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Is Bulgaria's Currency Board Sustainable?

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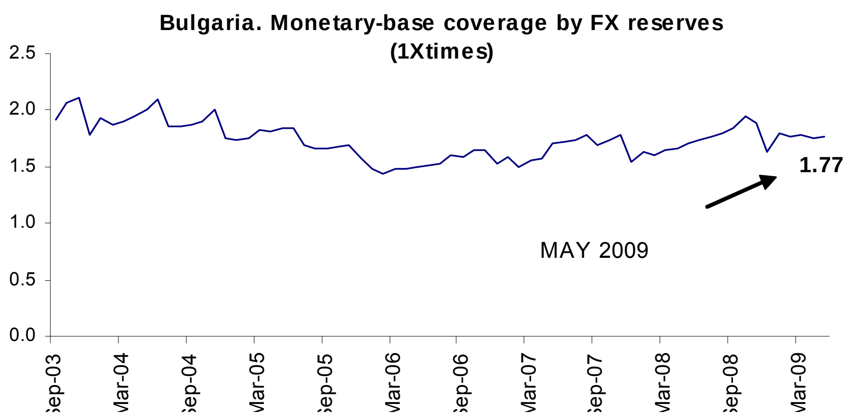
- **Bulgaria's currency board arrangement (CBA) enjoys much greater sustainability than the currency pegs in the Baltic states as it is supported by a strong fiscal position and a large pool of FX reserves, while the Bulgarian economy is in a better cyclical trajectory than the economies of the Baltic States**

- **In the absence of a new severe negative international shock and/or a serious domestic policy mistake, e.g. undue fiscal relaxation, the market by itself is unlikely to force – without the Bulgarian government's will - a devaluation of the lev and a CBA break up**

- **A discretionary policy of lev devaluation together with ERM - II entry at a new central parity is a scenario with positive probability, but with enormous macroeconomic and prudential risks, in view of the large outstanding amount of private-sector FX loans and its potential implications for domestic growth and the medium-term inflation outlook.**

- **Maintaining the currency board for as long as it takes to enter the euro area is a high probability scenario and politically easier to implement as it avoids the short-run costs of devaluation and puts less of a burden on Bulgarian policy makers to change a tested policy prescription that stabilised the macro economy during the last decade, but nevertheless postpones the necessary correction of the real exchange rate and, later on , risks trapping Bulgaria in a non-competitive position within the euro area**

- **Whichever policy option regarding the currency board and the exchange rate is adopted by the authorities, the date of Bulgaria's entrance into the euro area may be more distant than recent official statements imply.**



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Is Bulgaria's Currency Board Sustainable?

By Gikas A. Hardouvelis & Platon Monokrousos (1)

1. Introduction and overview

The present report provides an analysis on the sustainability of Bulgaria's currency board arrangement (CBA), in view of the sharp domestic economic downturn and increased investor worries over an eventual break up of the Latvian FX peg. A possible devaluation of the lat exchange rate vs. the euro is likely to raise the risk of competitive devaluations of other FX pegs in the CEE region, including the currency boards of Estonia, Lithuania and, to a lesser extent, the CBA of Bulgaria. A lat devaluation would tend to depress financial asset markets in Central Eastern Europe, generating conditions of panic for all nearby emerging economies.[2]

Our analysis indicates that Bulgaria's currency board is sustainable and would be abandoned only if policy makers believe that this is the best way to proceed for eventual euro area entry. Despite the global financial crisis, heightened regional uncertainty and lingering devaluation worries in Baltic States, Bulgaria's CBA continues to be supported by a number of factors, which differentiate it from other FX pegs in Central Eastern Europe. First, Bulgaria's CBA enjoys strong public and constitutional support, while its technical requirements continue to be comfortably met. Second, Bulgaria's CBA is also supported by both a large pool of foreign exchange reserves and a strong fiscal position, while the current economic recession is much milder than in the Baltic States. Finally, Bulgaria's banking sector is well-capitalized and has limited exposure to single-lender contagion risks, while its central bank has the flexibility to undertake ''strictly limited'' lender-of-last resort (LLR) operations, which can diffuse events that cause domestic financial stress.

Of course, the possibility of a break up of the present currency board arrangement and de facto devaluation of the lev ahead of euro adoption can not be totally ruled out. This is especially true, in view of the overvaluation of Bulgaria's exchange rate and the country's apparent commitment to enter the euro area as soon as conditions allow. Since 2002, the lev real exchange rate has appreciated by more than 30%[3]. Arguably, it might not be prudent for Bulgaria to enter the euro area with such an overvalued exchange rate, as overvaluation hurts competitiveness and is extremely difficult to reverse once the country becomes a euro area member. A decade of

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[2] The devaluation contagion is likely to work through the perceptions of risk and market expectations of calamity rather than the more traditional trade channel. Latvia accounts for only a tiny fraction of total trade in the CEE region and beyond.

[3] A CPI-based Real Effective Rate index constructed by BNB shows cumulative gains in excess of 70% since the establishment of the CBA in mid-2007.

experience with the existence of the euro area reveals that overvaluations in individual euro area countries, especially in the European South, tend to persist and result in large current account deficits.

In our view, a devaluation of the lev ahead of Bulgaria's euro area entry is possible but at the moment does not carry a very high probability. That is because the costs of devaluation would likely overwhelm any potential benefits. A lev devaluation would deal a severe blow to the balance sheets of domestic businesses and households, given their high levels of external indebtedness. It would thus exacerbate the current financial stress and lead to an even bigger and longer recession. Moreover, later on, if economic growth were to resume, the lev devaluation could likely put upward pressure on domestic inflation, further delaying the fulfilment of the Maastricht inflation criterion and, consequently, the country's efforts to join the euro area.[4]

In the period leading to Bulgaria's ERM - II entry, domestic policy makers are likely to try to keep the status quo, namely maintain the CBA, while taking the necessary policy measures to contain the domestic economic downturn and improve competitiveness. Such a policy path would require reinforced fiscal prudence by the new government and, possibly, some form of financial assistance from the IMF and/or other international organizations

The rest of the report is organized as follows: Section 2 analyzes the economic forces, which have led to the current stress on the Latvian lat. Section 3 focuses on the Bulgarian currency board, its mechanics and its economic viability. It compares the economic circumstances in Bulgaria with those in the Baltic States and clarifies their differences. It also analyzes the risks to the Bulgarian currency board. Section 4 presents an in depth analysis of current economic developments and financial vulnerabilities in Bulgaria, which also characterize the constraints faced by the authorities in their decision to defend or not the currency board. Section 5 provides an overview of the costs and benefits of the various policy options regarding the exchange rate regime and euro area entry. Section 6 concludes. An appendix explores the economic implications of Bulgaria's recent elections.

2. Baltic States: Lat devaluation risks and implications for the region

Lat devaluation worries have been on the rise in recent months amid lingering dislocations in international credit markets and deepening recessionary forces domestically. Aggressive intervention by Latvia's central bank to stave off renewed devaluation fears, triggered by a failed domestic T-bills auction in May 2009, saw the local foreign exchange and money markets freezing up entirely and interbank rates shooting up temporarily to over 100 percent.

Comments by international analysts that a collapse of the present exchange rate regime may ultimately prove unavoidable have added fuel to the fire, with former Swedish Central Bank governor saying in early June that the country would need to break its peg to the euro. Latvia's central bank has spent more than €900mn so far this year to support the Lat, causing a further drawdown in its foreign exchange reserves, which stood at ca at €2.9bn at

[4] Also, once the fixed exchange rate is broken, there is no guarantee that market expectations would be easily anchored by the new central parity within ERM–II or a new currency board with the new central parity.

the end of April. Note that the country joined the European Exchange Rate Mechanism (ERM-2) in early 2005 and, since then, the Bank of Latvia Central Bank has been targeting a +/-1% band around the central parity rate of 0.702804 lats/euro.

2.1 Painful adjustment of domestic imbalances continues

Rampant credit expansion, extended mainly via the local subsidiaries of three Swedish banks operating in the country, fuelled strong domestic growth and a real-estate bubble in recent years. Overheated domestic demand and rapid wage growth have conspired with the fixed-exchange rate regime to inflict massive competitiveness losses, leading to a significant widening in the current account deficit (13.6% of GDP in 2008) and a sharp rise in private-sector external debt (currently well in excess of 100% of GDP).

Tightening lending standards and growing worries over the sustainability of the currency peg have initiated a painful adjustment of domestic macro imbalances since early last year, which reached a climax in the aftermath of the Bear Sterns collapse. Real GDP declined by 4.6% in 2008 and a further 18% contraction is expected this year (latest IMF forecast), following annual growth rates in excess of 10% in 2005-2007. Domestic housing prices have already retreated by more than 60% from their 2007 peak, while the deepening of the credit crunch and the sharp decline in domestic demand compressed import growth, leading to a small surplus in the current account balance in Q1 2009.

2.2. International organizations come to the rescue...

Last December, the Europe Union, the IMF, the World Bank and the Nordic countries agreed on a €7.5bn support package for Latvia. The EU share of this aid package is €3.1bn, while the IMF provided a 27-month Stand-By Arrangement, for an amount equivalent to SDR 1.5bn (about €1.7bn). Earlier this year, the country has received the first tranche of its aid program, worth around €1.2bn (€1.0bn from the EU and ca €200 form the IMF), but the second disbursement of funds has been delayed because of the collapse of the previous government, and the formation in March of a new five-party coalition government led by Valdis Dombrovskis.

