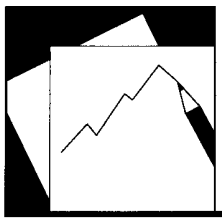

IMF Working Paper

Resolving a Large Contingent Fiscal Liability: Eastern European Experiences

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Resolving a Large Contingent Fiscal Liability: Eastern European Experiences

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Abstract

On occasion, a government may find itself confronted with a need to address a large contingent or off balance sheet fiscal liability. Implementing a settlement raises issues of fiscal sustainability and macroeconomic stability. This paper surveys the key design issues, and draws lessons from recent Eastern European experience. It then considers in more detail the particular case of Ukraine, and how it might approach its own large contingent liability—the so-called lost savings—which at end-2007 amounted to as much as 18 percent of GDP.

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I. INTRODUCTION

On occasion, a government may find itself confronted with a need to address a large contingent or off balance sheet fiscal liability. Usually, the contingent or off balance sheet debt in question is not being serviced. The experience in several European countries during the last decade provides some indication of how such claims may arise (Table 1). The debts have in some cases dated to periods of macroeconomic stabilization, when fast-decelerating nominal revenue growth, borrowing constraints, and rigid expenditures combined to create large build-ups of government expenditure arrears. In other cases, they have arisen from banking systems, when the government chose to absorb large deposit liabilities. Finally in other cases, they have arisen from damage and restitution claims, related to war or previous expropriation. The imperative to address the debt may arise from accumulating court orders for repayment, from a past guarantee (e.g. of deposits), or simply from political considerations.[2]

Table 1. Recent European Cases of Large Off-Balance Sheet Liabilities

Country	Timeframe	Size of liability (percent of GDP)	Origin of liability
Bosnia	1992-01	149 (in 2003)	War damage claims + frozen fx deposits
Croatia	1993-98	6 (in 2005)	Pension arrears (court decision)
Lithuania	1991	9 (in 1996)	Frozen domestic currency deposits
Macedonia	1991	18 (in 1999)	Frozen fx deposits
Moldova	1994-98	11 (in 1996)	Pension and expend. arrears (gov't liquidity)
Russia	1994-98	7 (in 1998)	Pension and expend. arrears (gov't liquidity)
Serbia	1991-01	29 (in 2001)	Frozen fx deposits
Ukraine	1991	160 (in 1996)	Frozen domestic currency deposits

Source: IMF Country Documents

The usual public finance and banking recapitalization approaches do not offer much guidance about how to devise a solution. The public finance literature emphasizes the need to disclose, regulate, and control contingent liabilities, to account for them in fiscal analysis, and to provision against their realization (see, e.g., Brixi and Schick, 2002). However, provisioning against a sudden payout would not be feasible when very large amounts are involved. For cases in which the liability arose in the banking system, it is tempting to think of settling the issue by a standard bank recapitalization exercise (see, e.g. Hoelscher, 2006). However, in these cases typically the liability has already been taken on by the government, and there is therefore no underlying bank solvency question (even if the banks in question are administrative agents for the liability).[3]

[2] Settling a large contingent debt would likely involve some redistribution of income—those paying to service the debt are likely to be different than those receiving repayment of the debt—so the politics can be complex.

[3] In general, the choice between bank recapitalization and assumption of liabilities will depend on the size of the liabilities (and whether it is feasible in a fiscal sustainability sense to recapitalize the bank). Legal considerations may also come into play, for instance in cases where government guarantees are extended.

There are good economic reasons for a government to address these liabilities with a settlement, but also reasons for caution. The alternative to settlement—explicit and unilateral default—carries a heavy reputational penalty even while potentially leaving the underlying issue intact (to the extent legal actions against the government follow). A well-designed settlement—which eliminates uncertainty—may help to lower risk premia and debt service costs. It can also remove the risk to the budget from court ordered awards (which may lead to disruptive seizures of government assets). However, an overly generous or poorly structured settlement could instead undermine the fiscal policy plans, create debt service problems, and seriously undermine macroeconomic stability.

The diversity of recent Eastern European experience offers perspective about implementing a settlement. A settlement must foremost be designed with economic considerations in mind—fiscal sustainability and macro stability—and the countries in question have taken different measures to contain fiscal and macroeconomic impacts. There are also technical aspects to a settlement design (which can play a key role in determining the design's overall fiscal and macro characteristics): countries have approached the administrative challenges in different ways; have staged settlements in different ways; and have used different repayment techniques (ranging from cash to netting to securitization).

Against the background of recent Eastern European experience, this paper looks at the issues in more depth, and then considers the case of Ukraine, now facing the problem. Section II considers the key economic considerations underlying a settlement design, and how to manage fiscal and macro risks. Macroeconomic stability issues are illustrated via the IMF's GIMF model. Section III looks at the issue of technical design of a settlement, elaborating how this may determine the fiscal and macroeconomic characteristics of the settlement. Section III Section IV shifts the focus to Ukraine's efforts to resolve the so called lost savings problem, and offers specific design suggestions.

II. Design of a Settlement: Economic Considerations

A. Fiscal sustainability

A change in the level and/or structure of government debt may place fiscal sustainability at risk. Equation (1) sets out the general requirement for fiscal solvency (see Chalk and Hemming (2000)): the present discounted value of expected primary surpluses (*PS*) must be large enough to pay off the debt (*B).* The debt-to-GDP ratio will be falling (equation 2) when the primary surplus is large enough to offset movements due to differences between the real interest rate (*R*), and the growth rate (*g*) (with an adjustment for GDP deflator growth, (*p*)).[4]

$$(1) \qquad B_t = \sum_{j=0}^{\infty} R(t,t+j)^{-j} PS_{t+j} \qquad (2)\ PS_t > B_{-1} \frac{\left[R_{t-1,t} - p(1+g) - g\right]}{(1+g)(1+p)}$$

[4] This abstracts from fx financing and currency valuation issues, and from financing via privatization proceeds.

- From (1-2) it is easy to see that if the level of debt rises (because the government must pay off a contingent liability), expected primary surpluses may no longer be enough to keep the debt falling or stable (given the level of the real interest rate and GDP growth rate), let alone to ensure solvency. The primary surplus would need to rise at some point to ensure debt sustainability, but it may also be subject to some constraints (Box 1 discusses this issue in more detail).

Box 1. The sustainable level of primary surplus.

This requires a careful evaluation of tax and expenditure policy constraints and needs:

- *Tax policy*. The total tax burden may be constrained by the mobility of tax bases, and by the potential for evasion, including because of weak tax administration. Since taxation distorts incentives, and in particular may reduce the supply and accumulation of factors of production, growth aspirations also put limits on tax rates.

- *Expenditure policy.* This may be constrained by historical legacies (e.g. pensions), development aspirations (public investment in human and physical capital), and by equity-redistribution preferences (social transfers).

A medium-term budget framework is very helpful is fleshing out these constraints.

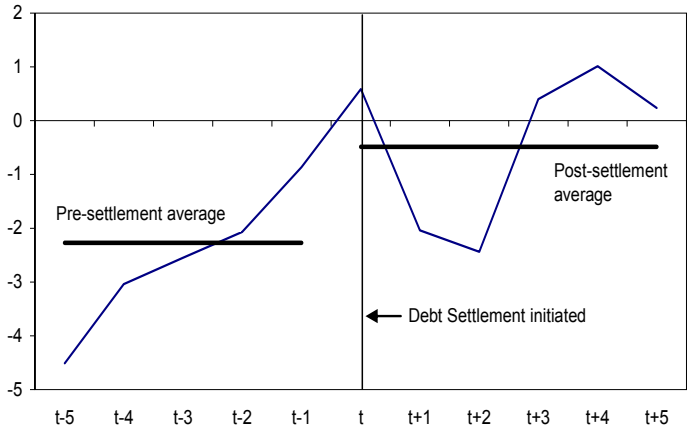
- Of course, (1) abstracts from the structure of the debt, whereas the literature has also emphasized a liquidity channel for debt crises. That is, excessive rollover requirements or excessive foreign exchange exposure (both public and private) can raise the probability of a debt crisis (see Detragiache and Spilimbergo (2001)). Thus if the structure of the debt shifts in the course of a settlement, this may be an independent cause for concern.

An iterative approach to assessing extra debt carrying capacity will thus generally be needed in designing a settlement. That is, a government must first determine the sustainable level of primary surplus and then assess how much debt can be added, given conservative growth and real interest rate assumptions. This determines the maximum net present value of a settlement, which in turn suggests possible combinations of face value, maturity and interest rate on any new debt to be issued, or the time path and interest rate applied for any cash settlement. The final step is to ensure that the chosen maturity structure of any new debt limits rollover risks. If the resulting settlement is viewed as too small, then the primary surplus must be reconsidered.

Eastern European experience lends some perspective to this decision process:

- In the case studies, the primary surplus does seem to rise even before a settlement, with the difference between the pre- and post-settlement average about 1½ percent of GDP (Figure 1). In countries with relatively small amounts of claims to be repaid, this may be more than adequate to cover extra debt service costs. Other countries facing larger claims relied less on budget adjustments—in light of rigidities in taxes and spending—and more on sometimes significant (in NPV terms) write downs of the debt (Table 2). For instance, in Bosnia (2004) the government felt the existing primary surplus was the right assumption to underpin the exercise. It made conservative assumptions about growth and the real interest rate, and on this basis identified large necessary write-downs.

