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Republic of Estonia: Staff Report for the 2010 Article IV Consultation

The following documents have been released and are included in this package:

- The staff report, prepared by a staff team of the IMF, following discussions that ended on December 13, 2010, with the officials of Republic of Estonia on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on January 11, 2011. The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.
- A Public Information Notice (PIN).
- A statement by the Executive Director for the Republic of Estonia.

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INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

Staff Report for the 2010 Article IV Consultation

Prepared by the Staff Representatives for the 2010 Consultation with the Republic of Estonia

Approved by Anne-Marie Gulde-Wolf and Aasim Husain

January 11, 2011

Executive Summary

On January 1, Estonia joined the euro area amidst a strengthening export-led recovery. Estonia has the distinction of being the only EU country, aside from Sweden, whose fiscal deficit does not exceed the Maastricht limit. In its first year in the euro area, staff projects that growth will accelerate to about 3½ percent. Still, unemployment is high and continued progress in job creation will likely be hampered by skill mismatches. Inflation is also projected to increase reflecting the full-year impact of food and fuel price shocks, but core inflation should remain subdued. At end-2010, downside risks have become more prevalent with renewed tensions in global financial markets.

The key policy challenge is to ensure that Estonia remains on a sustainable growth path. In this regard, the consultation focused on three areas:

Fiscal policy. Despite forthcoming elections, the 2011 budget has kept a tight rein on expenditures. Sticking to the budget will be essential to reaffirm the authorities' commitment to prudent fiscal policy and, with euro adoption no longer serving as an incentive, further enhance credibility. The authorities' medium-term goal of restoring a balanced budget provides a natural benchmark to safeguard sustainability and fiscal buffers. A full-fledged medium-term budgetary framework would support consolidation and avert pro-cyclical policies. Still, automatic stabilizers should operate up to the Maastricht limit and positive revenue surprises should be saved.

Financial system. While credit has been declining, Estonia's mostly Nordic-owned banks have so far been resilient. Access to the euro system's facilities will lessen risks. Still, vigilance is needed to ensure that liquidity facilities operate effectively and bank capitalization and provisioning remain appropriate given a weakened portfolio associated with the earlier credit boom, global financial uncertainty, and forthcoming regulatory and legal changes. Also, national and cross-border bank resolution frameworks need to be further enhanced.

Harnessing Estonia's potential. Deploying all of its resources will require addressing skill mismatches that intensified in the aftermath of the collapse of the construction boom. Besides a stable macroeconomic environment, proven flexibility of the labor market, and continuing efforts to enhance the effectiveness of active labor market policies, boosting competitiveness and productivity will require climbing up the technology and quality ladder. EU structural funds can continue supporting life-long learning, increases in labor mobility, and needed infrastructure investment

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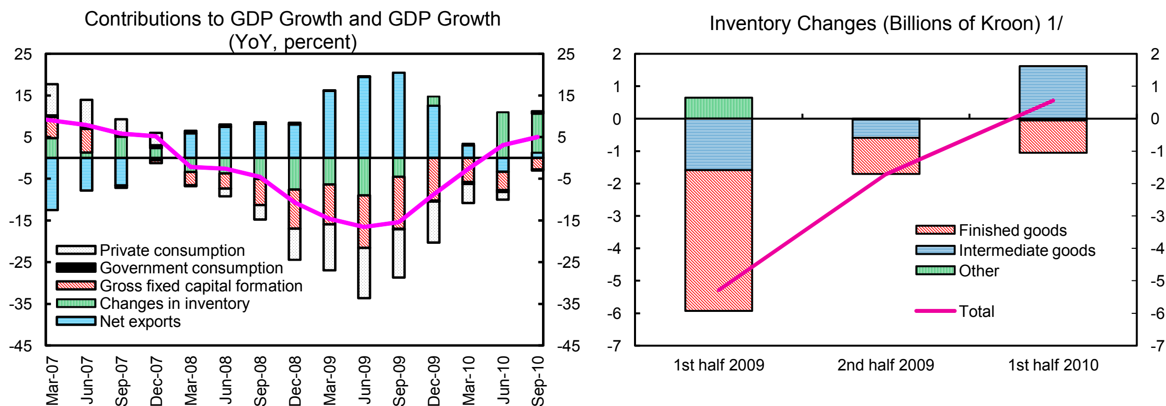
I. CONTEXT[1]

1. **Despite enduring one of the sharpest contractions in the EU, Estonia has been successful in its all-out efforts to join the euro area**. The authorities have resolutely persevered with policies based on satisfying the Maastricht criteria, which entailed a fiscal adjustment of about 9 percent of GDP in 2009. The 2010 fiscal deficit was only some 1 percent of GDP and thus Estonia has earned the distinction of being the only EU country aside from Sweden to keep their fiscal deficit below the Maastricht limit.

2. **Driven by external demand, economic growth has strengthened in 2010** (Figure 1). Annual growth resumed in the second quarter with rising exports of intermediate inputs and capital goods and briskly paced increases in manufacturing activity. Exports have continued growing in the third quarter and approached pre-crisis levels. Mirroring export orders and Estonia's integration in the international production chain, stock building—associated not with increases in retail goods but with increases in imported intermediate inputs—has surged and provided a sizable contribution to growth (but has lowered the measured net export contribution). Gross capital formation and private consumption have remained subdued. The latter reflects weak labor markets and household balance sheets, partly due to an earlier credit boom.[2]



Sources: Statistics Estonia; Haver; and IMF staff calculations.
1/ Finished goods contain goods for resales and finished goods; Intermediate goods consists of materials and supplies and work-in-process.

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[1] A mission comprising Messrs. Hoffmaister (head) and Lutz, Ms. Herzberg (all EUR), and Mr. Jarmuzek (SPR) visited Tallinn during December 2–13, 2010. Mr. Sutt (OED) accompanied the mission. Estonia is an Article VIII country (Informational Annex, Appendix I). Data provision is adequate for surveillance (Informational Annex, Appendix II).

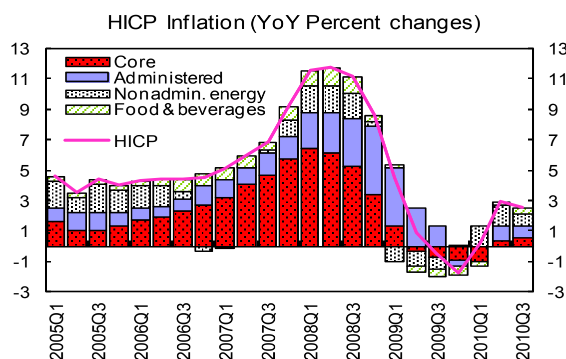
[2] Rough estimates suggest debt overhang may have lowered consumption by about 4 percent in cumulative terms in mid-2010 (IMF Working Paper 10/250).

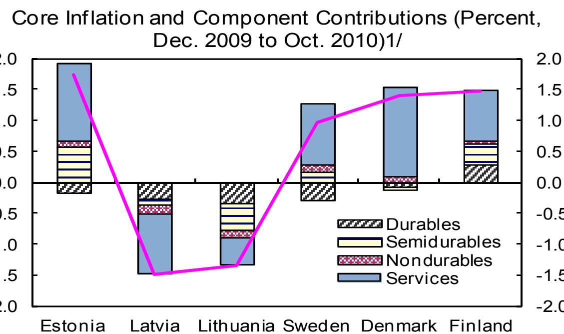
Contributions to Growth, 2007-11

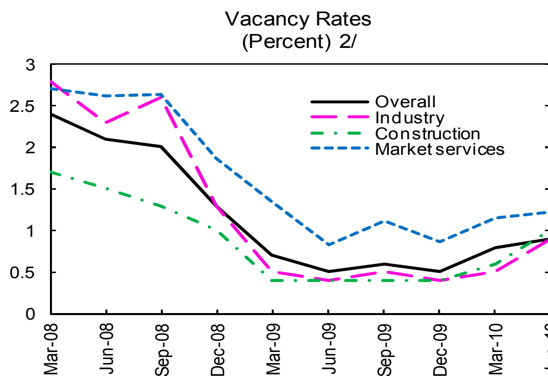
	2007	2008	2009	Proj. 2010	Proj. 2011
GDP growth	6.9	-5.1	-13.9	2.4	3.6
Domestic demand	10.5	-11.7	-23.1	0.1	2.8
Consumption	5.4	-2.3	-10.2	-1.4	1.2
Investment 1/	5.1	-9.4	-12.9	1.6	1.6
Net exports	-5.4	5.7	11.3	1.5	0.8
Statistical discrepancy	1.8	0.9	-2.2	0.8	0.0

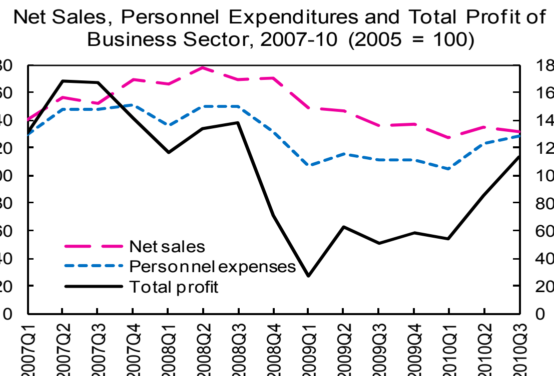
Sources: Statistics Estonia; and IMF staff calculations.
1/ Includes changes in stocks.

