FOR AGENDA

SM/09/287

December 11, 2009

To: Members of the Executive Board

From: The Acting Secretary

Subject: **Republic of Estonia—Staff Report for the 2009 Article IV Consultation**

Attached for consideration by the Executive Directors is the staff report for the 2009 Article IV consultation with the Republic of Estonia, which will be brought to the agenda for discussion on **a date to be announced**. At the time of circulation of this paper to the Board, the Secretary's Department has received a communication from the authorities of the Republic of Estonia indicating that they consent to the Fund's publication of this paper.

Questions may be referred to Mr. Rosenberg (ext. 34035) and Mr. Lutz (ext. 36588) in EUR.

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the WTO Secretariat and the European Central Bank on Monday, December 21, 2009; and to the European Bank for Reconstruction and Development, the European Commission, the European Investment Bank, and the Organisation for Economic Cooperation and Development, following its consideration by the Executive Board.

This document, together with a supplement providing an informational annex, will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities. The supplement, which is not being distributed in hard copy, will also be available in the Institutional Repository; a link can be found in the daily list (http://www-int.imf.org/depts/sec/services/eb/dailydocumentsfull.htm) for the issuance date shown above.

Att: (1)

Other Distribution:
Department Heads

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

Staff Report for the 2009 Article IV Consultation

Prepared by the Staff Representatives for the 2009 Consultation with the Republic of Estonia

Approved by Anne-Marie Gulde-Wolf and Tessa van der Willigen

December 10, 2009

Consultation discussions were held in Tallinn October 14–26, 2009. The staff team—Messrs. Rosenberg (head) and Lutz, Ms. Herzberg (EUR), Mr. Rodriguez (SPR), Messrs. Kisinbay and Seelig (MCM), Ms. Eble and Mr. Grote (FAD), and Mr. Kangur (EUR Warsaw Office)—met with President Ilves, Prime Minister Ansip, Minister of Finance Ligi, Eesti Pank Governor Lipstock, and other senior officials. It also met with members of Parliament and private sector representatives, social partners, and academics. Given Estonia's close financial sector ties with Sweden, discussions were held in Stockholm with Riksbank Governor Ingves, Financial Services Authority Director General Andersson, senior officials of the Finance Ministry and banking officials. Mr. Sutt (OED) participated in numerous meetings. The mission organized a seminar on topical issues, and presented its conclusions in a press conference.

Fund relations and exchange rate regime: The previous Article IV consultation was concluded by the Executive Board on March 2, 2009 and an FSAP update was completed in February 2009. Since June 20, 1992, Estonia operates a currency board arrangement, with a fixed rate of exchange of EEK 15.6466 per euro. Estonia has accepted the obligations under Article VIII, Sections 2(a), 3, and 4 of the Fund's Articles of Agreement and maintains an exchange system free of restrictions on the making of payments and transfers for current international transactions, with some EU-wide exceptions.

Political background: Since the Social Democrats quit the ruling coalition in May 2009, a center-right coalition under Prime Minister Ansip has been operating as a minority government. Opposition parties gained in local elections held in October 2009. Parliamentary elections are scheduled for early 2011.

Contents Page

I. Summary and Appraisal

1. **Following a credit boom, the Estonian economy is now undergoing a severe recession, although a full-fledged crisis has been avoided.** Sizable fiscal reserves and swift adjustment measures taken in 2008 and throughout 2009 prevented funding problems of the government and supported the currency board arrangement (CBA) at a time of regional stress. Banks' capital and liquidity cushions, including from their Nordic parents, headed off liquidity problems. And relatively high reserve requirements and a proactive approach to contingency planning, including a precautionary swap arrangement with the Swedish central bank in support of Swedish banks operating in Estonia[1], provided additional insurance and further boosted confidence. The non-bank private sector has also reacted quickly, with wage cuts and adjustments in employment, further enhanced by a new labor law.

2. **As a result of present and past efforts, euro adoption in 2011 appears within reach.** Following recent budget measures and assuming continued fiscal consolidation efforts, Estonia could meet all Maastricht criteria, while the policy record to date provides assurances for continued stability-oriented policies. This is remarkable, as it is being achieved against the background of severe dislocations due to the crisis. Joining the euro zone would remove residual currency and liquidity risks, adding stability to the Estonian economy.

3. **The focus should now be on restoring economic stability and laying the foundations for more balanced growth.** Euro adoption by itself is unlikely to trigger any major change in the pace of recovery, which staff—unlike the authorities—expects to be relatively protracted given high unemployment and debt burdens, necessary deleveraging by banks, and the need to fundamentally reorient the economy towards the tradable sector. Within the authorities' export-oriented growth strategy, a slower than expected rebound among Estonia's main trading partners represents a key risk to the outlook.

Putting Fiscal Policy on a Sustainable Path

4. **Staff supports the authorities' goal of meeting the 3 percent Maastricht deficit criterion.** The benefits of euro adoption outweigh the mildly procyclical effects of fiscal tightening during the crisis. Given considerable macroeconomic and implementation risks, staff recommended additional structural measures of some 1 percentage point of GDP in the context of the 2010 budget. This would provide an adequate safety margin for 2010, offset one-off and potentially reversible measures, confront an anticipated shift in tax bases, and help achieve the targeted medium-term structural balance. Following staff's visit, the authorities decided to further increase excise taxes by about ¼ percent of GDP.

---

[1] Eesti Pank Presse Release of February 27, 2009 (www.eestipank.info/pub/en/press/Press/pressiteated/pt2009/_02/pt0227)

5. **While there is some room for further expenditure reductions, much of the adjustment effort may need to fall on the revenue side.** The need to protect social safety nets limits the room for spending cuts. Tax administration could be further strengthened and, in keeping with Estonia's streamlined tax system, poorly targeted exemptions eliminated. Significant deferral benefits in the corporate income tax could also be reviewed. Consideration could be given to enhanced use of environmental and property taxes, which would broaden the tax base and reduce economic distortions. A further increase of the VAT rate would support a shift from consumption to investment and exports.

6. **A strengthened fiscal framework could limit the budget's procyclicality**. The annual balanced budget rule could be replaced by multi-year expenditure ceilings consistent with the existing goal to bring the budget to structural balance by 2012. Reduced revenue earmarking and tighter control over local government finances would also help in this regard.

Strengthening Competitiveness

7. **The economy needs to regain competitiveness lost during the boom years.** Labor and product markets seem capable of delivering the necessary adjustment. The recently enacted labor law provides a timely boost to flexibility, although the agreed-upon increase of unemployment compensation should be implemented as soon as fiscal space allows. Targeting EU-funded projects to the tradable sector and other supporting structural policies can also help to deliver the necessary rebalancing of the economy and spur economic convergence.

8. **Seeking euro adoption at the current fixed exchange rate parity remains the best exchange rate policy for Estonia**. The economy's flexibility suggests that the moderate overvaluation identified by staff can be corrected through factor price adjustment alone. While theoretically offering some advantages, a repegging of the kroon at a more depreciated level would be unnecessarily disruptive, both for Estonia and the region.

Addressing Private Sector Debt

9. **The large stock of debt by households and corporates is expected to weigh on growth, suggesting a focus on strengthening the credit enforcement and resolution framework.** Debtors' financial difficulties may have eased somewhat recently, thanks to low interest rates and banks' willingness to reschedule a portion of debt payments. This relief is likely to be temporary, however, as price and wage deflation and increases in euro zone interest rates could result in higher debt servicing burdens. In dealing with private sector debt, heavy-handed policy intervention, such as retroactive limits on debtors' liabilities, must be avoided. Appropriately designed credit enforcement legislation can facilitate the rehabilitation of viable and speedy exit of non-viable firms and help good faith debtors make a fresh start. In this spirit, the bankruptcy and reorganization acts could benefit from enhanced flexibility to accommodate on a case-by-case basis the need for debt reduction and

institutional capacity could be strengthened. Changes to the corporate tax code would be desirable to discourage excessive debt accumulation at the firm level.

Safeguarding the Financial Sector

10. **Though the financial sector has proven resilient, deteriorating credit quality and high private sector debt present challenges.** Overdue loans are likely to increase further over the course of the year, amid limited near-term growth prospects, a depressed real estate market and rising unemployment. Moreover, some debt restructuring agreements may turn out to be unviable. This will necessitate banks setting aside additional provisions. High capital adequacy ratios should not detract from the need for continued supervisory vigilance.

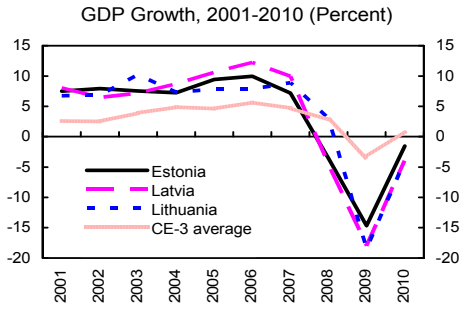
11. **Some recommendations of the last FSAP update still await implementation.** In particular, pending legislation on a bank resolution framework should be passed. This would complement ongoing contingency planning for liquidity pressures. Complacency now would risk future problems being less tractable and thus undermine public confidence.

12. **Estonia should remain on a standard 12-month consultation cycle.**

II. The Crisis and Policy Responses

13. **Following a period of severe overheating, the economy is contracting sharply (Figures 1 and 2).** Investment already started to slow in mid-2007, along with a bursting of the property bubble, when the two main banks tightened lending conditions. The collapse of global external financing and foreign trade in the Lehman bankruptcy aftermath exacerbated the downturn. Output plummeted by almost 16 percent in the first nine months of 2009. Deflation and wage declines are projected to persist through 2010; the latter may temper the rise in unemployment, which nevertheless will likely reach 16 percent by the end of 2009. The current account should remain in a small surplus in the short term, but declining nominal GDP will worsen external debt and NIIP ratios in 2009. Staff expects the economy to resume growth only in the middle of 2010, with a negative output gap peaking at 8½ percent of GDP.

14. **A full-fledged crisis has been avoided due to existing buffers and a determined response by both the public and the private sector.** Sizable fiscal reserves accumulated during the boom years, a very low level of public debt, and, importantly, swift and far-reaching adjustment measures taken in 2008 and throughout 2009 have helped the government to keep the deficit in check and avoid financing problems. At the same time, the increased use of EU structural funds provided some countercyclical fiscal stimulus. In the financial sector, banks' own capital and liquidity cushions—further boosted by relatively



Source: WEO.

high reserve requirements—and support from Nordic parents prevented liquidity problems in spite of rising nonperforming loans. The private sector has also reacted flexibly, with wage cuts and adjustments in employment, further enhanced by a new labor law. As a result of these supporting policies, Estonia's CBA has proven resilient to regional tensions: although local currency interest rates, CDS spreads and forward exchange rates increased (Figure 4), Eesti Pank did not experience a significant loss of reserves.

Box 1. Implications of Fund Policy Advice

Relations between Estonia and the Fund remain excellent. While policy formulation and implementation has been characterized by a high degree of ownership—a key factor in Estonia's economic successes—the authorities report that their decisions benefit considerably from Fund advice. Indeed, policies have been generally consistent with Executive Board recommendations. In 2007–08, however, large increases in current spending, which were contrary to Fund advice, resulted in a structural loosening of the fiscal stance. But recent corrective action, including expenditure reversals and increased indirect taxes (the latter despite initial reluctance) have been in line with staff suggestions. Most of the key recommendations of the 2009 FSAP update have been adopted, except implementation of a bank resolution framework.

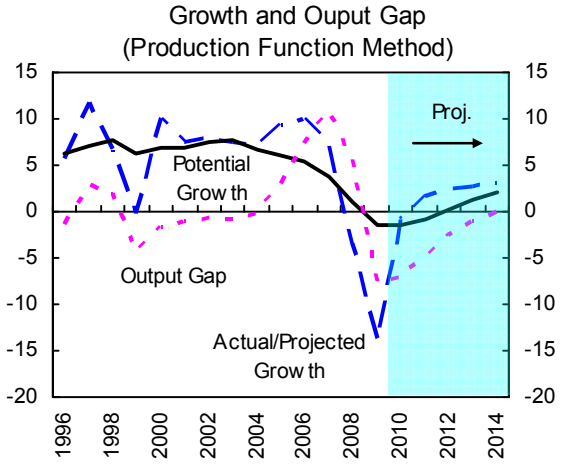
III. Outlook and Risks

15. **As the economy rebalances, a quick rebound to pre-crisis growth rates seems unlikely.** Growth in recent years was unsustainably bolstered by a disproportionate rise in nontradable sectors (construction, financial intermediation, real estate), with negative implications for competitiveness. Adjusting the economy to a more sustainable growth pattern and correcting imbalances will take time and cause temporary dislocations, especially in the labor market. Moreover, the need to reestablish fiscal sustainability, and for the private sector to address the legacy of sizable debt stocks will likely reduce domestic demand for several years (Figure 3). Growth prospects will therefore be constrained, with staff estimates suggesting a slow-down of potential growth to 3-4 percent, compared with 6–7 percent before the crisis.

Contributions to Growth, 2006-10

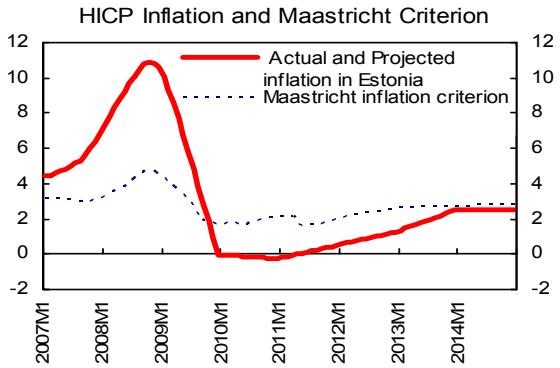
	2006	2007	2008	Proj. 2009	Proj. 2010
GDP growth	10.0	7.2	-3.6	-14.7	-1.5
Domestic demand	16.5	11.0	-11.8	-25.1	-1.2
Consumption	7.8	5.6	-1.9	-10.8	-2.5
Investment 1/	8.8	5.3	-9.9	-14.4	1.3
Net exports	-8.4	-4.4	6.8	9.6	-0.3
Statistical discrepancy	1.8	0.6	1.4	0.9	0.0

Sources: Estonian Statistical Office; and staff calculations.
1/ Includes changes in stocks.



Source: Estonia Statistical Office; and IMF staff estimates.

16. **Relatedly, inflation pressures are expected to remain subdued.** Under staff's central scenario, the current period of deflation will only be temporary, driven by the sudden drop of global energy prices in 2008–09 and the collapse of wages and consumption. Based on earlier precedent, recent price declines are not expected to present an obstacle to a positive assessment of the Maastricht inflation criterion, which should be formally met in late 2009. Staff projects inflation to resume in 2011 with the output gap closing and global commodity prices rebounding, but—due to depressed domestic demand growth—remain at 2–3 percent annually in the medium term. Price levels are close to 80 percent of the EU average (more than in most new member states), suggesting that a substantial degree of nominal convergence has already taken place.



Source: Haver; and IMF staff estimates.

17. **Staff and authorities agreed that regional instability represents the main short-term risk.** While Estonia has evaded financial contagion from neighboring Latvia to date, the difficult situation there could pose challenges to economic sentiment and banks' liquidity. Such risks are mitigated by considerable liquidity buffers and the authorities' determined contingency planning efforts. Moreover, the high share of external liabilities with foreign parents suggests that potential liquidity, and even solvency tensions can be resolved at a group level and rollover risks are considerably smaller than implied by standard measures of reserve coverage (Box 2). The authorities also pointed to their ambitions for speedy euro adoption, which would not only resolve residual currency and liquidity risks, but also differentiate Estonia from regional peers by confirming its strong policy record. By the same

Box 2. How Meaningful is the Ratio of Estonia's External Short-Term Debt to Reserves for Vulnerability Analysis?

Estonia's short-term external debt is large. At around 360 percent, Estonia's ratio of short-term external debt (at remaining maturity) to international reserves is among the highest in Europe, which raises concerns about the potential emergence of liquidity problems. The short-term external debt is mostly owed by banks and private nonfinancial corporations.

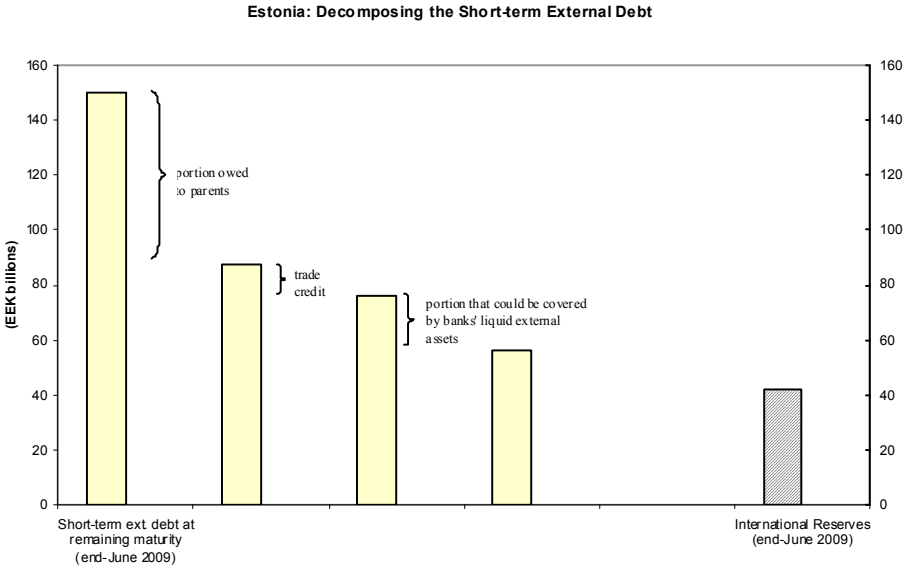
Nevertheless, the country has faced little roll-over problems so far. Why?