Figure 1. Primary Surplus in Successful Episodes of Debt Regularization 1/



Source: IMF WEO database

1/ Bosnia (2004); Croatia (2006); Lithuania (1997); Macedonia (2000); Serbia (2001)

Table 2. Settlement Structures for Large Contingent Fiscal Liabilities

Country	Size of liability 1/ (in percent of GDP)	Clearance Procedure	Timeframe of settlement	NPV (in percent of GDP)	Max/Min 2/ (in percent of GDP)
Bosnia (2003&ongoing)	204.0 (in 2003); subsequently reduced upon verification exercise	• Cash (small deposits and expenditure arrears) • Bonds-first settlement-rejected by courts: 20-50 yr maturity; 10-40 yr grace; 0.0-0.05 percent interest rate. • Bonds-second settlement: 9-25 yr maturity; 10 year grace; 1.5-2.5 percent interest rate	• Cash: several years • Bonds: to be upfront	• Cash: 4.0 • Bonds-1: 6.0 • Bonds-2: 5.3	Bonds-2: 0.9 / 0.1
Croatia (2005)	6.0 (in 2005)	Cash: pre-established schedule	Choice: 2 yrs (large haircut) 8 yrs (3 yrs grace, with smaller haircut)	3.4	~1.0
Lithuania (1997)	9.2 (in 1996)	Cash: semi-discretionary schedule (linked to privatization proceeds, but with annual cap)	10 years	5.4	2.1 / 0.0
Macedonia (1999)	17.5 (in 1999)	• Cash (small deposits) • Bonds (10 yr maturity; 2 yr grace; 2 percent interest rate; exchangeable for land or public assets at face value)	12 years	10.1	1.25 / 0.35
Moldova (1996-1998)	Max 11.0 (in 1996)	• Netting against tax arrears and tax payments • Triangular netting with public enterprises • In-kind	Ongoing: did not resolve	Unclear due to valuation issues (i.e. treatment of penalties and interest on expenditure arrears)	10.7 / 8.3

Table 2 (continued). Settlement Structures for Large Contingent Fiscal Liabilities

Country	Size of liability 1/ (in percent of GDP)	Clearance Procedure	Timeframe of settlement	NPV (in percent of GDP)	Max/Min 2/ (in percent of GDP)
Russia (1996-1998)	Max 6.9 (in 1998)	• Netting against tax arrears and tax payments • Triangular netting with public enterprises • Notes redeemable against tax payments (offsets) • In-kind	Ongoing: did not resolve	Unclear due to valuation issues (i.e. treatment of penalties and interest on expenditure arrears)	3.4 / 1.7
Serbia (2001)	29.2 (in 2001)	• Cash: small deposits • Bonds: 1-16 yr maturity with large claims assigned to longer bonds; 3 yr grace; 2 percent interest rate; useable in land or privatization deals at face value; redeemable against social expenditures at a discount	-Cash (4 yrs, 1998-2002) -Bonds (16 yrs, 2001-16)	11.5 (minimum: could be more to the extent bonds are redeemed early on at face value in land or privatization transactions).	1.2 / 0.6
Ukraine (1996/ongoing)	161.1 (in 1996)	• Discretionary annual cash payment; initially linked to age but rejected by courts. • Triangular netting with public enterprises	Undefined overall; netting schemes were limited to 2005-06.	3.5 total (through 2007); netting sub-total of 0.4 (through 2007)	0.4 / 0.1

Sources: IMF Country Reports

1/ Size, in percent of GDP, as of the date specified. Amounts in most cases accumulated over several years.
2/ Maximum and minimum annual payment

- Countries were also cognizant of debt service requirements. Serbia provides a good example of how to handle this in the context of an upfront securitization. Bonds were carefully structured to limit debt service requirements to no more than 1 percent of GDP in any one year (with an exception related to privatization proceeds, discussed below) (Table 3).

Table 3. Structure of the Serbian Debt Settlement

Deposit size (EUR)	Conversion Factor 1/	Bond Maturity	Calculated bond amount		
			EUR mln	Percent of GDP 2/	Percent of GDP 3/
< 276.1	1.00000000	2002	213.5	1.6	1.3
276.1 to 380	1.00000000	2003	162.5	1.2	0.9
380 to 530	1.00000000	2004	183.9	1.4	0.9
> 530	0.05425092	2005	228.7	1.7	1.1
> 530	0.05967601	2006	220.9	1.7	0.9
> 530	0.06564361	2007	219.7	1.7	0.7
> 530	0.07220798	2008	223.4	1.7	0.7
> 530	0.07942877	2009	231.3	1.8	0.6
> 530	0.08737165	2010	242.8	1.8	0.6
> 530	0.09610881	2011	257.7	2.0	0.6
> 530	0.10571970	2012	276.5	2.1	0.6
> 530	0.11629167	2013	298.3	2.3	0.6
> 530	0.12792083	2014	323.2	2.5	0.6
> 530	0.14071292	2015	348.1	2.7	0.6
> 530	0.15478421	2016	364.9	2.8	0.6

Sources: National Bank of Serbia; and Fund staff estimates.
1/ The total amount above EUR 530 is multiplied by the conversion factor to determine the amount of bonds issued for each maturity.
2/ Initial settlement period GDP (2001)
3/ Actual, through 2007; WEO projection, through 2013; extrapolation of WEO growth projections, through 2016.

B. Macroeconomic stability

A settlement may also place macroeconomic stability at risk. The macroeconomic impact would depend on several considerations:

- The wealth effect of the debt shock. Fully Ricardian consumers would perceive the need to eventually pay higher taxes, and would thus save the temporary windfall to smooth their intertemporal consumption path. However, consumer behavior is likely to be non-Ricardian, due to different cohorts of agents with compressed planning periods (see Blanchard, 1985 and Weil, 1989); or because some proportion of consumers are liquidity constrained—unable to borrow as much as they need to smooth their consumption (see Gali et al, 2007).[5] Thus a positive wealth effect and some demand stimulus is likely.

[5] The evidence on the importance of Ricardian equivalence in practice is inconclusive (see Ricciuti, 2003).

- The policy response to rising demand. To the extent the government adjusts, taxing other individuals or reducing other spending, the impact on aggregate demand will be diminished, and potentially even offset. The central bank can also, with enough lead time, engineer adjustments to aggregate demand to offset the shock (crowding out investment and net exports with adjustments in interest and exchange rates). The monetary policy framework may prevent this, however: under a peg and free movement of capital, foreign resources can be drawn in and if not sterilized by the central bank, the excess liquidity may amplify the demand shock.

- The cyclical position of the economy. If the economy is at or near capacity, a demand shock would lead to a relatively small increase in output, significant additional pressure on inflation (through non-traded goods prices), and deterioration of the current account. Nominal interest rates would rise, and the real exchange rate would as well. On the other hand, for an economy well below capacity, the demand shock might simply raise output.

Empirical examination of economic impacts is difficult. With so few cases to study, the diversity of settlement approaches, and so many shocks to control for, it is not possible empirically to isolate the impacts of settlements or aspects of their design on subsequent macroeconomic developments. And there has been insufficient variance in policy regimes (especially the exchange rate) to capture effects through this channel.

The IMF's GIMF model can be used to illustrate how these key macroeconomic considerations may play out. The "Global Integrated Monetary Fiscal Model" is a new open-economy macro model with explicit microfoundations. Box 2 provides an overview of key features. See Kumhof and Laxton (2007) for a full description of the model. The model is first calibrated for a steady-state, with the impact of shocks considered against this baseline.

Box 2. The Global Monetary and Fiscal Model 1/

Microeconomic foundations:

- Optimizing forward-looking firms and consumers.
- Nominal rigidities (prices (cascading); wages; plus pricing to market).
- Real rigidities (habit persistence; investment and import adjustment costs)

Detailed Production structure:

- Tradable and non-tradable sectors.
- Raw materials, intermediate goods, and final goods.
- Intra-industry trade across economies.
- Endogenous labor and capital supply

Non-Ricardian features:

- Multiple (4) distortionary taxes, plus productive investment.
- Liquidity constrained agents without access to financial markets.
- Life-cycle income patterns.
- OLG agents with finite lifetimes and high subjective discount rates.

Monetary and fiscal policy reaction functions.

1/ See Kumhof and Laxton (2007) for full details.

For the purposes of this paper, the home country in the model is calibrated to resemble Ukraine, on its post-2002 balanced growth path. That is, net energy imports; a high share of trade and size of government; a low deficit and public debt, a moderately high level of net foreign liabilities, a moderate current account deficit, and a interest rate risk premium of 300-350 basis points. Moderate inflation is assumed under a fixed exchange rate, with fiscal policy targeting the headline deficit. Ratios are drawn from the two most recent years of data, with adjustments to capture the underlying current account balance and fiscal deficit (consistent with IMF 2008).[6] Structural parameters are drawn from the literature on the Czech Republic (Laxton and Pesenti, 2003; Allard and Muñoz, 2008); and Western Europe/the U.S. (Bayoumi, Laxton and Pesenti, 2004; Everaert and Schule, 2006; Kumhof and Laxton, 2007). See Appendix I for details of the calibration.

[6] Ukraine is not in a steady state at present, as a credit boom and fiscal expansion have created a positive output gap, high and rising inflation, and a growing current account deficit. If Ukraine soon returns to a balanced growth path (at the underlying ratios used), the results that follow could be seen as having predictive content. Section IV below discusses the specific application to Ukraine in more detail.

The GIMF simulations highlight the following:

- A large upfront settlement (10 percent of GDP) would have considerable macroeconomic impacts (Figure 2). Much of the settlement would be spent, leading to a significant increase in inflation (especially for domestic goods, less so for final output and GDP deflator inflation). The real exchange rate would appreciate moderately, while the current account deficit would rise sharply to satisfy excess demand. In the medium-term, inflation must undershoot the baseline to restore the real exchange rate under the peg. This would lead to an increase in the real interest rate, which would crowd out investment, and lower real GDP relative to the baseline.

