FOR AGENDA

SM/10/92
Correction 1

April 27, 2010

To: Members of the Executive Board

From: The Secretary

Subject: **Bulgaria—Selected Issues**

The attached corrections to SM/10/92 (4/20/10) have been provided by the staff:

Factual Errors Not Affecting the Presentation of Staff's Analysis or Views

Page 57 para. 20, line 6: "In addition, February 2010 amendments to the Bulgarian capital adequacy regulation provide for the possibility for banks to include the audited profit from the previous year in their own funds prior to a decision taken at the shareholders' meeting." added

Page 58, Table 4b, line July 2004: for "all liabilities except interbank deposits"
read "long-term attracted resources (with maturity over two years) and repos of end-clients"

Page 64, para. 31, lines 4-6: "In addition, Bulgaria has chosen not to include unaudited current profits in the calculation of regulatory capital, as this is left to the discretion of national authorities by the CRD, but could decide to do so in the future." removed

Page 65, para. 33, line 5: for "of three months"
read "of three months, in cases of a liquidity risk that may jeopardize the stability of the banking system"

Typographical Errors

Page 48, main title, line 2: footnote added "Prepared by Jérôme Vandenbussche".
(subsequent footnotes will be renumbered)

Page 60, footnote 7 (new footnote 8): for "Chapter ZZZ", read "Section I".

Questions may be referred to Mr. Bakker, EUR (ext. 34649).

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

Att: (6)

Other Distribution:
Department Heads

Country	Type of National Rules (Start Date) 2/	Statutory Base	Coverage 3/	Time Frame	Other Features of Rules
Luxembourg	ER (1990), DR (1990)	Political Commitment, International Treaty	GG, CG	Multiyear for ER	ER: In the course of the legislative period, public expenditure growth is maintained at a rate compatible with the medium-term economic growth prospects (quantified). Independent body sets budget assumptions. Some rules exclude public investment or other priority items from ceiling. Major changes to DR in 2004.
Netherlands	ER, RR (1994)	Coalition agreement	GG	Multiyear for ER	ER: Real expenditure ceilings are fixed for total and sectoral expenditure for each year of government's four-year office term. Expenditure includes interest payments. If overruns are forecast, the Minister of Finance proposes corrective action. RR: At the beginning of the electoral period, the coalition agrees on the desired development of the tax base, and this multi-year path needs to be adhered to during the period. Additional tax increases are compensated through tax relief and vice versa. Independent body sets budget assumptions. Some rules exclude public investment or other priority items from ceiling.
Poland	DR (1997)	Constitutional	CG, GG	Annual	DR: Debt ceiling of 60 percent of GDP. The Public Finance Act includes triggers for corrective actions when the debt ratio reaches thresholds of 50, 55, and 60 percent of GDP. Rules exclude public investment or other priority items from ceiling at subnational levels.
Portugal	BBR (2002)	Statutory	CG, GG	Annual	BBR: Balanced budget rule for CG. Rules exclude public investment or other priority items from ceiling at subnational levels.
Spain	BBR (2003)	Statutory	GG	CA or Multiyear	BBR: In "normal" economic conditions, GG and its sub-sectors must show a balanced budget or a surplus. In downturns, the overall deficit must not exceed 1 percent of GDP. In addition, a deficit of up to 0.5 percent of GDP is allowed to finance public investment under certain conditions. Spain also has a FRL to support its rules. The "exceptional circumstances" and "special conditions" clauses have been activated during the current downturn and the provision to presenting plans to correct within 3 years have been put on hold without a specific time frame.
Sweden	ER (1996), BBR (2000)	Political commitment	GG, CG	Multiyear for ER; target government saving over the cycles	BBR: A surplus of 2 percent of GDP for the GG over the cycle targeted. ER: Nominal expenditure ceiling for CG and extra-budgetary old-age pension system targeted. Some rules exclude public investment or other priority items from ceiling.
United Kingdom	BBR, DR (1997)	Political commitment	GG	CA or Multiyear	BBR: Golden rule: GG borrowing only allowed for investment, not to fund current spending. Performance against the rule is measured by the average surplus on the current budget in percent of GDP over the economic cycle. DR: Sustainable investment rule: public sector net debt as a proportion of GDP should be held at a stable and prudent level over the economic cycle. Other things equal, net debt will be maintained below 40 percent of GDP over the economic cycle. There is a FRL to support these rules. Rules exclude public investment or other priority items from ceiling. Government will depart "temporarily" from the fiscal rules "until the global shocks have worked their way through the economy in full." Authorities have adopted a temporary operating rule: "to set policies to improve the cyclically adjusted current budget each year, once the economy emerges from the downturn, so it reaches balance and debt is falling as a proportion of GDP once the global shocks have worked their way through the economy in full.