- *Composition of the debt*. Most of the short-term external debt is owed to parent companies, which reduces the likelihood that liquidity problems will be resolved in a disorderly manner. backed by merchandise.

- *Buffers*. Estonia's private sector holds relatively large assets abroad. This is particularly important for banks, which keep half of their reserve requirements in liquid external assets (Estonia's reserve requirements are set at 15 percent of banks' total liabilities).

- *Policies*. The Swedish authorities put in place liquidity facilities to support banks, including those active in the Baltics. This has benefited Estonia since its financial sector is primarily Swedish owned. Furthermore, the central banks of Sweden and Estonia concluded a precautionary agreement to compliment the high liquidity buffers of Swedish banks.

These factors are likely to continue playing an important role in the future, which would mitigate Estonia's exposure to roll-over risks. Eventual euro adoption would further contribute to ameliorate these risks.

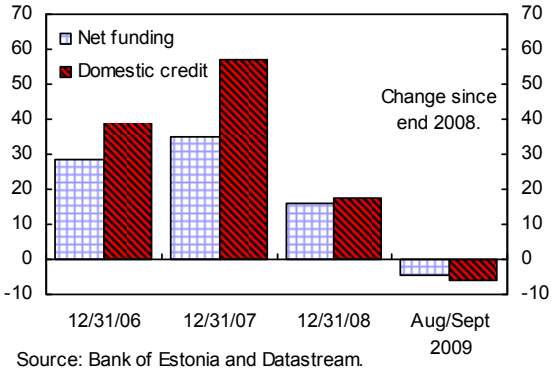


Source: Bank of Estonia and staff estimates

token, a postponement of euro adoption plans would likely lead to an increase of borrowing spreads, which have recently declined on the back of reduced regional tensions and growing anticipated supportive statements by public officials.

18. **Staff identified a number of medium-term risks to the outlook related to stock legacies from the boom years.** The rapid fall of employment, wages and prices raise the risk of a deflationary spiral, especially given high nominal debt burdens. The need for deleveraging may curtail Nordic banks' provision of fresh funding to their Estonian subsidiaries. Indeed, net inflows from parents have declined compared to previous years, although external liabilities remain large. Nonetheless, the adjustment that has already taken place in response to the crisis suggests that Estonia's external debt burden should steadily decline (Table 7) and be robust to several shocks (Figure 6).

Change in Net Funding from Non-Resident Credit Institutions and Domestic Credit, Billions Kroons 1/



Source: Bank of Estonia and Datastream.
1/ Non-resident credit institutions are mostly parent banks.

19. **The authorities viewed growth prospects more optimistically than staff, mainly on account of confidence effects associated with euro adoption.** This, they expected, will boost foreign direct investment inflows, restart growth as early as 2010 and reduce debt burdens over time. They viewed continued real convergence as inevitable, although they acknowledged that domestic demand cannot play the same role as in the past and growth rates may on average be lower than during the boom. The recovery would therefore be primarily driven by net exports. Staff acknowledged positive confidence effects, but cautioned that euro adoption prospects are already reflected in relatively low risk premia. In any event, it would be no panacea as the authorities' export-led growth strategy required a reorientation of the economy, which will take time and effort, especially in light of the uncertain global environment. In this context, the authorities agreed that protracted slow growth in Nordic trading partners, especially Finland, represented a key risk to the outlook. With a more optimistic view on growth prospects, they viewed the risks of protracted deflation as minor.

IV. Policy Challenges

20. **The authorities' immediate challenge is to ensure a smooth and speedy adoption of the euro, while managing the fallout of the economic crisis.** They appear broadly on track in addressing these issues, although obstacles remain.

- In the **fiscal area**, the authorities are focused on containing the public deficit in 2009, 2010, and beyond to below 3 percent of GDP to qualify for euro adoption as of January 2011.

- In the **financial sector**, rising loan default rates and bank losses will pose supervisory challenges. Regional contagion risks require continued vigilance.

21. **Medium-term challenges are still greater, requiring substantial adjustment by both private and public sectors.** While euro adoption would remove residual currency and liquidity risks, it would not provide a substitute for needed internal adjustment.

- The **private sector** needs to reallocate resources from past boom sectors to export-oriented and profitable activities to attain balanced and sustainable growth. While Estonia's history of economic flexibility is encouraging, the task is hampered by high levels of private indebtedness and current deflation, the reduced availability of foreign capital and lower potential growth, both in Estonia and its trading partners.

- The **public sector** will also need to adapt to an environment of lower growth (and hence revenues), while rolling back the unsustainable expenditure increases of the last two years and replacing temporary fiscal measures by permanent ones. This will require substantial structural reforms. A convincing medium-term fiscal adjustment strategy will be key to making euro adoption successful.

A. Consolidating Public Finances

22. **The authorities' fiscal policy is firmly geared towards qualifying for euro adoption.** Meeting the Maastricht deficit criterion appears within reach as budget implementation has held up remarkably well during the downturn—indeed, Estonia's public deficit and debt remain among the lowest in the EU. This can be attributed to a large and timely fiscal effort, a favorable starting position, as well as strong budget institutions (Box 3). While the deep recession may have suggested to let fiscal stabilizers work fully, staff endorsed the authorities' all-out fiscal push on the grounds that speedy euro adoption would sharply reduce remaining vulnerabilities (see above) and merely move forward fiscal adjustment measures that are necessary anyway. Further, the procyclical impact is mitigated by the increased use of EU grants funding as well as the limited domestic demand impact of some fiscal measures (such as dividends from Eesti Pank and state owned enterprises). Staff argued, however, that when designing measures the short-term focus on qualifying for euro adoption should not distract from the need to initiate structural reforms that achieve a balanced cyclically adjusted fiscal position in the medium-term.

Box 3: What Explains Differences in Fiscal Performance Among the Baltic Countries?

Estonia's fiscal performance in 2009 has been markedly better than in the other two Baltic countries. This was achieved despite seemingly similar macroeconomic trends. Why?

Better fiscal starting position. The fiscal cash deficit in 2008 was about 1 percent of GDP lower than in Lithuania and Latvia. Further, Estonia, where the recession started first, began already with fiscal tightening in 2008 (by revising the 2009 budget late in the approval process), while Lithuania and Latvia continued an expansionary fiscal policy path through late year wage and pension increases with a large carryover into 2009.

Lower automatic effects. The fiscal deterioration in Estonia due to the crisis was about 9 percent of GDP less than in Latvia and 5 percent less than in Lithuania. This is related to:

- *Spending rigidities*. In light of real rigidities, spending as a ratio of the GDP is expected to increase in all countries automatically as the economy collapses. In Estonia, where nominal GDP is dropping by around 15 percent (compared to close to 20 percent in the other two Baltics), spending rigidities are projected to increase the fiscal deficit by only 6½ percent of GDP compared to 10 percent in the other two countries.
- *Social benefits*. The increase in Estonia has been much lower than in Latvia (but not as low as Lithuania), primarily reflecting lower replacement rates for unemployment benefits.

Differences in the 2009 Fiscal Positions of the Baltics
(in percent of GDP, unless indicated otherwise)

	Estonia	Latvia	Lithuania
2009 fiscal balance (projected) 1/	**-2.9**	**-8.6**	**-9.5**
2008 fiscal balance	-2.7	-3.3	-3.2
Change in the fiscal balance	**-0.2**	**-5.3**	**-6.3**
Full year effect of 2008 measures	**0.3**	**-0.5**	**-1.8**
Automatic effects	**-7.6**	**-17.1**	**-12.1**
Expenditure rigidity	-6.6	-10.3	-9.9
Income based social benefits	-0.8	-2.1	-0.3
Revenue-related stabilizer	-0.2	-4.0	-2.0
Additional interest spending	0.0	-0.7	-0.5
Structural measures (net)	**7.5**	**11.2**	**7.4**
Deficit reducing measures	9.1	13.9	8.3
Deficit increasing measures	-1.6	-2.7	-0.9
Residual	-0.4	1.0	0.7
Memorandum items:			
Nominal GDP (percentage change)	-14.6	-19.7	-18.6
Consumption (percentage change)	-14.6	-23.9	-16.8
Wage bill (percentage change)	-13.3	-29.4	-16.4

1/ Adjusted for 2nd pillar pension diversion.

- *Lower revenue elasticity to GDP*. In Latvia the wage bill and private consumption are dropping at a much faster rate than GDP than in the other two Baltics. In addition, there was a large claim of accumulated VAT refunds. In Lithuania, the drop in VAT revenue is partly explained by cross-border shopping following the depreciation of the polish zloty. In contrast, revenue collection in Estonia has held up very well, even above macroeconomic parameters, suggesting recent improvements in tax administration.
- *The larger interest bill* in Latvia and Lithuania is directly related to their higher fiscal deficits.

A fiscal adjustment effort fully offsetting the automatic effects mentioned above. Latvia's adjustment package was in fact larger than in Estonia (and Lithuania), but a significant share was used to offset expansionary fiscal initiatives taken in 2009, including PIT cuts and pension increases. Estonia's smaller package was sufficient to compensate for the recession's automatic effects on the budget.

Estonia: Selected Fiscal Indicators
(Percent of GDP)

	2005	2006	2007	2008 Est.	2009 Proj.	2010 Proj.
Revenues	36.8	38.3	38.7	39.5	46.5	48.5
Expenditures	35.2	35.0	35.8	41.8	49.5	51.5
General government balance (cash basis)	1.6	3.3	2.9	-2.3	-3.0	-3.0
Cyclically adjusted balance (HP)	0.8	0.9	-0.9	-4.6	-0.3	-0.3
Transfers from the EU 1/	1.4	2.1	3.0	3.0	6.7	8.3
Transfers to the EU (contribution to the EU budget)	1.0	1.0	1.2	1.2	1.3	1.3
Cyclically adjusted balance corrected for net EU transfers 1/	0.3	-0.2	-2.7	-6.4	-5.7	-7.3
Fiscal impulse 2/	0.0	0.5	2.5	3.7	-0.7	1.6
Memorandum items:						
General government balance (ESA95 accrual basis)	1.5	2.9	2.7	-2.7	-2.9	-3.2
Output gap (average of HP and production function)	2.8	7.9	12.1	7.0	-7.9	-8.4

Source: Data provided by the Estonian authorities and Fund staff projections.

1/ Virtually all EU funds in Estonia are channelled through the budget.
2/ First difference in the cyclically adjusted structural balance, with sign reversed.

23. **The 2009 deficit target of 3 percent of GDP is achievable, but risks remain.** The authorities responded to a widening fiscal gap as early as late 2008 by making revisions to the 2009 budget. In 2009, they passed two supplementary budgets in February and June, totaling 7½ percent of GDP in measures, 2/3 of them on the expenditure side and 1/3 reversing planned or enacted previous expansionary policies. An additional 1½ percent of measures taken in September relies heavily on one-off dividends from state-owned enterprises. Altogether, adjustment was achieved in equal parts through durable structural reforms, potentially reversible measures once fiscal space emerges, and pure one-offs. Key risks to the outcome are larger than anticipated deficits of local governments and the health fund, lower than projected non-tax revenues, and a weaker macroeconomic framework.

Estonia: Overview on the 2009 Fiscal Measures

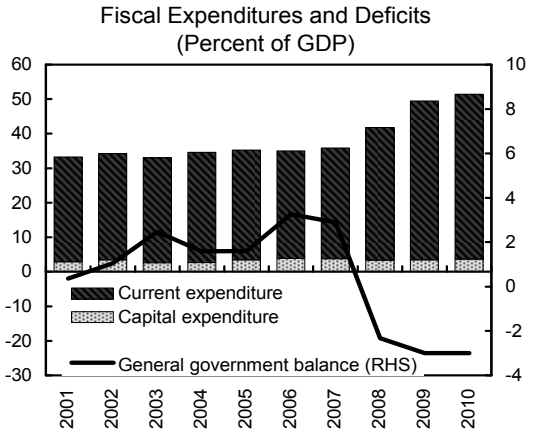
(in percent of GDP)

Total measures	9.3
Structural reforms (2 % VAT increase, excise taxes, social benefit decreases (health, pensions), consolidation in public functions)	3.0
Measures that might be reversed should fiscal space become available in the future (operating spending cuts, spending financed by earmarked revenue)	2.5
Measures that are committed to be reversed by 2011 (second pillar pension contributions)	0.6
One year measures (exceptional dividends, land sales, discretionary spending cuts)	3.2
Memorandum items:	
Measures with limited domestic demand impact (dividends, second pillar pension contribution, accounting measures)	3.2
Additional impact of the permanent 2009 measures for 2010	2.4

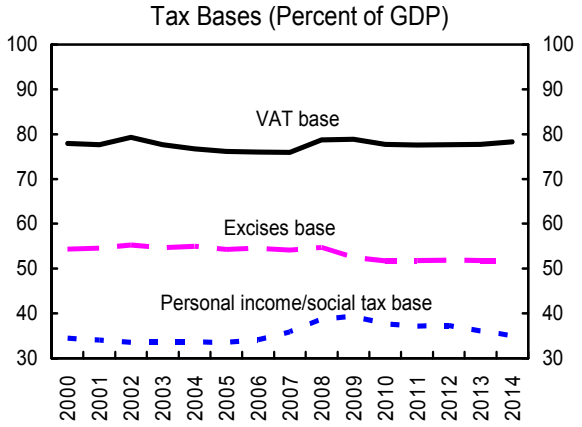
Sources: Estonian authorities; and Fund staff estimates.

24. **For 2010 and beyond, staff advocated a redoubling of the already planned fiscal effort.** The draft 2010 budget contains further spending cuts and some increases of excise taxes, in addition to a number of one-off measures such as property sales (about 3 percent of GDP in total). Staff estimates, however, that the current plans fall short of the deficit target of 3 percent of GDP. In light of considerable macroeconomic and implementation risks (notably in local governments and land sales), additional structurally sound measures of about 1 percent of GDP would provide an appropriate safety margin. The procyclical effect would be compensated by the expected increase in absorption of EU funds. Staff argued that this was all the more necessary as many temporary measures (such as the diversion of contributions from the second to the first pension pillar) will expire in 2011 and medium-term fiscal balances are set to deteriorate under unchanged policies. Early implementation, if possible as part of the 2010 budget, would also provide further evidence of Estonia's medium-term commitment to fiscal sustainability—a key consideration when assessing preparedness for the euro—and provide assurances should early euro adoption plans falter. The authorities agreed that some additional adjustment may be needed, although they would prefer to wait until the 2010 fiscal picture has become clearer. Following discussion with staff during the mission, additional excise increases on energy, amounting to about ¼ percent of GDP, were added to the 2010 budget.

25. **While scope remains for further expenditure rationalization, staff argued that much of the adjustment effort will need to fall on the revenue side.** The size of government in proportion to the economy rose substantially in the last years of the boom, mainly in pensions and health. While some of this spending surge has since been unwound,



Source: Estonia Authorities; and Staff estimates and projections.



Source: Estonia Statistical Office.

the authorities agreed that there remains scope for better targeting child and family benefits, and further rationalizing public services (health and administration); pension reform represents an important longer-term goal. The key medium-term fiscal challenge lies, however, in a likely erosion of the tax base as economic activity shifts toward more lightly taxed activities such as exports and investment. With the need to protect social safety nets limiting the scope for further spending cuts, staff laid out a range of options to strengthen tax revenues (Box 4).

Box 4. Revenue-raising options in support of fiscal consolidation

Estonia has a revenue-productive and cost-effective tax system, characterized by an internationally acclaimed low compliance burden (with some 90 percent of taxpayers filing electronically). Thus, additional revenue sources focus on broadening tax bases while maintaining low marginal tax rates.

In addressing under-collection risks due to the anticipated lower wage bill share and subdued private consumption expenditure, a useful short-term focus would be on eliminating tax privileges. These could include the following:

- *VAT*: Elimination of the reduced rate for hotel accommodation, journals and other printed materials.
- *PIT*: Phased elimination of the tax deductibility of mortgage interest payments, and the withdrawal of the additional child allowance and tax exemptions for annuity income and interest earnings from credit institutions. Pension incomes also enjoy a special tax-free minimum annual allowance, which could be re-examined.
- *CIT*: Based on preliminary quantitative analysis, the current CIT regime may create some bias towards debt financing as the law provides for unlimited and immediate deduction of debt servicing costs. The introduction of thin capitalization rules can shore-up the corporate tax base.
- *Annual motor vehicle* tax: In the EU and international context, the non-taxation of motor vehicles appears anomalous, especially in view of environmental objectives.
- *Revenue administration*: Tax gaps in VAT, fuel taxes, under-declared employment income are reportedly increasing, tax arrears are rising and the administrative capacity to tackle transfer pricing practices seems limited. Addressing these shortcomings will require increased budget appropriations, but with potentially material payoffs.

Over the longer-term and in support of the tradable sector, the authorities could consider enhancing the revenue potential of core taxes. These measures could also increase fiscal space to reduce the tax wedge on labor.