3. **Inflation has picked up and recently, defying double-digit unemployment, so have wages**. Prices have surprised on the upside reflecting global food and fuel price developments, which have a disproportionately large impact in Estonia (Annex I), but also reflecting adjustments in administered prices that resulted in a 1½ percentage-points boost to inflation in 2010. Core prices have begun increasing at a moderate pace reflecting rising service prices but, after having declined in 2009, their rebounds have exceeded those in neighboring economies (Figure 2). Wages have surprised on the upside and increased by about 1 percent (year-on-year) in the second and third quarters of 2010. This has broadly reflected the strength in manufacturing and traded goods sectors, and has occurred despite high unemployment; the latter has declined from almost 20 percent in the first quarter to 15½ percent in the third quarter of 2010. Still, long-term unemployment has increased—possibly associated with an increase in structural unemployment adversely impacting long-run growth—with rising vacancies (Figure 3). These developments point to the difficulties mismatched skills pose to resource reallocation in an otherwise flexible labor market. Regardless, business sector profitability has improved smartly.



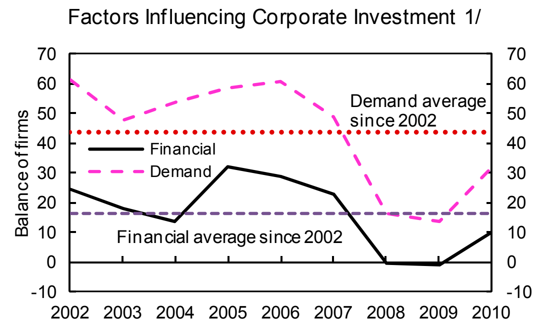






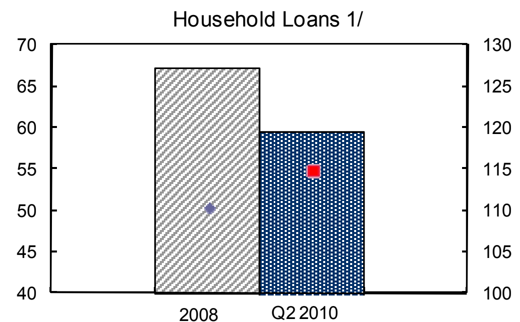
Sources: Haver;Statistics Estonia; and IMF staff calculations.
1/ Core is defined as HICP excluding energy, food, alcohol and tobacco.
2/ the vacancy rate measures the proportion of total vacant posts expressed as a percentage of occupied and vacant posts.

4. **Credit provided by the mostly Nordic-owned banking sector has declined**. The domestic loan stock has declined by 10 percent since end-2008. Banks tightened credit conditions in 2007 and some firms have turned to external borrowing attracted by lower pricing. Still, survey information and falling interest rates on new loans do not suggest loan supply constraints. Indeed, recently there have been incipient signs of an easing in lending conditions, while a continuing wide distribution of lending premia suggest a desirable discrimination between varying quality risks.



Source: European Commission.
1/ The balance represents the net balance reporting factor x to be very stimulating, stimulating, limiting and very limiting.

5. **Demand factors are likely to be the main driver of weak credit**. An increase in private sector debt ratios since 2008 has reflected income declines that have, so far, outpaced deleveraging. Given weak labor markets and house prices that, despite a gradually recovery, have remained about 40 percent below their peak, households and real estate and construction companies appear to be burdened by legacy loans of the earlier credit boom.



Sources: Statistics Estonia; and Haver.
1/ Dots indicate loans in percent of GDP (LHS); and bars indicate the loan stock in billions of Kroons (RHS).

6. **Strict expenditure control and one-off revenues explain the better-than-expected fiscal outcome in 2010**. The fiscal deficit is projected to have fallen to about 1 percent of GDP (ESA-95), or about 1¼ percent of GDP lower than anticipated in the 2010 budget. Central government spending has been kept close to budget levels even as general elections near. Revenues have been bolstered by one-off sale of CO2 emission rights (about 1 percent of GDP) and, to a lesser extent, by the ongoing recovery. Gross debt will decline to about 7 percent of GDP—remaining the lowest in the EU—and Estonia will continue holding a net external asset position in 2010.

7. **Estonia's external adjustment has continued with some gains in competitiveness**. The reversal of the current account balance from a deficit in 2008 to a surplus in the third quarter of 2010 has mainly reflected a marked improvement in the trade balance (Table 3 and Figure 4). Following a sharp contraction in exports and imports in 2009, the former have increased in line with Nordic trading partners' activity in the first three quarters of 2010 but the latter rebounded less sharply. Competitiveness has improved recently partly driven by cyclical factors (Box 1). The financial account has recorded a sizable deficit reflecting largely banking sector flows abroad, associated with domestic deleveraging and reserve requirement harmonization with the euro area. These funds have reduced liabilities to parent banks and increased liquid foreign assets. As a result, gross external debt declined to 118 percent of GDP at end-September 2010.

Box 1. Estonia's Competitiveness Developments

While competitiveness appears to have improved, mixed signals have continued from standard CGER methods. Taken at face value, current account-based methods suggest that Estonia's real exchange rate is undervalued by around 2 and 4 percent. Caution should be exerted in interpreting these indicators given cyclical developments as these may reflect the large cyclical decline in imports rather than undervaluation. In contrast, direct assessments of the real exchange rate still suggest that the real exchange rate is overvalued. Regardless, compared to 2009 Article IV consultation assessment these results suggest a small improvement in competitiveness.

REER Overvaluation

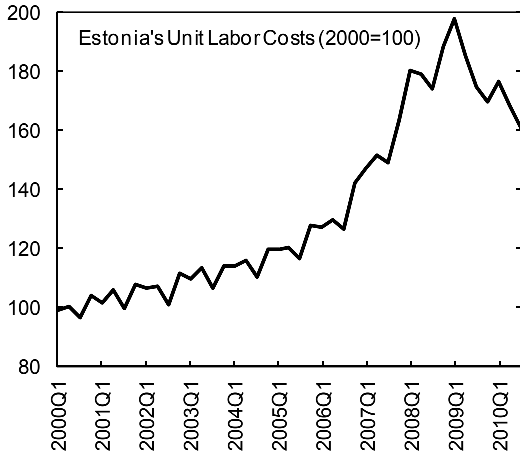
	Current Assessment	2009 Art IV
Macrobalance Approach	-9.7	-2.8
External Sustainability Approach	-7.8	0.0
Equilibrium Real Exchange Rate Approach	15.4	20.6
REER Deviation from Historical Average	7.2	10.1
Mid-point overvaluation range	4.1	7.0
Memorandum items		
Underlying current account	-2.8	-6.2
Equilibrium current account (MB)	-5.1	-5.4
Equilibrium current account (ES)	-4.3	-4.2
Mitigating factor	2.1	2.0

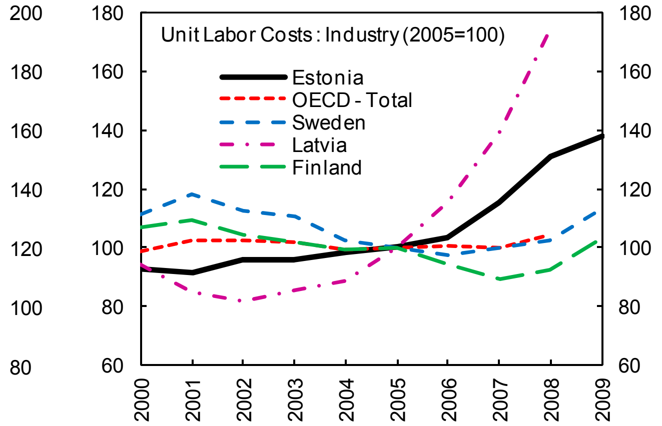
Source: IMF staff calculations.

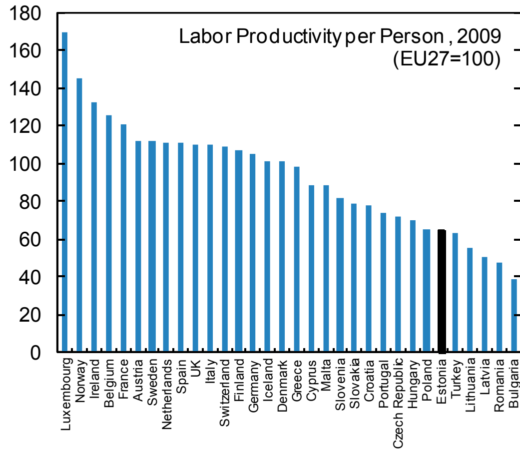
Price- and cost-based indicators broadly support a gradual positive trend in competitiveness. Various measures of REER have declined since 2009. The REER deflated by unit labor costs in the manufacturing or by the export deflator has shown further gains in competitiveness in the second quarter of 2010. In addition, the declines are less pronounced for REER measures that place less weight on the traded sector. These differences may reflect the fact that measures placing less weight on the traded sector may also reflect the previous construction boom as well as Balassa-Samuelson effects.