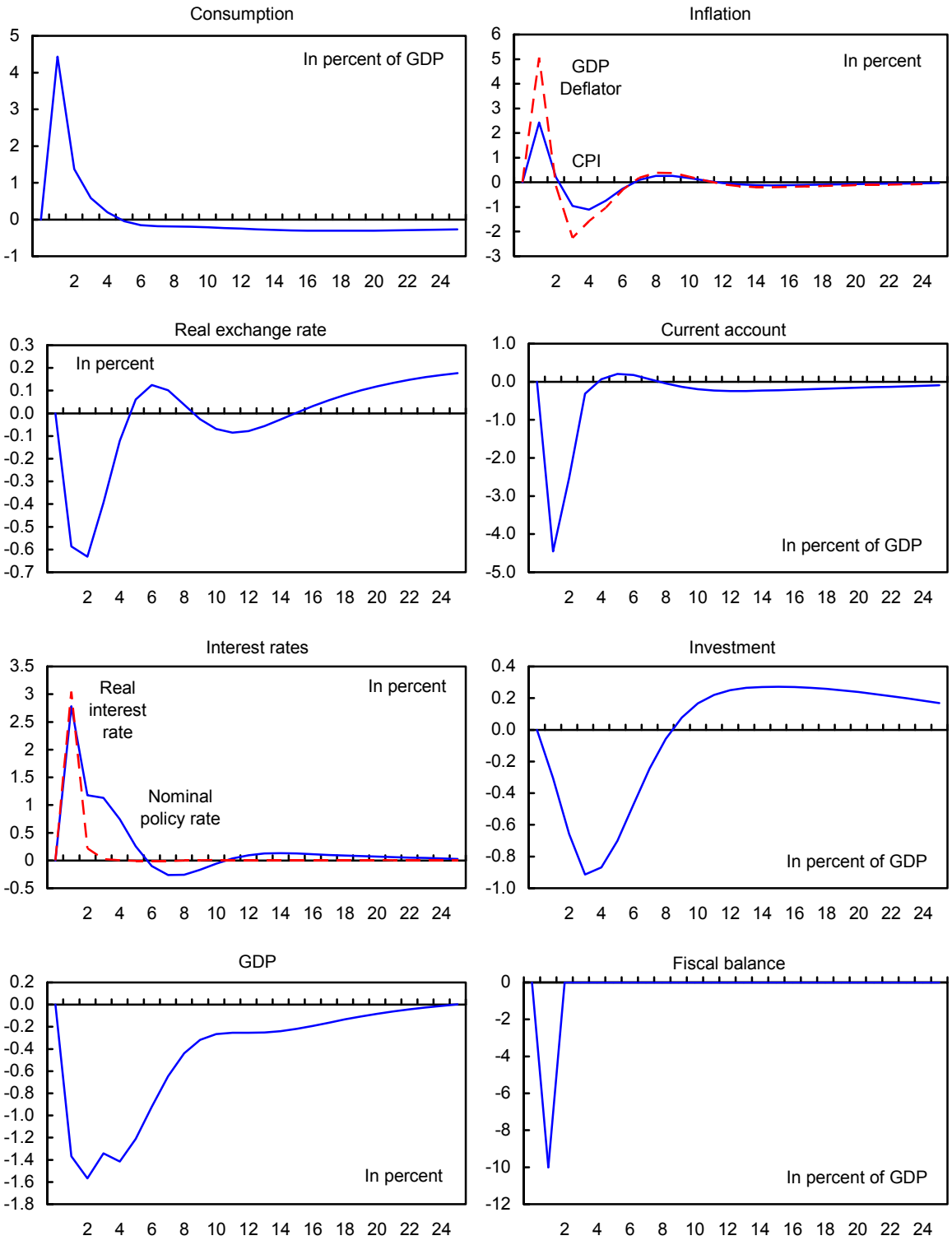
- Results are sensitive to assumptions about non-Ricardian model features, and to assumptions about price adjustment costs (Figure 3). With a smaller proportion of liquidity constrained agents (a large shock could push more individuals to the point where they no longer wish to borrow to smooth their consumption), the impact on overall consumption would be somewhat less, matched by less of an inflationary impact, less current account impact, and less impact on output. With smaller price adjustment costs, the inflationary impact is considerably larger.

- Counter-cyclical fiscal policy reduces macroeconomic impacts significantly (Figure 4). Under a deficit target, the shock is amplified as the burst of additional consumption raises taxes and, therefore, spending. If fiscal policy is instead geared to save excess revenues, the second-round impacts of the shock are greatly diminished: the total consumption response drops by about one-quarter, with a similar result for inflation and the deterioration of the current account.

- A settlement that is spread out also significantly reduces macroeconomic impacts (Figure 5). When payments are staggered over 5 years, the consumption response by non-liquidity constrained agents is the same, but liquidity constrained agents' consumption increase becomes much lower in any given year. Overall consumption thus rises much less, with diminished effects on inflation and the current account. It is important to note, however, that a spread out settlement that is too deterministic about future payments could easily allow recipients to borrow against them, the more so to the extent financial markets and consumer lending are well-developed. In this case the liquidity constraint likely disappears, and impacts would resemble those of an upfront securitization.

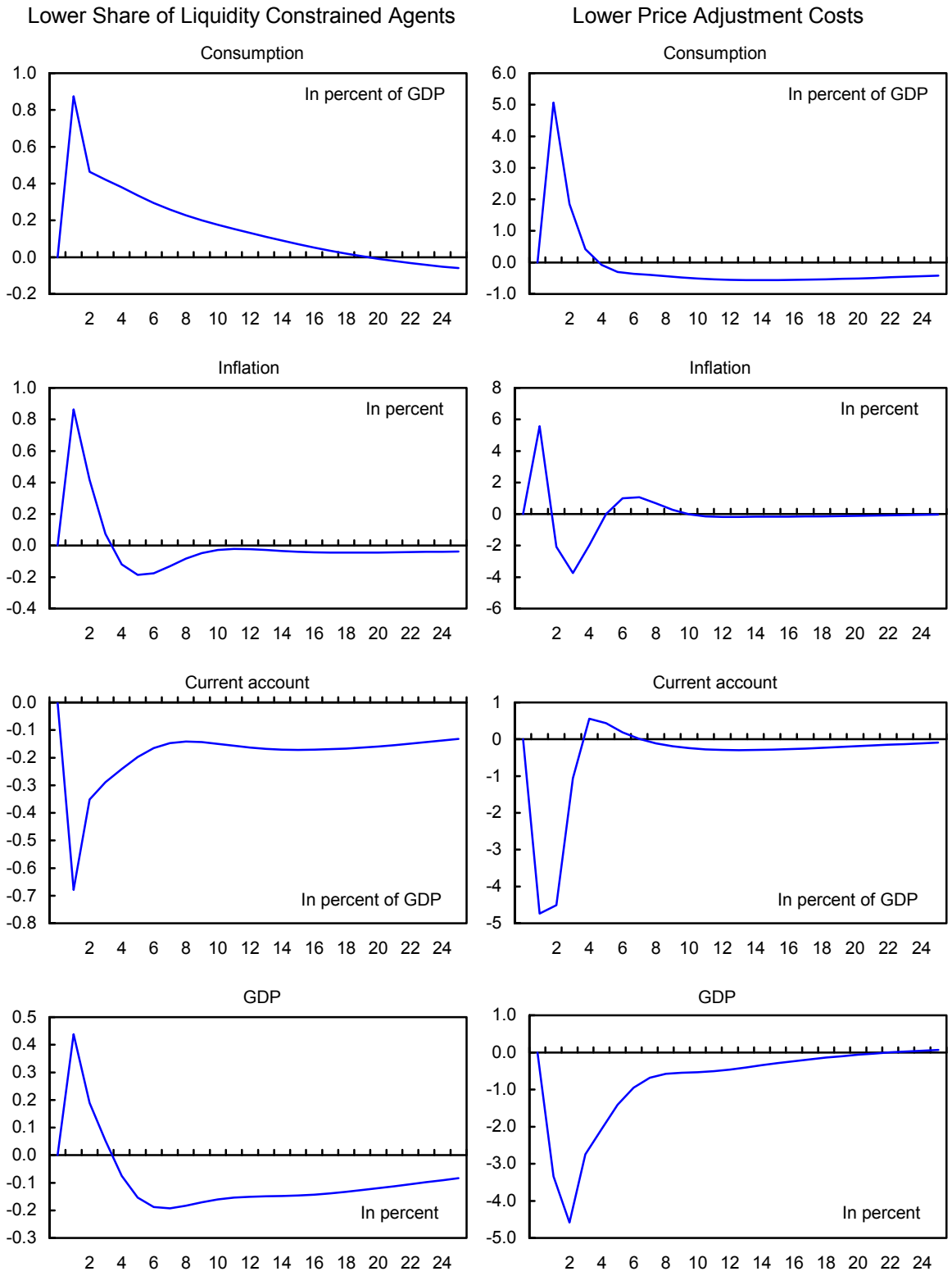
- With phasing, a counter-cyclical fiscal response, and a flexible exchange rate (freeing monetary policy to also respond) the inflationary impact of even a large settlement can largely be contained (Figure 6). A sharper increase in the nominal and real interest rate, as the central bank responds to the rising inflation projections for 1 year out, dampens investment, GDP and labor income, containing the consumption shock and inflation.

Figure 2. Up-front Debt Shock



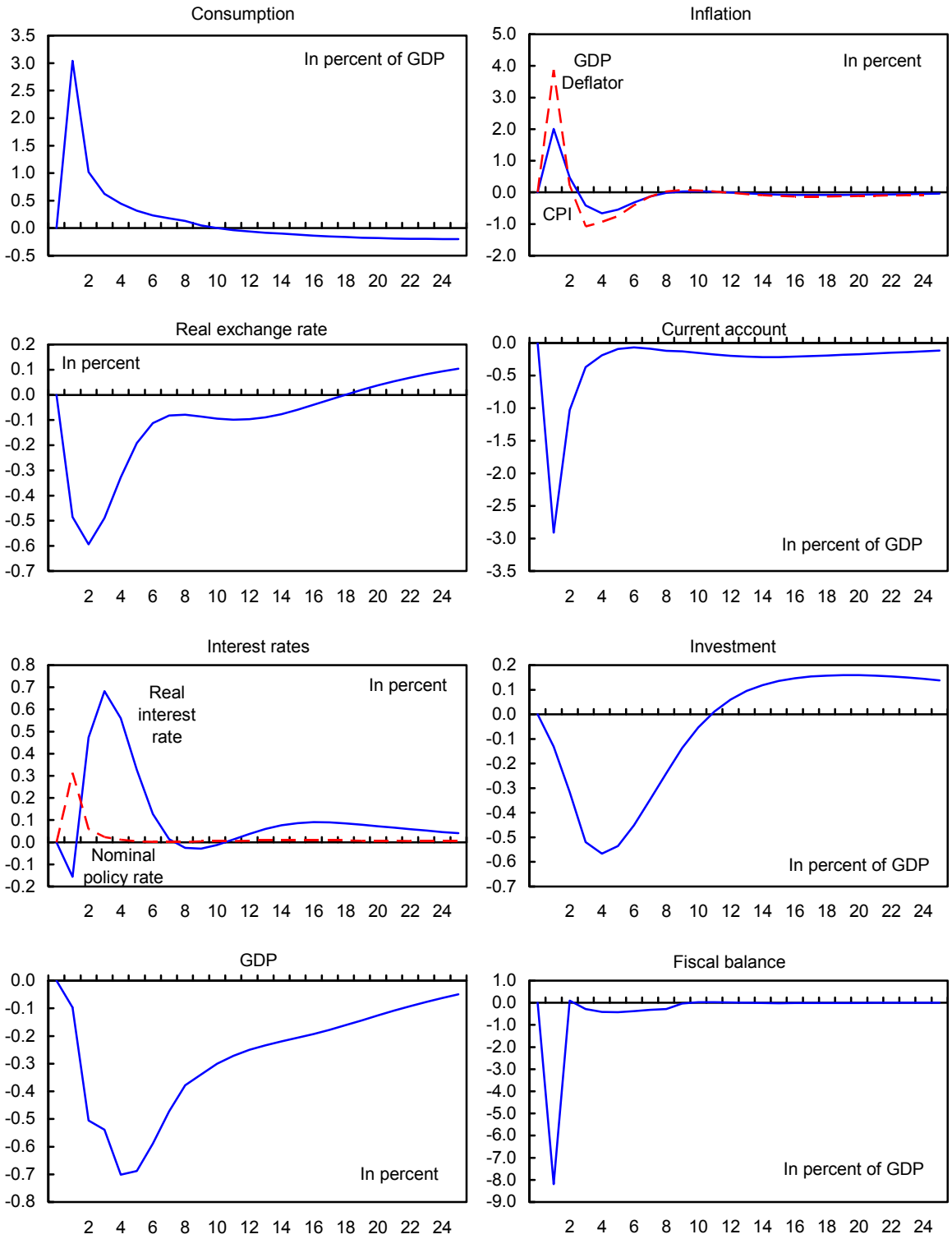
Source: IMF staff estimates using GIMF model (see Kumhof and Laxton (2007)).