Source: Kumar et al. (2009).

1/ Includes only national rules at the general or central government level.

2/ Rules in effect in 2008. Start date of rules in bracket. ER = Expenditure rule; RR = Revenue rule; BBR = Budget balance rule; DR = Debt rule

3/ GG = General government; CG = Central government. CA = Cyclical adjustment. While some countries cover the (non-financial) public sector, in this table their coverage is captured as GG.

III. Recent Evolution and Soundness of The Bulgarian Banking Sector[1]

1. **This chapter provides a broad overview of the Bulgarian banking sector and the short-run challenges it currently faces as the economy starts to emerge from recession.** Section I discusses the sector's market structure. Section II documents the evolution of credit during the boom years of 2002–08 while Section III analyzes developments during the 2009 recession and its impact on the soundness of the banking sector. Section IV reviews how some of the policies implemented during the boom have been reversed during the crisis. Section V concludes by presenting an analysis of risks at the current juncture.

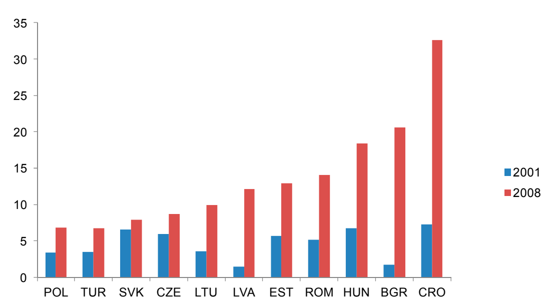
A. Market Structure

2. **The Bulgarian banking sector consists of 30 banks and is dominated by subsidiaries of large foreign banks.** Only seven banks are domestically-owned institutions while six foreign banks operate as branches. The largest five banks have a market share of 58 percent for both loans and assets as of end-Q4, 2009 (Table 1). This structure is the outcome of the restructuring and gradual liberalization of the banking sector that followed the country's financial crisis of 1996–97 (see Herderschee and Ong, 2006).

3. **Major foreign banks are all from other EU countries, most notably Greece, Italy, Austria and Hungary.** The five Greek banks together represent 30 percent of the market. Some of these banks entered the Bulgarian market relatively recently and have relied little on domestic deposits to fund their activity, as witnessed by their high loan-to-deposit ratios (see Table 1). The five private domestic institutions are typically controlled by a small number of individuals but four are listed on the Sofia stock exchange.

4. **The size of domestic nonbank credit institutions is still relatively small but cross-border loans are significant (Table 2).** The leasing sector's credit to corporations represents only 15 percent of the banking sector's while other credit institutions serve mostly households and have a 10 percent market share. These two types of institutions grew rapidly during the boom years, partly in response to constraints imposed by the BNB on banks to slow credit growth down, as discussed in Section IV below.[2] Thirty percent of loans to corporations are provided by foreign institutions.[3] External cross-border loans by BIS-

Figure 1. Ratio of Cross-Border Loans to the Non-Bank Sector to GDP, 2001-2008 1/



Source: BIS; IFS
1/ Loans to non-banks by BIS reporting banks

[1] Prepared by Jérôme Vandenbussche.

[2] Two leasing companies and one other credit institution have assets above 1 bn Leva as of end-2009. March 2009 amendments to the Law on Credit Institutions and BNB Ordinance No. 26 issued in April 2009 require that nonbank credit institutions be registered at the BNB and have a minimum capital of 250,000 Leva, and subject them to regular reporting to the BNB and its credit registry.

[3] This includes international organizations, foreign private financial institutions but also foreign private non-financial institutions that provide inter-company loans to local affiliates.

reasons. The first was the application of additional regulatory provisions as discussed further in Box 1. The second was the application of higher risk-weights under the standardized approach for credit risk for retail exposures (100 percent instead of 75 percent) and for mortgages (50 percent instead of 35 percent). This second deviation from the CRD has been eliminated in February 2010 and implies that the March 2010 CAR will automatically be boosted by a little less than 1 percentage point. In addition, February 2010 amendments to the Bulgarian capital adequacy regulation provide for the possibility for banks to include the audited profit from the previous year in their own funds prior to a decision taken at the shareholders' meeting.