As things stand at this point, Latvia remains the most likely candidate among the three Baltic States for a move away from its present fixed exchange-rate regime. Yet, the risk of an imminent devaluation appears to have been avoided for the time being, following steep spending cuts to the 2009 and 2010 budgets, endorsed recently by the Latvian parliament. The cuts, worth 500mn lats, or around 4% of GDP per annual, have allowed the disbursement of a further 1.2bn loan from the EU and are also expected to open the way for country to receive the next IMF tranche of 195mn. Latvia has already agreed with the IMF to keep its budget deficit within 10%-of-GDP this year and reduce it to 8.5%-of-GDP next year

Sure enough, international authorities and the government have continued to emphasize their support to the currency peg. This support is on the basis that a forced devaluation would deal a destabilizing blow to households and businesses´ balance sheets, with negative repercussion for the domestic economy and banking system, not to mention contagion risks for the broader region. On the other hand, proponents of a peg break hold that a more competitive currency would help restore competitiveness and support a return to a more sustainable growth trajectory once external demand returns.

2.3 ...but sustainability of currency peg remains an open question

So far, local authorities have chosen to accept the pain of maintaining the currency peg i.e., restoring competitiveness via a sharp contraction in domestic demand as well as wage and price adjustments, rather than proceeding with a de-facto Lat devaluation that would: (i) need to be substantial (no less than 15% and most likely close to 30% against the EUR, according to Latvia΄s Prime Minister) and (ii) risk inflicting considerable pain on domestic household and business that have borrowed heavily in foreign currency in recent years (some 90% of domestic loans are denominated in foreign currency). However, a further significant decline in exchange rate reserves and eroding confidence towards the peg could lead to a further contraction of the domestic monetary base or even, under an extreme-case scenario, a significant Eurization of the domestic economy, with severe implications for domestic household and corporate balance sheets.

Currently, it appears that a sensible exit strategy for local authorities would be to utilize financial assistance from international organizations and carry on with the peg, hoping for timely euro zone entry (officially targeted in 2012). Yet, the latter appears increasingly unlikely, given ballooning fiscal deficits and the persistent inflation differential vis-ΰ-vis the euro area. With regard to the Latvia's fiscal outlook, note that in its spring 2009 forecasts the EC projected that, under unchanged policies, the general government deficit would likely rise to 11% of GDP in 2009 and to 13% of GDP in 2010, with the debt ratio reaching 50% of GDP in 2010, from 19.5% of GDP last year.

2.4 Contagion risks

A de-facto devaluation of the Latvian currency would certainty raise the risk of, though not necessarily lead to competitive devaluations in other CEE pegs including the currency boards of Estonia, Lithuania and, to a lesser extent, that of Bulgaria. (Section 3 of this report provides an extended analysis on the sustainability and special characteristics of Bulgaria's CBA). It would also tend to depress financial asset markets in CEE, especially those comprising more liquid proxies for the broader region. A lat devaluation would also risk shake the Swedish banking system, though the latter's exposure to the Baltic States appears to be relatively manageable. According to a recent Riksbank report, some 8.5% of all Swedish banks' lending is to the three Baltic States, with Latvia accounting for something less that 1/3rd of that total. On a less negative note, contagion to the rest of CEE countries via the trade channel is likely to be limited in case of lat devaluation, as Latvia accounts only for a tiny fraction of total trade in the region. Furthermore, increased availability of assistance funds of international organizations such as the IMF, the WB and the EU currently offers a valuable pillar of support to investor sentiment towards the region and, in general, emerging economies facing external financing difficulties.

3. Currency board arrangements and sustainability issues – The case of Bulgaria

A pure or ''orthodox'' currency board arrangement (CBA) is a rule-based monetary system that provides full coverage of central bank monetary liabilities (notes & coins in circulation and deposit liabilities) by a convertible foreign reserve currency. Hanke and Schuler (1991) provide a detailed description of an orthodox CBA). Under an orthodox CBA, the country's money supply is strictly limited along two dimensions: (a) by legally guaranteeing a fixed exchange rate between the national currency and the reserve currency and (b) by restricting central bank monetary liabilities to be exclusively issued against foreign assets.

Attribute (b) is of particular importance as it effectively abolishes a potential source of political interference in the conduct of monetary policy. That is, direct or indirect monetization of fiscal deficits as well as support to insolvent banks by the central bank. The latter case can theoretically arise in a classical monetary system, where the central bank issues money (i.e., creates monetary liabilities) not only against foreign assets but also against domestic assets that may involve the extension of loans to the government and lender-of-last-resort (LLR) operations.

In a nutshell, a CBA is a fixed exchange-rate regime that replaces discretion with a set of simple, mechanistic rules in the conduct of monetary policy. The latter aims, at least in theory, to increase policy transparency and, more generally, induce radical changes in the behaviour of economic agents e.g., by enhancing fiscal accountability and contributing towards the elimination of such agency problems as moral hazard created by lending to loss-making public enterprises.

3.1 Money supply mechanism under a CBA

To understand some of the more important advantages and limitations of a typical CBA, it is important to formally consider how the money supply mechanism works under such a regime. Let MB denote the monetary base i.e., the central bank's monetary liabilities, which consist of currency in circulation, C, and commercial bank deposits with the currency board, R. Then, under the CBA arrangement,

$$MB = C + R = FX \qquad (1)$$

where FX is reserve currency, or more generally, foreign exchange reserves as stipulated in the relevant laws governing the structure and coverage characteristics of the currency board arrangement. Now, let M depict the money supply. Then,

$$M = C + D \equiv m * MB \qquad (2)$$

Again C stands for notes and coins in circulation, while D symbolizes deposits of the public with commercial banks and m is defined to be the money multiplier, where $m \equiv (1+c) / (c+r)$, where c is the cash-to-deposits ratio and r is the reserves-to-deposits ratio.

From (1) & (2),

$$M = m * FX \qquad (3)$$

Equation (3) implies that, all other things being equal, changes in FX reserves cause proportional changes in the money supply. This supports the widely-held notion that the CBA is effectively a procyclical mechanism under which, domestic money creation – assuming the money multiplier m is fixed - is solely determined by the evolution of the balance-of-payments i.e., capital & current account inflows and outflows, which influence the amount of foreign exchange reserves in the country. The policy adjustment to external shocks is now automatic. This leaves other financial and real-sector variables such as market-determined interest rates, output and productivity levels to provide the main absorbers of such shocks (Avramov 1(999)).

3.2 Existing CBAs vs. the theoretic "pure" framework

The above discussion highlights some of the key motivations and limitations from adopting a rule-based policy regime such as a CBA. Under a CBA, there is higher credibility and less political interference, but at the cost of less discretion and flexibility in the conduct of monetary policy.

There is an extended discussion in the literature about the advantages and disadvantages of currency boards. In general, CBAs are thought to be better suited for small open economies featuring weak financial sectors and limited experience in conducting monetary policy. For instance, in Bulgaria, the currency board arrangement was introduced in June 1997, following a short hyperinflation episode, when earlier stabilization efforts failed and key institutions lost their credibility (Dobrev, D., 1999). Several economies have introduced the currency board system, among them Hong Kong SAR, Argentina, Estonia, Lithuania, Bulgaria and Bosnia and Herzegovina. Yet, in none of these countries does the CBA operate in its "pure", theoretical form.

Comilleri (2004) develops an institutional framework for quantifying the deviation of existing CBAs from a pure theoretical one. As deviating factors, he points out the level of quality of reserve coverage, claims on reserves and the existence and content of escape clauses. In a scale of 0-1 (and for the six CBAs under review), Bosnia/Herzegovina gets the highest score (0.93), with respect to the examined criteria of statutory pre-commitment, followed by Estonia (0.86) and Bulgaria (0.62). Yet, as it is stressed in that particular paper, the exact numerical value of the constructed index is of limited significance, other than in providing a quantitative measure of deviation from the theoretical benchmark. The author concludes that "...the stronger the need to impart credibility to exchange rate policy, the greater the likelihood of opting for a strict CBA framework."

3.3 Merits and drawbacks

Avramov (1999) and Comilleri (2004), among others, provide a useful summary of the merits and drawbacks associated with CBAs. Some of the purported advantages include:

i. A CBA can facilitate stabilization programs in economies lacking credible institutions and when policy discretion is ineffective for monetary stabilization.
ii. There is a certain selection bias involved in choosing a CBA, since a government committed to comply with the strict requirements of the currency board is more likely to implement the necessary stabilization efforts.
iii. CBAs radically resolve the issue of central bank independence and contribute towards fiscal consolidation by placing a hard budget constraint on the government. In effect, the CBA cannot monetize public debt or extend liquidity to banks, since either of these policies would amount to creating additional claims on foreign exchange reserves.

iv. A CBA can promote inflation convergence and provide a valuable anchor for inflation expectations. This is facilitated by what Wagner (1998) describes as a disciplinary effect. Specifically, if domestic inflation runs higher than in major trading-partner economies, real exchange rate appreciation results. This appreciation tends to, ceteris paribus, induce a trend-deterioration in the trade balance and, ultimately, a drawdown in exchange rate reserves. The latter, in turn, causes a decline in money supply, with a dumping impact on domestic inflation.

With regard to the potential costs of a CBA, one can readily note:

a) the loss of the exchange rate instrument for facilitating balance-of-payments adjustments to external shocks, and
b) the unilateral abolition of discretion in exercising monetary policy.

Yet, as it is argued in Schwartz (1992), Williamson (1995) and others, the influence of those factors depends on country-specific characteristics, ranging from an economy's degree of openness to the elasticity of trade flows to the exchange rate.

All in all, there appears to be significant evidence that CBAs can contribute towards macro and financial stabilization, especially in economies featuring weak institutions and lack of credibility in exercising policy discretion. The latter is not a panacea, however, as the sustainability of a CBA ultimately depends on public perceptions with regard to authorities´ commitment to price stability and, more generally, policies that support, rather than undermine, the currency board system. In that respect, and given that a CBA lacks the exchange rate policy tool, structural policies aiming to enhance the productive capacity and competitiveness of the domestic economy are key in strengthening resilience to external demand shocks.

3.4 The structure of Bulgaria's CBA

The structure of Bulgaria's currency board is comprised of the following thee departments:

(A) the Issue Department,
(B) the Banking Department, and
(C) the Banking Supervision Department.