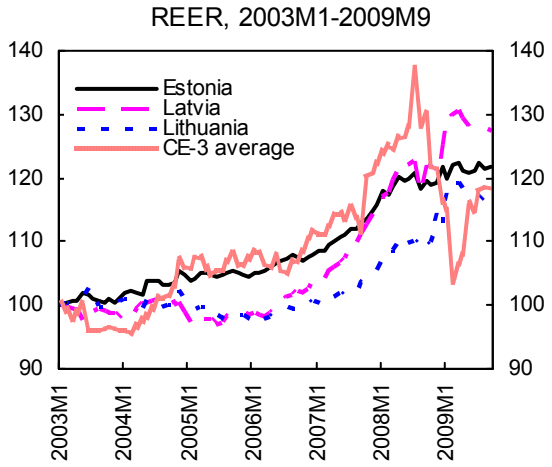
- *PIT*: Collection potential and progressivity could be enhanced by increasing the personal tax-free allowance. Revenue-neutrality could be preserved through the elimination of multiple other allowances or by introducing a second higher marginal tax rate on high-income earners.
- *CIT*: The dividend distribution regime is attractive in an expanding economy with ample reinvestment opportunities. Revenue productivity is low and the system encourages tax planning with long tax deferrals locking in dividends. It also discourages equity finance and could increase the attraction of transfer pricing practices. The authorities could revisit other corporate tax options such as the re-introduction of a *low-rate classical system*; the *advanced corporate tax* whereby tax on distributions is credited against the regular tax; or a *split-rate system* with a higher tax rate on distributed earnings and a lower tax rate on retained profits.
- *Social Tax-VAT rebalancing*: The statutory social tax burden on employers could be lowered by increasing VAT: a one percentage point hike in the latter is almost equal to the revenue loss from a one percentage point reduction in the former.
- *Converting the urban land tax to a property tax on improvement value*: Estonia underutilizes this revenue source compared to OECD member states. As an interim step, stagnating land tax collections could be improved by more frequent land valuations, the imposition of higher centrally legislated rates, and less exemptions and exclusions.

The authorities indicated that some elements of Estonia's tax system could indeed be adjusted to the post-boom environment. In doing so, they would place a priority on growth over distributional considerations and therefore prefer to focus on indirect and environmental taxes, in line with their aim to move the economy from consumption to export-led growth. They were also open to measures to broaden the tax base, consistent with Estonia's traditionally simple tax system.

26. **While the authorities' "balance or better" budget rule has served them well, a new medium-term framework could limit the budget's procyclicality.** The economic boom allowed for maintaining low government debt and the creation of sizable fiscal reserves, but it did not prevent a surge in current spending and tax cuts. Staff therefore advocated to shift revenues to less procyclical taxes, to reduce revenue earmarking and to strengthen multi-year expenditure ceilings. Further, tighter control over local governments finances and limiting contingent fiscal risks (including from local public-private partnerships) should support medium-term fiscal consolidation. The authorities acknowledged that such institutional arrangements, especially limits on local government borrowing, could aid in achieving structural fiscal balance by 2012—a goal to which they remained committed. Staff encouraged them to spell out their fiscal strategy in support of this target.

B. Boosting Competitiveness

27. **Although the current account has turned into a surplus, staff expressed some concerns about Estonia's external competitiveness (Figure 5)**. Staff calculations suggest that the real exchange rate remains overvalued, in spite of the large swing in the current account (Box 5). The performance of Estonia's exports has been broadly comparable to regional peers in recent years, falling sharply during the crisis. On the other hand, depreciations in some trading partners, which temporarily put additional pressure on the real exchange rate, have recently been partly reversed while at the same time unit labor cost reductions in Estonia have taken hold. Its share in world export markets remained broadly stable during the 2006–08 period of real appreciation, suggesting that competitiveness has not been materially dented. The authorities pointed out that the decline in Estonia's exports was not much different from what was recently observed in very competitive countries, such as Finland, Germany, and Sweden. Their assessment is that Estonia's competitiveness remains adequate, particularly in light of the turnaround of the current account and wage declines that are taking place throughout the economy.



Source: INS.

Box 5. Exchange Rate Assessment

Standard methods for exchange rate assessment give mixed signals. On the one hand, current-account-based methods suggests that Estonia's real exchange rate is *slightly undervalued*, which constitutes a sharp reversal vis-à-vis the assessments those indicators suggested less than a year ago. On the other hand, methods based on direct assessments of the real exchange rate still suggest that the real exchange rate is *substantially overvalued*. More broadly, since the previous assessment the overvaluation range (now -3 to 21 percent) has widened and the mid-point overvaluation has declined somewhat.

Estonia: Estimates of Real Exchange Rate Overvaluation
(In percent)

	REER Overvaluation	
	Current assessment 1/	February 2009 staff report 2/
Macrobalance Approach		
Projections-based method 3/	...	3.1
Elasticities-based method 4/	-2.8	7.2
External Sustainability Approach 5/		
Projections-based method 3/	...	5.3
Elasticities-based method 4/	0.0	9.4
Equilibrium Real Exchange Rate Approach	20.6	18.6
REER Deviation from Historical Average 6/	18.5	15.5
Mid-point of overvaluation range	8.9	10.8
Mid-point of overvaluation range (common approaches) 7/	8.9	12.9
Memodandum items (percent of GDP)		
Underlying current account balance (elasticities method)	-6.2	-10.9
Equilibrium current account balance (MB approach)	-5.4	-6.2
Equilibrium current account balance (ES approach)	-4.2	-5.2
Mitigating factor (i.e., capital transfers)	2.0	1.5

1/ Based on end-June 2009 data.
2/ Based on end-October 2008 data.
3/ Uses the end-point WEO projection (for year 2014) as the underlying current account. This method is not used in the current assessment given that the end-point WEO is projected assuming a more depreciated real exchange rate (so, it is not an appropriate underlying current account).
4/ Uses the coefficients of Isard and Faruquee (1998) to estimate the underlying current account.
5/ For February 2009 SR NFA stabilized at the end-September 2008 level (-77 percent of GDP). For current calculations NFA stabilized at the end-June 2009 level (-79 percent of GDP).
6/ Average deviation (of CPI-based REER and ULC-based REER) from their past five-year historical averages.
7/ Excludes projections-based method, which was only calculated for the February 2009 SR.

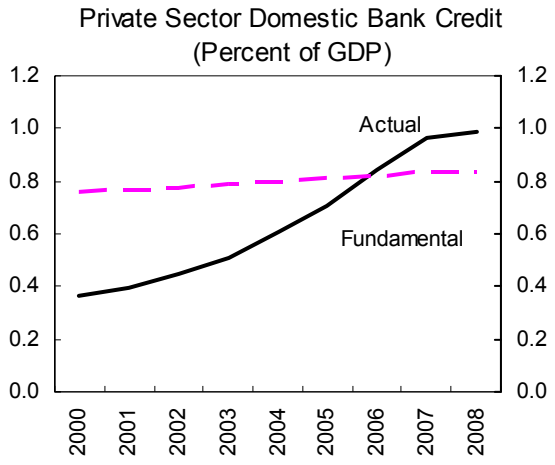
Staff, nevertheless, thinks that real exchange rate overvaluation remains an area of concern. The expansion in domestic demand observed during the credit boom put pressure on the labor market, and generated wage increases that ran ahead of productivity growth even in tradable sectors not immediately affected by the domestic credit boom. These developments are being partially reversed as firms have seen profitability decline, but the process is not complete and it is being achieved in part with a large decline in employment. Staff believes that the outcome of the current-account-based methods needs to be interpreted with caution given the global crisis in financial markets. Rather than an indication of undervaluation, the reversal may be illustrating the magnitude of the sudden stop in international financial flows, and a stronger-than-estimated cyclical decline in Estonia's demand for imports (particularly after a period of over-consumption and over-investment).

28. **The economy seems flexible enough to rebalance economic activity towards export-oriented sectors.** The export sector is diversified and dominated by small and medium-size enterprises integrated in supply chains with Nordic-Baltic neighbors. Domestic prices, wages, and productivity are adjusting fast, to what has essentially been a global shock. In this context, the authorities pointed to the recently enacted labor law which gives more flexibility to the already nimble labor market by reducing high lay-off costs. At the same time, they agreed that the corresponding security component of higher unemployment replacement rates should be introduced as soon as fiscal conditions allow. Targeting EU-funded projects to the tradable sector as well as active labor market policies and research investments are also aimed at boosting competitiveness.

29. **The authorities and staff agreed that maintaining the CBA and seeking euro adoption at the current exchange rate parity remains the best exchange rate policy for Estonia**. The overvaluation of the exchange rate, albeit moderate, imposes a burden on competitiveness and growth. Neverthless, Estonia's negligible level of public debt, the substantial fiscal adjustment that has already taken place, and the implied delay in imminent euro adoption (due to the violation of the Maastricht exchange rate stability criterion) would advise against repegging as a more depreciated level. Moreover, the economy's proven flexibility suggests that the necessary adjustment can be achieved through factor price adjustment alone. The authorities felt strongly that any change of the parity, which has been in place for over 15 years, would constitute a breach of trust and have a highly adverse impact on the economy. In this context they reiterated their commitment to adopt the euro at the current exchange rate.

C. Addressing Private Sector Indebtedness

30. **While not representing a liquidity risk, the large stock of private sector debt, accumulated in the boom years, is likely to weigh on growth prospects.**[2] With non-financial sector loans at over 170 percent of GDP, private sector indebtedness is high in Estonia relative to its wealth, income level and measures of 'fundamental' credit deepening (Figure 3).[3] Much of long-term debt (almost all denominated in euros and at floating interest rates) is linked to the depressed real estate sector. Nonetheless,



Source: IFS and Staff calculations

[2] See Annex for more details.
[3] The estimate of 'fundamental' credit over GDP is based on the methodology employed in Cottarelli, et al (2003).

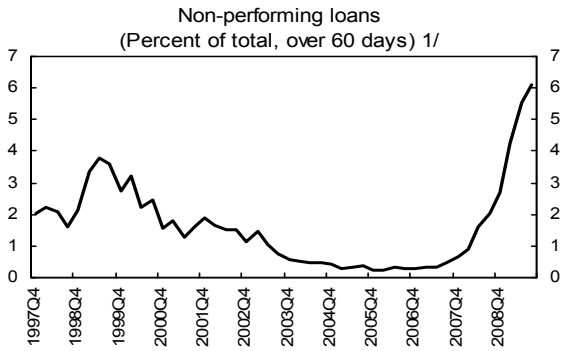
financial difficulties of debtors seem to have lately eased somewhat, thanks to low interest rates in the eurozone and banks' willingness to reschedule a portion of debt payments into the future. Staff cautioned, however, that this relief was likely to be temporary as price and wage deflation and increases in euro zone interest rates could result in a higher debt servicing burdens in the years ahead. International evidence suggests that high debt levels often slow the recovery of consumption and investment. At the same time problematic legacy loans, if unaddressed, constrain intermediaries to provide fresh lending. Some reduction of debt levels may therefore be desirable to ensure that the convergence process can resume apace. Anecdotal evidence from banks suggest that currently only few loan restructurings entail debt relief in net present value terms.

31. **While the authorities accepted that deleveraging was necessary, they were more sanguine than staff about its impact on future economic activity**. In the near term, consumption would be more subdued than in the past, but this would not stop the catch-up with the old EU member states, which was underpinned by strong supply-side factors and market fundamentals. They also pointed out that Estonia's public debt levels are much lower than in comparator countries in the EU and other emerging markets.

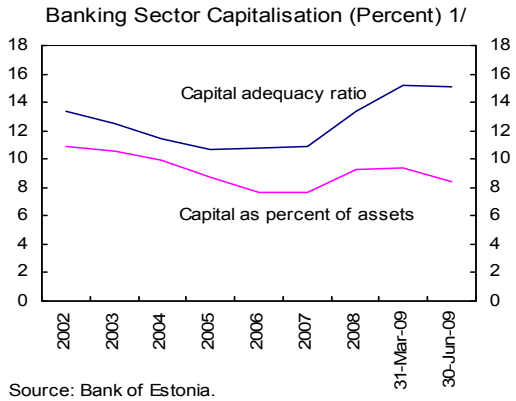
32. **Staff agreed with the authorities that heavy-handed policy intervention to address the debt overhang must be avoided**. Any interference in private contracts, such as retroactive limits on debtors' liabilities, would severely undermine Estonia's tradition of the rule of law. Imposing such provisions on new contracts would also likely constrain the availability of credit. Staff pointed out, however, that appropriately designed credit enforcement legislation could promote the rehabilitation of viable and speedy exit of non-viable firms, and help good faith individual debtors make a fresh start. It therefore welcomed the recently enacted Reorganization Act which should facilitate debt restructurings. A preliminary assessment had, however, identified some room for optimizing current legislation. For example, the Bankruptcy Act imposed a relatively long period of inactivity (5–10 years) on individuals in personal bankruptcy. More generally, while existing legislation maintained payment discipline, it did not provide adequate incentives for viable firms and their creditors to pursue debt workouts. The authorities stressed that any legal changes needed to be mindful of moral hazard issues and expressed their strong support for out-of-court restructuring. Regarding the Reorganization Act, they acknowledged some teething problems, attributed largely to insufficient experience and training among judges and insolvency administrators. Going forward, staff suggested that appropriate changes in corporate taxation could discourage excessive debt accumulation at the firm level (Box 4).

D. Improving Financial Sector Resilience

33. **The financial sector has proven resilient, owing to high capitalization and earnings, and a strong supervisory framework.** Some 95 percent of Estonia's banking system is Nordic-owned, dominated by two Swedish banks with 65 percent market share and a number of branches. The system successfully handled the real world test of liquidity strains in October 2008. As an additional insurance element, Eesti Pank established in February 2009 a precautionary swap arrangement with the Swedish Riksbank to compliment high liquidity buffers of Swedish banks operating in Estonia (an FSAP recommendation),



Source: Bank of Estonia.



Source: Bank of Estonia.
1/ The CAR excludes capital held in Estonia but attributed to subsidiaries in Latvia and Lithuania.

which has however not been utilized.
Contingency plans to deal with possible pressures on deposits have also been put in place. More recently, the liquidity position of parent banks has benefited from the reopening of the European wholesale funding market.

34. **The main near-term challenge is credit risk, where rising nonperforming loans (NPLs) may test banks' resilience.** While there are signs that the growth of NPLs has slowed recently, this could prove temporary given the expiration of debt repayment holidays, limited near-term growth prospects, and rising unemployment coupled with ending of comparatively short unemployment insurance periods. It is also uncertain if real estate prices have bottomed. Currently, banks have significant buffers against rising NPLs, as they have high capital adequacy levels, which is partly due to a tax regime that has favored the retention of earnings. The authorities' own stress tests as well as those performed on a group level by the Swedish authorities show that the system is resilient to a substantial increase in NPLs. Nevertheless, staff suggested that the authorities continue to closely monitor banks' financial conditions, including their debt restructuring practices, to ensure that they are based on sound economic principles. The authorities agreed that banks should continue to maintain adequate provisions for expected losses, and parent banks should stand ready to inject further capital if needed. Consideration will also be given to further developing macrofinancial risk analysis.

35. **Staff urged the authorities to accelerate the implementation of measures to strengthen the financial system.** Priority should be given to pending legislation on a bank

resolution framework—a key recommendation of the last FSAP update. Complacency now would delay or dilute the necessary reforms, risk future problems being less tractable and thus undermine public confidence. The authorities pointed to recent progress in strengthening cooperation on cross-border financial stability in the Nordic region, including through a memorandum of understanding on crisis management and burden sharing principles. Additionally, they recently took steps to strengthen the deposit insurance fund by tripling the annual premium to 10 basis points.

Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2007–10
(In units as indicated)

	2007	2008	2009 Proj.	2010 Proj.
National income, prices and wages				
Nominal GDP (kroons, billions)	244.5	251.5	214.7	208.7
GDP (euro, billions)	15.6	16.1	13.7	13.3
Real GDP growth (year-on-year in percent)	7.2	-3.6	-14.7	-1.5
Average HICP (year-on-year change in percent)	6.7	10.6	0.2	-0.2
GDP deflator (year-on-year change in percent)	10.2	6.7	0.0	-1.2
Average monthly wage (year-on-year growth in percent)	20.4	13.8	-4.5	-3.5
Unemployment rate (ILO definition, percent)	4.7	5.5	13.9	16.4
Average nominal ULC (year-on-year growth in percent)	13.9	18.3	1.6	-5.5
Saving-investment balances (in percent of GDP)				
National saving	22.4	20.4	23.8	23.9
Private	16.7	20.3	26.4	27.3
Public	5.7	0.1	-2.7	-3.4
Domestic investment	40.2	29.7	20.5	21.9
Private	36.4	26.3	16.9	18.1
Public	3.8	3.4	3.5	3.7
Foreign saving	17.8	9.3	-3.3	-2.0
General government (ESA95 basis; in percent of GDP)				
Revenue and grants	38.7	39.5	46.5	48.5
Expenditure and net lending	36.0	42.2	49.4	51.7
Fiscal balance	2.7	-2.7	-2.9	-3.2
External sector (in percent of GDP)				
Trade balance	-17.8	-11.7	-3.9	-4.4
Service balance	6.1	7.4	8.1	8.5
Income balance	-6.8	-6.3	-3.1	-4.4
Current account	-17.8	-9.3	3.3	2.0
Gross international reserves (euro, millions)	2239	2824	2679	2815
In months of imports	2.5	3.3	4.7	4.9
In percent of gross short-term debt (including trade credits)	42.8	38.2	40.5	47.0
In percent of base money	119.0	116.8	120.0	126.8
Gross external debt/GDP (in percent) 1/	111.2	118.7	130.9	129.3
Net external debt/GDP (in percent) 2/	35.6	38.7	37.0	31.4
General government external debt/GDP (in percent)				
Excluding government assets held abroad	2.4	3.1	4.8	6.4
Including government assets held abroad 3/	-7.1	-4.9	-3.5	-1.6
Exchange rate (EEK/US$ - period average) 4/	11.4	10.7	…	…
Money and credit (year-on-year growth in percent)				
Domestic credit to nongovernment	33.0	7.2	-9.3	-8.7
Base money	1.6	28.5	-7.7	-0.5
Broad money	13.5	5.5	-0.9	-0.5

Social Indicators (reference year):
Population (2007): 1.342 million; **Per capita GDP** (2007): €11,581; **Life expectancy at birth** (2006): 78.5 (female) and 67.4 (male); **Poverty rate** (share of the population below the established risk-of-poverty line, 2005): **18.0 percent; Main exports**: machinery and appliances.