Box 1. Main aspects of Bulgaria's loan classification and specific provisioning rules

The BNB's Ordinance No 9 establishes the criteria for classifying risk exposures and the allocation of specific provisions for credit risk and applies to banks using Basel II's standardized approach for credit risk (i.e. all banks in Bulgaria currently). Specific provisions for credit risk are deducted from banks' own funds for the calculation of capital adequacy. This Ordinance was amended in February 2009.

Risk exposures are evaluated and classified based on the delay of amounts overdue, the assessment of debtors' financial state and the sources for repayment of debtors' obligations.

Specific provisions are calculated as the excess of the balance sheet value of an exposure over its *risk value*. The risk value is calculated by reducing contractually agreed cash flows by a percentage that depends on the classification group of the exposure and adding all or a fraction the value of recognized collaterals or guarantees (depending on the type of collateral). The classification was changed in February 2009 as described in Table 4a below.

Loan Classification as of March 31, 2009

Old classification		New classification	
Name of exposure	Overdue days	Name of exposure	Overdue days
Watch	31-60	Watch	31-90
Substandard	61-90	Nonperforming	91-180
Nonperforming	91+	Loss	181+

Source: Bulgarian National Bank.

The percentage reduction to compute the risk value is 10 percent for watch exposures, 50 percent for non-performing exposures, and 100 percent for loss exposures.

Other changes made to the ordinance in February 2009 include:

- Less restrictive criteria for reclassification as "standard"
- Greater room to extend loan maturity without triggering reclassification
- Extension of the list of recognized collateral

Table 4b. Measures Taken by the BNB During the Credit Boom and the Slump

Date	Details of Measures
June 2004	Transfer of MoF deposits from commercial banks to the BNB
July 2004	Increase in reserve requirement ratio to 4 percent on long-term attracted resources (with maturity over two years) and repos of end-clients
September 2004	Transfer of Deposit Insurance Fund deposits from commercial banks to the BNB
October 2004	Cash-in-vault accepted to fulfill reserve requirements reduced to 50 percent
October 2004	Transfer of Government deposits from commercial banks to the BNB
December 2004	Increase in reserve requirement ratio to 8 percent on all liabilities except interbank deposits
December 2004	Cash-in-vault accepted to fulfill reserve requirements reduced to 0 percent
February 2005	Introduction of credit ceilings. A bank is subject to marginal reserve requirements of 200 percent if (i) it expands credit by more than 6 percent per quarter on average, taking end-Q1 2005 as the base period; and (ii) the sum of its loans and the risk-weighted off-balance sheet items converted into assets, reduced by the amount of own funds, exceeds 60 percent of all attracted funds (excluding those attracted from financial institutions). In parallel, the required reserves may be held only in domestic currency and in euro from April 1, 2005 onward.
April 2005	Introduction of daily reporting of the amount of extended credit, and of the data required for the computation of marginal reserve requirements. The quarterly growth rate set by the BNB is calculated as an increase of the average value of credit at the end of each business day during a quarter. The allowed average growth rates are: 5 percent for a quarter; 12.5 percent for 6 months; 17.5 percent for 9 months and 23 percent for 12 months.
April 2005	Regulatory minimum capital adequacy ratios (CARs) must be satisfied while excluding current profits from the capital base. Introduction of monthly reporting on capital adequacy.
April 2005	Loans overdue by more than 30 days, 60 days, or 90 days, have to remain classified as “watch,” “substandard” and “non-performing,” respectively, for a minimum of 6 months. Loans that are classified as such need to be provisioned in line with BNB regulations for these categories.
November 2005	Quarterly limits on the penalty-free growth of credit are extended beyond March 31, 2006 to end-2006.
November 2005	The penalty rate for breaching credit ceilings is temporarily increased for banks exceeding the limit by 1-2 percent, from 200 to 300 percent, and to 400 percent for excesses of more than 2 percent, effective Q1 2006.
November 2005	The provisioning requirements for impaired household credits is raised: from 10 percent to 20 percent for loans overdue by 30-60 days (“watch” category), and from 50 percent to 75 percent for loans overdue by 60-90 percent (“substandard” category)
December 2005 and June 2006	Banks are required to disclose effective interest rates on their consumer loans; this disclosure is extended to all household loans up to the amount of BGN 40,000 following the adoption of the new consumer protection law in June 2006.
February 2006	The excess of local non-government, non-bank sector bonds issued to banks over and above their stock outstanding on December 31, 2005, are brought under the credit limits starting from Q1 2006.