The Issue Department issues domestic currency against foreign assets and its balance sheet contains

(i) On the assets side: FX reserves, and
(ii) On the liabilities side: Notes and coins in circulation; Commercial banks reserves; The government's fiscal deposit; The Banking Department deposit with the Issue Department. The latter constitutes the excess of the lev equivalent of foreign exchange reserves over the total amount of the BNB monetary liabilities.

The Banking Department's main role is to perform a ''strictly limited'' lender-of-last-result (LLR) function in case severe liquidity problems in the domestic banking system. Its balance sheet includes:

(i) On the assets side: the Banking department deposit with the Issue Department; Any collateralized discount loans extended to commercial banks under the Banking Department's LLR function; Receivables from the government generated by its borrowing from the IMF; Certain other items inherited from the balance sheet of the BNB before the establishment of the CBA.
(ii) On the liabilities side: Borrowing from the IMF (on behalf of the government); Certain other items inherited from the balance sheet of the BNB before the establishment of the CBA.

Note furthermore that:

a. in order to help safeguard the credibility of currency board arrangement, the Banking Department's deposit with the Issue department is not allowed to fall below a certain limit, and
b. the size of that deposit in lev terms may vary across time, among other reasons due to accrued interest, realized capital gains and losses and changes in exchange rates.

Finally, the Banking Supervision Department represents the watchdog of the domestic banking system.

3.5 Peculiarities, strengths and weaknesses

The currency board arrangement in Bulgaria exhibits certain intrinsic peculiarities that provide more flexibility relative to an orthodox system. Yet, this appears to come at the cost of necessitating a greater degree of coordination and cohesiveness within the overall framework of domestic macroeconomic policies. Dobrev. (1999) provides a comprehensive analysis of the peculiarities and intrinsic characteristics of the currency board arrangement in Bulgaria. The characteristics of Bulgaria's regime that are common with those of an orthodox CBA include:

a) full foreign exchange coverage for its notes, coins and deposit liabilities
b) a fixed exchange rate against the reserve currency (i.e., the euro at a central parity of 1.95583 BGN/EUR) and
c) no availability of government spending financing.

On the other hand, some of the key differences of Bulgaria's CBA relative to a pure currency board regime include:

i) The CBA regulates domestic commercial banks
ii) The CBA may assume a ''strictly limited'' lender-of-last resort function in the event of severe liquidity problems in the domestic banking system (as stipulated in the Article 20, Section 2 of the Law on the BNB). Note that a pure currency board is restricted from performing any of the two functions described above.
iii) Besides supplying only notes and coins - as would be the case with a ''pure'' CBA - the currency board in Bulgaria also supplies commercial bank reserves and government deposits. Regulation of domestic banks by the CBA and the lender-of-last-resort (LLR) function involve a historic (and cultural) component as they relate to the magnitude and characteristics of the banking crises that preceded the adoption of the Bulgaria's currency board. Bulgarian CBA´s supply of commercial bank reserves and government deposits is also a feature that is atypical of a pure currency board. Especially, with regard to the presence of the government in the liability side of the CBA´s Issue Department, the concern is that this leaves the door open for the Ministry of Finance to, intentionally or unintentionally, conduct monetary policy operations. Practically, this can be done by controlling domestic inflows and outflows from the government's deposit with the CBA.

To help clarify the latter point, note that in the case of Bulgaria's policy regime equation (1) becomes:

$$MB \equiv C + R = FX - G - B \qquad (1a)$$

where variables C and R are as defined in (1), G is the government deposit with the currency board and B is the Banking Department deposit with the Issue Department.

As a result of the above, equation (3) becomes:

$$M = m * (FX - G - B) \quad (3a)$$

The above equation shows that a reverse relationship exists between changes in G and the money supply. In theory, the government may, ceteris paribus, cause an increase (decrease) in money supply by reducing (increasing) its fiscal reserve with the CBA. Such changes could arise from such budgetary operations as salaries and pensions payments as well as subsidies to the state budget. The latter point is of particular importance in the present economic trajectory in Bulgaria, as the combination of contracting domestic demand and hefty budgetary spending increases ahead of the July 5 elections have fuelled worries over the sustainability of the CBA (see analysis below). Years of strong budgetary surpluses have accumulated a sizeable fiscal reserve account (´12.5% of GDP in May 2009), which effectively helped to sterilize foreign capital inflows by restricting them from directly translating into money base growth. Yet, such budgetary surpluses were to a great extent the result of buoyant domestic demand and thus, strong tax revenue growth.

Therefore, the risk going forward is that a trend-deterioration in the fiscal balance could lead to a drawdown in the fiscal reserve account, which provides an important pillar of support to the currency board. Imagine, for instance, what could happen if there was a sizeable reduction in the government's fiscal deposit with the CBA as a result of e.g., unwarranted fiscal expansion in a period of contracting domestic demand. Such a drawdown in the fiscal reserve account could, ceteris paribus, undermine the government's ability to service its debt to international financial institutions and also cause an undue rise in monetary base growth, which would tend to push domestic interest rates lower. The latter, in turn, would increase demand for foreign currency against the lev, with a negative impact on confidence towards the CBA.

3.6 Technical requirements of Bulgaria's CAB continue to be comfortably met

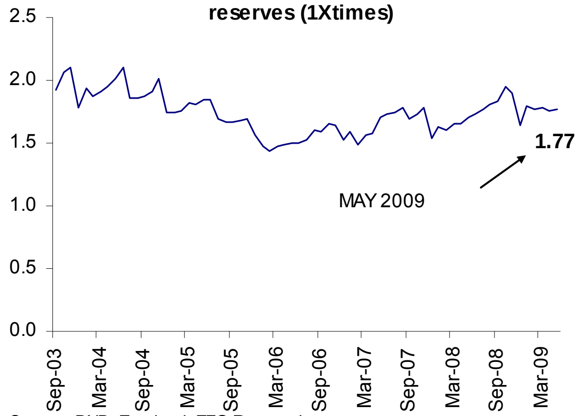
Graph 1i below shows the inter-temporal evolution of Bulgaria's foreign exchange cover of the monetary base (currency in circulation and commercial bank reserves with the currency board). The coverage was around 1.77 times in May 2009, i.e., higher from the same month a year earlier (1.70) and not much lower than in the month preceding the Lehman Brothers collapse (1.80 in Aug. 08). Exchange rate reserves stood at €10.85bn in May 09, some 10% lower vs. a year earlier. But, they were still adequate to more-than-cover the overall money base, which contracted by ca 13.2% from its level in May 08.

Another issue that relates to the sustainability of a currency board, especially in periods of increased demand for foreign currency by domestic economic agents, is the degree of foreign exchange cover of broader monetary aggregates, including deposits that may be converted into cash upon request. Graph 1.ii provides such information. In this axis, note that exchange rate reserves in May 2009 amounted to around 81.3% of the lev-denominated portion of M2 (M1 + quasi-money). This was lower than the corresponding coverage ratio in both August and May 2008 (97.2% and 92%, respectively) but still sufficient to meet the greater part of the hypothetical demand for foreign currency that could arise under a scenario in which all economic agents decided, at once, to convert their lev coins, bills and deposits into hard currency.

Furthermore, foreign exchange reserves and the fiscal reserve account amounted to around 43% of GDP in May 2009, providing a strong buffer of support to the CBA.

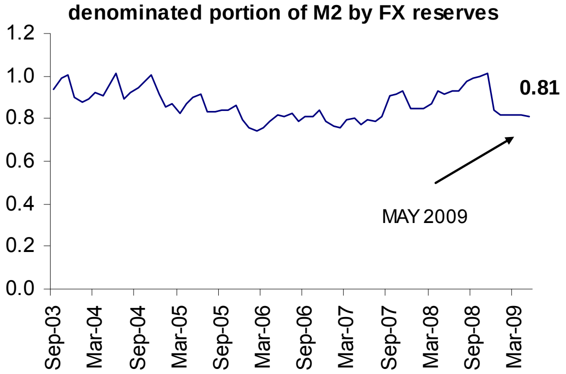
The points made above indicate that, at least from a technical standpoint, Bulgaria's exchange rate regime is relatively safe, unless an external event - e.g., forced currency devaluations in Baltic States coupled with a new sharp deterioration in global economic and market sentiment - propagate a significant drawdown in the country's FX reserves or a massive move by local agents away from lev-denominated assets.

Graph 1i. Monetary-base coverage by FX reserves (1Xtimes)



Source: BNB, Eurobank EFG Research

Graph 1ii. Coverage of local ccy-denominated portion of M2 by FX reserves



Source: BNB, Eurobank EFG Research

Balance Sheet of the Issue Department (30.06.2009) (Million BGN)

ASSETS		LIABILITIES		Coverage ratio of BNB liabilities by FX reserves excl. monetary gold & other monetary gold instruments
Cash and foreign currency denominated deposits	2,833	Currency in circulation & Liabilities to banks	12,236	1.77
Monetary gold and other monetary gold instruments	1,677	Liabilities to Government and to government budget institutions	7,440	2.9
Investments in securities	18,756	Liabilities to other depositors	474	45.5
		Banking Department deposit	3,115	6.9
TOTAL ASSETS	23,265	TOTAL LIABILITIES	23,265	

Source: BNB

3.7 Bulgaria's CBA still strong, but sustainability risks on the rise

In the absence of a further significant deterioration in the global economic environment and/or a serious domestic policy mistake, the Bulgarian currency board arrangement (CBA) appears sustainable and, in fact, stronger that the currency pegs in the Baltic States. Some of the reasons supporting this view include:

i. The technical requirements of the Bulgarian CBA continue to be comfortably met (see earlier analysis)

ii. Bulgaria's CBA enjoys strong public and constitutional support. The currency board is credited with the successful macro stabilization effort that followed the effective collapse of domestic institutions and the late 1996/early 1997 hyperinflation episode. From, a legal perspective, the law specifies that only an Act of Congress or National Assembly could change the regime.