Sources: Estonian authorities and IMF staff estimates and projections.

1/ Includes trade credits.
2/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by Estonian residents.
3/ Includes the Stabilization Reserve Fund (SRF).
4/ The Estonian kroon is pegged at 15.6466 kroons to the euro.

Table 2. Estonia: Summary of General Government Operations, 2001–10 [1/]

(Percent of GDP)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
								Prel.	Staff Proj.	
Revenue and grants	33.6	35.2	35.5	36.2	36.8	38.3	38.7	39.5	46.5	48.5
Revenue	33.0	34.6	34.4	34.1	34.1	35.4	35.7	36.3	39.8	40.2
Tax revenue	29.2	30.6	30.3	29.8	30.0	30.3	31.6	32.2	34.0	35.3
Direct taxes	18.0	18.8	18.8	18.5	17.4	17.5	18.6	19.9	20.8	21.5
Personal income tax	6.5	6.4	6.5	6.3	5.6	5.6	6.0	6.3	5.5	5.9
Corporate profits tax	0.7	1.1	1.6	1.7	1.4	1.5	1.7	1.7	1.6	1.2
Social security tax	6.3	6.3	5.9	5.7	5.6	5.6	5.9	6.5	7.2	7.5
Medical insurance tax	4.1	4.1	4.1	4.1	4.1	4.1	4.5	4.9	5.2	5.2
Unemployment insurance tax	...	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.8	1.4
Land and property taxes	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4
VAT	7.9	8.4	8.2	7.5	8.4	9.0	9.1	8.2	8.6	9.1
Excises	3.3	3.2	3.1	3.5	3.8	3.4	3.4	3.6	4.3	4.4
Other taxes (incl. on intern. trade)	0.0	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.4	0.4
Nontax revenue	3.8	4.0	4.1	4.3	4.1	5.1	4.2	4.1	5.8	4.9
Grants	0.6	0.6	1.1	2.1	2.7	2.9	3.0	3.2	6.7	8.3
Expenditure	33.3	34.2	33.0	34.6	35.2	35.0	35.8	41.8	49.5	51.5
Current expenditure	30.4	30.8	30.4	31.9	31.8	31.1	32.0	38.4	46.0	47.7
Expenditure on goods and services	19.8	19.9	19.4	19.7	20.2	19.8	21.0	25.0	29.2	30.7
Wages and salaries	6.7	6.9	7.4	7.1	6.8	6.3	6.6	7.6	8.4	8.2
Other goods and services	13.1	13.0	12.0	12.6	13.3	13.5	14.4	17.4	20.8	22.5
Current transfers and subsidies	10.3	10.6	10.8	12.0	11.4	11.2	10.9	13.3	16.6	16.8
Subsidies	0.7	0.9	1.0	1.3	0.7	0.6	0.3	0.3	0.4	0.3
Transfers to households	9.6	9.7	9.6	10.1	9.8	9.5	9.4	11.7	14.9	15.3
of which: Pensions	6.1	6.0	6.1	6.0	6.0	5.9	5.9	7.1	8.8	9.4
Family benefits	1.2	1.1	1.0	1.4	1.3	1.3	1.2	1.5	1.9	2.0
Sickness benefits	0.7	0.7	0.6	0.8	0.7	0.8	0.8	1.0	1.0	0.8
Unemployment benefits	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	1.1	0.9
Income maintenance	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1
Disability benefits	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4
Prescription drug benefits	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.7
Other	0.2	0.4	0.5	0.5	0.6	0.6	0.6	1.0	1.0	1.0
Transfers to the EU budget	...	...	...	0.6	1.0	1.0	1.4	1.9	2.1	2.1
Interest payments	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
Capital expenditure	2.9	3.5	2.6	2.7	3.4	3.9	3.8	3.4	3.5	3.7
Financial surplus (+) / deficit (-)	0.3	0.9	2.5	1.6	1.6	3.3	2.9	-2.3	-3.0	-3.0
Net lending	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall surplus (+) / deficit (-)	0.4	1.1	2.5	1.6	1.6	3.3	2.9	-2.3	-3.0	-3.0
Financing										
Domestic financing	...	...	...	...	...	...	...	...	-1.1	1.2
Foreign financing	...	...	...	...	...	...	...	...	4.0	1.8
Memorandum items:										
Primary fiscal balance (+, surplus)	0.6	1.3	2.7	1.8	1.8	3.4	3.0	-2.2	-2.8	-2.9
Overall balance, ESA95 basis 2/	-0.1	0.3	1.7	1.7	1.5	2.9	2.7	-2.7	-2.9	-3.2
Total general government debt										
Excluding government assets held abroad	4.8	5.7	5.6	5.0	4.5	4.2	4.7	5.7	9.6	9.3
Including government assets held abroad	1.5	0.4	-2.3	-3.1	-3.7	-5.2	-3.2	-0.8	3.2	3.1
Nominal GDP (kroons, billion)	109.1	121.7	136.4	151.5	175.0	207.0	244.5	251.5	214.7	216.9

Sources: Estonian authorities and IMF staff estimates and projections.

1/ Cash basis.
2/ Source: Estonia's Statistical Office.

Table 3. Estonia: Summary Balance of Payments, 2002-14

	2002	2003	2004	2005	2006	2007	Est. 2008	Projections 2009	2010	2011	2012	2013	2014
	(In millions of EURO)												
Current Account	-825	-985	-1,095	-1,116	-2,238	-2,783	-1,498	453	268	225	-46	-168	-395
Primary Current Account 1/	-480	-523	-586	-661	-1,549	-1,723	-493	884	857	876	690	615	442
Trade Balance	-1,180	-1,376	-1,569	-1,550	-2,388	-2,785	-1,875	-533	-586	-682	-768	-866	-1,067
Exports	3,704	4,055	4,764	6,348	7,761	8,087	8,539	6,267	6,367	6,682	7,139	7,667	8,247
Of which: goods for processing	1,146	1,204	804	647	1,281	990	821	602	612	642	686	737	793
Imports	-4,883	-5,430	-6,333	-7,898	-10,149	-10,872	-10,414	-6,800	-6,953	-7,364	-7,907	-8,532	-9,313
Of which: goods for processing	-964	-962	-672	-587	-1,174	-970	-948	-619	-633	-670	-719	-776	-847
Services Balance	632	733	891	839	790	958	1,188	1,116	1,137	1,156	1,161	1,199	1,211
Receipts	1,800	1,960	2,294	2,612	2,787	3,200	3,530	3,168	3,233	3,384	3,542	3,744	3,957
of which: travel and tourism	585	592	717	784	811	754	820	736	751	787	823	870	920
Payments	-1,168	-1,227	-1,403	-1,773	-1,997	-2,241	-2,342	-2,052	-2,096	-2,228	-2,381	-2,545	-2,746
Income	-345	-463	-509	-455	-688	-1,059	-1,005	-431	-589	-652	-736	-783	-838
Current Transfers	67	119	92	50	49	104	194	301	306	402	297	282	298
Capital and Financial Account	834	1,186	1,449	1,311	2,648	2,701	2,052	-598	-132	-69	94	265	521
Capital Transfers	41	62	69	85	289	164	161	440	601	388	322	320	339
Financial Account	794	1,123	1,380	1,226	2,359	2,537	1,892	-1,038	-733	-457	-229	-55	182
Direct Investment 2/	167	685	554	1,751	550	725	598	36	118	138	155	169	182
From abroad	307	822	771	2,307	1,432	1,998	1,334	422	353	416	483	535	590
Outward (by Estonians)	-140	-137	-217	-556	-881	-1,273	-736	-386	-235	-279	-329	-366	-408
Net equity investment 2/	59	32	-44	-1,355	-54	-266	44	-32	-32	-32	-32	-32	-32
Loans and other investments 3/	568	407	870	830	1,862	2,078	1,249	-1,041	-819	-563	-352	-192	32
of which:													
Banks	340	697	897	531	1,583	2,215	1,023	-1,055	-863	-639	-256	-128	64
Government	-194	-211	37	-94	-282	-299	348	300	275	193	0	0	0
Monetary Authorities	38	37	11	-44	24	62	-111	0	0	0	0	0	0
Errors and Omissions	50	-53	-135	117	71	171	-50	0	0	0	0	0	0
Overall balance	59	148	219	312	481	90	504	-145	137	155	48	97	125
Memorandum Items:	(In percent of GDP, unless otherwise stated)												
Current Account	-10.6	-11.3	-11.3	-10.0	-16.9	-17.8	-9.3	3.3	2.0	1.6	-0.3	-1.1	-2.5
Trade balance	-15.2	-15.8	-16.2	-13.9	-18.1	-17.8	-11.7	-3.9	-4.4	-4.9	-5.3	-5.7	-6.6
Non-factor services balance	8.1	8.4	9.2	7.5	6.0	6.1	7.4	8.1	8.5	8.3	8.1	7.9	7.5
Income balance	-4.4	-5.3	-5.3	-4.1	-5.2	-6.8	-6.3	-3.1	-4.4	-4.7	-5.1	-5.1	-5.2
Compensation of employees, net	0.2	0.3	1.1	1.5	1.9	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Reinvested earnings, net	-2.2	-4.2	-4.7	-3.5	-5.2	-6.7	-5.6	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4
Other income, net	-2.4	-1.4	-1.7	-2.0	-1.9	-1.5	-1.7	-3.9	-5.1	-5.3	-5.7	-5.7	-5.7
Current transfers	0.9	1.4	1.0	0.4	0.4	0.7	1.2	2.2	2.3	2.9	2.1	1.9	1.9
Export growth (in percent)	-1.4	9.5	17.5	33.2	22.3	4.2	5.6	-26.6	1.6	4.9	6.8	7.4	7.6
Import growth (in percent)	5.6	11.2	16.6	24.7	28.5	7.1	-4.2	-34.7	2.3	5.9	7.4	7.9	9.2
Net FDI	2.1	7.9	5.7	15.7	4.2	4.6	3.7	0.3	0.9	1.0	1.1	1.1	1.1
Gross International Reserves (EURO millions) 4/ 5	964	1,099	1,318	1,648	2,120	2,239	2,824	2,679	2,815	2,971	3,018	3,116	3,241
In months of imports	2.4	2.4	2.5	2.5	2.5	2.5	3.3	4.7	4.9	4.8	4.6	4.4	4.2
Relative to gross short-term debt (ratio) 6/ 7/	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
Total external debt 8/													
Gross	57.8	64.4	77.2	86.6	97.7	111.2	118.7	130.9	129.3	122.1	116.8	111.0	106.8
Net 9/	10.4	12.9	17.5	18.2	27.4	35.6	38.7	37.0	31.4	25.6	22.5	20.1	19.1
NIIP	-54.1	-65.9	-86.5	-85.2	-74.6	-74.3	-75.0	-81.4	-77.2	-69.8	-65.3	-60.7	-57.7
General government external debt 10/													
Excluding Govt. assets held abroad	2.8	2.8	3.9	3.7	3.4	2.4	3.1	4.8	6.4	7.5	7.2	6.8	6.5
Including Govt. assets held abroad	-2.5	-5.1	-4.2	-4.5	-6.0	-7.1	-4.9	-3.5	-1.6	-0.1	-0.1	-0.1	-0.1
Debt Service/Exports of GNFS (in percent)	33.8	31.9	37.1	37.6	46.0	56.4	66.7	117.1	112.4	106.4	99.8	92.9	87.0

Sources: Bank of Estonia and IMF staff estimates and projections.
1/ Excluding interest payments and reinvested earnings.
2/ The large FDI and equity investment flows in 2005 reflect the aquisition of remaining shares of Hansabank, most of which were held by foreigners, by its swedish parent
3/ Includes operations in debt securities.
4/ Excludes Government deposits held abroad (including in the SRF).
5/ Changes in gross international reserves may differ from flows implied by overall balance of payments due to valuation changes.
6/ Includes trade credits.
7/ Short term debt is defined on the basis of original maturity.
8/ Starting in 2000, the definition of external debt was widened to include money market instruments and financial derivatives.
9/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by Estonian residents.
10/ Includes government guaranteed debt.

Table 4. Estonia: Macroeconomic Framework, 2001–14
(Percent of GDP, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
									Projection					
GDP real growth (percent)	7.5	7.9	7.6	7.2	9.4	10.0	7.2	-3.6	-14.7	-1.5	2.8	2.9	3.2	3.3
Contribution to real GDP growth (percent)														
Consumption 1/	4.5	6.2	5.1	5.7	5.5	7.8	5.6	-1.9	-10.8	-2.5	2.0	2.0	2.1	2.5
Investment 2/	5.8	7.7	5.1	2.4	4.4	10.6	5.9	-8.5	-13.5	1.3	1.5	1.4	1.5	2.1
Exports (goods and nonfactor services)	0.4	-0.8	5.3	10.1	13.6	10.9	0.0	-0.5	-12.0	0.5	2.7	3.2	3.5	3.5
Imports (goods and nonfactor services)	-3.1	-5.1	-7.9	-11.0	-14.0	-19.3	-4.3	7.3	21.6	-0.8	-3.4	-3.8	-3.9	-4.8
National saving	22.7	21.7	21.8	21.8	23.8	21.8	22.4	20.4	23.8	23.9	24.3	23.2	23.2	23.1
Private	19.7	17.7	17.5	18.2	19.5	16.9	16.7	20.3	26.4	27.3	25.4	22.6	21.5	20.4
Public	3.0	4.0	4.4	3.6	4.3	4.9	5.7	0.1	-2.7	-3.4	-1.1	0.6	1.7	2.7
Investment	27.9	32.3	33.1	33.1	33.8	38.7	40.2	29.7	20.5	21.9	22.7	23.5	24.3	25.5
Private	25.0	28.8	30.5	30.4	30.3	34.9	36.4	26.3	16.9	18.1	19.0	19.6	20.1	20.8
Public	2.9	3.5	2.6	2.7	3.4	3.9	3.8	3.4	3.5	3.7	3.7	3.9	4.2	4.8
Foreign saving	5.2	10.6	11.3	11.3	10.0	16.9	17.8	9.3	-3.3	-2.0	-1.6	0.3	1.1	2.5
Memorandum items:														
Fiscal balance 3/4/	0.4	1.1	2.5	1.6	1.6	3.3	2.9	-2.3	-3.0	-3.0	-2.0	-1.0	-0.4	0.0
Revenues and grants	33.8	35.2	35.5	36.2	36.8	38.3	38.7	39.5	46.5	48.5	44.3	42.5	41.1	39.8
Expenditure and net lending	33.5	34.1	33.0	34.6	35.2	35.0	35.8	41.8	49.5	51.5	46.3	43.5	41.6	39.7
Cyclically-adjusted balance	0.8	1.1	2.8	1.8	0.8	0.9	-0.9	-4.6	-0.3	-0.3	-0.3	0.0	0.0	0.0
Total general government debt	4.8	5.7	5.6	5.0	4.5	4.2	3.4	4.7	5.7	8.4	10.1	10.8	10.6	10.0
Net non-debt creating capital inflows ("+" inflow)	7.1	4.4	8.9	6.0	4.3	5.9	4.0	5.0	3.2	5.1	3.6	3.1	3.0	3.0
Capital transfers 5/	0.2	0.5	0.7	0.7	0.8	2.2	1.0	1.0	3.2	4.5	2.8	2.2	2.1	2.1
Net equity investment	0.8	0.9	0.4	-0.5	-12.1	-0.4	-1.7	0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Net foreign direct investment	6.0	2.9	7.9	5.7	15.7	4.2	4.6	3.7	0.3	0.9	1.0	1.1	1.1	1.1
HICP inflation (average, in percent)	5.6	3.6	1.4	3.0	4.1	4.4	6.7	10.6	0.2	-0.2	0.5	1.3	2.5	2.5
CPI inflation (average, in percent)	5.8	3.6	1.3	3.0	4.1	4.4	6.6	10.4	0.0	-0.2	0.5	1.3	2.5	2.5
Employment growth (average, year-on-year in percent)	0.9	1.4	1.5	0.2	2.0	6.4	1.4	0.2	-9.2	-3.6	0.8	1.7	-0.3	-0.3
Unemployment rate (percent)	12.6	10.3	10.0	9.7	7.9	5.9	4.7	5.5	13.9	16.4	15.2	13.2	12.8	12.4
Average wage growth (percent)	13.0	10.9	9.7	7.8	11.4	16.2	20.4	13.8	-4.5	-3.5	1.8	2.5	2.8	3.0
Labor compensation share of GDP	44.6	44.2	44.3	44.3	44.2	44.9	47.3	51.3	52.1	49.8	49.2	49.4	47.8	46.3
Output gap (in percent of potential output)	-1.7	-1.3	-1.2	-0.6	2.8	7.9	12.1	7.0	-7.9	-8.4	-5.4	-3.1	-1.2	0.1

Sources: Estonian authorities, and IMF staff estimates and projections.