Figure 3. Sensitivity Tests



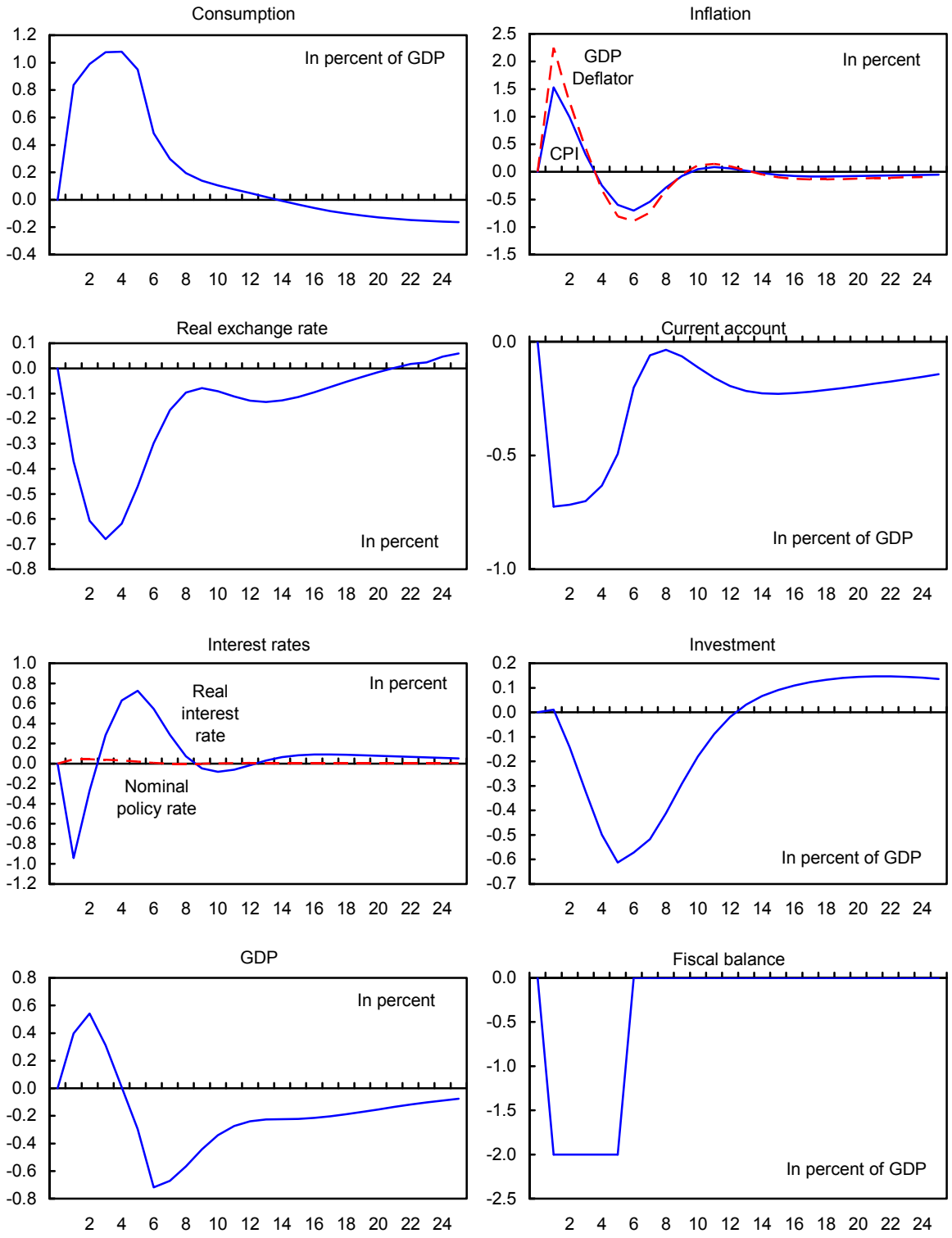
Source: IMF staff estimates using GIMF model (see Kumhof and Laxton (2007)).

Figure 4. Debt Shock with Counter-Cyclical Fiscal Policy



Source: IMF staff estimates using GIMF model (see Kumhof and Laxton (2007)).

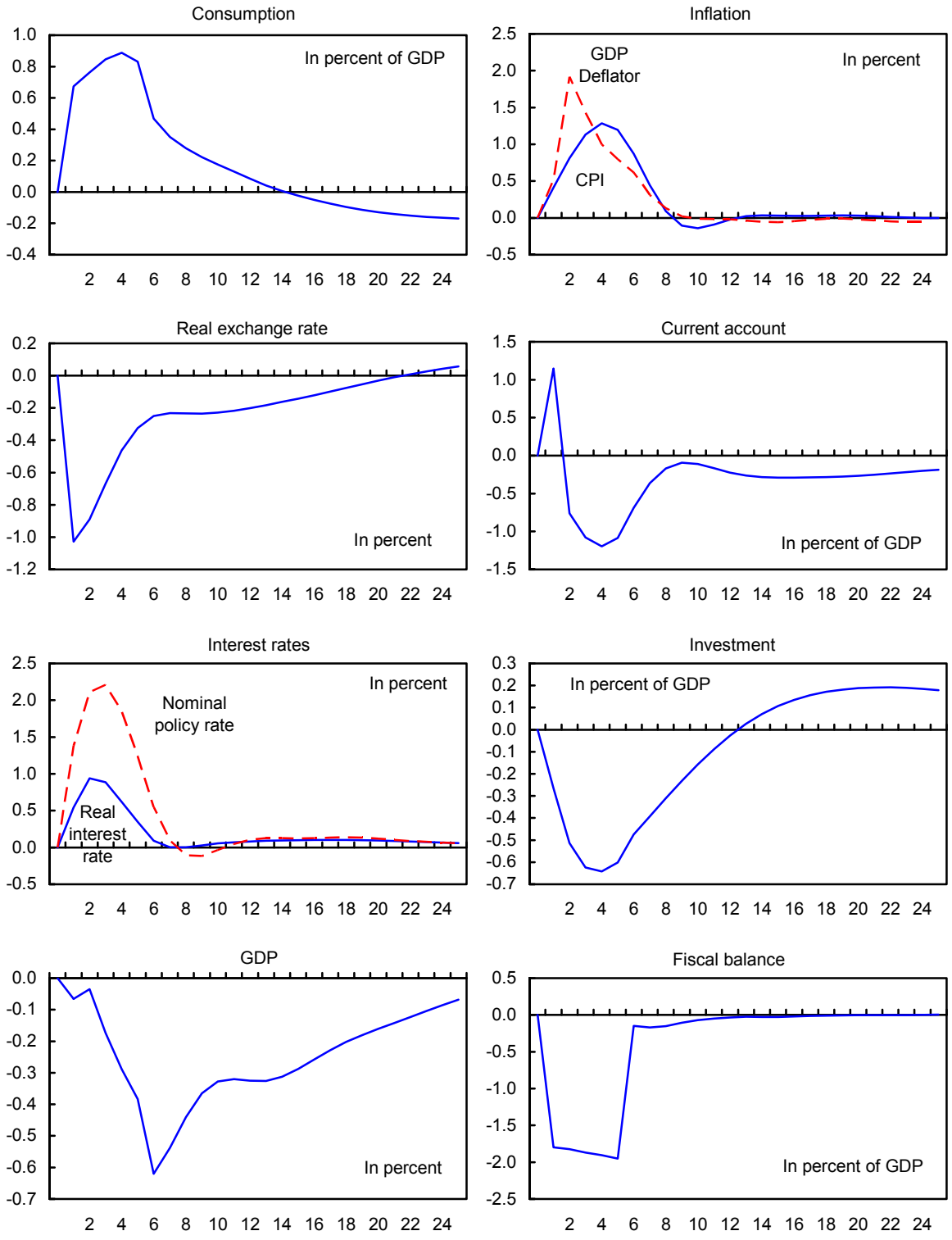
Figure 5. Spread-out Debt Shock



Source: IMF staff estimates using GIMF model (see Kumhof and Laxton (2007)).

Figure 6. Debt Shock with All Offsets

(staggered; counter-cyclical fiscal response; and flexible exchange rate)



Source: IMF staff estimates using GIMF model (see Kumhof and Laxton (2007)).

The approach taken in case study countries on the staging of the settlement—discussed in more detail below—is broadly consistent with GIMF findings. Large upfront settlements have been a minority and have generally been undertaken at a more favorable macroeconomic conjuncture (Table 4).

Table 4. Debt Settlement Timing and Macroeconomic Conjuncture

Country	Year	Type	Inflation	Growth	CA deficit
Bosnia	2004	Up-front	0.3	6.3	-16.3
Croatia	2006	Up-front	3.2	4.8	-7.7
Lithuania	1997	Spread	10.3	8.5	-7.9
Macedonia	2000	Up-front	6.4	4.5	-1.9
Moldova	1997	Spread	11.8	1.6	-14.2
Russia	1997	Spread	14.8	1.4	0.0
Serbia	2001	Up-front	91.8	4.8	-2.4
Ukraine	1996	Spread	80.2	-10.0	-2.7
Memorandum items 1/					
		Up-front	4.8	4.8	-5.1
		Spread	13.3	1.5	-5.3

Source: IMF WEO data base
1/ Median

The case studies, and other country experience, do highlight other approaches to reducing macro impacts and risks (beyond overall settlement design):

- Creating incentives to save cash payouts. Lithuania created a new class of small-denomination government savings bonds, and offered above-market interest rates to claimants if they maintained their (now-unfrozen) bank account (IMF 1999a).