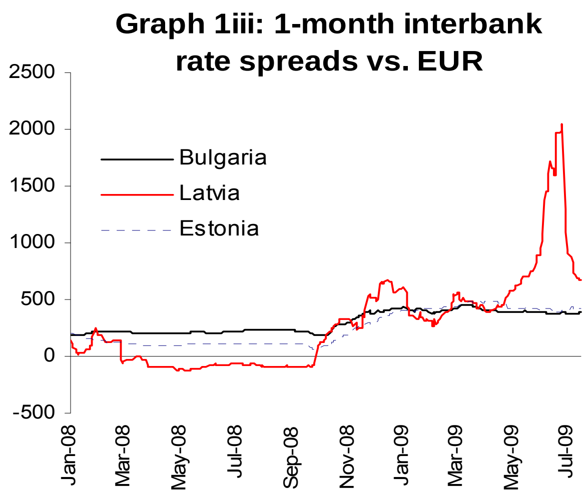
iii. The economic downturn in Bulgaria is much milder than in the Baltic States. Indeed, the IMF now forecasts real GDP of -3.5% for Bulgaria this year, while expects economic contraction of more than 10% in Baltic States (-18% in Latvia).

iv. Bulgaria has large foreign exchange reserves and enjoys a strong fiscal position, which, via the fiscal reserve account, provides a strong pillar of support to the currency board.

v. Additionally, the currency board may provide an important shield if problems in the financial sector were to emerge. Note that in accordance with Article 33 of the Law on the Bulgarian National Bank, the central bank may undertake a ''strictly limited'' lender-of-last resort function upon emergence of a liquidity risk that may affect the stability of the banking system. Specifically, the BNB may extend to a solvent bank lev-denominated credits with maturity no longer than three months, provided they are fully collateralized by gold, foreign currency or other high-liquid assets. Such credits may be extended solely up to the amount of the excess of the lev equivalent of the gross international reserves over the total amount of monetary liabilities of the BNB. As we have noted already, a pure currency board arrangement is not allowed to perform lender-of-last-resort functions.

vi. The banking sector in Bulgaria is well-capitalized and foreign banks of widespread geographic origin own more than 80% of the total banking system, limiting single-lender contagion risks. Strong FDI, a positive macroeconomic trajectory and rapid credit expansion in recent years allowed domestic banks to enter the present recession with high capital adequacy and still positive profitability (industry-wide capital adequacy ratio of 14.9% in December 2008 vs. a mandatory ratio of 12.0% and the 8.0% EU minimum requirement). Faced with deteriorating conditions in own markets, rising funding gaps, capitalization strains and worries over the outlook of the CEE region, parent companies cut back on funding to their subsidiaries, with the latter now having to finance new loans form local deposits. As a result, loan growth is expected to drop sharply this year (it was broadly flat in the September 08 – April 09 period compared to double-digit levels a year earlier), NPLs are likely to rise further and bank profitability to decline. Yet, banks are considered to be well-positioned for the economic downturn and have strong capital and liquidity buffers. Furthermore, bank supervision is strong with the central bank regularly conduction stress tests on domestic banks, in line with the IMF & World Bank directives.

vii. Bulgaria gets much higher scores that the three Baltic States in a range of key external sustainability indicators (see table below). Graph 1iii also shows the 1-month interest rate differentials of Bulgaria, Latvia, Estonia and Lithuania vis-a-vis their respective reserve currencies. Jeanne and Masson (2000) argue that the interest rate differential constitutes a direct estimate of devaluation probability. In that respect, graph 1iii clearly implies that the probability of such an event is lower in Bulgaria than in the three Baltic States.



Source: Bloomberg, Eurobank EFG Research

Cross-country comparisson Baltic States vs. Bulgaria

Macroeconomic indicators		Bulgaria	Latvia	Estonia	Lithuania
Real GDP (%, YoY)	2008	6.0	-4.6	-3.6	3.0
	2009f	-3.0	-18.0	-13.0	-18.0
Budget balance (% GDP)	2008	1.5	-4.0	-3.0	-3.2
	2009f	-0.5	-11.0	-4.0	-5.8
C/A balance (% GDP)	2008	-25.3	-13.6	-9.1	-12.2
	2009f	-12.0	-1.5	-1.1	-1.9
HICP (%, YoY p.a.)	2008	12.0	15.3	10.6	11.1
	2009f	3.9	3.2	0.4	4.0
Gross public debt (% GDP)	2008	14.1	19.5	4.8	15.6
	2009f	16.0	35.0	7.5	23.0

Sources: IMF, EC, Official statistics & Eurobank EFG Research

Sustainability indicators		Bulgaria	Latvia	Estonia	Lithuania
Gross external debt (% GDP)	latest	107.9	124.4	116.0	70.2
Private-sector ext. debt (% GDP)	latest	95.9	111.1	112.2	61.4
Public-sector ext. debt (%GDP)	latest	11.9	13.3	3.9	8.9
S-T debt/Gross ext. debt (%)	latest	36.1	27.6	36.0	30.8
Domestic credit (% GDP)	latest	68.5	92.3	101.5	60.6
Private-sector credit (% GDP)	latest	79.0	82.9	99.1	59.2
FDI/CA deficit (x times)	latest	0.56	0.37	518	1176
Nom. Effect. exch. rate (%)	2002-08 cum.	32.8	58.4	56.2	40.0
Reserve assets (EUR mn)	latest	11.8	2.8	2.7	4.5
FX reserves (months of imp.)	1Q09	5.3	3.4	2.7	2.5
FX reserves (% money base)	latest	177	119	118	143

Sources: IMF, EC, Official statistics & Eurobank EFG Research

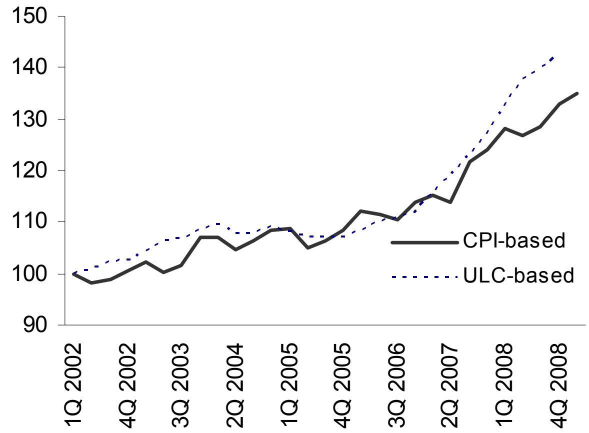
4. Bulgaria: Current economic trajectory & financial vulnerabilities

Strong capital inflows over the past five years, expectations of fast EU converge and strengthened financial intermediation provided the base for a credit boom and the eventual economic overheating. The latter was manifested in a rapid deterioration of Bulgaria's external imbalance, which saw its current account deficit widening beyond 25% of GDP in 2008, from levels around 5% of GDP five years earlier. Furthermore, confidence towards the CBA and over-optimistic expectations of future incomes by domestic households and businesses resulted led to a sharp rise in foreign-currency borrowing that boosted the private-sector external debt ratio to 95.9% of GDP in April 09, from levels around 47% of GDP in 2005 and below 18% of GDP in 2002.

4.1 Real exchange rate appreciation weighs on competitiveness

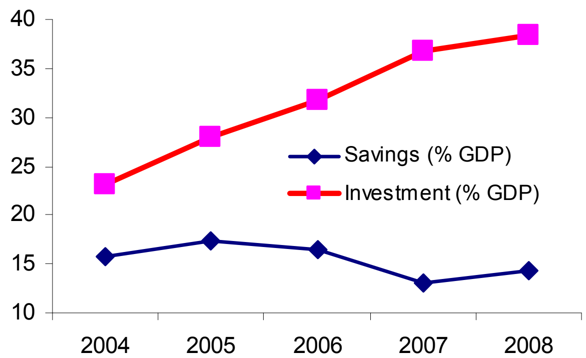
Bulgaria's widening savings-investments imbalance in recent years does not solely reflect the investment needs of a transition economy eager to upgrade its capital base and standards of living. It also reveals competitive losses due to real exchange appreciation, accrued especially in the 2006-2008 period. The latter can be partly explained by a positive productivity growth differential vis-a-vis major trading partners. But, the amount of real exchange rate appreciation recorded in the past three years is also indicative of overheating domestic demand conditions and acute employment bottlenecks. In the period 1Q2005 – 4Q2008, Bulgaria's CPI-based real effective exchange rate (REER) appreciated by a cumulative 22.4%, while the appreciation of the corresponding ULC-based index was 31.9% (Graph 2i). Please also note that a CPI-based Real Effective Rate index constructed by BNB shows cumulative gains in excess of 70% since the establishment of the CBA in mid-2007. Hefty wage increases saw the pace of real appreciation strengthening since 2006, a development that was reflected in a gradual deceleration in the volume of goods and services exports (+2.9% yoy in 2008 vs. +5.2% yoy in 2007 and a 9.2% yoy average in 2002-2006).

Graph 2i. Bulgaria: Real effective exchange rate



Source: BNB, Eurobank EFG Research

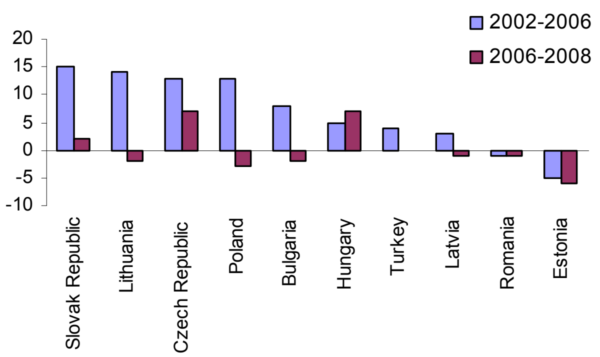
Graph 2ii. Bulgaria: Savings-investments imbalance



Source: BNB, Eurobank EFG Research

Furthermore, Bulgaria's export performance, as measured by a relevant index for exports of goods and services divided by an index for growth of markets (eg, see EC Spring 2009 forecasts), deteriorated in the 2006-2007 period, after recording steady gains in the prior 5- year period. The same story is told by Graph 2iii. below, which shows the change in the exports-to-GDP ratio in the periods 2000-2006 and 2006-2008 for Bulgaria and a number of other CEE countries.