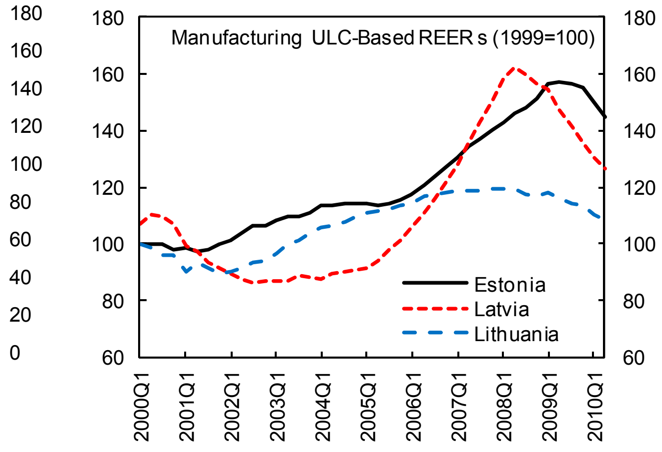
Regardless, Estonia's export market share remained broadly stable pointing to gains in non-price competitiveness. Despite the measured appreciation of the REER and weakness in trading partners during the crisis, EU export market shares have remained stable. Improvements in non-price competitiveness may have been associated with large foreign direct investment (FDI) inflows. FDI may have provided access to technology and foreign markets with vertical integration contributing to its external performance. Also, Estonia has been gradually moving up the technology and quality ladder relative to its competitors and it scores broadly well in terms of the quality of human and physical infrastructure and the business environment relative to the EU (Annex II).

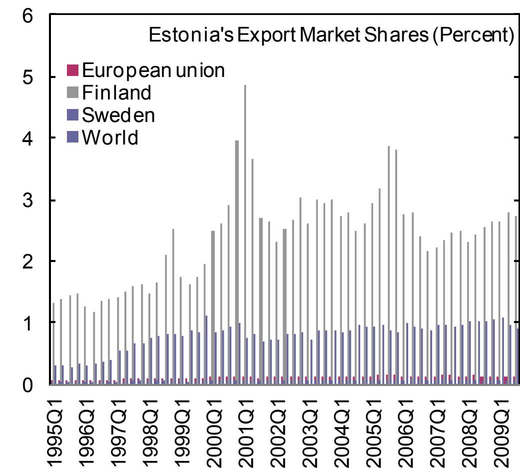
Box 1. Boosting Estonia's Competitiveness Remains a Challege (Concluded)

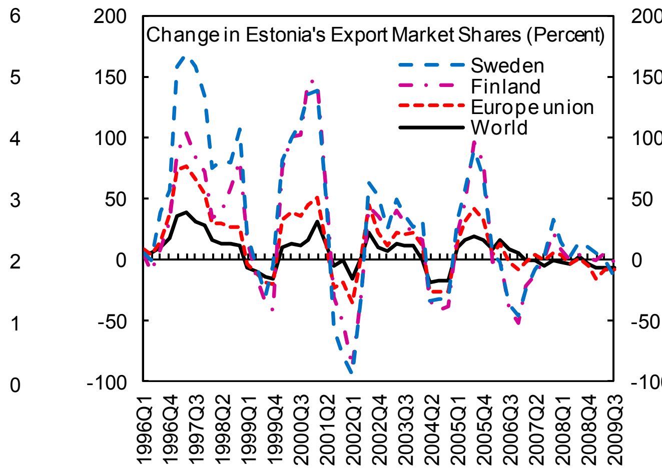












Sources: EU Commission; Eurostat; and Direction of Trade.

II. OUTLOOK

8. **Growth is poised to strengthen and remain export-driven in 2011**. Growth is projected to increase from 2½ percent in 2010 to 3½ percent in 2011. Exports are expected to continue boosting economic activity mirroring the strength in Estonia's main trading partners. Still, high household debt as well as slow progress in reducing unemployment will burden final domestic demand, which is expected to remain sluggish. Relatedly, credit growth is also projected to remain low.

9. **Inflation is envisaged to persist in 2011**. Price increases are projected to rise from about 2¾ percent in 2010 to about 4 percent in 2011. While the impact of administered price increases will wane, the full-year impact of food and fuel prices will be felt. In light of price and wage developments, inflation projections remain subject to large uncertainty but, on balance, core inflation should remain subdued throughout 2011 and increase on average primarily reflecting base effects of the disinflation in early-2010.

10. **Positive surprises to the outlook are possible, but downside risks appear more prevalent at end-2010**. Faster growth is feasible if trading partners' activity proves lasting but this could pose sectoral wage pressures associated with labor market constraints. Also, euro adoption could afford a one-time impetus as residual exchange rate risk vanishes and the risk of adverse regional spillovers recedes. But the risk of slower growth—including from renewed uncertainty in global financial and sovereign markets and the tail risk of global double-dip recession—has increased. Besides direct trade-related effects, a faltering recovery or if unemployment otherwise becomes entrenched could result in new nonperforming loans (NPLs) weighing on bank's willingness to lend. Renewed banking sector shocks, including through parent banks, could also pose risks to domestic financial intermediation.

11. **The authorities concurred that growth prospects have improved even as risks have risen**. They noted that economic activity remained dependent on trading partners' growth and expressed some concern about the sustainability of the latter. Still, the authorities were more sanguine regarding private investment prospects as, despite the anticipated overall continued economic slack, capacity constraints in export-oriented sectors may trigger investment. But rising inflation may limit increases in real household incomes and constrain real consumption. Regarding inflation, they noted that while Estonia's consumption patterns made it more sensitive to food and energy price shocks, increases in some individual prices were unusually large and could reflect inadequate competition. In this connection, legal investigations have been opened. Core inflation was, nonetheless, expected to remain subdued in 2011. They also considered wage increases to be somewhat surprising, but may, in addition to mismatch skills, represent a measurement problem as workers with lower skills and compensation levels were disproportionately laid off as unemployment increased sharply in late-2009 and early-2010. The authorities broadly considered that credit availability was adequate.

III. POLICY CHALLENGES

12. **Against this backdrop, Estonia faces the challenge of remaining on a sustainable growth path that will lead to steady income convergence while fully employing its resources**. The authorities' policies have largely been in line with Fund Advice (Box 2) but conjunctural circumstances and longer-term challenges warrant continued attention. In this regard, the consultation focused on three key areas.

Box 2. Implications of Fund Advice

Relations between Estonia and the Fund have remained excellent. Policies have been characterized by a high degree of ownership—a key factor in Estonia's economic success—and these have been generally consistent with Executive Board recommendations. But large increases in current spending resulted in an ill-timed loosening of the fiscal stance in the boom years. Since then, corrective actions, including expenditure reversals and increased indirect taxation, have been in line with Fund advice. Most of the key recommendations of the 2009 FSSA update have been adopted (Annex III).

A. Safeguarding Fiscal Consolidation and Counter-Cyclical Policy

13. **Despite the upcoming elections, the 2011 budget envisages only a small increase in the fiscal deficit, thereby continuing Estonia's prudent macroeconomic policies**. The deficit is targeted to reach about 1¼ percent of GDP (ESA 95 basis)—an increase of about ¼ percent of GDP—largely reflecting the expiration of a number of one-off revenue factors as well as the restitution of contributions to the second pillar. The budget envisages spending to increase primarily to support education and investment, with personnel expenditures to be held at 2010 levels. On the revenue side, aside from a 10 percent hike in tobacco excises, no major tax measures have been introduced and thus total revenues—in the absence of one-time revenues—will decline by about 1¼ percentage points of GDP.

Fiscal Balance and One-off Measures
(Percent of GDP)

	2010	2011	
		Auth.	Staff
Overall balance (cash basis)	-0.3	-1.9	-1.6
One-off measures	1.7	0.3	0.4
CO2 emmission permit revenues	1.1	0.2	0.3
Dividends	0.3	0.0	0.0
Land and property sales	0.4	0.1	0.1
Adjusted overall balance	-2.0	-2.2	-2.0
Memorandum items:			
Overall balance (ESA95 basis)	-1.0	-1.6	-1.3
Resumption of pillar 2 pension transfers	--	0.5	0.5

Sources: Ministry of Finance; and staff projections.

Estonia: Selected Fiscal Indicators, 2007-11
(Percent of GDP)

	2007	2008	2009	2010	2011
				Proj.	
Revenues	38.2	39.2	45.5	46.3	45.1
Expenditures	35.4	41.5	47.6	46.6	46.7
General government balance (cash basis)	2.9	-2.3	-2.1	-0.3	-1.6
Cyclically adjusted balance	-0.9	-3.9	1.1	2.1	-0.1
Transfers from the EU 1/	3.0	3.0	5.2	6.5	6.8
Transfers to the EU (contribution to the EU budget)	1.2	1.2	1.2	1.2	1.2
Cyclically adjusted balance corrected for net EU transfers 1/	-2.7	-5.7	-2.9	-3.1	-5.7
Fiscal impulse 2/	2.3	3.0	-2.8	0.2	2.6
Memorandum items:					
General government balance (ESA95 accrual basis)	2.6	-2.7	-1.7	-1.0	-1.3
Output gap	12.0	5.0	-9.2	-7.0	-4.4

Sources: Estonian authorities; and IMF 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.