(Table 4b continued)

February 2006	The risk weighting for mortgage loans used in the calculation of the capital adequacy ratio is effectively raised, by lowering the loan-to-value ratio from 70 percent to 50 percent, from April 1, 2006.
February 2006	A recommendation is issued to banks not to extend credit to households which do not have disposable income of at least BGN100 per household member per month after taxes and all debt service (including that for the requested loan) have been deducted from officially declared income. Non-adherence to this recommendation could result in additional supervisory measures.
May 2006	Banks are required to report information on all loans to the credit registry including loans that have been sold or moved off balance sheet.
September 2007	Reserve requirements are increased from 8 to 12 percent.
October 2008	Relaxation of reserve requirements. 50 percent of commercial banks' cash on hand are recognized as reserve assets. Commercial banks' access to the reserves they keep with the BNB is made easier as banks are allowed a breach of 1 percentage point during the holding period.
November 2008	Relaxation of reserve requirements: (i) effective December 1, 2008, the minimum required reserves on all attracted funds of the banks are decreased from 12 percent to 10 percent; (ii) effective January 1, 2009, the minimum required reserves on funds attracted by the banks from abroad is decreased from 10 percent to 5 percent; and (iii) effective January 1, 2009, no minimum required reserves is imposed on funds attracted from the state and local government budgets.
February 2009	The interest rate on the BNB's LOLR window is reduced from 150 percent of the interbank rate to 120 percent.
February 2009	The loan classification and provisioning rules are loosened by increasing the number of days within each classification category. Loan restructuring through maturity extensions up to two years does not lead to reclassification.
February 2010	The requirement to hold a general shareholders' assembly for the recognition of current profit or profit from the previous year as a capital base element is dropped.
February 2010	For banks using the standardized approach to credit risk, the risk-weight for retail exposures is reduced from 100 percent to 75 percent, and the risk-weight for mortgage exposures is reduced from 50 percent to 35 percent.

Source: Bulgarian National Bank.

Table 5. Bulgaria: Distribution of Impaired Loans
(In thousand leva)

	Watch Exposures			Nonperforming Exposures			Exposures Lost		
	Value Before Impairment as per IAS 39	Impairment as per IAS 39	Specific Provisions for Credit Risk	Value before Impairment as per IAS 39	Impairment as per IAS 39	Specific Provisions for Credit Risk	Value Before Impairment as per IAS 39	Impairment as per IAS 39	Specific Provisions for Credit Risk
2009 Q1	1,756,206	84,574	41,894	528,511	101,706	38,171	1,071,225	705,277	161,819
2009 Q4	3,622,411	129,346	92,632	1,021,055	173,688	94,411	2,162,514	1,147,284	469,206

Source: BNB.

E. Short-Term Risks

21. **The main two risks currently are the continued weakening of asset quality and a reversal of parent funding to their Bulgarian subsidiaries.** As discussed above, classified

loans have increased significantly during 2009 and it is likely that this negative momentum will continue for several more quarters looking forward. During the first three quarters of 2009, many banks seem to have preferred rolling over and marginally restructuring loans until the economic prospects of their customers have become clearer. More resolute loan restructuring seems to have taken place during Q4 2009 and this trend could continue in the beginning of 2010. With many subsidiaries operating with a loan-to-deposit ratio well above 100, the banking system depends on parent funding for the extension of credit. Although all foreign-owned institutions appear adequately capitalized and sufficiently liquid at the current juncture, persistent financial tensions in a parent bank's country of origin (which could result from market concerns about sovereign debt sustainability) could spill over to Bulgaria.

Credit Risk

22. **This section presents a very simple top-down stress test, based on an estimated macro-credit risk equation.** We first estimate how the quality of banks' loan portfolio is likely to evolve over the next two years based on the historical relationship between classified loans and the macroeconomic environment. We then ask whether banks' profitability would be strong enough to maintain capital above the required minimum while absorbing the losses associated with the new classified assets.