Graph 2iii.: Change in the exports-to-GDP ratio



Source: WEO, Eurobank EFG Research

4.2 Economic contraction expected to help correct internal and external imbalances...

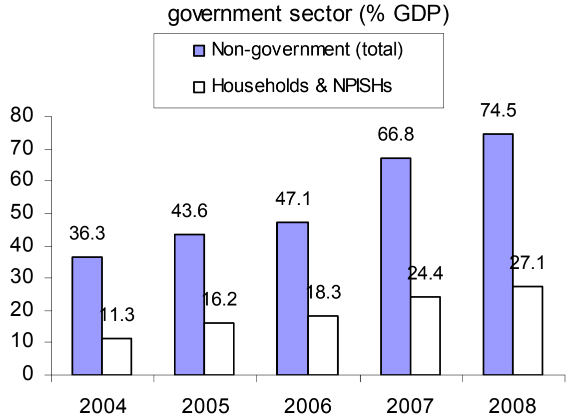
The sharp downturn already evident in the domestic economy is likely to help deflate overheated demand conditions and reduce the external imbalance. The cumulative growth of private-sector credit was broadly flat in the six months-to-April 09, bringing the corresponding year-on-year rate to 20.6%, from around 56% Yoy in April 2008. Reduced availability - as well as demand - for credit, lower wage growth and the economic contraction in major trading-partner economies will help bring domestic inflation sharply lower this year (Eurobank EFG Research forecasts year-end CPI at 2.5% Yoy, from 7.8% in December 2008 and highs above 15% Yoy early last year).

The trade deficit is also expected to decline significantly, mainly as a result of lower imports. The 2009 January-April current account deficit was around 40% lower than that in the same period a year earlier, with the contraction in the growth of goods & services imports (-32.6% Yoy) outpacing that of exports (-30.4% Yoy). For the year as a whole, we forecast the current account deficit to shrink to 14%-of-GDP in 2009, from around 25% of GDP in 2008. From the funding side, FDI inflows amounted to BGN 956mn in January-April 2009, compared with a total of around BGN 6.16bn for the year 2008 as a whole. The FDI coverage ratio is expected to retreat to around 50% this year, despite the expected concomitant decline of the current account deficit (graphs 2v & 2vi).

4.3 ...albeit in a painful way

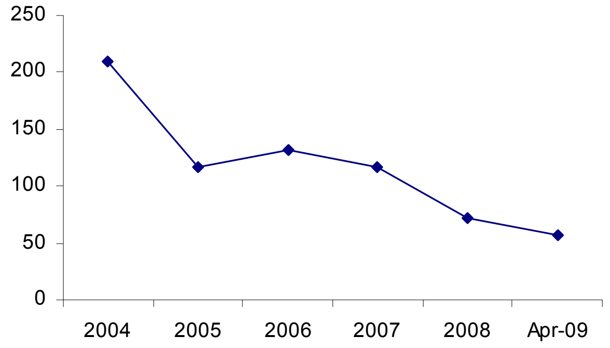
Bulgaria's private-sector will be particularly affected by the global economic downturn and the credit crunch, especially in view of rapid credit growth and sharp increases in external indebtedness in recent years. Recent dismal readings in a range of higher-frequency indicators of domestic economic activity signal that the domestic economy has already entered recession, being adversely affected by contracting export growth, stagnating credit and lower FDI inflows. According to the latest national accounts data, real GDP growth contracted by 3.5% Yoy in Q1 2009, after rising by 3.5% Yoy in the prior quarter, with final consumption and investments falling by 5.4% Yoy and 14.1% Yoy, respectively.

Graph 2iv. Bulgaria: MFI credit to domestic non-government sector (% GDP)



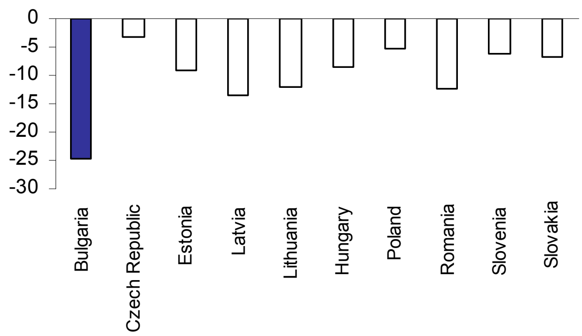
Source: BNB, Eurobank EFG Research

Graph 2.v. Foreign direct investment/Current account deficit (%)



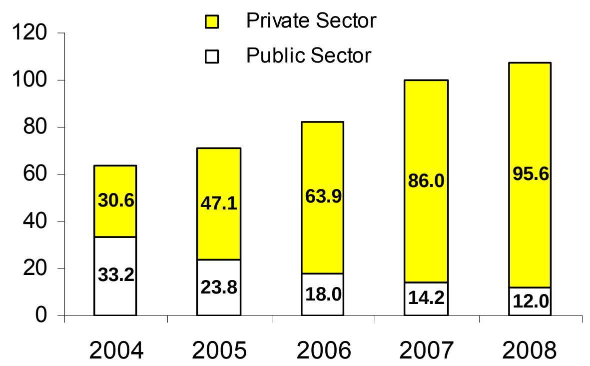
Source: BNB, Eurobank EFG Research

Graph 2.vi Current account balance (% GDP) in 2008



Source: EC, Eurobank EFG Research

Graph 2.vii Bulgaria: Gross external debt (% GDP)



Source: BNB, Eurobank EFG Research

Net exports exerted a positive contribution to overall growth as the pace of contraction of imports (-21.1% yoy) exceeded that of exports (-17.4% yoy). With respect to key sectors of domestic economic activity, industrial output declined for a second consecutive quarter in Q1 (-17.7% yoy vs. -7.0% yoy in Q4 2008), while in the retail trade except of motor vehicles and motorcycles activity contacted by 6.6% yoy in January-April.

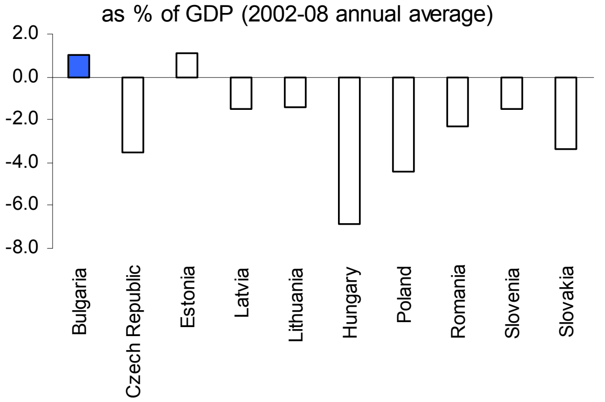
Retail sales of food, beverages and tobacco rose by 3.2% yoy in the first four months of the year, but sharp declines were recorded in all other sales categories. In the labor market, the rate of registered unemployed as a percentage of the labor force hit a multi-year high of 7.1% in May 2009, with further increases expected in the following months as domestic firms continue to restructure, reducing headcount and wage costs.

All in all, we expect real GDP growth of -3.0% Yoy this year, with risks to this forecast being skewed to the downside, especially if the recent tentative stabilization in a number of sentiment indicators fail to translate to more concrete evidence that the worst of the global economic crisis is behind us.

4.4 Prudent fiscal policies in recent years provided an important pillar of stability...

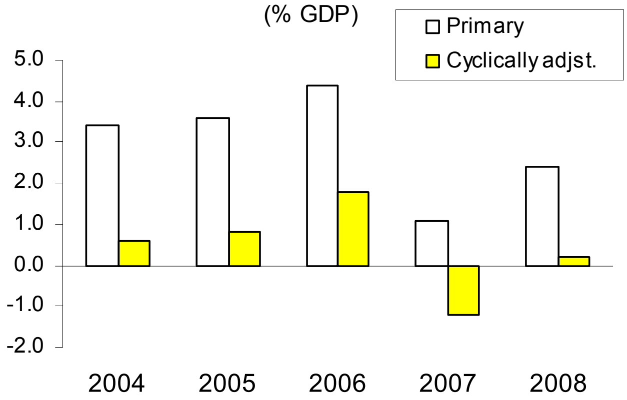
Bulgaria has entered the current economic downturn with a strong fiscal pillar of support to the currency board arrangement, thanks to strong budgetary surpluses in recent years (graphs 3i & 3ii). The initial budget law for 2009 envisioned tax revenue growth of 16% yoy, an assumption eventually judged to be overly-optimistic given the sharper-than-initially-expected economic downturn. In a move to account for a worsening economic environment and maintain public and investor confidence towards domestic macro policies, authorities decided in December to limit spending to 90 percent of the budgeted amount (the so-called 90 percent rule). Yet, even with this measure, the full-year budget balance is likely to show a deficit (1% of GDP or higher according to the IMF) in 2009, unless authorities make a harder effort to cut spending, particularly subsidies to loss-making companies and big infrastructure projects.