- Drawing on broader country experience, penalties for selling newly issued securities can also serve as a direct disincentive to spending. Rediscount restrictions on securities issued would reduce the sale price, and would be effective unless there were close substitutes for "restitution" bonds in banks' portfolios.

III. Design of a Settlement: Technical Considerations

A successful debt settlement must confront several technical issue of design, including how it can be administered at minimum cost and risk; how it is most effectively staged or sequenced; the technique through which claims will be resolved; and, as a special case of the latter, the use of public assets in a settlement. These design issues, and their role in determining the overall fiscal and macro characteristics of the settlement, are discussed in what follows. Table 5 summarizes findings from the case studies.

A. Administration

Implementing a debt settlement presents a government with a number of potential costs and risks. A settlement is often composed of a staggering number of individual claims, raising a potentially significant the administrative burden. Without appropriate controls, improper claims may be paid out, resulting in losses for the government and taxpayers. A settlement that is not final—at risk of an ongoing process of renegotiation—may have deeper costs. It benefits neither the government nor claimants to have ongoing uncertainty. At an extreme, the dangers are easy to see: a solution that is knife-edge in terms of fiscal or macroeconomic sustainability would break down if revisited.[7]

The experience of European countries shows several strategies for addressing administrative costs and fiscal and legal risks:

- *Stock-taking and verification of claims*. Verification protects the government against fraudulent claims, which could otherwise give rise to large losses (given the typically large size of the settlement involved). For instance, in Bosnia verification reduced amounts outstanding by 6½ percent of GDP. How a government chooses to verify is important: a good check and balance is to involve, along with internal audit, an independent body; for instance bank auditors in the case of frozen deposit claims, or the supreme independent audit institution in the case of expenditure arrears claims. Where government capacity is insufficient, the involvement of private sector accounting and auditing firms can also be justified.

- *Prioritization of claims—but within limits.* The stock-taking exercise can be used to identify characteristics of the claims—their age, size etc. It is usually the case that a majority of the claims represent a small amount of the total outstanding debt. Settling these small claims upfront and in cash may not be overly taxing in a fiscal or

[7] Other dimensions of closure, including time consistency (building in enough barriers to prevent the issue from being politically revisited); and incentive compatibility (ensuring that the settlement, as designed, does not give rise to new claimant behaviors that may disadvantage the government in the future) are discussed below.

macroeconomic sense, but can vastly reduce administrative costs. Macedonia and Serbia followed this approach. Lithuania, Serbia, and Ukraine all at some point gave preference in settling claims to the elderly, disabled or to those trying to fund their education. This approach raises administrative costs, however, as a new level of verification is required, and it may create legal problems if courts do not accept some criteria for prioritizations (e.g. Ukraine, where the constitutional court rejected an age-of-claimant based criterion).

- *Transparency*. Auditing and public disclosure of government payments and receipts helps prevent abuse. When these were not up to international standards, for instance during netting transactions in Russia, Ukraine, and Moldova in the late 1990s, widespread concerns developed about losses to the government (in particular, overvaluation of the private sector's netted claim; see Commander, Dolinskaya and Mumssen (2000)). Better clarity about the fairness (horizontal equity) of the settlement may help build overall public support for the specific design of a scheme.

- *Voluntary settlement.* The legal status of a large contingent claim is often ill-defined, leaving any settlement open to some legal risk. An accepted settlement reduces these risks, and in this context, almost all countries have required claimants to take action to receive their settlement. A time limit can also allow the books to be closed on difficult-to-trace claimants. Some countries (Croatia), have also negotiated with umbrella organizations for claimants to improve the odds that a settlement will be accepted.

- *Moratorium legislation.* A settlement may take time to prepare, and in the interim successful legal challenges may lead to disruptions (e.g. seizure of government assets). Ex-post, lawsuits over debt haircuts may also prove successful, since the law may be unclear about the burden between the public and individual interest under a settlement. Again fiscal disruption may result. These concerns were especially prominent in Bosnia (IMF, 2005). The solution adopted there, and elsewhere (e.g. Ukraine), was moratorium legislation, which freezes a claim until budget resources are identified.

Table 5. Settling Large Contingent Fiscal Claims: Issues Raised

Country	Date 1/	Clearance Procedure	Administration	Closure	Fiscal Issues	Macro Issues
Bosnia	2003 & ongoing	-Cash -Bonds	-Ongoing flow of new claims hindered design and calculations. -Court-ordered asset seizures had to be controlled with moratorium legislation. -Verification process reduced number of claims considerably.	Settlement overturned by courts: burden between public and private interest weighted too much towards the former.	Sustainability. Max settlement NPV calculated in best practice manner (i.e. looking at sustainable primary balance, and reasonable growth-interest rate differential)	Issue considered through the lens of fiscal sustainability.
Croatia	2005	-Cash: pre-determined schedule	-Use of EBF with power to borrow (and fiscal accounting for this). -Administering the choice adds an element of cost	-Design of choice scheme influenced by discussion with pensioners association (reducing risk of rejection)	-Link to privatization proceeds limits total financing exposure.	-Added a small and transient impact to consumption pressures at time of already high domestic absorption and CA deficit. -Choice may have offered some info. about consumption intentions—those taking two year scheme more likely to consume; with info, can better tailor response.

Table 5 (continued). Settling Large Contingent Fiscal Claims: Issues Raised

Country	Date 1/	Clearance Procedure	Administration	Closure	Fiscal Issues	Macro Issues
Lithuania	1997	-Cash: semi-discretionary schedule	-Large number of accounts, prioritization of payment and two rounds of indexation create verification and management challenge. -Use of EBF with power to borrow.	Initial indexation (1993) unsuccessfully challenged in court; later politically revisited.	-Partial link to privatization proceeds limits total financing exposure. -Explicit link may have built support for privatization program.	-Absence of a pre-set schedule allows government to stop restitutions when external situation becomes problematic in 2000-01. -Measures to encourage savings: new retails savings bond plus pymt of above-market rates if deposit maintained. -Limits on amount of privatization proceeds that can be used in one year (two-thirds of total) provide some check on macro impact. -Central bank deposit auctions to offset liquidity impact.
Macedonia	1999	-Cash -Bonds	-Large number of small accounts.	IMF Article VIII problems: restrictions on non-residents repatriation of proceeds; schedule agreed to eliminate restriction by 2006; restriction eliminated by 2007.	-Short 2-yr grace period before amortization requires extra measures to prevent budget stress. -Exchangeability into public assets can help limit potential need for cash redemption/ financing.	-Conversion to fx-denominated bonds payable in local currency reduces external risk, but does not eliminate. -Settlement designed to bolster confidence in the domestic financial system, leading to greater financial market development.

Table 5 (continued). Settling Large Contingent Fiscal Claims: Issues Raised

Country	Date 1/	Clearance Procedure	Administration	Closure	Fiscal Issues	Macro Issues
Moldova	1996-1998	-Netting -In-kind pymts	-Significant costs of matching transactions in place of money (for in-kind, government has to set up a network of shops and issue redeemable coupons). -Significant problems with valuation of netting transactions, on both sides, opening the door to fraud.	-Considerable moral hazard: clearance procedure taught agents that if they wanted to get their debts quickly, the best way was to not pay their current obligations to the government.	-Threatened debt sustainability: encouraged new arrears, robbing budget of cash needed, e.g., for debt service. -Distorted budget priorities towards items which could be offset/netted against. -Robbed the budget of real resources since netting/in-kind transactions often provided partial tax amnesties, while government arrears often faced punitive penalties.	-Encouraged disintermediation raising transactions costs economy wide. -Distorted the pricing system, reducing efficiency of resource allocation. -Provided implicit subsidies that discouraged needed enterprise adjustment.
Russia	1996-1998	-Netting -Tax offsets -In-kind pymts	-Significant administrative costs of matching transactions in place of money. -Significant problems with valuation of netting transactions, on both sides, opening the door to fraud.	-Considerable moral hazard: clearance procedure taught agents that if they wanted to get their debts quickly, the best way was to not pay their current obligations to the government.	-Threatened debt sustainability: encouraged new arrears, robbing budget of cash needed, e.g., for debt service. -Distorted budget priorities towards items which could be offset/netted against. -Robbed the budget of real resources since netting/in-kind transactions often provided partial tax amnesties, while government arrears often faced punitive penalties.	-Encouraged disintermediation, raising transactions costs economy wide. -Distorted the pricing system, reducing efficiency of resource allocation. -Provided implicit subsidies that discouraged needed enterprise adjustment.

Table 5 (continued). Settling Large Contingent Fiscal Claims: Issues Raised

Country	Date 1/	Clearance Procedure	Administration	Closure	Fiscal Issues	Macro Issues
Serbia	2001	-Cash -Bonds	-Large number of small accounts. -Complications in verifying compliance with social and other criteria for early withdrawal	-Initial settlement law of 1998 replaced by a new law in 2002, which defined a more sustainable debt servce profile.	Settlement (2002) explicitly designed with an explicit maximum annual debt service in mind.	-Settlement explicitly tailored to financial mkt development needs, especially creating liquidity along entire yield curve. -But fx bonds probably contributed to euroization, a source of present vulnerability
Ukraine	1996/ongoing	-Cash (discretionary payment) -Netting	-Difficulties tracking large number of beneficiaries and whether they were still alive. -High administrative and compliance costs of netting exercise.	-Lawsuits over terms and priorities (successful in the latter case). -Not accepted politically as solution; many new proposals. -Netting had a moral hazard, and failed to reduce utility/ tax arrears.	-May have raised risk premium: movements in EMBI public debt spread parallel periods when new solutions were being debated (although effect cannot be separated from general political uncertainty). -Unsuccessful netting exercises left public utilities scrambling to accommodate new arrears.	-Payouts have generally proved to be pro-cyclical, rising when inflation is highest.

Sources: IMF Country Reports

B. The staging of a settlement

There are arguments in favor of both upfront and spread out settlements, and the countries in question have used both approaches (Table 5). Given the sums involved, upfront payouts have been via securitization of the debt (Serbia, Macedonia, Bosnia (planned)). Spread out payments have more typically been in cash (Lithuania, Ukraine).