1/ Includes government, private and nonpublic institutions serving households.
2/ Includes private and public capital formation, changes in inventories, and statistical discrepancy.
3/ Cash basis. Public savings minus public investment differs from the fiscal balance by the amount of capital transfers received from abroad.
4/ Medium-term balances consistent with the authorities' stated targets for cylically adjusted balances..
5/ Mainly EU capital grants, all of which are channelled through the budget.

Table 5 Estonia: Indicators of External Vulnerability, 2005–09
(Percent of GDP, unless otherwise indicated)

	2005	2006	2007	2008	Latest Observation	Date
Financial indicators						
Public sector external debt 1/	3.7	3.4	2.4	3.1		
Broad money (year-on-year, in percent)	41.9	28.2	13.5	5.5	0.6	Q2 2009
Base Money (year-on-year, in percent)	33.0	30.7	1.6	28.5	0.5	Q2 2009
Private sector credit (year-on-year, in percent) 2/	64.9	62.1	33.0	8.4	0.1	Q2 2009
External Indicators						
Exports (year-on-year, in percent)	33.2	22.3	4.2	5.6	-13.3	Jun-09
Imports (year-on-year, in percent)	24.7	28.5	7.1	-4.2	-30.3	Jun-09
Current account balance	-10.0	-16.9	-17.8	-9.3	4.9	Q2 2009
Capital and financial account balance	11.7	20.0	17.3	12.8	1.0	Q2 2009
Gross official reserves (in euro millions)	1,648	2,120	2,239	2,824	2,688	Q2 2009
NFA of the consolidated banking system (in euro millions)	-667	-1,597	-3,404	-3,285	3,711	Q2 2009
Central Bank short-term foreign liabilities (in euro millions)	3.1	29.3	85.5	8.9	7.2	Q1 2009
Short term foreign assets of the financial sector (in euro millions) 3/	3,146	4,017	5,401	3,097	2,906	Q1 2009
Short term foreign liabilities of the financial sector (in euro millions)	2,613	3,715	5,168	9,993	9,432	Q1 2009
Open net foreign currency position of the financial sector (in euro millions)	633	506	2,213	3,316	3,654	Jul-09
Official reserves in months of imports (excl. imports of goods for processing)	2.7	2.8	2.7	3.6	5.2	Q2 2009
Broad money to reserves (ratio)	3.2	3.2	3.4	2.9	3.2	Jul-09
Total short term external debt to reserves 4/	2.02	2.15	2.34	2.62	2.4	Q2 2009
Total external debt 5/	86.6	97.7	111.2	118.7	131.0	Q2 2009
of which: Public sector debt 1/	3.7	3.4	2.4	3.1	4.9	Q2 2009
Net external debt 6/	18.2	27.4	35.6	38.7	43.1	Q2 2009
Debt service to exports of GNFS	37.6	46.0	56.4	66.7	...	
External interest payments to exports of GNFS, in percent	2.3	2.9	4.7	6.4	5.9	Q2 2009
External Amortization payments to exports of GNFS, in percent	35.2	43.1	51.7	60.3	...	
Exchange rate (per US$, period average)	12.6	12.5	11.4	10.7	10.5	Oct-09
REER (percent change, period average; appreciation (+))	1.4	1.8	4.6	7.0	1.7	Sep-09
Financial Market Indicators						
Stock market index 7/	664	856	742	274	436	17/9/2009
Foreign currency debt rating 8/	A	A	A	A	A-	Aug-09
Money market spread 9/	0.02	-0.05	2.01	4.10	3.8	14/9/2009

Sources: Estonian authorities, Bloomberg, Standard & Poor's, and IMF staff estimates.

1/ Total general government and government-guaranteed debt excluding government assets held abroad.
2/ Credit to households and nonfinancial institutions.
3/ Excluding reserve assets of the Bank of Estonia.
4/ By original maturity.
5/ External debt includes money market instruments and financial derivatives.
6/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by residents.
7/ Tallinn stock exchange index (OMX Tallinn), end of period.
8/ Standard & Poor's long-term foreign exchange sovereign rating.
9/ One-month spread between Tallinn interbank borrowing rate (TALIBOR) and the corresponding EURIBOR rate. 2008 data refer to end period.

Table 6. Estonia: Monetary Survey, 2003–10
(Millions of EEK, unless otherwise indicated)

	2003	2004	2005	2006	2007	2008	Proj. 2009	Proj. 2010
Banking Survey								
Net foreign assets	-1,072	-11,427	-10,429	-24,984	-53,265	-61,007	-46,776	-31,138
BOE	16,709	20,118	25,750	32,760	33,770	43,390	41,121	43,259
Banks	-17,781	-31,545	-36,179	-57,745	-87,035	-104,397	-87,897	-74,397
Net domestic assets	51,376	69,677	93,102	130,963	173,597	187,930	172,493	156,209
Domestic credit	68,933	89,048	117,593	166,916	224,066	242,108	222,280	205,996
Net credit to general government	-162	-1,606	-3,314	-4,289	-3,639	-1,966	983	3,950
Banks	-157	-1,601	-3,308	-4,284	-3,634	-1,964	985	3,952
BOE	-5	-5	-5	-5	-5	-2	-2	-2
Credit to nongovernment	69,095	90,654	120,906	171,204	227,705	244,074	221,297	202,046
Credit to nonfinancial public enterprises	221	651	719	617	1,142	1,783	1,801	1,819
Credit to private sector	41,769	59,997	98,952	160,360	213,252	231,124	208,329	188,948
Credit to nonbank financial institutions	27,105	30,005	21,236	10,227	13,311	11,167	11,167	11,279
Other items (net)	-17,558	-19,371	-24,490	-35,952	-50,469	-49,786	-49,786	-49,786
Broad money	50,304	58,251	82,674	105,986	120,337	126,923	125,717	125,071
M1	30,807	36,178	48,673	61,861	59,964	58,478	56,931	55,940
Currency outside banks	7,140	7,714	8,747	10,068	9,874	10,092	9,997	9,945
Demand deposits	23,667	28,463	39,926	51,794	50,090	48,386	46,934	45,995
Time and savings deposits	19,497	22,073	34,001	44,125	60,374	68,445	68,787	69,131
Monetary Authorities								
Net foreign assets	16,709	20,118	25,750	32,760	33,770	43,390	41,121	43,259
Foreign assets	17,195	20,626	25,799	33,181	35,001	43,442	41,173	43,311
of which: currency board cover 1/	13,450	16,672	22,171	28,975	29,439	37,838	34,922	34,742
Foreign liabilities	-485	-508	-48	-420	-1,231	-52	-52	-52
Net domestic assets	-3,259	-3,446	-3,579	-3,785	-4,331	-5,552	-6,199	-8,517
Base money	13,450	16,672	22,171	28,975	29,439	37,838	34,922	34,742
Currency issued	8,324	8,895	10,102	11,763	11,762	11,996	11,664	12,647
Deposits of commercial banks with the BOE	5,063	7,702	11,985	17,121	17,523	25,842	23,258	22,095
Other deposits at BOE	64	75	85	91	155	0	0	0
Memorandum items:								
Base money multiplier	3.7	3.5	3.7	3.7	4.1	3.4	3.6	3.6
Currency-to-deposit ratio	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Velocity (end period)	2.7	2.6	2.1	2.0	2.0	2.0	1.7	1.7
Base money (year on year, in percent)	14.6	24.0	33.0	30.7	1.6	28.5	-7.7	-0.5
Broad money (year on year, in percent)	10.9	15.8	41.9	28.2	13.5	5.5	-0.9	-0.5
Credit to the private sector (year on year, in percent)	32.5	43.6	64.9	62.1	33.0	8.4	-9.9	-9.3

Source: Bank of Estonia and IMF staff estimates and projections.
1/ Currency board cover is equivalent to base money (e.g., the sum of currency issued plus the kroon liabilities of the BOE in its correspondent accounts).

Table 7. Estonia: External Debt Sustainability Framework, 2003–14
(Percent of GDP, unless otherwise indicated)

	Actual						Projections						Debt-stabilizing non-interest current account 6/
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Baseline: External debt	64.6	76.8	85.4	97.8	111.2	118.7	130.9	129.3	122.1	116.8	111.0	106.8	-5.4
Change in external debt	6.7	12.2	8.6	12.4	13.4	7.6	12.1	-1.5	-7.3	-5.2	-5.9	-4.2	
Identified external debt-creating flows (4+8+9)	-13.0	-8.7	-12.2	-5.1	-11.3	4.2	13.8	-5.4	-9.0	-6.7	-6.1	-4.8	
Current account deficit, excluding interest payments	9.8	10.6	8.1	14.6	14.4	4.5	-6.6	-6.3	-6.5	-4.8	-3.7	-2.1	
Deficit in balance of goods and services	7.4	8.0	6.3	12.1	11.7	4.3	-4.2	-4.1	-3.4	-2.7	-2.2	-0.9	
Exports	69.2	74.0	78.8	79.8	72.2	75.1	68.8	72.0	72.6	74.2	74.9	75.7	
Imports	76.6	81.9	85.1	91.9	83.9	79.4	64.5	67.8	69.2	71.5	72.7	74.8	
Net non-debt creating capital inflows (negative)	-9.5	-9.6	-10.9	-8.3	-7.2	-8.7	-5.7	-5.4	-3.9	-3.6	-3.6	-3.7	
Automatic debt dynamics 1/	-13.2	-9.7	-9.3	-11.4	-18.4	8.4	26.1	6.4	1.4	1.7	1.2	1.0	
Contribution from nominal interest rate	1.6	1.7	1.9	2.3	3.4	4.8	3.3	4.3	4.9	5.1	4.8	4.5	
Contribution from real GDP growth	-3.1	-4.4	-6.7	-6.7	-5.5	3.6	22.8	2.1	-3.5	-3.4	-3.6	-3.5	
Contribution from price and exchange rate changes 2/	-11.7	-6.9	-4.6	-7.0	-16.4	...	...	...	...	...	...	...	
Residual, incl. change in gross foreign assets (2-3) 3/	19.6	20.9	20.7	17.5	24.7	3.3	-1.7	3.8	1.7	1.4	0.2	0.6	
External debt-to-exports ratio (in percent)	93.4	103.8	108.4	122.6	153.9	158.1	190.3	179.7	168.1	157.5	148.1	141.2	
Gross external financing need (in billions of US dollars) 4/	3.1	4.5	5.3	8.5	11.8	12.9	13.3	13.0	12.8	13.1	13.2	13.5	
Percent of GDP	31.8	37.9	38.1	51.3	55.1	54.6	73.9	74.6	70.8	69.3	65.9	63.7	
Scenario with key variables at their historical averages 5/						118.7	96.1	87.2	79.8	72.9	66.8	61.3	-14.4
Key Macroeconomic Assumptions Underlying Baseline													
Real GDP growth (in percent)	7.2	8.3	10.2	9.3	7.2	-3.6	-14.7	-1.5	2.8	2.9	3.2	3.3	
GDP deflator in US dollars (change in percent)	25.3	12.0	6.3	9.0	20.1	14.2	-10.5	-1.6	1.2	1.2	2.7	2.4	
Nominal external interest rate (in percent)	3.6	3.2	2.9	3.3	4.5	4.8	2.1	3.2	3.9	4.3	4.3	4.3	
Growth of exports (US dollar terms, in percent)	31.0	29.6	24.7	20.6	16.7	14.4	-30.1	1.4	4.9	6.4	7.1	6.9	
Growth of imports (US dollar terms, in percent)	31.9	29.7	21.6	28.5	17.7	4.1	-37.9	1.9	6.1	7.5	7.9	8.8	
Current account balance, excluding interest payments	-9.8	-10.6	-8.1	-14.6	-14.4	-4.5	6.6	6.3	6.5	4.8	3.7	2.1	
Net non-debt creating capital inflows	9.5	9.6	10.9	8.3	7.2	8.7	5.7	5.4	3.9	3.6	3.6	3.7	

Source: Estonian authorities and IMF staff estimates and projections.

1/ Derived as [r - g - r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock. r increases with an appreciating domestic currency (e > 0) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

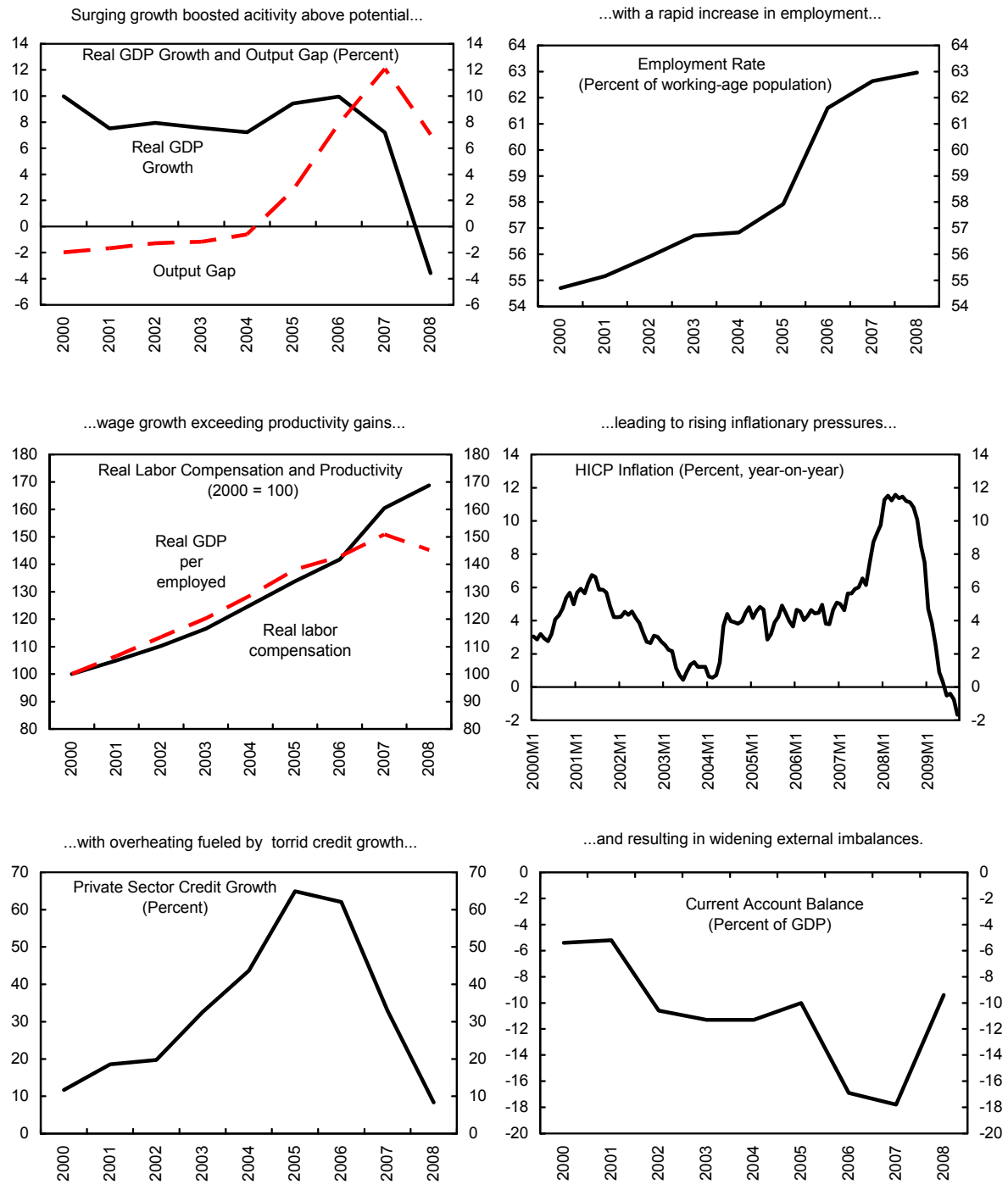
6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Table 8. Estonia: Financial Soundness Indicators of the Banking Sector

	2007	2008	3/31/2009	6/30/2009
Capital adequacy				
Regulatory capital as percent of risk-weighted assets	14.78	18.86	22.19	21.79
Regulatory Tier I capital to risk-weighted assets	10.55	13.18	16.26	15.71
Capital as percent of assets	8.61	8.80	8.91	8.50
Capital adequacy (on consolidated basis)				
Regulatory capital as percent of risk-weighted assets	10.84	13.32	15.25	15.10
Regulatory Tier I capital to risk-weighted assets	8.25	10.47	13.21	11.52
Capital as percent of assets	7.70	9.26	9.33	8.37
Sectoral distribution of bank credit to the private sector (as percent of total credit to private sector)				
Real estate/Construction and Development loans	17.20	17.13	17.69	18.27
Consumer loans	4.93	4.94	4.88	4.89
Industrial/Commercial loans	10.22	5.65	5.68	5.69
Transportation and Road Construction Loans	3.85	1.57	1.64	1.74
Asset quality				
Non-performing loans (NPL) as percent of gross loans	0.44	1.94	3.20	4.46
NPL net of provisions as percent of tier I capital	3.82	16.53	23.36	31.59
Large exposures as percent of tier I capital	0.58	1.17	0.97	1.15
Earnings and profitability				
Gross profits as percent of average assets (ROAA)	2.59	1.18	-0.53	-2.31
Gross profits as percent of average equity capital (ROAE)	30.00	13.24	-5.27	-19.70
Net interest margin (net interest income as percent of interest bearing assets)	2.29	2.13	0.40	0.30
Net interest income as percent of gross income	45.17	56.82	52.67	48.14
Non-interest income as percent of gross income	54.83	43.18	47.33	51.86
Trading income as a percent of gross income	17.79	7.37	10.43	5.78
Non-interest expenses as percent of gross income	40.71	65.19	53.41	80.03
Personnel expenses as percent of non-interest expenses	35.43	28.31	43.65	27.26
Spread between reference loan and deposit rates	2.15	2.21	1.79	1.68
Liquidity				
Liquid assets as percent of total assets	18.12	19.01	17.79	19.28
Liquid assets as percent of short-term liabilities	34.89	32.06	30.01	32.82
Foreign currency loans as percent of total loans	80.50	86.11	86.87	86.96
Deposits as percent of assets	58.50	54.30	56.68	57.49
Sensitivity to market risk				
Off-balance sheet operations as percent of assets	46.88	43.56	41.61	43.39
Gross asset position in derivatives as a percentage of tier I capital	5.57	5.44	4.02	3.64
Gross liability position in derivatives as a percentage of tier I capital	3.94	4.42	3.62	4.43
Net open position in foreign exchange as a percentage of tier I capital	16.02	18.31	17.97	25.64
Net open position in equities as a percentage of tier I capital	65.54	58.71	52.51	54.67