14. **Achieving the budget target has particular importance for the euro area's newest member**. The authorities argued that, besides keeping the deficit comfortably below the Maastricht limit, sticking to the budget would reaffirm Estonia's preference for fiscal rectitude even without the incentive of euro adoption. While supporting the target, staff noted that should downside risks emerge, the authorities are advised to allow automatic stabilizers to operate up to the Maastricht limit. Likewise, strict adherence to the budget's spending limits will be essential to avoid pro-cyclical policy if revenue collections exceed projections.

15. **Looking forward, the authorities foresee restoring a balanced budget by 2014 under current policies**. Although conservative given Estonia's net public asset position, this would nevertheless help safeguard fiscal buffers, that are critical for mitigating the impact of volatility, including in the context of ongoing global and regional financial uncertainty, and which proved critical in weathering the global financial crisis of 2008–09. While broadly feasible under current policies with some one-off measures set to expire (including investments obligations associated with CO2 emission rights sales), meeting the target will entail holding operational expenditures unchanged in real terms. This will imply reducing expenditures by about 3 percent of GDP and thus bringing Estonia's public spending closer to its pre-crisis level (Figure 5). Expenditure pressures are bound to emerge in light of the 2009 cuts (about 5½ percent of GDP), limited social benefits, and improving economic conditions. If offsetting measures are necessary, given the expenditure compression built into current policies, these should focus on the revenue side with a view of minimizing tax distortions and supporting resource reallocation. Specifically, these could include broadening tax bases, increasing the VAT rate to narrow differences with neighboring countries, making greater use of property taxation, and boosting environmental taxes. In addition, as consolidation progresses, the authorities' long-run target to gradually reduce overall labor taxes

can be considered. This focus, however, should not hinder further efforts to improve expenditure efficiency.

16. **Enhancing Estonia's medium-term budgetary framework** (MTBF) **could help maintain fiscal sustainability and avert pro-cyclical policies**. Such a framework could include a target for the cyclically-adjusted overall balance and binding medium-term spending ceilings (Annex IV). Its success in Estonia will hinge on the dual requirements of simplicity and transparency needed to facilitate communication, verification, and accountability. To enhance its credibility and facilitate monitoring, spending limits should exclude those of a cyclical nature (such as unemployment benefits) and relatively unpredictable EU structural-fund related spending. In addition there will be a need to address the high proportion of earmarked spending—complicating expenditure control—and ensure that the MTBF operates effectively at the general government level. Regarding the latter, the recently passed "Act of Financial Management of Local Municipalities," which controls local government balances, is a step in this direction. Regardless, Estonia's strong fiscal position imparts a distinct advantage because it needs a comparably small medium-term adjustment. On the other hand, large swings in its economic structure and activity amid real convergence may obscure cyclical developments.

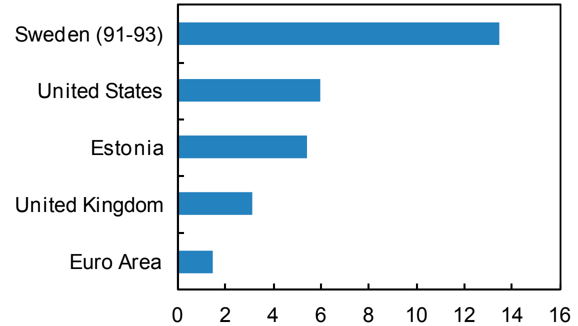
17. **The authorities stressed that conservative fiscal policies would remain the hallmark of Estonia's economic approach**. Tight fiscal policy has served Estonia well and underpinned the success of its currency board arrangement. They stressed that prudent fiscal policy was motivated not by euro adoption—a welcome bonus—but by needed fiscal prudence to support the currency board. Although this need had now passed, with euro accession, the authorities pointed to the 2011 budget that, despite upcoming elections, will exert a tight rein on spending while protecting social spending. In this regard, they highlighted the importance of restoring pillar II pension fund contributions and expressed their intention of continuing to do so.

18. **They insisted that restoring a fiscal balance or better in the medium-term would continue guiding fiscal policy, despite euro adoption and low public debt levels**. The authorities recognized, nonetheless, that spending pressures could emerge but expressed confidence that continued expenditure efficiency gains would keep fiscal consolidation on track. Moreover, their medium-term goal would maintain fiscal sustainability and ensure that fiscal buffers would be rebuilt to pre-crisis levels. In this connection, while the authorities re-iterated their desire to reduce labor taxation they stated that this would have to be accommodated within their medium-term objectives. They recognized that a MTBF could help avoid pro-cyclical policies and envisaged its implementation to be coordinated with revisions to the Stability and Growth Pact currently under discussion.

B. Financing the Recovery While Maintaining Resilience

19. **Estonian banks have so far managed to successfully navigate the crisis** (Figure 6). Cumulative loan loss provisions amounted to about 5 percent of assets in mid-2010. A gradual credit tightening, ahead of the global crisis, declining interest rates and rescheduling of loan obligations (about 2 percent of mortgages) have helped contain increases in NPLs (Box 3). Local banks have also held on to properties from defaulting borrowers, thus helping to stabilize the property market. At the same time, banks have maintained high capitalization rates with the core tier 1 ratio close to 12 percent, supported by earlier capital transfers and reductions in assets. Stress tests by the Estonian supervisors reflecting a scenario with sluggish growth and more stringent tests by the parent authorities indicate resilience to cope with renewed credit risk. The authorities in parent banks countries have nonetheless kept in place extensive debt guarantee and financial recapitalization packages introduced during the financial crisis.

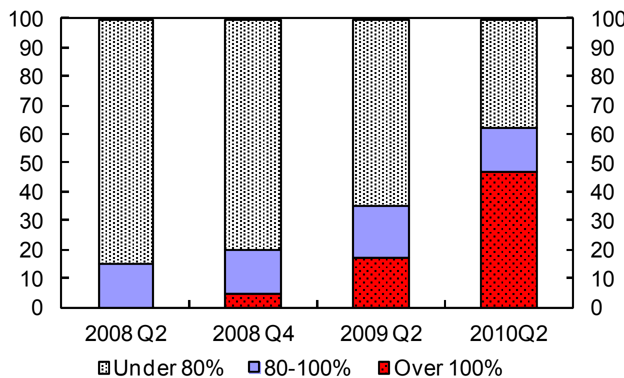
Cumulative Gross Banking Sector Losses
(Percent of total assets) 1/



Sources: Oct 2010 GFSR; Haver; and Riksbank.
1/ The data for Sweden refer to net loan losses. Losses for other countries are up to 2010 Q2.

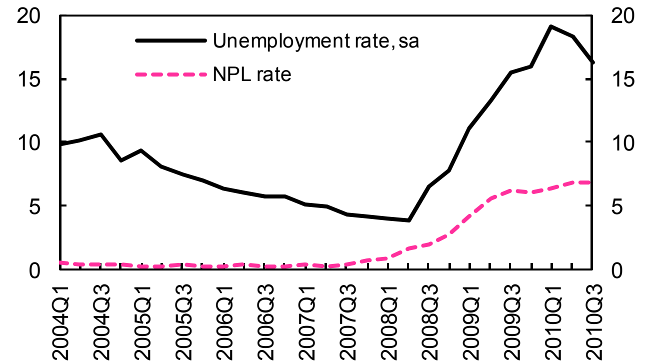
20. **But banks remain vulnerable to shocks**. Even though NPLs have been low, they are high by international comparison. Also, about half of NPL mortgages remain in negative equity, household indebtedness is high, and property markets remain weak and illiquid. New NPLs could emerge if unemployment fails to subside or if lending rates are pushed up by sudden increases in European interbank interest rates. Local banks are also exposed to adverse spillovers effects through parent banks, including a rapid correction of asset prices in home countries or disruptions in international funding markets.

NPL Mortgages by Loan-to-Value (Percent) 1/



Source: Estonian Financial Supervision Authority.
1/ Based on survey estimates. The red bars show the proportion of non-performing mortgages in negative equity , e.g. 47 percent in 2010 Q2.

Unemployment and NPLs (Percent) 1/

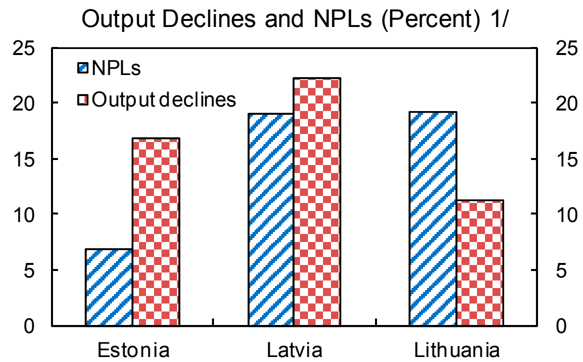


Sources: Eurostat; and IMF staff calculations.
1/ NPL rate is defined as loans overdue by more than 60 days divided by total outstanding loans.