Spread out flexible settlements can have benefits relative to upfront settlements:

- A phased approach does not lock the fiscal authority into what could be a fiscally unsustainable settlement. Under a staggered approach with some discretion (e.g. Lithuania), if assumptions about real growth, the real interest rate, and the sustainable primary surplus turn out to be incorrect, in principle the NPV of the settlement can be altered ex-post by shifting the time profile of remaining payouts. But the lack of closure is not itself without risk, as discussed below.

- A phased and flexible settlement schedule can help in the management of macroeconomic impacts and shocks. Phasing reduces the fiscal stimulus in any one year, and thus reduces the pressure on monetary and fiscal policy to manage the demand impact. This could be a critical consideration in countries with weak capacity to implement policies. Looking at the case studies Lithuania (1997) was able to use phasing to good effect in managing macro shocks. When it faced an extremely challenging external environment in 2000-01, it was able to postpone cash payouts, which were targeted to be completed in 10 years, but not specified on an annual basis (Figure 7).

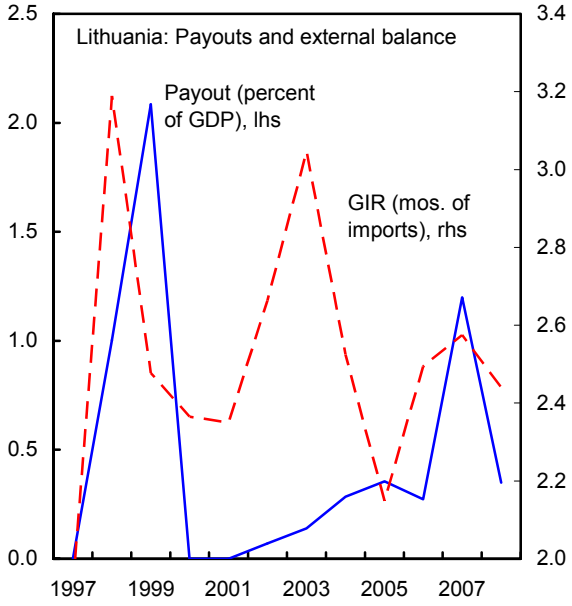
However some considerations argue for upfront settlements:

- An upfront settlement rapidly achieves closure. For countries going this route, once the scheme has been designed, implementation has been rapid, and that has been the end of the issue.[8] At the other extreme, Ukraine (1996) set no time limit for redeeming recognized liabilities, and no annual guidance. This helped avoid problems during 1999-2002, when Ukraine faced difficult external circumstances and severe fiscal financing constraints, but in 2003-04, payments fell below the macro-fiscal capacity of the government (Figure 7). Pressures have since mounted for an entirely new solution and at a much less attractive macroeconomic conjuncture (see Section IV below).

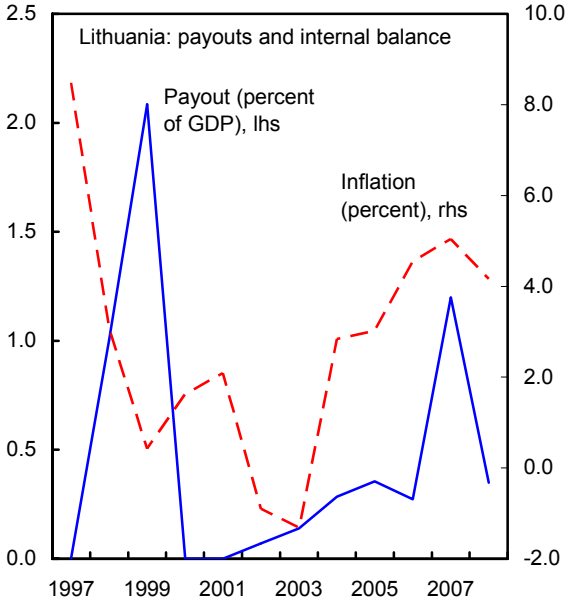
[8] The exception is Bosnia, where legal problems grounded the initial scheme. Arguably the same legal problems would have grounded an equivalent spread out scheme, since the question related to the haircut on claims.

Figure 7. Timing of Debt Restitution and Macroeconomic Factors

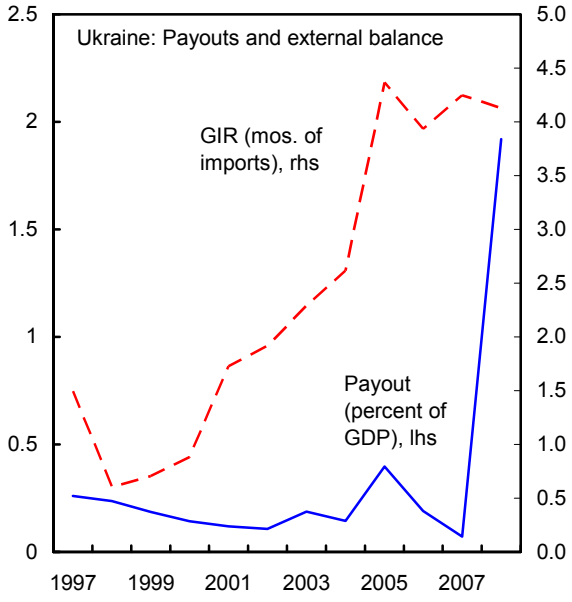
In Lithuania, high payouts have come when international reserves have been strong...



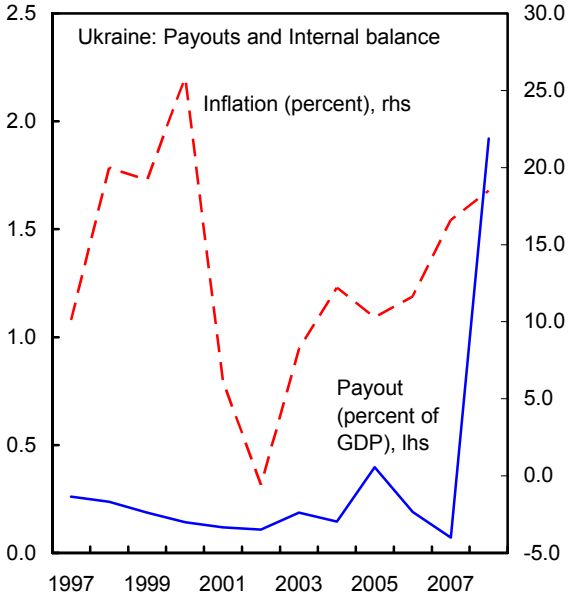
...and reached their highest level when inflation was well-contained.



In Ukraine, it took some time before the strength of reserves was reflected in high payouts...



...but this has timed the high payouts to occur during high and rising inflation.



Source: Country authorities, IMF WEO database, and Fund staff estimates

- An upfront settlement can be leveraged toward immediate financial market development. In Serbia, claims were securitized by a series of bonds, varying in maturity from 1-16 years. Volumes were carefully chosen to provide liquidity along the yield curve (Table 3, above). However, the Serbian case does also contains a note of caution: the bonds issued were fx-denominated, and may have contributed to a creeping euroization of the economy, which is now complicating monetary policy.

In sum, neither approach dominates. Generally, an upfront settlement should be preferred when: (i) macro and fiscal risks are well contained; (ii) there are financial market development needs; and (iii) achieving closure (time consistency) is a pressing concern.

C. The settlement technique

The case study countries have pursued a variety of techniques in settling debt. Some have used cash payments (Croatia, Lithuania, Ukraine); some have securitized the debt (Bosnia, Macedonia, Serbia); some have netted the debt against amounts owed to the government (Moldova, Russia, Ukraine); and some have paid in-kind (Moldova).

The case studies highlight some benefits and pitfalls of settlement techniques (Table 5):

- Cash repayment and securitization, either alone or in combination, offer a range of benefits to both the government and claimants. They offer the most flexibility, ease-of-administration, and transparency. Among all techniques, they offer the greatest improvement in claimant welfare, as consumers can achieve their optimal consumption bundle at minimal transaction cost (Ramos, 1998). Securitization may have the added benefit of encouraging financial market development (Table 3, above). Cases of successful settlement invariably have taken these approaches.

- In-kind payments impose a range of costs, and should always be avoided. Country experience shows a high cost of administration, lack of transparency (including valuation problems), and significant fiscal side-effects, in the form of reduced cash revenue receipts for the budget. By encouraging a barter economy, in-kind settlements are thought to have been highly negative for growth (see IMF 1998). Finally, of all the settlement techniques, they improve claimant welfare by the least, by imposing a consumption bundle that may bear little relation to what people want, and one which can only be transformed into another bundle, or shifted into another period, at high transactions cost.

- Mutual debt settlements (netting) carry heavy risks, and should only be undertaken under very specific circumstances. First, as noted above, netting operations do not lend themselves to transparency and disclosure, and in particular were associated in the CIS with rampant valuation problems (government expenditure arrears tended to be inflated by excessive prices and/or late payment penalties, while the government was willing to

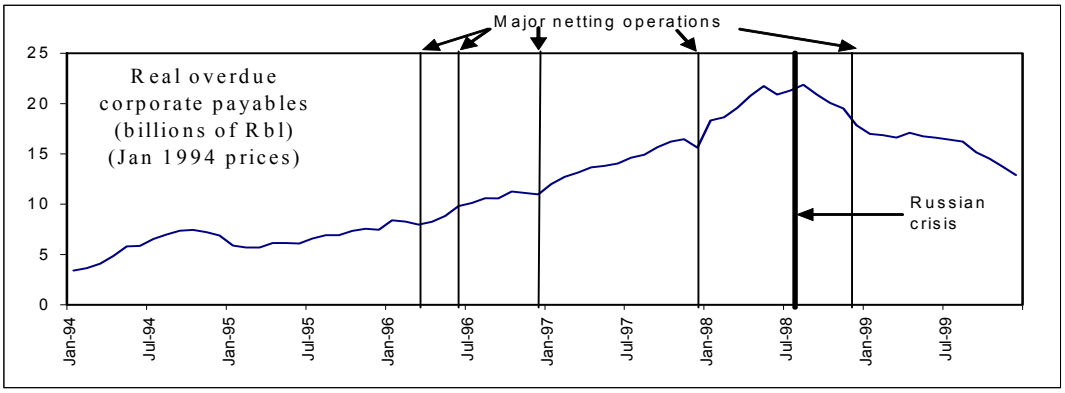
write down interest and penalties on tax arrears). Second, if the netting extends beyond bilateral debt cancellation to chains (e.g. involving state enterprises and claimants' debt to them), the administrative cost becomes very high.[9] Third, netting disintermediates the economy and distorts price signals thereby undermining macroeconomic performance. Finally, netting involves considerable moral hazard. Once introduced as a technique in settling debts in the CIS it quickly became entrenched with deepening macroeconomic and fiscal costs. Box 3 discusses this last point in more detail (see also IMF 1999b). In sum, experience suggests that netting is a highly risky strategy, and only if the government can credibly commit to a one-off transaction and can exert control over valuation abuse, should it play a role in a settlement.