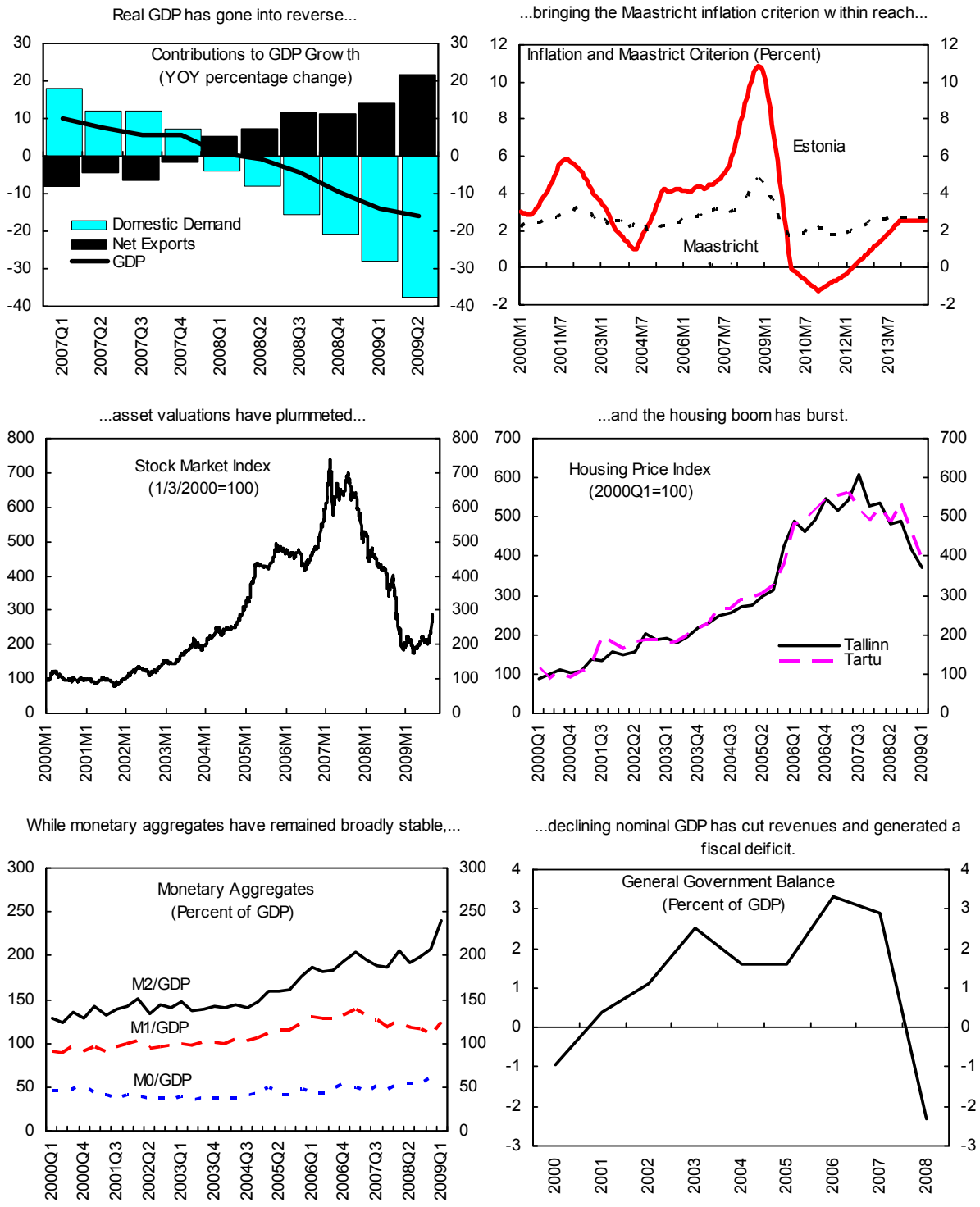
Source: Bank of Estonia.

Figure 1. Estonia: The Boom, 2000-08



Sources: Estonian Statistical Office; and Bank of Estonia.

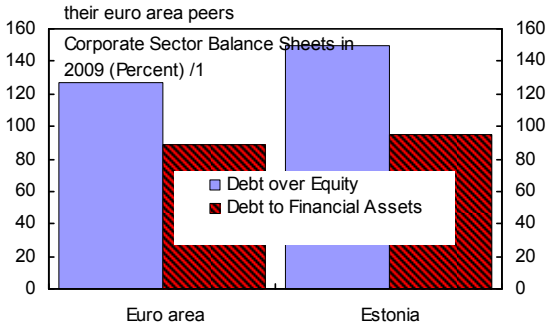
Figure 2. Estonia: Effects of the Bust



Sources: Eurostat; WEO; Bank of Estonia; Ministry of Finance; and Eurostat.

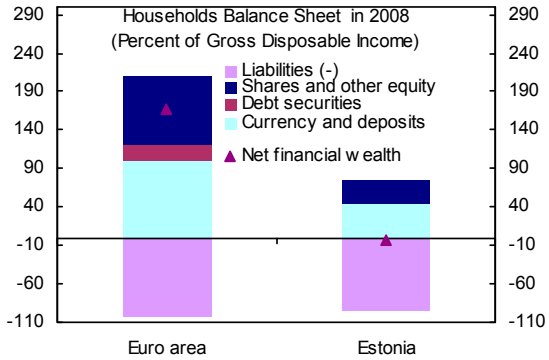
Figure 3. Estonia: Stock Legacies

Estonian corporates are as, if not more, leveraged than their euro area peers

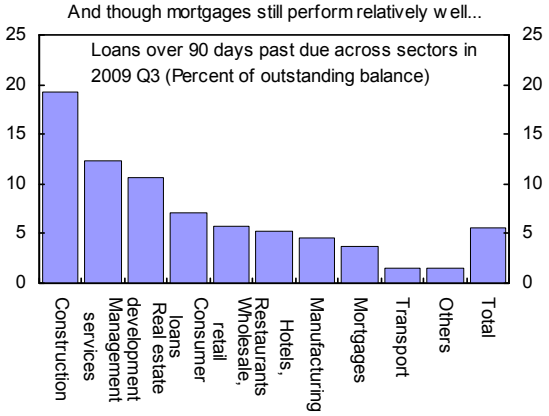


/1 Euro area data refer to end Q1 2009, for Estonia to end Q2 2009

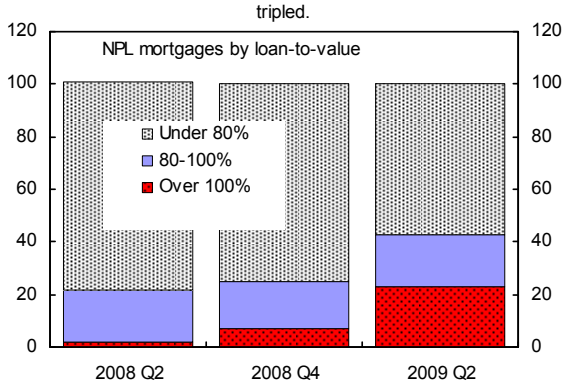
...and so are households, borrowing mainly to acquire real estate



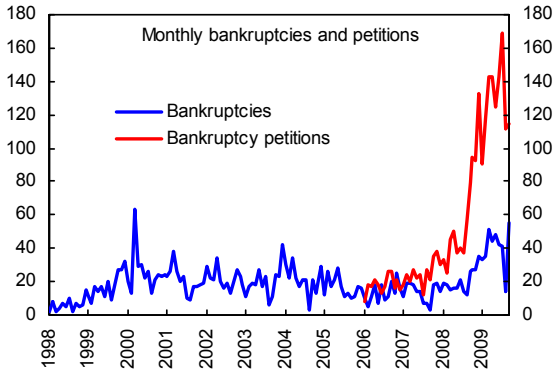
NPLs have risen and are concentrated in non-tradeable sectors. And though mortgages still perform relatively well...



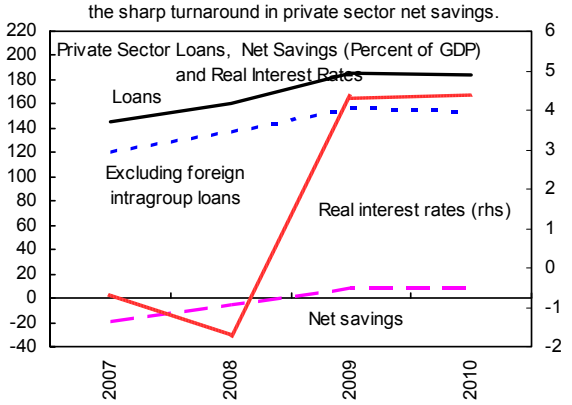
...the proportion of NPL mortgages in negative equity has more than tripled.



The legal system is under pressure....



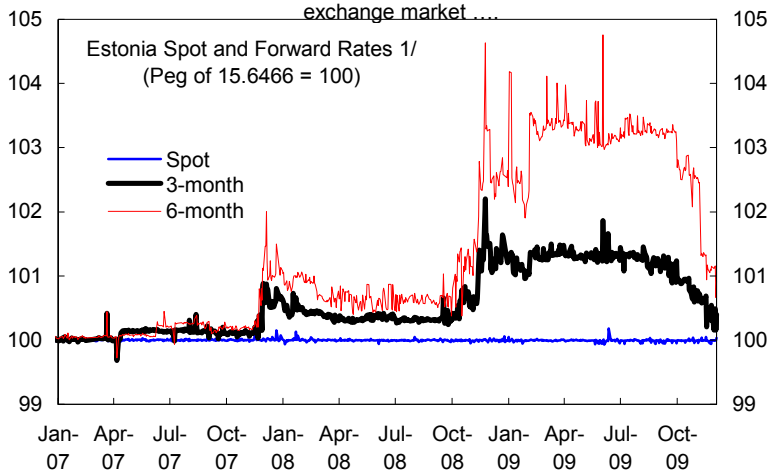
...especially as deflation is increasing the debt burden, despite the sharp turnaround in private sector net savings.



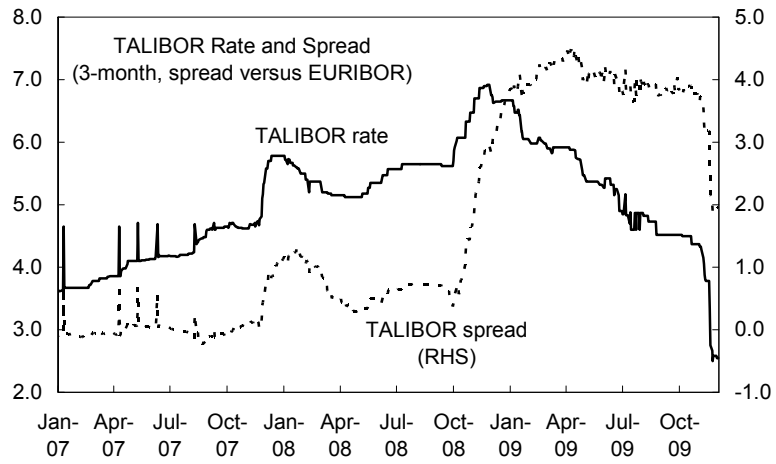
Source: Bank of Estonia; Eurostat; European Central Bank, Estonia Financial Services Authority; Courts Information System; and staff calculations.

Figure 4. Estonia: The impact of the Recent Global Financial Turmoil, 2007-09

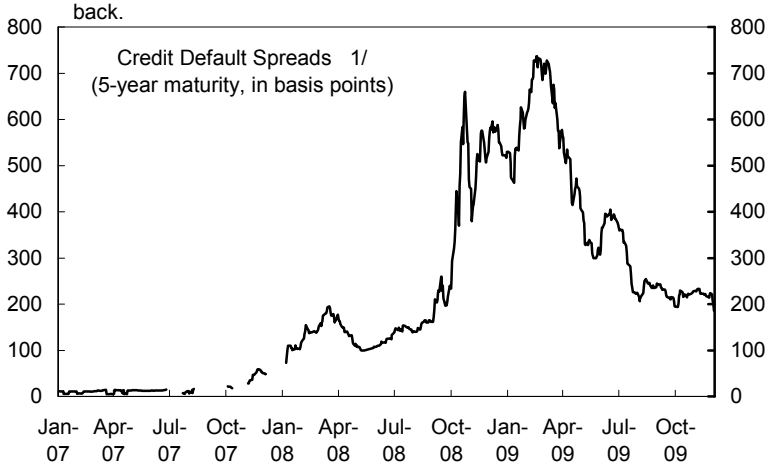
The global financial crisis resulted, until recently, in a widening of forward exchange market ….



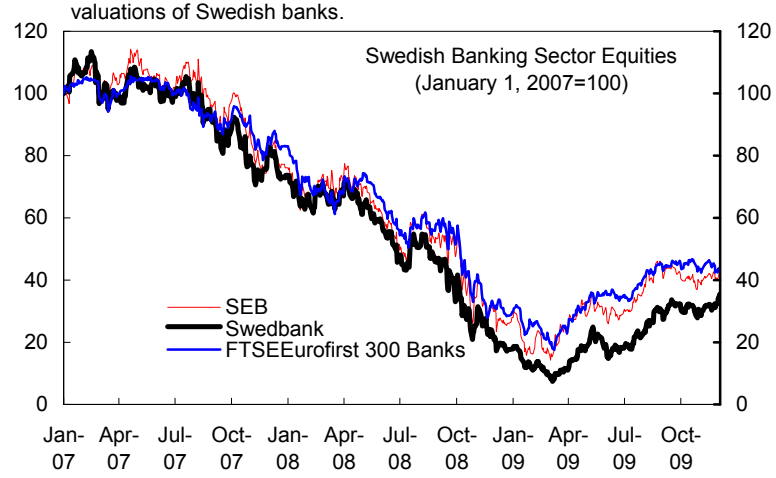
…and (notional) interbank market spreads.



CDS spreads peaked in April 2009, although levels have since fallen back.

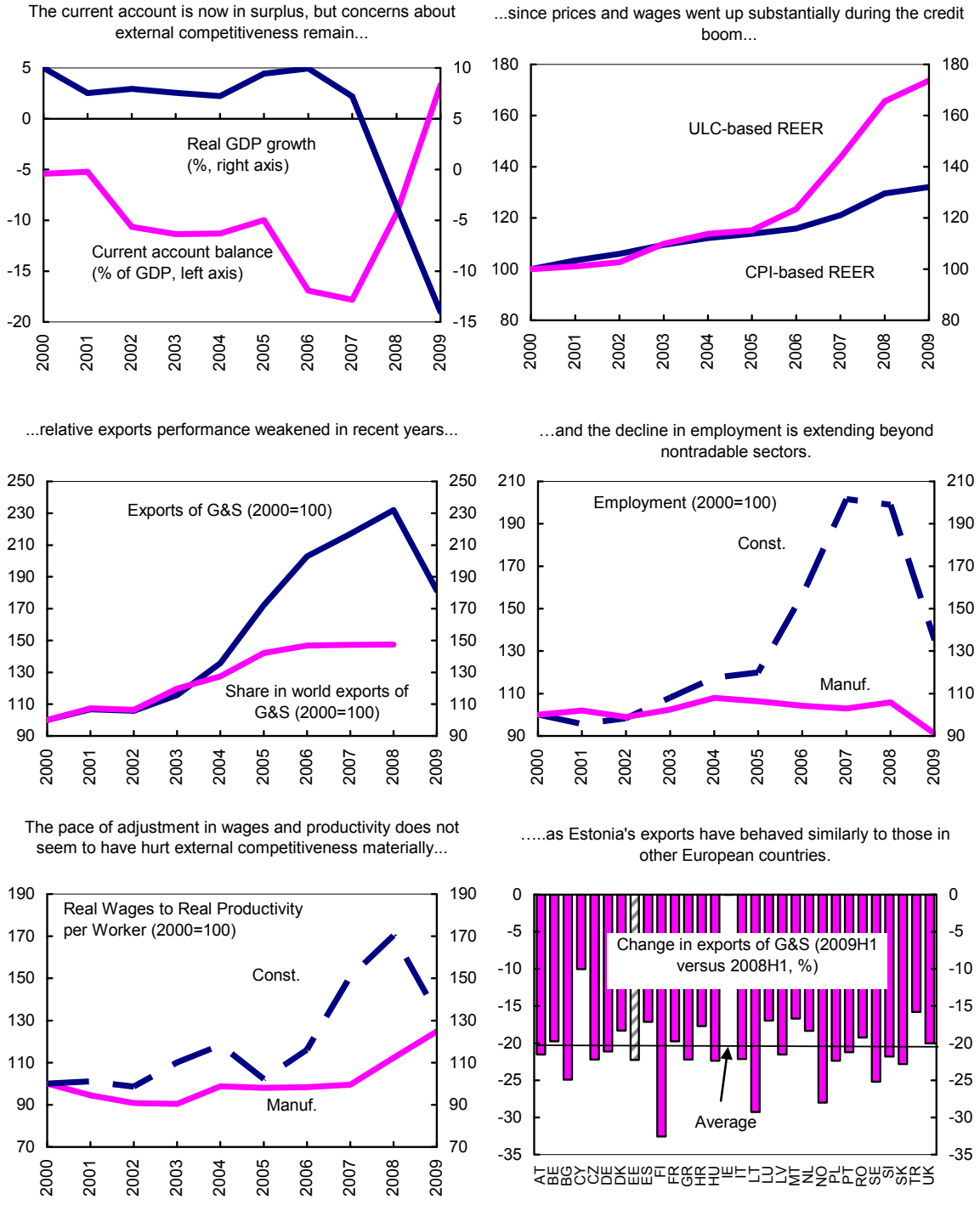


But the economic crisis in the Baltics continues to affect equity valuations of Swedish banks.