Box 3. Why Are NPLs Lower in Estonia Than in Other Baltic Countries?

As elsewhere in the Baltics, the recession in Estonia was severe. Baltic countries could not avoid a credit boom-bust cycle despite attempts to slow credit via restrictive prudential and monetary measures. Yet, Estonia's NPLs increased to only about 7 percent in the second quarter of 2010, or roughly half those in Lithuania and Latvia. A few factors are at play.

- *Definitional differences.* In Estonia, loans are classified as non-performing when they are past 60 days due and, unlike Lithuania, do not include all impaired loans. The latter would increase NPLs (comparable to those in Lithuania) to around 10 percent.

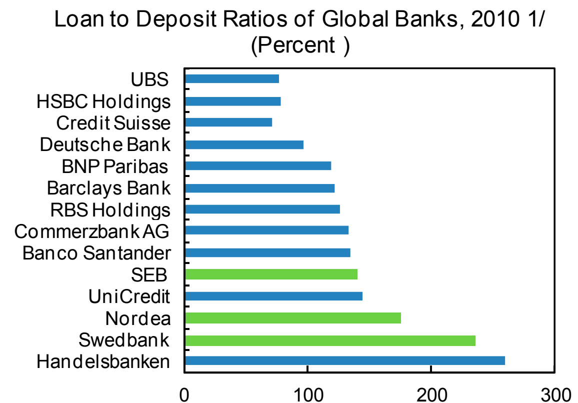


Sources: Oct. 2010 WEO; Country authorities; and IMF staff calculations.
1/ Output declines are the 2008-09 cumulative percent changes; NPLs in both Lithuania and Estonia are defined as loans 60 days overdue, in Latvia as 90 days overdue.

- *Larger presence of foreign-owned banks.* These banks reported lower NPLs and accounted for 95 percent of lending in Estonia, compared to 88 (70) percent in Lithuania (Latvia). Foreign subsidiaries were able to benefit from parent-bank liquidity support and liquidity provision in home countries, but domestic banks were more exposed to higher local refinancing costs reflecting increased country and currency risk. In addition, the composition of assets may have also differed. In Lithuania, domestically-owned banks have been more exposed to corporate and consumer credit, both of which experienced higher levels of distress.[3] Finally, risk management in some domestic banks may have been weaker than in foreign banks. In Latvia, the second largest bank (domestically owned) was subject to risk management failures and taken over by the government in late 2008. In Lithuania (Latvia), NPLs reached an estimated 18.8 (14.8) percent of loans in the foreign-owned banks compared to 29 (20) percent in other banks in the first quarter of 2010.[4]

- *Euro adoption.* Estonia's near-term euro adoption prospect encouraged a rapid convergence of interest rates to euro area levels lowering debt servicing. With Latvia and Lithuania facing considerable fiscal challenges, risk spreads in these countries have remained higher.

21. **Euro area membership can help counterbalance liquidity risks**. The reduction in reserve requirements to euro area levels could reduce the banking system's liquidity buffers and increase liquidity risks. Indeed, preparations by the authorities' and commercial banks' to implement the necessary liquidity and collateral management systems and procedures for accessing the Eurosystem's liquidity facilities are well advanced. This is of particular significance as Nordic parent banks continue to rely heavily on wholesale funding and their



Sources: Bankscope; and the Riksbank.
1/ For Santander and Paribas, data are as of end of last year; Green bars indicate Nordic parent banks in Estonia.

[3] See Selected Issues Paper for Lithuania, July 2010.
[4] See Bank of Latvia Financial Stability Report (2009).

(home country) public guarantees may be phased out in 2011.

22. **The banking sector will be shaped by forthcoming legal and regulatory changes at home and abroad aiming to strengthen financial stability and address debt overhang**. In this connection, vigilance will be needed so that anticipated changes do not, via pressures on profitability, have undesirable side-effects such as increased risk taking and regulatory arbitrage. Changes to liquidity regulations under Basel 3 are expected to affect Nordic banks the most as they will be required to address their large funding mismatches.[5] Banks are also expected to maintain their high ratios of capitalization. In addition, some home authorities are imposing bank levies on parent banks while in Estonia contributions to the deposit guarantee scheme (DGS) are set to nearly double to an annualized 0.18 percent in second quarter of 2011. Also, changes to the insolvency framework such as Estonia's new household debt restructuring law and the shortening of the bankcruptcy period from 5 years to between 3 and 5 years, can help address debt overhang but could pose risks to credit growth (Box 4).

23. **While crisis management preparedness has progressed, bank resolution powers have remained limited and need strengthening**. Supervisors' early intervention powers appear extensive (e.g. to replace management, curtail dividend payments, or impose higher prudential ratios). Estonia's bank resolution tool kit, however, is restricted to imposing insolvency, a moratorium suspending bank's activities, and, nationalization following recently approved legislation. The latter also has enhanced crisis-related on-site supervision powers and has aligned the DGS with changes in EU directives.[6] Still, weaknesses in resolution powers remain as legal protection of resolution authorities is limited, courts can override their decisions, and breaking up the balance sheet of a distressed bank can be conducted only with the consent of shareholders. Also, deposits cannot be transferred to another bank nor can the deposit guarantee fund be used in crisis resolution.

24. **The cross-border crisis cooperation framework has advanced but further progress is essential**. The 2010 Nordic-Baltic Memorandum of Understanding (MOU) provides a broad overview of criteria used to establish ex-post sharing of crisis costs.[7] In this connection, all authorities commit to identifying obstacles and solutions for coordinated decision making and bank resolution, establishing effective communication procedures and continuing the work on detailing burden sharing criteria. Still, the MOU is not binding and the implementation of crisis preparedness measures remains at an early stage.

[5] Page 18 ¶23 in IMF Board Paper, "The implications of regulatory reform initiatives for large complex financial institutions" (2010).

[6] Eligibility was extended to all firms, insured deposits increased from €50,000 to €100,000 and the pay-out period shortened to 20 working days. In view of increased eligibility, in 2011, and despite the increase in contributions, the deposit coverage is anticipated to decline to about 2¼ percent, below the target rate of 2½ percent and below the FSAP recommended target of 4½ percent.

[7] http://www.riksbank.com/templates/Page.aspx?id=44649.

Box 4. Estonia's Household Debt Restructuring Law

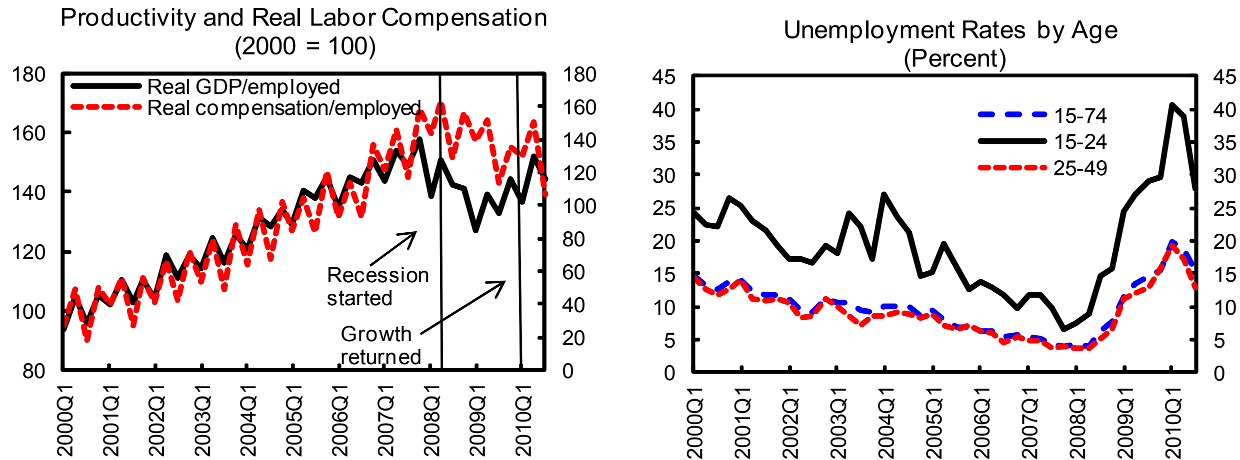
In the wake of the global financial crisis and property market busts, a number of countries have introduced household debt restructuring schemes, (the Czech Republic, 2008), in some cases also involving fiscal incentives (the UK Homeowners Support Mortgage Scheme, 2009). In the same vein, Estonia has also introduced a law—coming into force in April 2011—aimed at facilitating restructuring of debt obligations of natural persons (including entrepreneurs) facing payment difficulties. The law foresees a case-by-case restructuring of all liabilities and does not envisage the use of public funds. Borrowers facing debt payment difficulties can avoid formal bankruptcy by petitioning for restructuring. This entails submitting a restructuring plan to creditors outlining the proposed adjustments (such as extension of maturities or a reduction in claims) to restore solvency. While the law encourages out-of-court settlement, its procedures rely heavily on court input. All secured claims (equivalent to the value of collateral) may be restructured only with consent of secured creditors. For unsecured debts, however, the court has the power to override creditors' decisions. In all cases, the courts are tasked with supervising the implementation of restructuring plans that may be challenging as Estonia ranks behind its peers in terms of contract enforcement. In this connection, Estonia's experience with the recently introduced restructuring law for legal persons could provide useful lessons. Specifically, there is evidence of delays in courts' processing petitions perhaps due to the considerable court input under the law and many judges' limited specialized financial background. Specialization in insolvency matters has occurred only in larger courts. Debtors may also be reluctant to file for restructuring (and also bankruptcy) possibly due to a number of factors, including high advisory fees, or other costs.