23. **The estimates of the macro-credit risk model are presented in Table 6.** The BNB publishes monthly data on "bad and restructured" loans for the three main categories of loans: corporate loans, consumer loans and mortgage loans. The NPL series is not available at a disaggregated level and we thus decided to use the data on "bad and restructured" loans, which are defined as the sum of restructured loans and loans in the worse two categories of the classification shown in Table 4b.[7] We thus estimate the relationship between the change in the "bad and restructured" loan ratio and the change in the output gap[8]. No other macroeconomic variable is found to be econometrically significant once the effect of the output gap is accounted for, except for loan growth during 1998-2002 which mechanically reduced the classified loan ratio of corporations as the share of legacy NPLs in that sector gradually shrank. An autoregressive term is included as it is strongly suggested by the data and three dummy variables are included to account for a change in the definition of the series in the third quarter of 2006 (with an effect spread over two quarters)[9] and the loosening of loan classification rules in the first quarter of 2009. The sample period is 1998Q3-2009Q4.

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[7] As shown in Table 4b, the worse two categories are "substandard" and "non-performing" until February 2009 and "nonperforming" and "loss" afterwards.

[8] The output gap series is constructed using the methodology used in Section I of this paper. The choice of lag for the output gap variable is determined based on the Akaike information criterion.

[9] Until Q2 2006, the data include only the overdue principal. Since then, the total amount of exposure (principal and interest) is included.

per IAS 39 (see Table 6), which represents a provisioning rate of 52 percent, in line with the current provisioning rate for the “loss” loan category as per IAS 39 (see Table 5). Then, assuming a transition rate of 50 percent to the “loss” category for “non-performing” exposures at end-Q4 2009 would generate an additional provisioning expense of 180 million leva, applying current IFRS provisioning rates. Finally, we compute from BNB published data the flow of IFRS provisions in 2009 for loans in the “standard” and “watch” categories to be 400 million leva. Without any detailed information on the reason why such an amount was provisioned in 2009, we arbitrarily assume that the flow of impairment for these two categories in 2010 will be half of the 2009 amount, or 200 million leva. Total impairment expenses in 2010 would thus amount to 1.25 billion leva, or about 20 percent more than in 2009. The pre-tax pre-provisions profitability of the 24 banks has remained unchanged between 2008 and 2009 slightly below 1.9 billion leva and we expect this level of gross profitability to be maintained in the baseline. This means that banks should be able to generate enough profits to cover impairment charges in the aggregate during 2010. Impairment charges in 2011 are expected to be quite manageable as the classified loan ratio is not expected to increase significantly then.

Table 7. Loan Loss Projections from new NPLs in 2010 under the baseline scenario
(In bn leva)

Type of loan	Amount	NPL increase	LGD (in percent)	Loss Estimate
Corporate	30.7	1.01	55	0.56
Mortgages	8.6	0.395	30	0.12
Consumer	9.5	0.279	70	0.2
Total	48.8	1.68		0.87

28. **However this conclusion is subject to a number of qualifications.** First, it is obtained under staff’s baseline scenario. Should there be delays in output recovery, or should there be reversal of parent funding to their Bulgarian subsidiaries, credit losses would turn out higher and earning generation would turn out weaker than forecast under the baseline. Under a downside scenario where real GDP growth in 2010 would be -2 percent (the lowest current private sector public forecast) instead of 0.2 percent as projected by IMF staff, the NPL ratio at end-2010 would be one percentage point higher. Assuming LGDs and provisioning rates for the “loss” category 5 percentage points higher than in the baseline, total impairment expenses in 2010 would then reach 1.7 billion leva, which would then bring pre-tax profit to about 200 million leva. Second, given the drop in the value of real estate prices and the tightness of the market for foreclosed assets, banks may still be relying on too optimistic assessments of collateral and thus may not have provisioned to the extent necessary.

29. **The net impact on the end-2010 aggregate regulatory capital adequacy ratio should be close to zero or slightly positive.** As explained above in Box 1, the BNB requires

banks to set aside "specific" provisions in addition to IFRS provisions, which provides the banking sector with an additional buffer. These are not treated as an accounting expense in the profit and loss statement but are taken into account in the computation of regulatory capital. The flow of these "specific" provisions amounted to 439 million leva in 2009. A flow of 1.68 billion leva of new "loss" loans and the transition of 500 million leva of loans from "non-performing" to "loss" during 2010 would likely generate the need for an additional 430 million leva of specific provisions, assuming the same provisioning ratio as at end-2009 shown in Table 5. As this is a little smaller than our baseline forecast pre-tax IFRS profit, we would expect aggregate regulatory capital to remain about flat or to increase slightly at a high and comfortable level.[11]

30. **Still, the situation of some individual banks may be less comfortable.** Profitability in 2009 was negative overall for two medium-sized banks (including one branch) and on a downward quarter-on-quarter trend for several others. Moreover, the rate of provisioning was close to zero or even negative in several medium-sized banks and one large bank, which may suggest under-provisioning. In the absence of publicly available data on individual banks' capital adequacy ratio, one can nevertheless speculate that credit losses would require recapitalization in a small number of institutions under the current regulatory requirements.