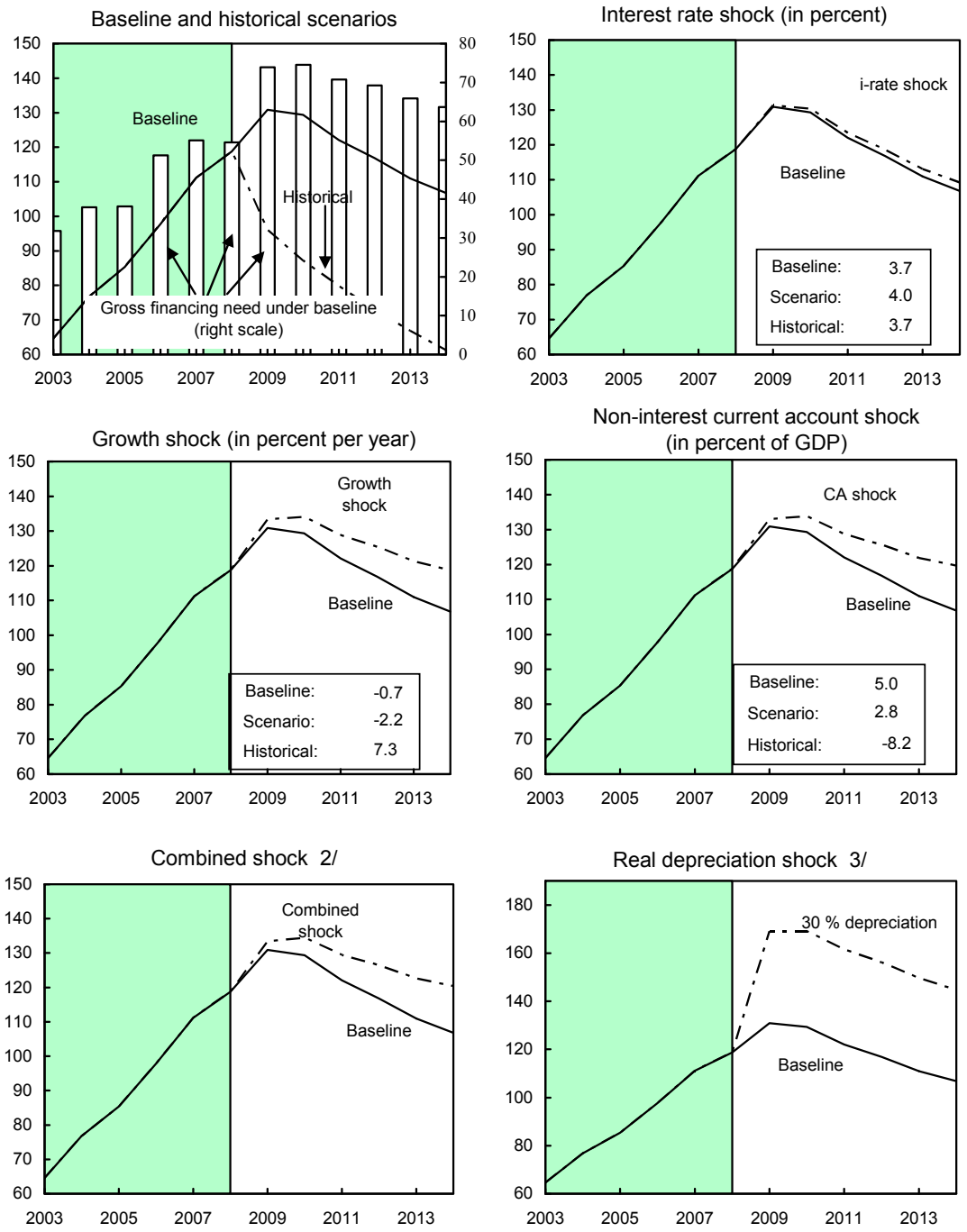
Source: Bloomberg and Staff calculations.
1/ Breaks in the series reflect periods when there were no quotes.

Figure 5. Estonia. External Competitiveness



Source: Bank of Estonia, Statistical Office of Estonia, Eurostat, and IMF staff calculations.

Figure 6. Estonia: External Debt Sustainability: Bound Tests, 2003–14 1/
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.
1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
2/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.
3/ One-time real depreciation of 30 percent occurs in 2009.

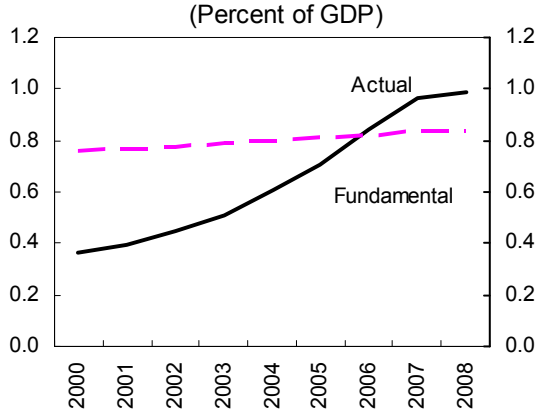
ANNEX: DEBT OF NON-FINANCIAL CORPORATES AND HOUSEHOLDS IN ESTONIA[4]

Based on a number of indicators, the balance sheets of Estonia's non-financial private sector appear stretched, with a relatively large stock of debt facing reduced incomes and assets tied to a depressed real estate sector. This is likely to weigh on domestic consumption and investment, and could be exacerbated by current deflationary trends and future expected increases in interest rates in the euro-zone. Restructuring of bank credits have temporarily eased repayment pressures and hence reduced financial stability risks, but at the cost of a higher future debt burden.

A. Stylized facts

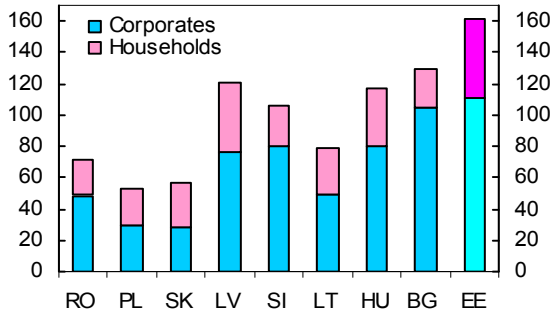
The build-up of private sector debt accelerated with EU accession in 2004.
Since 2005-06 domestic private sector bank credit ratios have exceeded estimates of credit

Private Sector Domestic Bank Credit
(Percent of GDP)



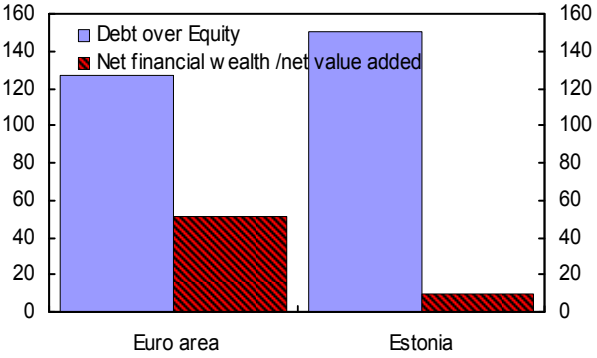
Sources: IFS; and Staff calculations.

Non-Financial Private Sector Loans over GDP,
2008 (Percent) 1/



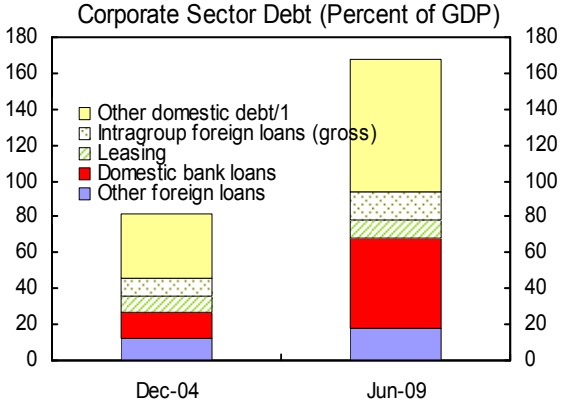
Source: Eurostat; and Bank of Estonia
1/ Taken from ESA 95 consolidated financial accounts. Data for Estonia are from Bank of Estonia (also ESA 95 financial accounts) as unavailable for 2008 in Eurostat. Data for BG, PL refer to 2007.

Corporate Sector Balance Sheets in 2009 (Percent) /1



Source: Bank of Estonia; Eurostat; European Central Bank and IMF staff calculations.
/1 Net financial wealth over/net value added refers to 2008 for Estonia
Debt is defined as all non-equity liabilities.

Corporate Sector Debt (Percent of GDP)

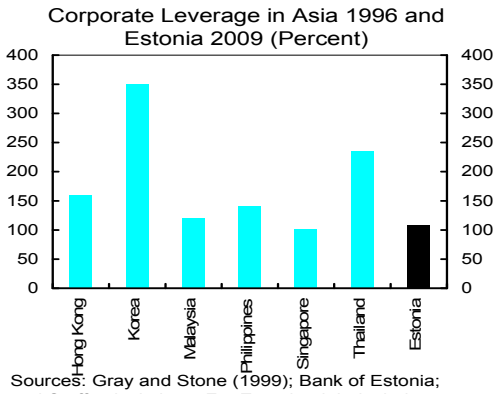


Source: Bank of Estonia; and IMF staff calculations.
1/ Includes suppliers' credit and other domestic intercompany loans.

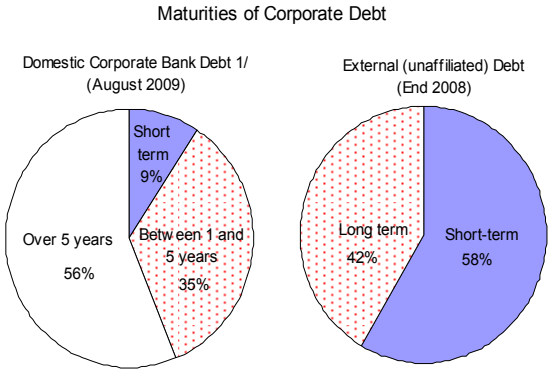
depth that are commensurate with Estonia's macroeconomic fundamentals.[5] Both the corporate and household sector participated in this accumulation of liabilities. As a share of GDP, they now exceed levels in other EU new member states.

***Corporate* sector gearing is substantial and has reached similar or higher levels than in the euro area.**[6] Though Estonian firms are less indebted than the most highly indebted pre-1998 Asian crisis countries, they are not out of line with that region as a whole.

Domestic credit makes up the bulk of corporate debt and given its long maturity and sectoral composition suggests that it may concentrate potential debt overhang problems. Domestic bank loans, together with other domestic debt, accounted for the bulk of increased corporate borrowing over the past four years. While supplier credits are by nature of short duration, domestic bank credit has relatively long maturities. This protects borrowers from liquidity risks, but at a cost of a potential debt overhang problem. More than half of domestic bank credit has a maturity exceeding five years. In addition, domestic more than external credit was directed towards the real estate sector: lending to commercial real estate accounted for around 30 percent of total corporate debt and domestic lending nearly 70 percent of all lending to the same sector. According to industry specialists, around half of total office space entered the market in just two years (2007–09). Current vacancy rates of around 10–50 percent, depending on quality and location, indicate the degree of excess supply in office space, which will probably take several years to clear. Manufacturing, in contrast, attracted less credit than its share in GDP, and half of all credit to this sector was sourced from abroad (two thirds of which from affiliated enterprises). Generally speaking,



Sources: Gray and Stone (1999); Bank of Estonia; and Staff calculations. For Estonia, debt includes loans and issued securities only.



Sources: Bank of Estonia and Staff calculations.
1/: Based on original maturity.

---

[4] The principal author of this Annex is Valerie Herzberg.
[5] The estimate of 'fundamental' credit over GDP is based on the methodology employed in Cottarelli, Carlo et al, 2003, "Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and the Balkans", *IMF Working Paper* 03/213.
[6] The euro area non-financial sector is also considered highly leveraged. See ECB *Financial Stability Review* December 2008 p. 49 and June 2009. A comparison of loan-to-equity ratios in 2007 across the EU using Eurostat data suggests that out of the available data on 22 countries, 17 had lower ratios than Estonia.

about 10 percent of total corporate debt is estimated to be owed to affiliated foreign enterprises which should in these cases allow balance sheet adjustments to be resolved at group level.

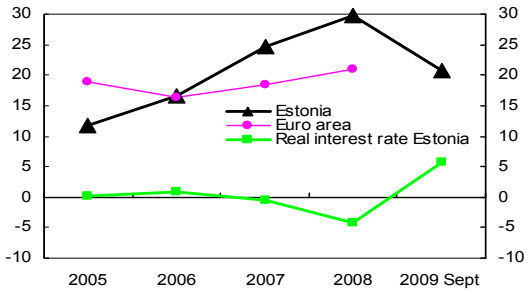
Corporate Credit by Sector and Origin (Percent)

	Share in nominal GDP 2008	Share in domestic corporate credit	Share in total corporate credit	Share of external credit in total corporate credit	Share of external (unaffiliated) credit in total corporate credit	Share of external (affiliated) credit in total corporate credit
Manufacturing	15.0	10.8	13.5	49.8	19.0	30.8
Construction	7.0	4.5	3.7	25.4	15.1	10.3
Wholesale, retail trade, repair of motor vehicles/cycles	12.0	11.2	16.0	55.9	31.5	24.4
Real estate activities	17.0	31.2	28.6	32.0	14.3	17.7
Transport, storage and communications	9.0	8.1	11.5	48.4	24.2	24.2

Source: Bank of Estonia; and staff calculations. Corporate credit excludes domestic inter-company debt.

Companies' debt servicing burden has been declining, but is likely to rise in the near term.[7] Companies are benefiting from the current low level of interest rates prevailing in the eurozone and banks are reportedly offering repayment holidays in exchange of further collateral. Current deflationary pressures, however, suggest that real interest rates have shot up, well into positive territory.

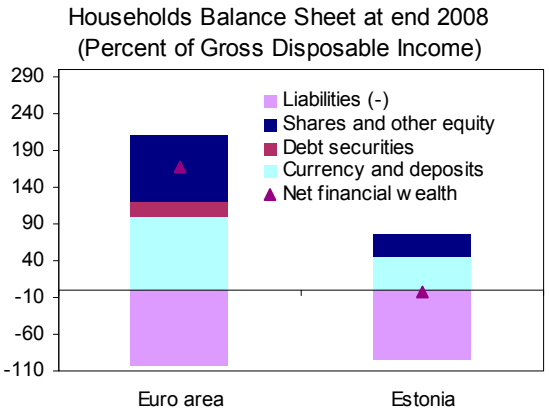
Corporate Sector Interest Payments over Gross Operating Surplus and Real Interest Rates (Percent)/1



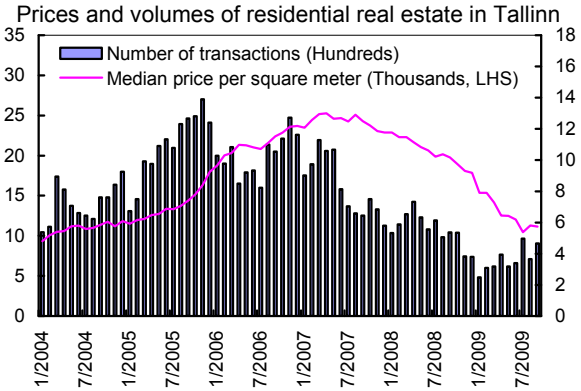
Sources: Bank of Estonia; European Central Bank; and Staff calculations.
/1 For Estonia, estimated based on outstanding loans and debt securities.

***Households* in Estonia borrowed mainly to acquire real estate, whose significant depreciation over the past year has weakened their balance sheet position.** In relation to gross disposable income, household borrowing is similar to the euro area. However, this is not matched by financial assets. Net financial assets as a percent of income are slightly negative, compared with a large positive buffer of euro area households. While the upgrading of a dilapidated post-Soviet housing stock is welfare enhancing in the long run, the large correction in house prices has severely diminished Estonian housing wealth in the short to medium-run: house prices have halved since peaking in mid 2007 and according to the Financial Services Authority, one fourth of mortgage exposures (15 percent of contracts) was in negative equity in 2009 Q2.

[7] Ideally, the calculations should also take account of amortization payments for which data is however unavailable.