25. **The authorities agreed with the need for continued close vigilance and the overall assessment of financial sector strengths and risks**. While capital and liquidity buffers of Estonian banks were elevated, they stressed that domestic supervisory scrutiny has been maintained, including by using stress tests to determine the adequacy of capitalization. The authorities saw risks to local subsidiaries mainly stemming from spillovers from shocks to parent banks. In this regard, the authorities underscored the considerable progress made in improving crisis preparedness over the past couple of years. While noting that bank resolution powers were constitutionally constrained, they explained that resolution tools would be expanded further in line with EU decisions and would be mindful of responsibilities vis-à-vis home jurisdictions given the importance of foreign bank ownership. The authorities saw particular merit in using the relatively well pre-funded deposit guarantee scheme in the EU context for bank resolution. But they were more guarded about establishing an additional resolution fund. Regarding the household debt restructuring law, they noted that it was better balanced than initially feared and underscored that the key will lie in its court implementation. Developments would be followed closely to ensure that it not undermine the rule of law nor financial intermediation.

C. Restoring Competitiveness and Fully Deploying Potential Resources

Enhancing external competitiveness will be critical for Estonia's sustainable growth. Wage increases outstripped productivity gains during the boom that, besides eroding

competitiveness, resulted in lopsided expansion of the nontraded goods sector, particularly construction. Sustainable growth however will require rebalancing the economy towards exports as well as continuing to climb up the technology and quality ladder and diversifying export's destination (Annex II). The initiative to create an environment conducive to foreign direct investment in industries with export potential and high value added represents a welcome step in this direction and can potentially provide access to technology and markets through vertical and horizontal integration. Likewise, the program to improve access to financing to boost investment in these strategic areas can help develop high-value added exports.



Sources: Statistics Estonia; and IMF staff calculations.

26. **Continued human capital development will support full resource use and income convergence**. Addressing skill mismatches through continued progress in enhancing the education system will be essential. In this regard, the authorities have implemented a number of measures focusing on training and education of unemployed workers and introduced a voucher program to help youth complete their tertiary studies. Intensive use of EU-structural funds has improved vocational, unemployment, and in-job training programs. In this regard, exploring synergies among these programs as well as potential efficiency gains and continued focus on life-long learning and language training, in additional to infrastructure development, may further enhance the effectiveness of the education system to support the economy's needs and bolster labor mobility, including geographically. Needed enhancements in infrastructure will also require continued use of EU structural funds.

27. **The authorities underscored their continued commitment to enhance competitiveness and lower unemployment**. They stressed that a stable macroeconomic environment and a business friendly climate were central to establish the preconditions needed to support the modernizing of the private sector's production base supporting Estonia's world class ICT and enhancing its lagging transportation system. In this regard, the Estonia 2020 Competitiveness Strategy has established two key quantitative targets: increasing the employment rate of working-age individuals by about 15 percentage points to 76 percent, with a similar increase in productivity per worker to bring it to 80 percent of the EU average. This will require attracting

investment, including that associated with euro adoption, and continued efforts to enhance cross-border infrastructure, address rigidities in ALMP, and exploit synergies among various programs with a view of enhancing the effectiveness of the educational system.

IV. Staff Appraisal

28. **Having successfully adopted the euro, Estonia now faces the challenge of ensuring that its export-led recovery remains sustainable**. Euro membership represents the culmination of 18 years of a fundamentally sound currency board arrangement supported by a strong commitment to fiscal rectitude. In 2011, Estonia will see a strengthening recovery with core inflation likely remaining subdued. Recent wage increases have coincided with rising profitability but these increases warrant close monitoring as unemployment lingers and price and cost competiveness, while improving, have remained below pre-crisis levels.

29. **Consistent with this challenge, the 2011 budget keeps a tight rein on expenditures**. Sticking to the 2011 general government expenditure ceilings will reaffirm the authorities' commitment to prudent macroeconomic management, and further enhance credibility as the euro area's newest member. Still, if downside risks materialize low public debt and fiscal buffers provide space for automatic stabilizers to operate up to the Maastricht limit. Should revenues surprise on the upside, strict adherence to spending limits will be used to avert pro-cyclical fiscal policy.

30. **Looking forward, the authorities' medium-term goal of restoring a balanced budget maintains a conservative fiscal stance**. Besides being consistent with EU obligations and preserving low debt levels, this goal would safeguard fiscal buffers needed to bolster the economy's resilience. A balanced budget can be broadly achieved under current policies foreseeing unchanged operational expenditures in real terms and thus implying expenditure compression as a share of GDP. Still, demands to boost spending are bound to emerge and, if offsetting measures are necessary, given the expenditure compression in current policies, these should focus largely on the revenue side. But this should not detract from continuing efforts to improve expenditure efficiency nor impair education and investment spending.

31. **A full-fledged medium-term budgetary fiscal framework could usefully support Estonia's consolidation efforts and avert pro-cyclical fiscal policy**. Such a framework by including binding multi-year expenditure ceilings can help avoid procyclical policy. Estonia's strong fiscal tradition and its relatively small adjustment needs impart a distinct advantage in operating such a framework even though difficulties may arise in identifying cyclical developments, particularly during the income convergence process.

32. **The challenge for the financial sector entails preserving stability in light of legacy risks from the earlier credit boom, elevated global financial tensions and forthcoming legal and regulatory changes**. Joining the euro system will lessen financial sector risks. But continued ongoing vigilance will nevertheless be required so that all banks are prepared to access the eurosystem's liquidity facilities and that their contingency liquidity plans remain effective. Also,

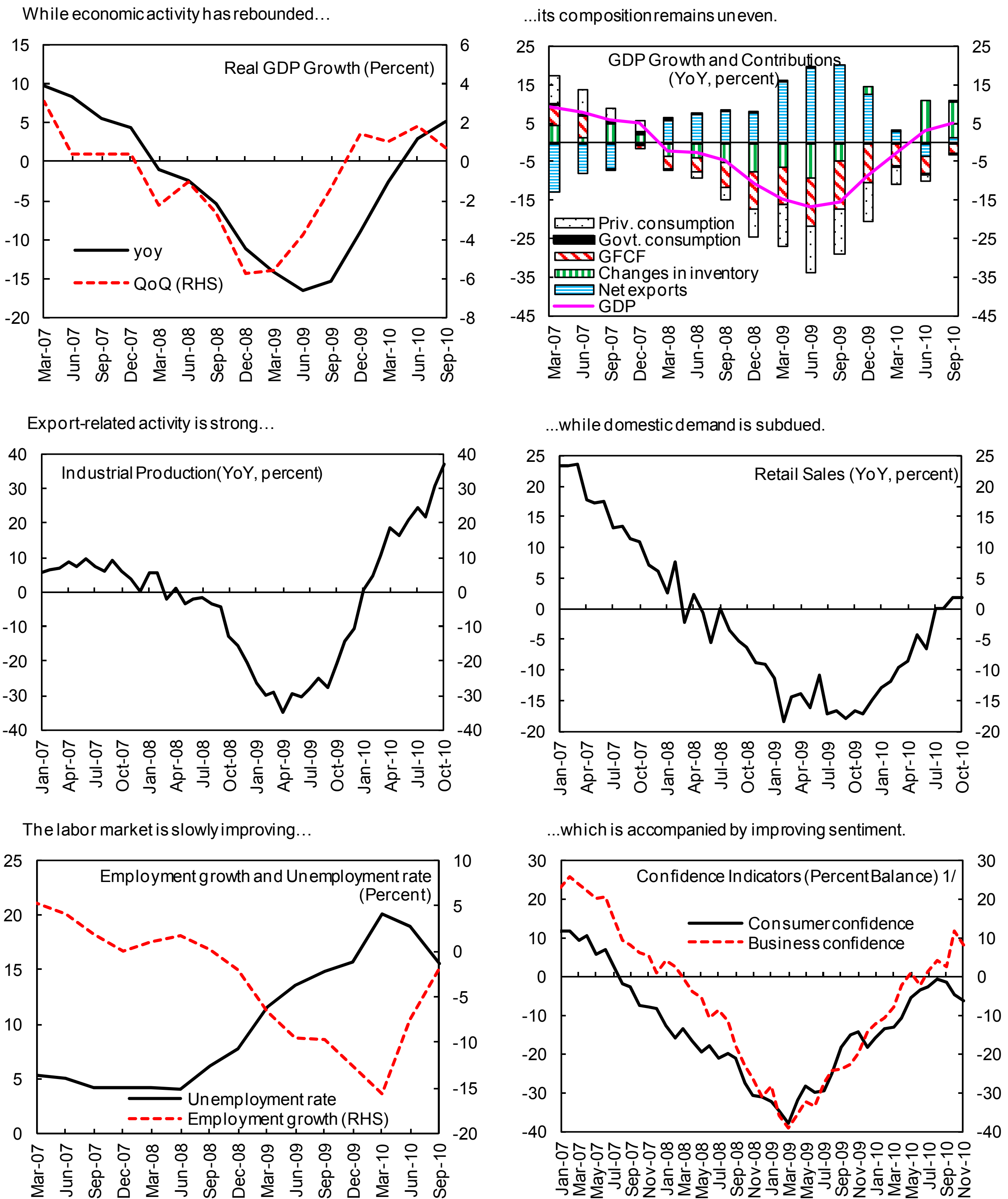
there will be a need to ensure that provisioning and capitalisation remain ample to cope with potential risks. In the coming years, prompt use of prudential measures should help quell undue risk-taking activities and regulatory arbitrage that may result from changes in the regulatory and legal environment. Estonia's new household debt restructuring law can help address debt overhang but it will be essential that its implementation not undermine financial intermediation nor harm confidence in a rules-based system. In due time, a broad review of the insolvency framework should be undertaken.