Graph 3i. General gvnt fiscal balance as % of GDP (2002-08 annual average)



Source: BNB, Eurobank EFG Research

Graph 3ii. Bulgaria: Privary and cyclically adjusted general government balances (% GDP)



Source: BNB, Eurobank EFG Research

4.5 ...but the economic downturn and spending increases ahead of the June 09 elections have raised fiscal risks

Faced with plummeting support due to the domestic economic hardship and alleged corruption scandals, the previous government announced, ahead of the July 5 general elections, spending cuts worth 500mn levs (1.7% of GDP), including a 15% reduction in ministers´ salaries and a freeze in public servant wages. Yet, the majority of foreign and local analysts believe that even with these measures, a budget deficit is rather unlikely to be avoided this year. Note that the official fiscal target is a 3% of GDP surplus this year, though ex Finance Minister Plamen Oresharski said in late April that the targeted surplus will likely be cut to around 1% of GDP. Yet, no revision on the fiscal target has been made so far.

All in all, maintaining a fiscal surplus is key to avoiding a drawdown in the fiscal reserve account and sustaining confidence towards the currency board arrangement. This is particularly relevant, given the limited flexibility with respect to convectional monetary-policy tools. Thus, fiscal developments deserve close monitoring, especially in the case of a renewed deterioration in the global economic environment.

4.6 Competitiveness problem needs to be addressed with structural reforms

Until recently, domestic authorities used to view the problem of Bulgaria's current account deficit with a certain degree of comfort, thanks to the relatively low share of consumer goods imports (ie., no higher than 15% of total imports). The relevant argument was that the strong growth of investment-related imports would help expand the production capacity and export orientation of the economy, with positive consequences for medium-term growth. That optimism was also supported by the considerable progress made in recent years towards reducing the country's regulatory burden. Recall that Bulgaria was ranked among the top 10 reformers in the 2006/07 World Bank's Ease of Doing Business report, with respect to tax system and public administration improvements. Yet, as the earlier points suggest, policies to address the country's weakened external position are needed to ensure medium-term economic growth and sustain confidence towards the CBA. Wage policies to realign unit labor costs with domestic productivity growth, structural reforms to further reduce the regulatory burden of the economy and, primarily, the continuation of prudent fiscal policies are key to attain these aims.

4.7 Domestic financial markets recovered recently, but remain well below pre-crisis levels

Since March 2009, Bulgaria's equity, external debt and credit markets have recovered some of the steep losses incurred since last September, but still remain at depressed levels relative to where they stood one year earlier (SOFIX equity index: -1.27% y-t-d and -69.3% yoy; 5-year CDS: 405bps currently vs. highs above 715bps recorded earlier this year and levels around 145bps in late June 2008). The improvement was in line with the recent rebound in global investor sentiment and the incipient market recovery in CEE markets.

Yet, sentiment remains fragile, foreign portfolio inflows low and we would not rule out renewed market pressures later this year if global market conditions worsen again. On a more positive note, hot money in the domestic economy - in the form of, say, foreign portfolio inflows in the domestic money and capital markets - remain very low, reducing the risks of a speculative attack aiming to destabilize the CBA.

5. What will the future bring? Possible exchange rate and currency board scenarios in view of joining the euro area

In this section we provide an analysis on the policy options available to Bulgarian authorities for navigating through the turbulent waters of the global financial crisis, while ensuring that the country remains on track for joining the euro area within a reasonable time span. Currently, Bulgaria has no official deadline for adopting the euro. Recent polls conducted by Reuters and other news agencies show that the market expects the country to join the euro area no earlier than in 2014. Yet, recently Bulgarian politicians make statements about expediting the process.

In March 2009, Bulgaria's former Prime Minister Sergei Stanishev pressed for a swift entry in the Exchange Rate Mechanism (ERM-II), viewing it as a step to cushion the effects of the global financial crisis. On March 1st, in a special informal EU summit, German Chancellor Angela Merkel signalled that the process of joining ERM-II could be accelerated for candidate EU states. Merkel insisted that there could be no change to the Maastricht treaty rules, but said that the EU could consider requests by several euro area candidates to enter ERM-II faster than earlier planned.

More recently, Simeon Djankov, a World Bank economist tipped to become Bulgaria´s new finance minister, said that the country will apply for ERM - II entry in November 2009 and maintain its currency peg until joining the euro area.

5.1 Where does Bulgaria stand with respect to the five Maastricht criteria for euro area entry?

In view of the apparent commitment of the Bulgarian authorities to lead their country into the euro area, we begin with a brief overview of the Maastricht Treaty's criteria for euro adoption and Bulgaria's stance on each one of them. In order for an EU member state to enter the third stage of European Economic and Monetary Union (EMU), it needs to satisfy the following five convergence criteria[5]:

1. **Inflation rate:** No more than 1.5 percentage points higher than the average of the three best performing (lowest inflation) member states of the EU.
2. **Annual government deficit:** The ratio of the annual government deficit to gross domestic product (GDP) must not exceed 3% at the end of the preceding fiscal year. If not, it is at least required to reach a level close to 3%. Only exceptional and temporary excesses would be granted for exceptional cases.
3. **Government debt:** The ratio of gross government debt to GDP must not exceed 60% at the end of the preceding fiscal year. Even if the target cannot be achieved due to the specific conditions, the ratio must have sufficiently diminished and must be approaching the reference value at a satisfactory pace.
4. **Exchange rate:** Applicant countries should have joined the exchange-rate mechanism under the European Monetary System (ERM-II) for two consecutive years and should not have devaluated its currency during the period. ERM-II fixes the acceding country's national currency's exchange rate to the euro, within a specified band (normally ±15%).
5. **Long-term interest rates:** The nominal long-term interest rate must not be more than two percentage points higher than in the three lowest inflation member states.

[5] Article 121(1) of the European Community Treaty

In the case of Bulgaria, **inflation convergence** currently appears to be the most demanding of all five convergence criteria. This is especially true in the present macro trajectory, not only as a result of lingering deflation pressures in the euro area but also because of: i. Balassa–Samuelson-type effects in a converging economy that tend to maintain a certain inflation differential vis-ΰ-vis major trading partners and ii. any remaining hikes in administrative prices Bulgaria will need to implement as a member of the EU.

The currency board arrangement is a powerful tool for anchoring inflationary expectations and eliminating major sources of domestic inflation, such as direct or indirect budget deficit monetisation and support to insolvent banks by the central bank *(Avramov, 1999)*[6]*. Yet,* the currency board has so far not prevented Bulgaria's headline inflation from reaching levels around 15%Yoy in mid-2008 as a result of the strong rally in global commodity prices and the overheating of domestic demand.

On a more positive note, domestic inflation has been on a deceleration path in recent months, assisted by favourable base effects and retreating demand-side pressures. Headline inflation stood at 3.7% yoy in June, with the BNB expecting it to decelerate further and reach 2.5% at the end of the current year. *(The IMF sees Bulgaria's CPI at 1.5% at the end of 2009).* This is good news for Bulgaria's euro area entry prospects, though a big question market remains over the sustainability of inflation convergence in such an uncertain international environment as the present one. In June 2009,

[6] Heavy budget deficit monetization and support to state-run public enterprises by the BNB boosted the money base to over 100%-of-GDP in mid- 90s, leading to the early-1997 hyperinflation episode.

Bulgaria´s inflation differential relative to the three lowest-inflation EU States stood at 5.3%.[7]

Bulgaria gets a satisfactory score with respect to the fiscal criteria. The **fiscal-deficit criterion** is being met for a number of years now, in view of the country's sizeable budgetary surpluses. These surpluses have provided a valuable pillar of support to the present exchange rate regime[8] and contributed a great deal towards macroeconomic stabilisation in the period following the introduction of the CBA in 1997. However, the combination of increased government spending ahead of the July parliamentary election and lower tax revenues due to the domestic economic downturn have resulted in an underperformance of budgetary targets in H1 2009. And, it is now clear that the initial 3%-of-GDP surplus target for 2009 will likely be missed by a significant margin. The new minority government has already signalled that it will swiftly proceed with spending cuts, aiming for a balanced budget this year and the next. Yet, the government realizes that the outcome of a budget deficit is more likely scenario for 2009 (*Eurobank EFG Research forecasts a general government fiscal deficit of 1%-of-GDP this year).*

Looking further ahead, a key fiscal concern is that a long period of below-trend growth and weak budget revenues may lead to increased fiscal pressures at a time when the country needs to satisfy the budget deficit criterion for euro area entry and strengthen its fiscal capacity for absorbing EU structural funds. Despite these headwinds - and excluding a serious policy mistake or an unforeseen event that could propagate sizeable fiscal slippage - we expect Bulgaria to pass the deficit criterion for timely euro area entry.

Bulgaria's **gross public debt** stood at around 14%-to-GDP at the end of 2008 and is expected to marginally exceed 16%-of-GDP this year. As a result, and barring any unforeseen circumstances, the country is likely to pass the debt-ratio test without much difficulty.

Regarding the **exchange rate criterion,** please note that the European Central Bank and the European Commission do not accept the currency board arrangement as a substitute for the participation in the Exchange Rate Mechanism (ERM-II). Yet, they do not rule out the unilateral operation of a currency board arrangement in the countries where this arrangement already exists. This is presently the case with the currency boards of Estonia and Lithuania *(both have been members of ERM-II since 2004)* and the same treatment could be applied to Bulgaria at the time it will decide to join the Exchange Rate Mechanism with its present FX regime.

The appropriate exchange rate with which Bulgaria will enter the euro area is key to future developments. We analyze this issue in more detail in the next sub section.

As for the l**ong-term interest rate criterion,** the domestic government bond market is still in an under-developed state *(party due to a low public*

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[7] The Article 121 (1) of the Treaty holds that with regard to "an average rate of inflation, observed over a period of one year before the examination", the inflation rate is calculated using the increase in the latest available 12-month average of the Harmonised Index of Consumer Prices (HICP) over the previous 12-month average. The notion of "at most, the three best-performing Member States in terms of price stability", which is used for the definition of the reference value, is applied by using the simple arithmetic average of the rate of inflation in the three countries with the lowest inflation rates, given that these rates are compatible with price stability.