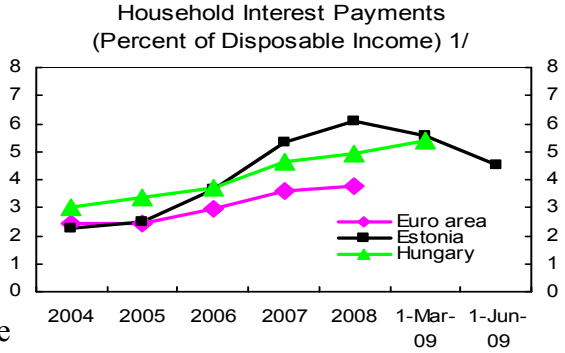


Sources: Eurostat; and Bank of Estonia.



Source: Bank of Estonia.

The debt servicing burden of households has been higher than in other countries and the current respite thanks to record low euribor rates could again prove temporary.[8] 80 percent of credit to households consists of mortgages, most of which are at variable rates, following movements in 6-months euribor rates with a lag. As for firms, debt servicing payments have therefore declined. Banks are also reportedly rescheduling interest payments of struggling households. However, this relief will again be increasingly offset by current deflationary pressures. Euro area interest rates are also expected to rise at some point, possibly before the Estonian economy has fully recovered. Finally, unlike in the euro area, only a fraction of households have mortgages. While the data thus underestimate the debt service of indebted households in Estonia, it should also be noted that mortgages are heavily concentrated among high-income households. Unofficial market estimates put overall debt servicing costs at 26 percent of households' net income.



Sources: Bank of Estonia; European Central Bank; Hungary Central Bank; and Staff calculations.
1/ On loans and leases.

B. Problems of Debt Overhang and Resulting Risks to the Estonia's Recovery

There is a substantial empirical and theoretical literature linking debt overhang to economic activity. Overleveraged households tend to cut back spending when hit by a shock that changes their perception of permanent income and wealth.[9] Investment can also suffer

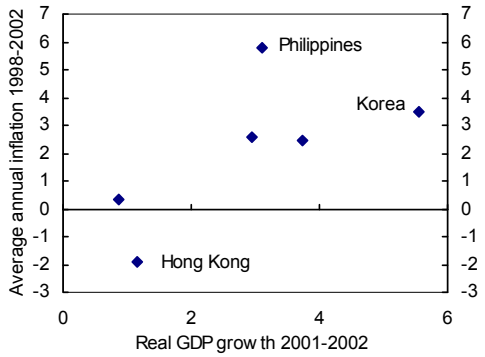
[8] Again, information on amortization payments is not available.

[9] King, Mervyn, 1994,"Debt deflation: Theory and evidence", *European Economic Review*. Debt overhang has also been identified for euro area households. See DG Ecfin *Quarterly Report of the Euro Area, 2009, Volume 8, No 3*.

because shareholders with debt overhang are unwilling to take up new projects if the returns benefit solely existing debt holders.[10] Overindebtedness can also impair the lending capacity of financial intermediaries. Leveraged investors often have to reduce debt when asset prices fall, while a deteriorating credit portfolio undermines banks' willingness and ability to lend.[11] Finally, asset price busts are relatively costly for economic activity. Particularly, house prices busts tend to be longer lasting and are associated with greater output loss than other asset market corrections.[12]

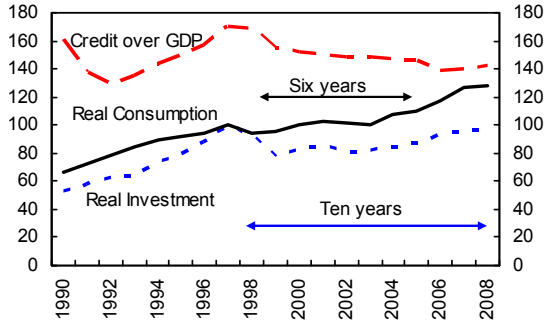
Price and wage deflation could magnify the contractionary effects of Estonia's high private debt levels on domestic demand. In Hong Kong, a country with a fixed exchange rate regime like Estonia, deflation and the legacy of a property boom weighted on domestic demand and growth for many years in the aftermath of the Asian Crisis. Real investment has not yet returned to levels in 1997. Sweden's revival from the 1992 crisis, in contrast, was relatively fast because export-oriented firms benefited from exchange rate devaluation and

Inflation and Real GDP Growth in Asian Economies post Asian Crisis (Percent)



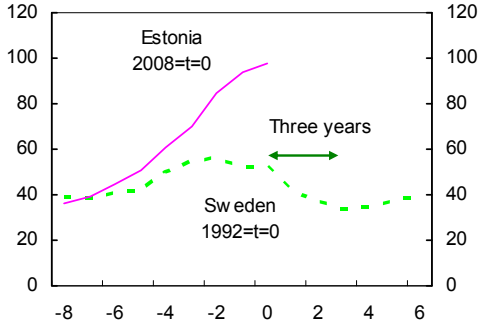
Source: ARIC

Domestic Demand and Private Sector Credit in Hong Kong (Percent)1/



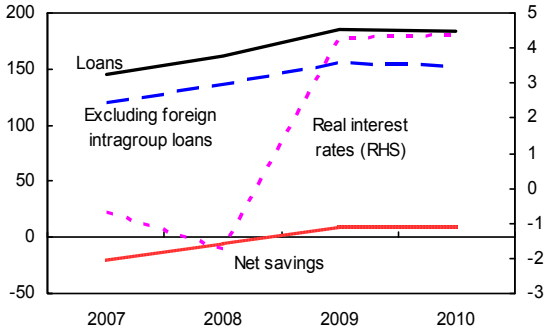
Sources: DataStream; and IMF staff calculations.
1/ For real consumption and real investment, year 1997=100.

Domestic Bank Credit to Private Sector in Estonia 2000-2008 and Sweden 1984-1998



Sources: IFS; Datastream; and Staff calculations.

Private Sector Loans, Net Savings (Percent of GDP) and Real Interest Rates



Source: Bank of Estonia; and IMF staff calculations.

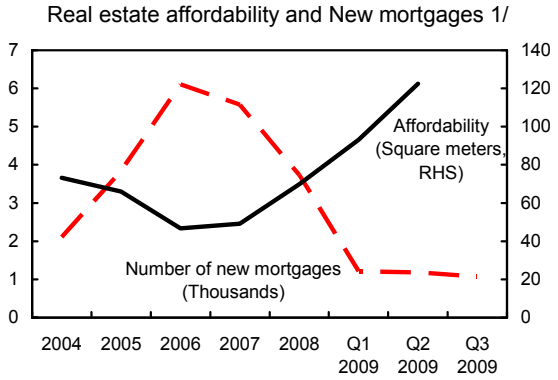
[10] Myers, Stewart, 1977, "Determinants of Corporate Borrowing," *Journal of Financial Economics,* Vol. 5, pp. 147–75.).

[11] See for example Bernanke, Ben, and Gertler, Mark, 1995, "Inside the Black Box: The Credit Channel of Monetary Policy Transmission," *Journal of Economic Perspectives* and Ghosh, Swati and Ghosh, Atish, 1999, "East Asia in the Aftermath: Was there a crunch?", *IMF Working Pape*r, WP/99/38

[12] See IMF World Economic Outlook, October 2009, Chapter 3.

strong external demand. Corporate deleveraging was quick and relatively short-lived. In Estonia, despite the turnaround in net savings, private sector loans as a percent of GDP have risen further in 2009 and are expected to remain broadly unchanged at that level in 2010.[13] Estonian firms will have to rely on improvements in productivity and cost reductions to boost incomes, which takes longer and for the latter depresses domestic demand. Regarding households, in addition to the overshooting of mortgage and consumer borrowing relative to expected permanent income, the short-term dynamics of deflation and rising interest rates are likely to weigh on demand. The negative wealth effects of a depressed housing market, however, are likely to be more muted in Estonia as only few households have mortgages and those who were previously credit constrained should now benefit from improved housing affordability.

The debt overhang may also be constraining credit supply, though the relative strength of Swedish banking groups should help mitigate this risk. Yet, even though housing affordability has improved substantially in 2009, the number of new mortgages has sharply declined.[14] Banks' willingness and ability to provide new loans may be impaired by the build-up of non-performing loans (NPL) in 2009. NPL ratios (for 60 day overdue loans) rose from less than 1 percent in 2008 to 6.4 percent in October 2009. Banks' loan loss provisions increased accordingly and lending conditions have been tightened.[15] International evidence suggests that legacy loans, if not dealt with, undermine efficient financial intermediation as capital stays locked in underperforming assets, interest income falls and management resource are diverted.[16] With unemployment expected to continue to rise and given the lags typically observed between economic activity and credit defaults, a further



Source: Bank of Estonia; and IMF staff calcuations.
1/ Real estate affordability based on square meters a family in Tallinn can afford earning two average wages; new mortgages assumes average mortgage size is 0.5 million EEK.

[13] For the purpose of assessing the more medium-term debt burden the focus here is on loans of corporates and households only. Short-term trade and suppliers' credits are excluded from the calculations. The share of savings assumed to be used for debt payments is equal to the net savings rate of the private sector plus non-debt creating capital inflows as a proportion of the total savings rate (equal to around 40 percent). The interest rate on the debt stock is assumed to be 4 percent.

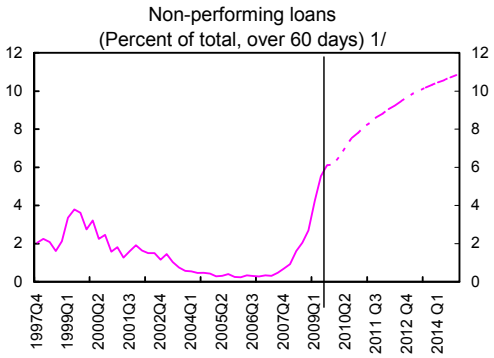
[14] These figures may however overstate the true number of new mortgages, as restructured mortgages may also be counted as new ones.

[15] Many banks for example are charging higher risk premia and lowered loan to value ratios and debt servicing ratios. As a result, 60 percent of new loans in April 2009 had a loan servicing ratio below 30 percent, compared with only 39 percent a year earlier.

[16] See for example Krueger, Anne and Tornell, Aaron, 1999, "The role of bank restructuring in recovering from crises: Mexico 1995-1998", *NBER Working Paper* 7042.

slow deterioration in banks' credit portfolio is to be expected.[17] The strong capitalization of the Nordic banking groups should however help mitigate the risk of a protracted credit crunch. The three largest banking groups raised substantive amounts of capital during 2009, resulting in tier 1 ratios above 10 percent, well in excess of regulatory minima.

The existing debt burden and negative housing equity also bear the risk of accelerating defaults in a 'disorderly' manner. Recent research based on household surveys in the United States indicates that households' probability to default increases nonlinearly with respect to foreclosures in the neighborhood and with respect to depressed housing values. In both cases, the social stigma attached to default fades, accelerating debt failures.[18] So far, banks' proactive rescheduling of both corporate and household debt has prevented an eruption of foreclosures and also contained personal bankruptcies. The relatively strict bankruptcy regime and the high incidence of owner-occupied housing—96 percent in 2007—is also likely to maintain payment discipline. Still, an anticipated further increase in unemployment, rising real interest rates and possibly only slow recovery of the real estate market will test the sustainability of these arrangements in the years to come.



Source: Bank of Estonia and IMF staff projection.
1/ Based on simpe ARDL model of NPL ratios and GDP growth (projections) shown in Table 1.

[17] See Berge, Oddvar and Godding Boye, Katrine Norges Bank (2007) "An analysis of banks' problem loans", *Economic Bulletin*. Further expected tightening in global capital and liquidity regulation is also likely to dampen the availability of credit. The projections of NPLs shown in the chart are not based on a long-term cointegrating relationship which is difficult to identify given the numerous structural breaks. The chart is thus merely illustrative to highlight the importance of lags between economic shocks and non-performing loans.
[18] Guiso, Luigi et al, 2009, "Moral and Social Constraints to Strategic Defaults on Mortgages", *NBER Working Paper Series*

INTERNATIONAL MONETARY FUND

Public Information Notice

EXTERNAL RELATIONS DEPARTMENT

Appendix I: Draft Public Information Notice (PIN)

Public Information Notice (PIN) No. 09/xx
FOR IMMEDIATE RELEASE
[Month, dd, yyyy]

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Executive Board Concludes Article IV Consultation with the Republic of Estonia

On January [ ], 2010, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Estonia.[1]

Background

Following a period of severe overheating, Estonia's economy is contracting sharply. Investment already started to slow in mid-2007, along with a bursting of the property bubble, when the two main banks tightened lending conditions. The collapse of global external financing and foreign trade in the Lehman bankruptcy aftermath exacerbated the downturn. Output is expected to drop by some 15 percent in 2009 and unemployment to reach 16 percent by year end. Deflation and wage declines are projected to persist through 2010 and the current account should remain in a small surplus in the short term. Staff expects the economy to resume growth only in the middle of 2010.

A full-fledged crisis has been avoided due to existing buffers and a determined response by both the public and the private sector. Sizable fiscal reserves accumulated during the boom years, a very low level of public debt, and swift fiscal adjustment measures taken in 2008 and

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities.

throughout 2009 have helped the government to keep the fiscal deficit in check and avoid financing problems. At the same time, the increased use of EU structural funds provided some countercyclical fiscal stimulus. In the financial sector, banks' own capital and liquidity cushions—further boosted by relatively high reserve requirements—and support from Nordic parents prevented liquidity problems in spite of rising nonperforming loans. As a result of these supporting policies, Estonia's currency board arrangement has proven resilient to regional tensions

The credit-fueled boom has resulted in a relatively large non-financial private sector debt stock. With declining incomes, unemployment increasing sharply and asset prices depressed, balance sheets of households and corporates are under strain, weighing on domestic demand. Non-performing loans have increased to over 6 percent of total and some banks are reporting losses.

A flexible labor market is also helping to restore external competitiveness lost during the boom years. The recently enacted labor law adds further flexibility by reducing lay-off costs. EU-funds are being increasingly targeted at the tradeable sector. Nevertheless, export performance remains highly dependent on developments in Estonia's Nordic trading partners.

The government intends to apply for euro membership for 2011. Assuming continued fiscal consolidation, notably to boost revenues, Estonia could meet all Maastricht criteria in 2010. Joining the euro zone would remove residual currency and liquidity risks, adding stability to the Estonian economy.

Executive Board Assessment

<Begin Typing Here>

Estonia: Selected Macroeconomic and Social Indicators, 2007–10
(In units as indicated)

	2007	2008	2009 Proj.	2010 Proj.
National income, prices and wages				
Nominal GDP (kroons, billions)	244.5	251.5	214.7	208.7
GDP (euro, billions)	15.6	16.1	13.7	13.3
Real GDP growth (year-on-year in percent)	7.2	-3.6	-14.7	-1.5
Average HICP (year-on-year change in percent)	6.7	10.6	0.2	-0.2
GDP deflator (year-on-year change in percent)	10.2	6.7	0.0	-1.2
Average monthly wage (year-on-year growth in percent)	20.4	13.8	-4.5	-3.5
Unemployment rate (ILO definition, percent)	4.7	5.5	13.9	16.4
Average nominal ULC (year-on-year growth in percent)	13.9	18.3	1.6	-5.5
Saving-investment balances (in percent of GDP)				
National saving	22.4	20.4	23.8	23.9
Private	16.7	20.3	26.4	27.3
Public	5.7	0.1	-2.7	-3.4
Domestic investment	40.2	29.7	20.5	21.9
Private	36.4	26.3	16.9	18.1
Public	3.8	3.4	3.5	3.7
Foreign saving	17.8	9.3	-3.3	-2.0
General government (in percent of GDP)				
Revenue and grants	38.7	39.5	46.5	48.5
Expenditure and net lending	35.8	41.8	49.5	51.5
Fiscal balance	2.9	-2.3	-3.0	-3.0
External sector (in percent of GDP)				
Trade balance	-17.8	-11.7	-3.9	-4.4
Service balance	6.1	7.4	8.1	8.5
Income balance	-6.8	-6.3	-3.1	-4.4
Current account	-17.8	-9.3	3.3	2.0
Gross international reserves (euro, millions)	2239	2824	2679	2815
In months of imports	2.5	3.3	4.7	4.9
In percent of gross short-term debt (including trade cre	42.8	38.2	40.5	47.0
In percent of base money	119.0	116.8	120.0	126.8
Gross external debt/GDP (in percent) 1/	111.2	118.7	130.9	129.3
Net external debt/GDP (in percent) 2/	35.6	38.7	37.0	31.4
General government external debt/GDP (in percent)				
Excluding government assets held abroad	2.4	3.1	4.8	6.4
Including government assets held abroad 3/	-7.1	-4.9	-3.5	-1.6
Exchange rate (EEK/US$ - period average) 4/	11.4	10.7	…	…
Money and credit (year-on-year growth in percent)				
Domestic credit to nongovernment	33.0	7.2	-9.3	-8.7
Base money	1.6	28.5	-7.7	-0.5
Broad money	13.5	5.5	-0.9	-0.5

Social Indicators (reference year):
Population (2007): 1.342 million; **Per capita GDP** (2007): €11,581; **Life expectancy at birth** (2006): 78.5 (female) and 67.4 (male); **Poverty rate** (share of the population below the established risk-of-poverty line, 2005): 18.0 percent; **Main exports**: electrical equipment and parts.

Sources: Estonian authorities and IMF staff estimates and projections.
1/ Includes trade credits.
2/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by Estonian residents.
3/ Includes the Stabilization Reserve Fund (SRF).
4/ The Estonian kroon is pegged at 15.6466 kroons to the euro.