31. **The Bulgarian authorities still have room to relax their conservative regulatory standards on bank capital in case of need.** The rules for the calculation of additional regulatory provisions discussed in Box 1 were amended in February 2009 and could be loosened again. Also, the minimum regulatory capital is set at 12 percent in Bulgaria, compared to 8 percent at the EU level. Therefore the BNB still has several instruments to implement further a counter-cyclical macro-prudential policy within the confines of EU regulation.

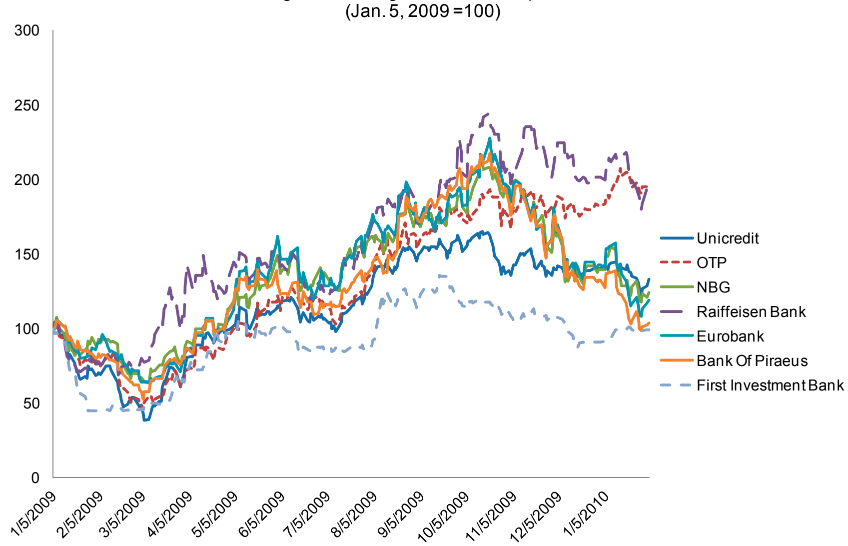
Funding and Liquidity Risk

32. **Another source of risk is a stagnation of reversal of parent bank funding to their Bulgarian subsidiaries.** As discussed above, the banking system crucially depends on parent funding for the extension of credit. A particular source of concern in this respect are Greek banks who have recently come under market pressure (Figure 20) as all major Greek banks were downgraded by rating agencies in December 2009. The action was prompted by a weakening of the banks' stand-alone financial strength, combined with the rating agencies'

[11] Of course, this is excluding the one-time positive impact of the reduction in risk-weights on the CAR described in paragraph 20 and the inclusion of 2009 profits into the capital base, both of which are expected to take effect at end-Q1 2010. The combined effect of these measures should be to raise the aggregate CAR by about 2 percentage points.

reassessment of Greece's ability to support its banking system, following the lowering of the national government debt rating amidst concern over Greek public debt sustainability. Moreover, Greek banks have relied a lot on the ECB to obtain liquidity and the withdrawal of the ECB's exceptional liquidity supply operations by the end of 2010, including the tightening of collateral requirements, could signify that Greek banks would have to scale back their funding to their SEE subsidiaries over the course of 2010 and 2011.

Figure 20. Bulgaria: Bank stock prices
(Jan. 5, 2009 =100)



Source: Bloomberg

33. **Should severe liquidity tensions emerge in a small or medium-size institution, the Bulgarian authorities' emergency liquidity assistance framework should be able to provide the necessary support.** The BNB is restricted by law to provide LOLR assistance only to solvent banks experiencing an acute need of liquidity that cannot be satisfied from other sources, and for a maximum of three months, in cases of a liquidity risk that may jeopardize the stability of the banking system (LBNB Article 33 and BNB Ordinance No. 6). Eligible collateral is limited to monetary gold, some foreign currencies (euro, US dollar and Swiss franc) and liquid securities issued or guaranteed by the Bulgarian government or by some foreign governments and central banks. In addition, the government could also act as a lender of last resort by drawing on the fiscal reserve (i.e. the large central government deposits at the BNB). The Treasury mainly uses the BNB as its bank, but it can also place deposits with commercial banks provided they have eligible collateral, which comprises cash, domestic government securities and some foreign government securities.

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