[9] Money is often modeled as a matching technology. Arguably, it was the long experience of central planning in the former Soviet states that reduced costs of administrative matching and paved the way for the netting.

Box 3. Mutual Debt Settlements (Netting) in the CIS

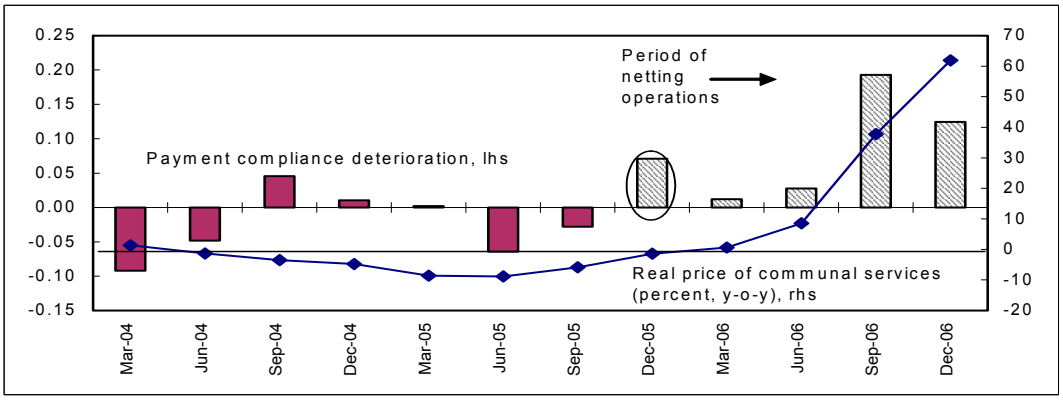
A mutual debt settlement may appear to be a one-off phenomenon, but in reality it can create a problematic incentive for future periods. The government effectively teaches claimants that the way to obtain their remaining claim (if it has not all been repaid) is to not pay current obligations to the government (tax liabilities or payments to such state enterprises as public utilities). Figure B3.1 illustrates how this process was at work in Russia. Arrears did not decline over time, despite netting, and rebounded very rapidly after netting rounds. The situation did not right itself until the underlying problem—the liquidity strains preceding Russia's debt default—disappeared. Figure B3.2 illustrates declines in compliance consequent on Ukraine's public utility netting scheme.

Figure B3.1. Russia: Corporate Tax Arrears and Netting



Source: Country authorities, and Fund staff estimates.

Figure B3.2. Ukraine: Utility Payment Compliance and Netting



Source: Country authorities, and Fund staff estimates.

When netting becomes entrenched, fiscal and macroeconomic problems multiply. Fiscal sustainability comes into question and fiscal management is complicated as the budget loses the cash it needs to pay debt service, wages and pensions. If the netting operations are of sufficient size, the monetary and price system begin to collapse, with extremely negative consequences for structural adjustment and growth.

D. The use of public assets in a settlement

Many countries have linked their debt settlements to asset sales, either directly or indirectly (Table 2, above). Lithuanian repayments were linked to privatization proceeds, up to a cap;[10] and a direct link was also made in Croatia. In Serbia and Macedonia, securities issued as part of the restitution exercise could be used at face value to buy public assets, including both land and companies.[11]

Political economy and financing considerations seem to lie behind this oft-observed link. In theory, there is no reason for such a link. In practice, linking to privatization may have helped build public support for privatization. Privatization remains controversial in several ex-Socialist economies, not least due to a perception that insiders have been the ultimate beneficiaries of past deals. An explicit earmark lends the appearance that citizens will benefit directly, and in proportion to their claims on the government (claims which, in the case of deposit savings, originally allowed creation of the public assets being sold). The government may also prefer to finance the transactions with asset sales rather than debt issuance on risk/return grounds. A state enterprise is an illiquid asset, often offering a low and unpredictable return in government hands (especially if the governance framework is weak); while a debt obligation imposes rigid servicing requirements (in effect reducing the government's financial flexibility).

Experience suggests that there are macro-fiscal disadvantages to a privatization link which need to be addressed if it is made. First, as with any earmark, it reduces budgetary flexibility, committing resources to one type of spending, This may subvert higher priorities that unexpectedly arise at a later date. Second, the earmark may create a need for large offsetting policy actions to maintain macro stability. For instance, where privatization reflects FDI under a peg, spending of the proceeds is a direct liquidity injection into the economy (see Davis et al (2000)). It may be relatively simple to sterilize small amounts (either via government or central bank bond issuance), but for large inflows—and privatization has reached 5 percent of annual GDP in some of these countries—the sterilization burden becomes rather large. This was one motivation for Lithuania's cap on the amount of privatization proceeds that could be used in any one year.

Experience also suggests that any link to government assets needs to be formulated very carefully. A government may not wish to accelerate privatization without a transparent well-governed process in place. More direct debt-asset exchanges have run into problems of

[10] To smooth out the time profile of restitution, the extra budgetary fund set up for this purpose borrowed from the government in anticipation of budgeted privatization proceeds.

[11] The bonds carried a below market interest rate, implying a direct link between the amount of privatization and the NPV of the settlement.

valuation, and have been associated with losses to the government (e.g. the Russian loans-for-shares scheme). Finally, the exchange of debt against privatization vouchers could run into the problems observed with earlier voucher privatization schemes: too widespread dispersion of ownership can create problems for corporate governance (see Havrylyshyn and McGettigan (1999)).

IV. APPLICATION: UKRAINE AND THE LOST SAVINGS PROBLEM

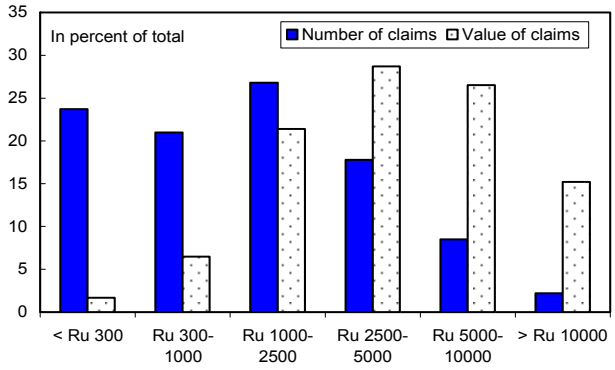
The government of Ukraine expressed a desire in early 2008 to bring a long-standing contingent liability—the so called "lost savings"—to closure.[12] The government has commenced a verification exercise, and set aside up to 2¼ percent of GDP in funds in the 2008 budget for initial payments in cash (including amounts financed by an earmark related to privatization proceeds in excess of the budget target). There would also be a triangular netting exercise involving communal service (local utility) payment arrears and local utility companies' tax arrears to the government. It remains to be determined how the government will deal with the still large residual claims that will remain after this initial phase.

Evaluation

a. Technical design considerations

Ensuring full verification and undertaking some prioritization would help reduce administrative burdens. Given the passage of time, the inheritance of many claims (as some deposit holders died), and the change in Ukrainian identification documents since the early-post Soviet era, special care is needed in verifying claimants' identity. In terms of paying claims, the initial focus should be on eliminating the large number of *de minimus* claims to reduce administrative burden (Figure 8).

Figure 8. Ukraine: Distribution of Lost Savings Claims



Source: Country authorities.

The netting exercise should be reconsidered, in light of fiscal risks. An alternative would be to withhold payment for those in arrears to the government. If netting is to proceed, transparency would be crucial: netted claims should be audited, and the government should compensate utilities on-budget for their

[12] Appendix II provides a brief history of the lost savings.

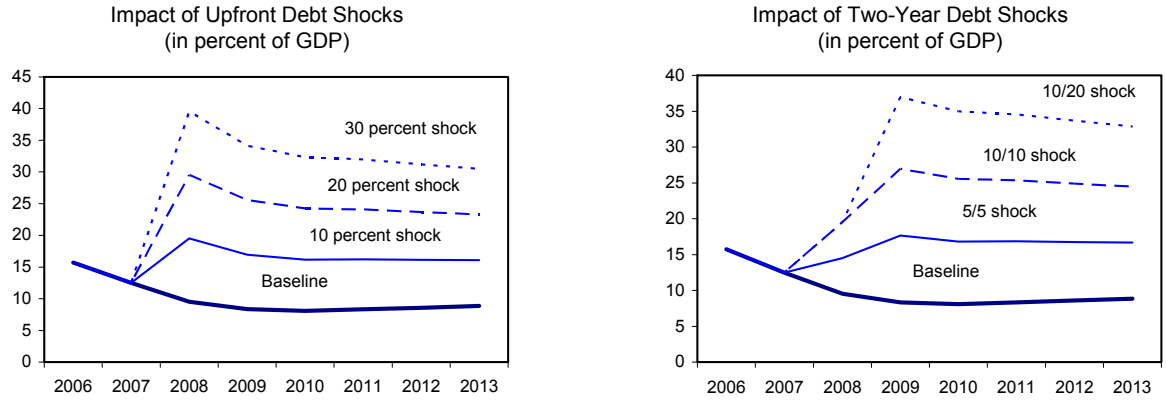
costs. Second, the government would have to somehow convince those participating that this is a one-off exercise and that new arrears will not be tolerated.[13]

The role for privatization in the settlement is less clear. The existing earmark against excess proceeds may, by accelerating privatization to high levels, create both a macro and fiscal risk (the latter to the extent transparency in the privatization process cannot quickly be improved). And while this form of financing may encourage faster private sector development (to the extent it speeds up privatization), it works against the possibility of using the settlement towards debt market development. If an earmark is to be used in 2009 and beyond, it would be wise to (i) cap annual spending through this channel, perhaps at no more than 2 percent of GDP; and (ii) eliminate the "excess" formulation of the earmark to keep the focus on designing a transparent, feasible and well-paced annual privatization plan.

b. Fiscal sustainability and macroeconomic stability

From a pure fiscal sustainability perspective, there is room to resolve the lost savings. Public debt is only 10 percent of GDP in Ukraine and falling. It is sustainable for debt shocks in the range of the existing liability, implying that from a fiscal standpoint, either an upfront securitization or spread out cash repayment could work (Figure 9). Of course, consistent with the Serbian experience, in the case of a securitization the feasibility of annual debt service requirements would need to be carefully considered (with private sector debt rollover also kept in mind).