33. **The high integration with Nordic financial systems underscores the need for continued efforts to develop effective cross-border and national crisis management and resolution mechanisms**. In close collaboration with home authorities of parent banks, there is a need to further strengthen the authorities' resolution powers and expand available tools. The 2010 Nordic-Baltic MOU on crisis management—a pioneering step in cross-border cooperation—provides an ideal framework for doing so. Joint work should focus on further developing the ex-ante criteria for crisis-related burden sharing. In this context of cross-border cooperation, consideration could also be given to a pre-financed crisis resolution fund.

34. **More broadly, sustainable growth entails fully harnessing Estonia's resources, as well as continuing improvements in productivity and competitiveness**. Besides safeguarding Estonia's stable macroeconomic and business-friendly environment, supported by flexible labor markets, long-term growth will entail reallocating resources to the tradable sector. The authorities' "Estonia 2020" competitiveness strategy highlights many of these issues. These programs should be implemented promptly and complemented by exploiting synergies and potential efficiency gains among various education and training programs. Also, boosting productivity and competitiveness will require continued use of EU structural funds in support of life-long learning to enhance human capital development and needed infrastructure improvement, increase labor mobility and establish a solid foundation for rising living standards.

35. **It is recommended that the next Article IV consultation with Estonia be held on the standard 12-month cycle**.

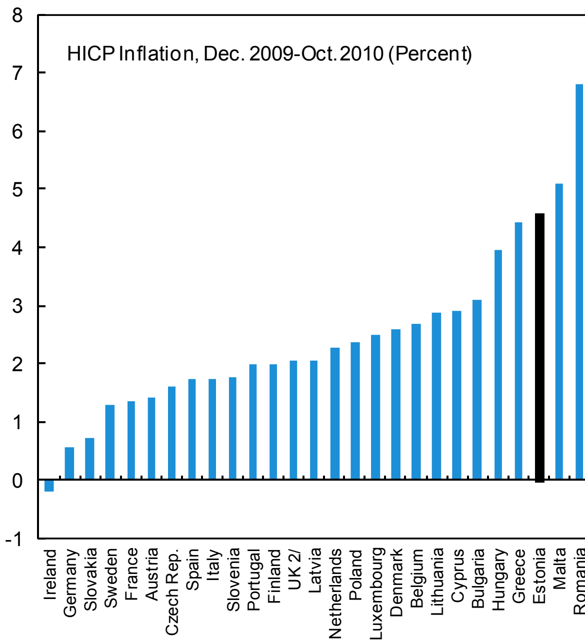
Figure 1. Estonia: The Nascent Economic Rebound, 2007-10



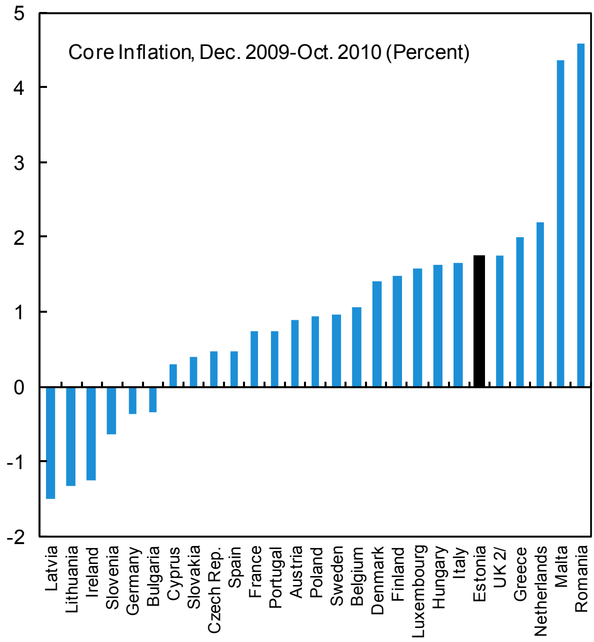
Source: Haver.
1/ Percent balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

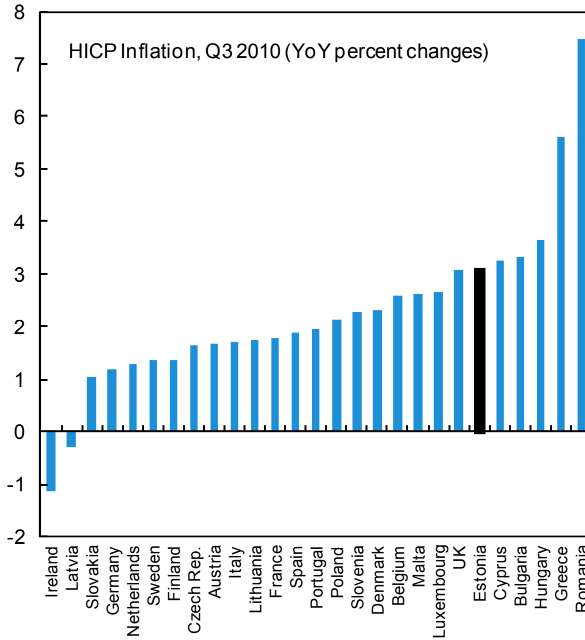
Figure 2. Estonia: Recent Price Development, 2009-10 1/

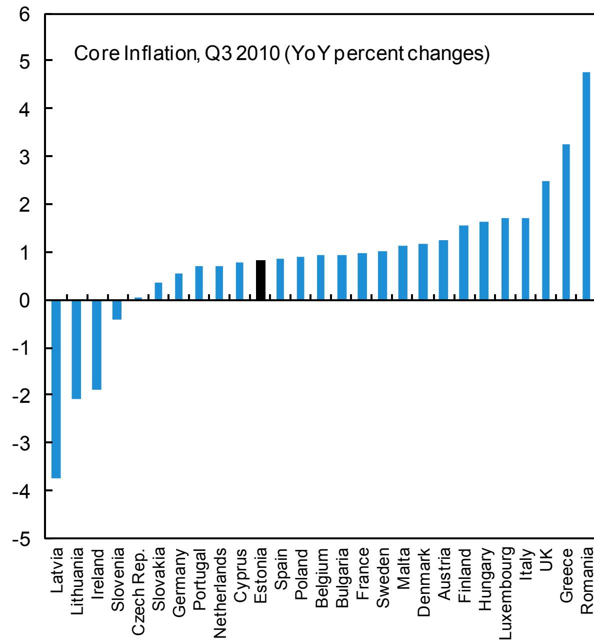
Although inflation is among the highest in the EU…



…core inflation remains more subdued.