[8] The government's fiscal reserve account with the BNB currently stands at around 14%-of-GDP

borrowing requirement), lacking a liquid yield curve. However, a look at the external debt market reveals the Bulgaria currently trades at a significant discount against its core European peers *(At the time of writing, the spread of the 5yr 7½ 01/15/2013 bond vs the German benchmark stood at ca 374bps and 310bps on a cash basis and in asset-swap terms, respectively).*

5.2 Three alternative scenarios for attaining euro area entrance

So far, we have provided a brief overview on where Bulgaria stands with respect to the fulfilment of the five criteria for euro area entry. We next examine the pros and cons of a number of policy options available to local authorities for managing the currency board and joining the euro area while addressing the present economic downturn and the global financial crisis.

Option 1: Maintain the current FX regime and try to join the euro area as soon as possible

Option 1 represents our baseline scenario, as the Bulgarian economy is currently in a much better shape than the Baltic economies and its FX reserves continue to provide strong coverage of its monetary base and broader monetary aggregates. The key question therefore is not about the sustainability of the country's currency board arrangement. It is about whether the maintenance of the present FX regime is the best policy for ensuring sustainable medium-term growth and macroeconomic stability. The possibility of joining the euro area soon is also open to question.

Arguments in favour of *Option 1:* The first argument in favour of such a policy path is that it can eventually lead to euro adoption with the least possible disruptions for the domestic economy and markets. Specifically, the maintenance of the present currency board arrangement would prevent a de facto lev devaluation from inflicting immense pain on domestic household and corporate balance sheets. The latter arguably arising as a result of the extent of foreign-denominated lending in the domestic economy (see table below):

Table: local & foreign ccy denominated credits (% GDP)

	Bulgaria	Latvia	Lithuania	Estonia
Total	71.79	101.11	62.02	111.93
In local ccy	30.59	10.31	19.82	15.07
In FX	41.20	90.80	42.20	96.86

GDP numbers used are the ones estimated for 2009 by the IMF.
For Bulgaria, Lithuania: total loans is the number of total non-government loans
For Estonia: total loans in the domestic economy
For Latvia: total loans to residents

Second, the maintenance of the current FX regime would ensure the continuation of the successful macro stabilisation policies that have been in place since 1997 and also mitigate the risk of a disruptive spike in inflation and inflation expectations. Arguably, the latter could arise from a sizeable currency devaluation and/or a return to a classic two-tier banking system, under which the central bank is allowed to monetize the fiscal deficit.

Arguments against *Option 1:* A major argument against the maintenance of the present currency board arrangement relates to the real effective exchange rate appreciation and the ensuing macro imbalances in recent years (see Graph 2i in Section 4.1). The focus here is on the sharp widening in the current account deficit to levels above 25%-of-GDP in 2008 as a result of overheating domestic demand conditions and competitiveness losses due to the inflation differential and the lev peg to the euro.

If Bulgaria were to adopt the euro with a significantly overvalued currency, it would be very hard to reverse the overvaluation once a member of the euro area. The experience with countries of the European South after the formation of the euro area is not very encouraging. In view of the latter as well as the experience of the global financial crisis, the politics of EMU enlargement are likely to have changed for the worse. While the Maastricht criteria are clearly specified and do not refer to the structures of the real economies, competitiveness issues may underlie the thinking of old EMU members and, consequently, influence their politics. Old EMU members may no longer be as willing to easily accept new members, unless the latter can somehow signal their structural policies that would improve the competitiveness of their economies within EMU. Such policies take time to administer effectively and, hence, euro area entrance may delay.

Once a currency board exists, the reversal of the real exchange rate overvaluation through policies that lower domestic prices relative to foreign prices does not depend on euro area membership. The same policies would have to be followed whether inside or outside the monetary union. Thus, from the candidate country's point of view, the decision to continue with the currency board implies a simultaneous desire for quick euro area entry, rather than a delayed one. It is the old EMU members that may wish a delayed entrance.

A counterargument to the lev's overvaluation critique is that Bulgaria's inflation is already decelerating rapidly and the current account balance is likely to improve significantly this year as a result of lingering global deflationary forces and the domestic recession[9]. Yet, this counterargument only captures possible future rises in overvaluation. It does not address the overvaluation that is already present. Another counterargument is based on a point we have already made in Section 3: Following an external shock, the CBA places the main burden of adjustment on domestic financial and macro variables like market-determined interest rates, employment and productivity. That is, the lack of the exchange rate and monetary-policy instruments may allow the domestic economy to more directly adjust to the external economic downturn, thus facilitating a more drastic correction of imbalances and a faster move to a more sustainable growth path. While this may be true in theory, it has not been proven in practice, given Bulgaria's huge current account deficits in recent years.

The second potential cost of maintaining the present currency board arrangement relates to the hard budget constraint that it places on fiscal authorities. This effectively limits their ability to adopt a counter-cyclical policy stance that would aim to contain the effects of the global recession. In that sense, the CBA can exacerbate the domestic recession while the global crisis lasts. Yet, this might not be as bad as the worsening in domestic economic conditions that would result from a large depreciation of the domestic currency.

Overall, maintaining the currency board and joining ERM-II at today's exchange rate is a policy that can be effectively administered and ensure timely euro area entry. Yet, it is also a policy that comes at a great long–run cost, namely a loss of competitiveness that would be harder to reverse inside the euro area.

[9] The IMF forecasts Bulgaria's current account deficit to fall to 12.3%-of-GDP this year, from levels around 25%-of-GDP in 2008.

Option 2: Devalue the lev and target a tight fluctuation band against the euro within ERM-II

The devaluation policy would have to be accompanied by policies that improve the credibility of the new exchange rate. Hence, an entry into ERM-II with a devalued currency would likely be accompanied with the announcement by the Bulgarian authorities of a comprehensive program of structural reforms, aiming to reduce the risk of future significant overvaluation of the local currency[10].

Arguments in favour of *Option 2:* The obvious aim of such a strategy would be to reclaim the competitiveness losses inflicted by the real exchange rate appreciation in recent years and dispel speculation over a future disruptive change in the country's fx-policy regime.[11] The potential benefits of laying out the ground for entering the euro area with a more competitive currency are hard to ignore, not least because of the high degree of openness of the Bulgarian economy *(see table below).*

Table: Trade of goods and services (% GDP) in 2008

	Exports	Imports
Bulgaria	60.4	83.8
Latvia	41.4	54.4
Estonia	76.1	80.4
Lithuania	60.0	70.5

Source: National stats & Eurobank EFG Research

Arguments against *Option 2*: This option will likely lead Bulgarian authorities to a new big adventure and thus requires strong political will and full preparedness, as it departs from well known past practices. A key issue would be the nature of the post-devaluation monetary policy regime and the ensuing structure of the BNB. Would that be a new currency board arrangement under a new BGN/EUR exchange rate? Or, alternatively, would it be a classic two-tier banking system with a rigid exchange rate target *e.g., a very narrow fluctuation band around the new central parity as presently the case in Latvia?*

The answer to the above question is critical for judging the post-devaluation evolution of Bulgaria's macroeconomic variables, particularly inflation. Try to imagine, for instance, what would happen to domestic inflation and inflation expectations in a scenario under which the fiscal authority is given a greater influence over money creation. Under a classic banking system, the central bank is not restricted from holding domestic assets and this potentially creates an incentive for fiscal-deficit monetization, moral hazard and other undesirable agency problems.

A second drawback relates to short-term inflation risks and the ensuing inability to satisfy the Maastricht inflation criterion for timely Euro zone entry. A de facto devaluation of the lev peg to the euro could theoretically be as sizeable as 30% or more, so as to offset the real exchange appreciation accumulated in recent years *(see Section 4.).* Earlier BNB studies on the inflation dynamics under the current board arrangement in Bulgaria *(e.g. Nenovsky, Yotzov & Hristov, 1999)* show that the exchange-rate pass-through to domestic inflation could be as high as 100%, suggesting a very significant first-round impact in case of a break up in the lev peg to the euro.

[10] An ambitious structural-reforms package was unveiled by e.g., Greece in March 1998, when it devalued the drachma and entered ERM-II.

[11] For a more thorough analysis on Bulgaria's competitiveness please see section 4.1 of this document

Of course, forecasting the longer-term inflation effects of a lev devaluation would be a very demanding exercise. This is because besides the appropriate magnitude of devaluation, one would also need to incorporate the likely evolution of a range of key domestic macro variables. For instance, under such a scenario, a wider (negative) output gap could strengthen deflationary forces in the economy, helping to mitigate any first-round inflation effects. In addition, one would need to account for the likely evolution of inflation expectations under a different monetary policy regime e.g., a shift from the currency board arrangement to a simple FX peg or a currency float under a classic banking system.

In short, a lev devaluation could, *ceteris paribus,* create a short term inflation shock to the economy and higher uncertainty with regard to medium-term inflation dynamics.

A third potential drawback under *Option 2* relates to the likely impact of devaluation on private-sector balance sheets, given the extensive private-sector borrowing in foreign currency in recent years *(rise in NPLs and increased macro/prudential risks in the domestic banking sector).* Finally, a lev devaluation would inflate the public-sector debt ratio, though the fx-denominated part of the latter is presently very low in Bulgaria *(12%-of-GDP at the end of 2008).*

Overall, under option 2, the risks are high that Bulgaria may not manage to stabilize the macro economy and satisfy the Maastricht criteria. But, if it finally manages to do so, then it would join EMU at a more competitive exchange rate, which would improve future growth opportunities.

Option 3: Move to a currency float regime and adopt the euro when conditions allow

This is an extreme option, under which the currency board arrangement is abandoned without a new anchor for the exchange rate or even a visible date for euro area entrance. It is very unlikely to be initiated by the Bulgarian authorities, but could be forcefully imposed by the markets in view of the overvaluation of the lev. We attach a very low probability to such a scenario, but it is still worth briefly describing it, as it forms a yardstick for clarifying the differences with the previous two options.