Figure 9. Ukraine: Debt Shocks and Fiscal Sustainability

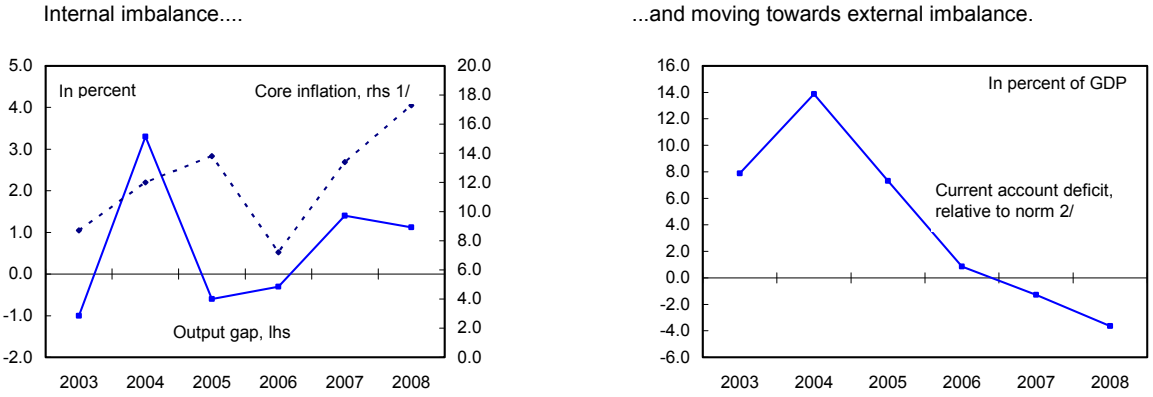


Source: IMF staff estimates.

[13] If the exercise fully pays out for lost savings claims this is less of a concern. If it does not, there is probably little that can be done to contain compliance impacts. In theory, strengthened collection powers for utility companies and stronger enforcement by the tax administration of its claims would help, but these are long-standing needs suggesting that a sudden assertion of change could be viewed with some skepticism.

However, the existing plan—and moreso a full upfront settlement—raises considerable concerns about preserving macroeconomic stability. IMF staff estimates suggest that the Ukrainian economy is presently operating beyond its capacity, with the excess demand contributing to inflation and a rising current account deficit (Figure 10). At the same time, many of the lost savings accounts are thought to belong to liquidity constrained pensioners (given the 16-17 year age of the claims), and it could thus be expected that a good proportion of restitution will be spent. Finally, privatization proceeds are likely to come from abroad and, under Ukraine's currency peg, this could accommodate the higher demand with money creation. The GIMF simulations above—albeit tailored to a Ukraine steady state—offer some indication of the size of the potential problem.

Figure 10. Ukraine: Current Macroeconomic Situation



Sources: Fund staff estimates.
1/ See IMF (2008)
1/ Estimated via CGER approach. See IMF (2007).

Consistent with the message from the case studies and GIMF model simulations, to limit macroeconomic concerns the government could consider:

- Spreading out the settlement over several years. In light of already significant 2008 payouts, and high and rising inflation, further payouts in 2008 could be halted. But this should not be a replay of the 1996 law: a time limit, perhaps 5 years, is needed.

- Moving to a countercyclical fiscal rule. Policy will then tend to offset the second round effects of the shock.

- Using the room available under the planned gradual transition to a flexible exchange rate to tighten monetary conditions and lean against residual inflationary pressures.

A spread out repayment does not rule out using the settlement towards financial market development. Within a multi-year framework, the government could approach securitization

opportunistically. It could continue to pay small amounts annually through the budget, and when the macroeconomic conjuncture is more favorable, it could pay off all remaining claims in one securitization transaction, modeled on the Serbian experience.

V. CONCLUSIONS

When a government finds itself confronted with a need to address a large contingent or off balance sheet fiscal liability, it faces several challenges. It must act in a way that preserves both fiscal sustainability and macro stability, and ensure that the settlement design also minimizes administrative burdens and legal risks.

Preserving fiscal sustainability requires attention to both the post-settlement level and structure of government debt. An appropriate level should be assessed on the basis of reasonable assumptions about the evolution of the government's primary revenue and spending, and reasonable assumptions about the real interest rate and growth. NPV write downs may be needed. Debt structure should avoid bunched maturities.

Preserving macro stability requires attention to the cyclical position and structure of the economy; the size of the wealth effect from the settlement (which depends on, e.g., the share of liquidity constrained consumers), the design of the settlement (including its staging), and the fiscal and monetary policy response. GIMF simulations, calibrated in Ukraine (which has many features typical of Eastern European economies), show that impacts on inflation and the current account can range from alarming to moderate depending on these factors.

Managing administrative and legal risks is a matter of getting a number of technical details right. Eastern European experience highlights the importance of verifying and prioritizing claims, and of transparency. It also provides insight into non-cash settlement techniques (i.e. in-kind payments, securitization, tax or public enterprise receivable offsets, and asset swaps): securitization can promote financial market development, but other methods bring high risks. Indirectly using asset sales to finance a transaction may bring some benefits, however.

The review of Eastern European experience suggests some difficult issues that governments designing a settlement will need to focus attention on. When does a spread out settlement become well enough defined that markets are willing to lend against it, effectively making it upfront? How does a settlement affect the share of liquidity constrained agents, and thus consumption? A government must also assess whether using assets to finance the settlement (i.e. privatization) outweighs the financial market development benefits from securitization.

The Ukraine application highlights how macroeconomic factors can constrain possibilities for settlement even when there is no real fiscal sustainability concern. There is a clear need to spread out the restitution (which does not rule out securitization at a later date). Eastern European experience also suggests Ukraine should avoid netting, be careful not to over-accelerate privatization (to fund an earmark), and should carefully audit the settlement.

APPENDIX I. THE GIMF MODEL CALIBRATION

Table A.I.1. Calibration of GIMF: Macroeconomic Ratios and Policies

Variable	Home Country 1/	Rest-of-World
Size of economy-population	1	142
Size of economy-GDP	1	202
Growth-population	1	1
Growth-GDP	...	3.5
Growth-TFP	1	1
Inflation	7	7
Real interest rate	...	3.5
Energy production	1.6	2.6
Energy net exports	-5.6	0.03
Non-traded goods share	56	50
Intermediate goods exports	30	...
Final good exports	12.8	...
Final goods imports	16.3	...
Private consumption	56.8	62.0
Private investment	22	20
Labor share/NTG sector	50/65	66/66
Net Foreign Assets	-42	...
Current account	-4.7	0.0
Fx risk premium	328	...
Government debt	16	50
Government deficit	-1.8	-5.6
Government consumption	18	15
Government investment	2.3	3
Government transfers	24.2	10
Share of cons. tax	35	43
Share of labor tax	46	43
Share of profit tax	19	14
Exchange rate regime	Fixed	...
Prices	Price stickiness	Price stickiness

Sources: WEO, IFS and Fund staff estimates.
1/ Ukraine.

Table A.I.2. Calibration of GIMF: Structural Parameters

Variable	Home Country 1/	Rest-of-World
Probability of surviving	.95	.95
Income decline rate	.9875	.9875
Liquidity constrained: in pop	0.5	0.5
& share in dividends	0.5	0.5
Inverse, Intertemp EoS	5	5
Frisch, E of Labor supply	0.5	0.5
Habit persistence	0.7	0.7
Depreciation: priv./gov't	10/4	10/4
Elasticity of substitution:		
Private for government	1.5	1.5
Tradables for non-tradables	0.4	0.4
Home for foreign (interm.)	1.5	1.5
Production inputs (T/non-T)	0.99/0.99	0.99/0.99
Betw. varieties (all sectors)	11-41	11-41
Price adjust. cost params	20-100	200
Quantity adjust. cost params		
Retail	2	2
Trade-final	1	1
Trade-intermed.	1	1
Capital	0	0
Investment	10	10

Sources: Laxton and Pesenti (2003); Bayoumi, Laxton and Pesenti (2004); Everaert and Schule (2006); Kumhof and Laxton (2007); and Fund staff estimates.

1/ Ukraine.

APPENDIX II. UKRAINE: A BRIEF HISTORY OF THE LOST SAVINGS

The so-called "lost savings" arose during 1992, when hyperinflation wiped out frozen Ukrainian household savings deposits. A 1996 Law revalued the deposits, and established state liability. However, the law at the same time clarified that savings were to be redeemed subject to availability of budget resources. No interest was to be paid, nor were any plans made for indexing the debt. Over time, there have been several initiatives to reach a more permanent solution. At the same time, with the debt unindexed and the nominal size of the economy growing strongly, the ratio of this debt to GDP has shrunk dramatically.

Table A.II.1. Ukraine: Major developments with the lost savings

Date	Action/proposal	Result	Residual Liability 1/
1991-2	Hyperinflation	Wipes out real value of frozen Sberbank deposits in Ukraine	2.5
1996	Law "On State Guarantees for the Ukrainian Individuals' Savings Recovery"	Established state liability for the debt, and valued it at 1.05 Hrv per rouble. However, Art. 7 of the law clarified that savings were to be redeemed subject to availability of budget resources. No interest was to be paid, and no provision made for further indexation of the debt.	160.8
2002 pre-election period	Parliament passes proposal for permanent settlement (cash plus utility netting; NPV of 26.5 percent of GDP; 12 year completion)	Vetoed by the President	...
2005 pre-election period	Parliament passes proposal for permanent settlement (cash, with payments scaled to past and projected GDP; NPV of 16 percent of GDP; 12 year completion)	Vetoed by the President	...
2005-06	Triangular netting scheme involving public utility arrears, and utility companies' tax arrears	0.4 percent of GDP in debt cleared, but no permanent reduction in utility arrears or utility companies' tax arrears.	
1997-2007	Small annual cash payments and large increase in size of economy (plus small netting transactions)	Liability shrinks dramatically.	17.9
2008	PM promises full clearance and puts Hrv 20 billion (2.1 percent of GDP) in budget to this end, of which Hrv 14 billion contingent on privatization proceeds.	-Verification ongoing. -In January, Hrv 1.3 billion paid out (0.15 percent of GDP).	...

Source: Ukrainian news media.
1/ In percent of GDP

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