Arguments against *Option 3*: As the recent experience with Ukraine suggests, a forced abandonment of the present rigid exchange rate regime would likely be associated with immense domestic social and economic chaos, a situation hardly describing the present political and economic environment in Bulgaria. Under scenario 3, the current board arrangement is abandoned, the exchange rate is allowed to fluctuate freely against the foreign currencies and the BNB becomes a fully-fledged central bank, having some kind of inflation or money targeting in place.

Under such a scenario, it is not very hard to imagine an initial period of excessive FX volatility and strong depreciation pressures on the lev as the market searches for the currency's new equilibrium level in an environment of increased policy uncertainty and reduced prospects for a speedy ERM-II entry and euro adoption. The worsening environment deals a painful blow to the domestic economy, recessionary forces aggravate and risks of a major ''financial accident'' in the country rise precipitously.

Summary of the options: In sum, of all three policy options analysed in this section, *Option 1 and Option 2* carry the highest probabilities of being implemented. In option 1, the CBA continues as is and the Bulgarian government wrestles to correct the losses in competitiveness that the overvaluation of the exchange rate has brought. Option 1 represents the status quo. It causes the least domestic frictions but may not be welcome by Bulgaria's EMU future partners.

Under option 2, the lev devalues and simultaneously joins ERM-II at a new central parity and perhaps a new currency board. The overvaluation is no longer a problem but the recession becomes worse and satisfaction of the inflation criterion is at risk. Option 2 requires a major break from the past known practices. It will cause a bigger domestic upheaval than option 1. Hence, it requires strong political will to be implemented. Yet, the costs of option 2 may be mostly of short-run nature. If the government and the central bank manage to stabilize the new exchange rate and limit the effects on NPLs and inflation, then they can look up to a period of strong growth inside EMU without the burden of an overvalued exchange rate.

Option 3 represents a disaster scenario that is not likely to occur. Our earlier analysis indicates that the currency board cannot break by market forces alone.

6. Concluding remarks

This report provides an analysis of the sustainability of Bulgaria's currency board arrangement (CBA), in view of the sharp domestic economic downturn and increased international worries over an eventual break up of the Latvian FX peg. In the absence of a further significant deterioration in the global economic environment and/or a serious domestic policy mistake, the Bulgarian CBA appears sustainable and, in fact, stronger that the currency pegs in the Baltic States, both from a macro and a strictly technical standpoint.

The market alone is not likely to force a devaluation of the lev and a break up of the CBA. Reinforced fiscal prudence by the new government and, possibly, some form of financial support from the IMF and/or other international organizations, would help a great deal towards mitigating FX risks and maintaining confidence on the present regime. In fact, as of May 2009, the foreign exchange reserves in the Bulgarian central bank covered 177% of the monetary base and 81% of the lev-denominated portion of M2.

Given Bulgaria's desire to join the euro area, the current overvaluation of the lev presents a major obstacle. Once a member of EMU, it will be difficult to improve competitiveness and reverse the real overvaluation that has cumulated over the last few years. Hence, the authorities face a major dilemma: To devalue the lev or not.

A decision by local authorities to devalue the lev and abandon the CBA could presumably occur concurrently with entry into ERM-II and the establishment of a new and credible central parity, perhaps even a new currency board. Such a strategy requires additional structural policies that would aim to make the new central parity credible. It also necessitates strong political resolve to be implemented. This is because it calls for a major departure from the established policy framework of the last decade and it may also have negative short-run consequences on the domestic economy: It increases the real debt burden of households and corporations, deepens and prolongs the current recession and risks a higher rate of inflation once the financial crisis is over. The latter may result in an inability to satisfy the Maastricht inflation criterion, significantly delaying entrance into the euro area. This policy is a journey to the unknown and – in the middle of a major international crisis - requires superior skills and luck to be successfully implemented.

The alterative policy to stick to the status quo of the CBA is politically easier as it faces fewer unknowns and – apart form the required tight fiscal policy – it does not impose a bigger short-run burden on the population relative to the one the recession has already brought. Yet it postpones into the future the necessary correction of the present overvaluation of the lev and risks stagnation or low growth once Bulgaria becomes a fully-fledged member of the euro area. If this is the policy option that ends up dominating the domestic political sphere, then European politics may delay the eventual entrance of Bulgaria into the euro area, as old EMU members may wish to see signals of policies that would begin correcting the overvaluation problem prior to irrevocably locking the lev exchange rate to the euro.

Overall, the previous analysis suggests that whichever policy option regarding the currency board and the exchange rate is adopted by the authorities, the date of Bulgaria's entrance into the euro area may be a more distant prospect than recent official statements imply.

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Special Focus: July 5 general election outcome
Assessment and implications

The final results of the July 5 general election showed that the centre-right opposition party, the Citizens for European Development of Bulgaria (*GERB*), achieved a significant victory. It obtained a share of 39.72%, in a 20-year high turnout of 60.2%, faring much better than in the European Union elections earlier this year as well as in the opinion surveys conducted ahead of the July 5 ballot. The GERB will occupy 116 seats out of the 240 in parliament. It is short just five of obtaining an outright majority to rule alone. The ruling Socialists party (*BSP*) is trailing far behind, having scored 17.70%, corresponding to 40 MPs, while their junior coalition partner, the ethnic Turkish MRF, collected 14.45%, or 38 seats. The ultranationalist Attack obtained 9.36% for 21 seats and the Blue Coalition 6.76%, or 15 seats. The last party which passed the 4% threshold to enter parliament was the Order, Law and Justice which achieved 4.13% (*10 seats*). In effect, the incumbent cabinet's failure to effectively target corruption and organized crime boosted public support towards the opposition. The global financial crisis did not favour the government's ratings either. Note that according to Transparency International, Bulgaria is amongst the countries most affected by corruption.

The GERB will form a minority government with the support of other rightist parties, but without giving up any ministerial seats. The GERB is officially led by the former deputy mayor of Sofia, Tsvetan Tsvetanov. However, the party's actual leader is the incumbent mayor of Sofia and former firefighter and bodyguard Boyko Borisov. He has already agreed to become the next Prime Minister. And for many, he is the "Batman" - as Borisov is dubbed due to his passion for action – who will lead Bulgaria out of recession. Not surprisingly, fighting corruption and organized crime will likely be amongst his key priorities. The GERB has repeatedly said that will fiercely tackle corruption and immediately initiate negotiations with the IMF in order to secure a Stand-By financial aid program to cushion the spillover impact of the global financial crisis. It has also highlighted its intention to revise the budget and employ spending cuts so as to avoid fiscal slippages and maintain investor confidence towards the Currency Board Agreement (CBA).

On July 8, Simeon Djankov, a World Bank economist tipped to become the new finance minister, said that the new government will slash spending within a month from taking office and ask the IMF to audit its budget revisions. These will aim for a balanced budget this year and the next, though Mr. Djankov said that a budget deficit was more likely in 2009 as a result of the outgoing government´s spending spree. On the IMF issue, he said that the new government should wait until February to see the effects of its fiscal measures and the evolution of the global financial environment before deciding whether to seek financial assistance from the Fund. **Importantly, Mr. Djankov also said that Bulgaria will apply for entry in to ERM-II in November 2009 and maintain its currency peg to the euro until joining the euro area.**

Following nearly a decade of hefty fiscal surpluses, Bulgaria is faced with the risk of running a deficit this year. This may not echo alarming at first, as most of its fellow CEE countries operate on budget shortfalls. But in Bulgaria's case surpluses are key for the sustainability of the CBA. In view of the BGN's peg to the euro, the main macro policy tool left to local authorities is fiscal policy. However, this year is proving to be dire. The global financial crisis is taking a hefty toll on the domestic economy. And growing concerns about the sustainability of Latvia's currency peg are spilling over to Bulgaria. In line with global developments, domestic and external demand in Bulgaria is collapsing and the troubles in the labour market have further to run.

As a result, the fiscal performance is being severely hurt. Depicting the sharp deterioration in the government's finances, the budget recorded a surplus of just BGN 555.4mn (or ca USD 400mn) in the first five months of the year, down 17.8% on a monthly basis and 83.2% compared to the same period a year earlier.

This was due to a combination of increased spending in the run-up to the July elections and lower tax revenues (-6.1%yoy) due to the domestic economic downturn. Under local accounting standards the January-May surplus corresponds to a meager 0.8% of GDP which compares with the official surplus target of 3% of GDP (the government recently suggested that a downward revision to 1.0% of GDP is on the cards). Taking into account that most of fiscal spending is customarily realized towards the end of the year (the budget ran a surplus of 5.36% of GDP in January-May 2008, but ended the year at 3.0% of GDP), the generation of a budget surplus in 2009 now seems out of reach. In a less worrying note, the fiscal reserve account that the government maintains with the CBA amounted to BGN7.3bn in May and this, along with ample foreign exchange reserves, provided a strong buffer of support to the currency board *(equivalent to around 43% of GDP, according to our calculations).* Nonetheless, the country's high external financing requirement, primarily the result of a widening gap between national savings and investments in recent years, has raised concerns that Bulgaria may not be able to navigate through the crisis without external financial assistance.

Along these lines, the July 5 elections outcome is considered to be favorable for financial markets. Provided that the GERB will form the new government, a swift revision to the 2009 budget targets should be expected, including additional spending cuts and a temporary freeze of the capital outlays. An IMF loan accord, if such an agreement is finally reached, should also help to ease investor concerns about a domestic financial crisis and force the new government to follow strict policy guidelines to cushion the effects of the global turmoil. Although an IMF programme is unlikely to prompt a speedy rebound from the current recession *(we still expect GDP contraction of 2.5%yoy or more in 2009 followed by a marginally flat-to-negative growth in 2010),* it would help to promote much needed reforms, favourable for growth in the longer-term.

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