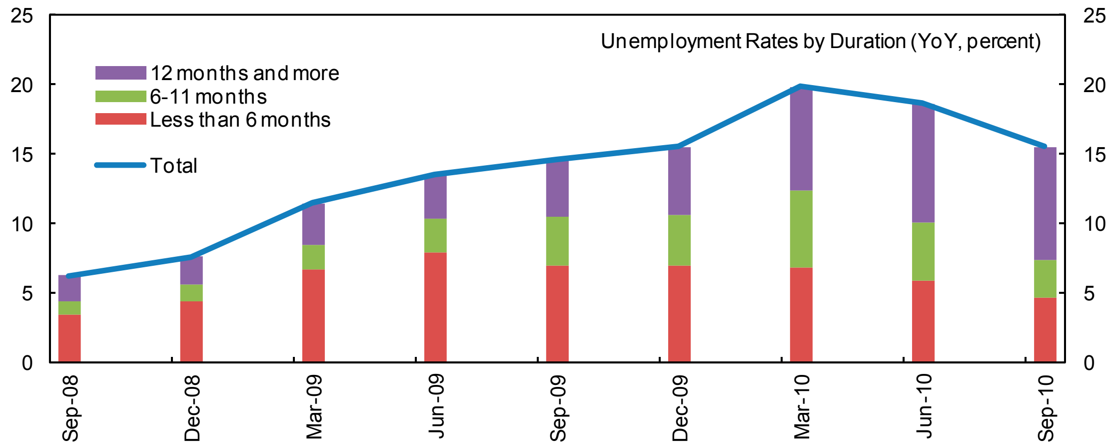




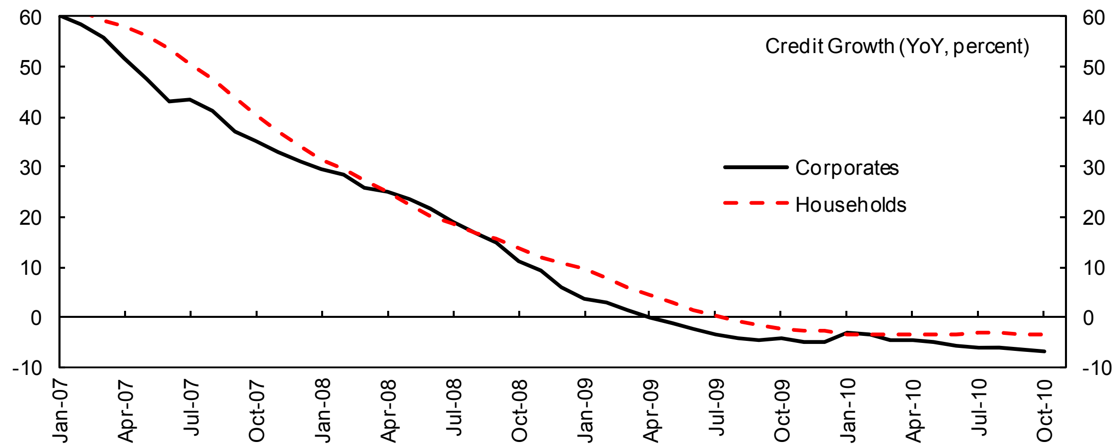
Source: Eurostat.
1/ Core is defined as HICP excluding energy, food, alcohol and tabacco.
2/ Data on UK are from Dec. 2009-Sep. 2010.

Figure 3. Estonia: Legacies of the Bust

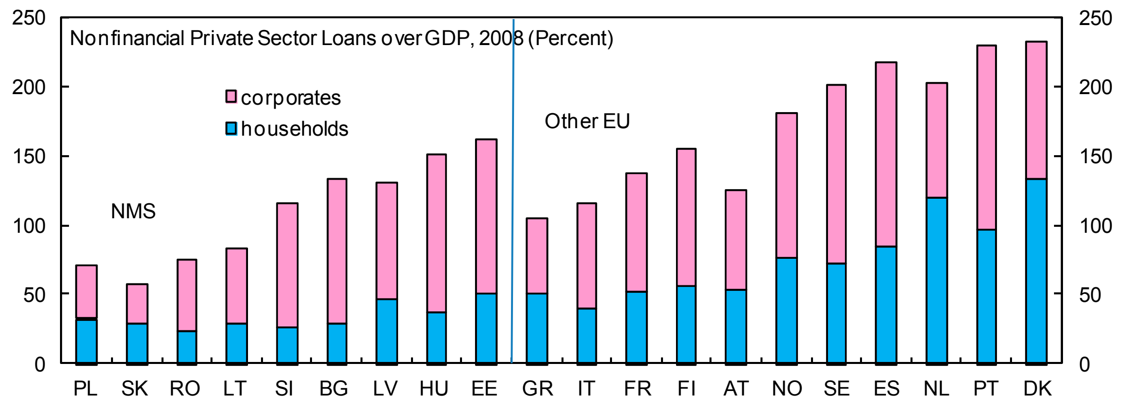
The number of unemployed are declining, but are experiencing increasingly longer durations.



Households and enterprises are on balance repaying their loans...



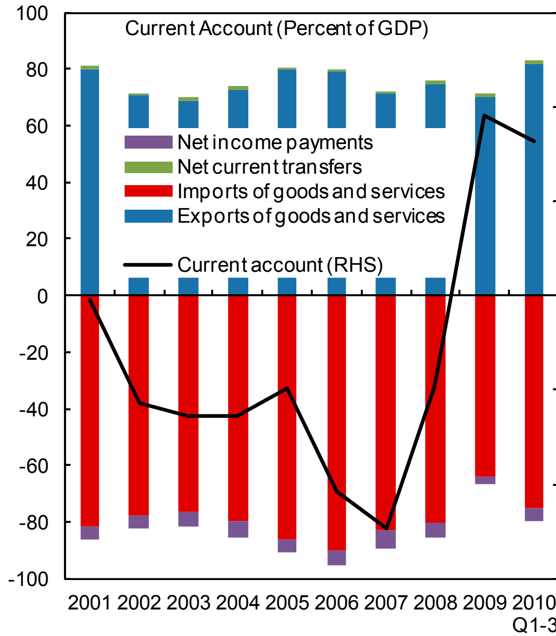
...which remain comparatively high from an international context.



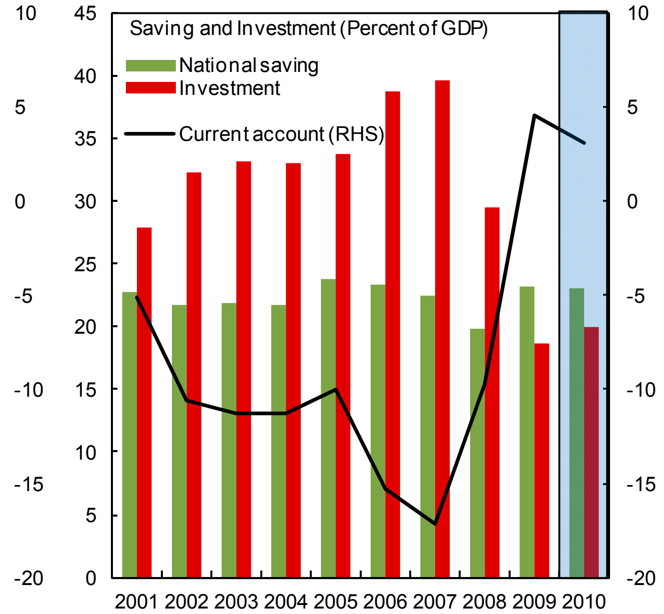
Sources: Eurostat; and Bank of Estonia.

Figure 4. Estonia: External Developments, 2001-10

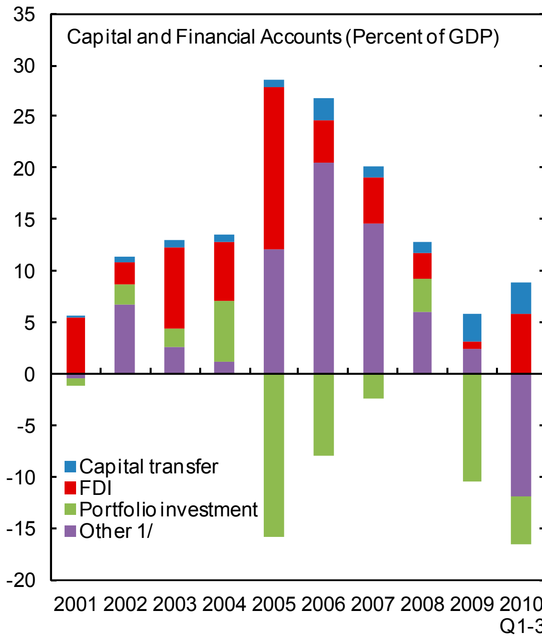
The strong current account improvement reflected a collapse of imports, which is beginning to be reversed...



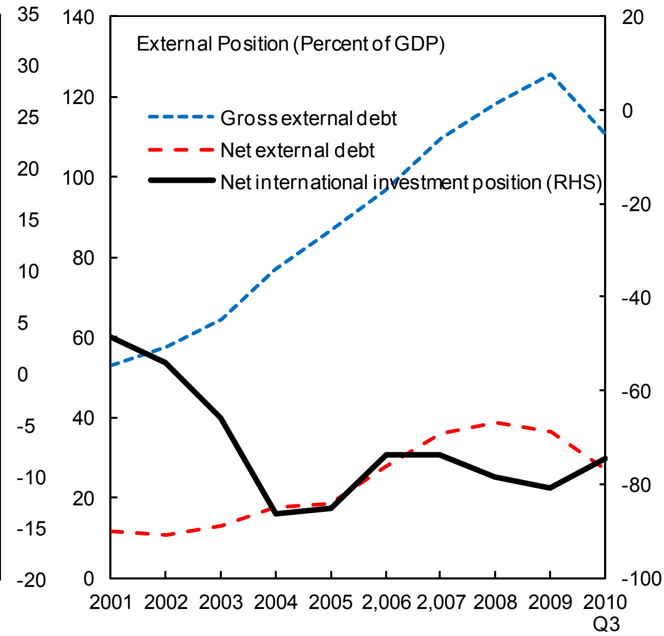
...while both saving and investment ratios (including stockbuilding) are recovering.



Bank deleveraging is reflected in external capital flows...

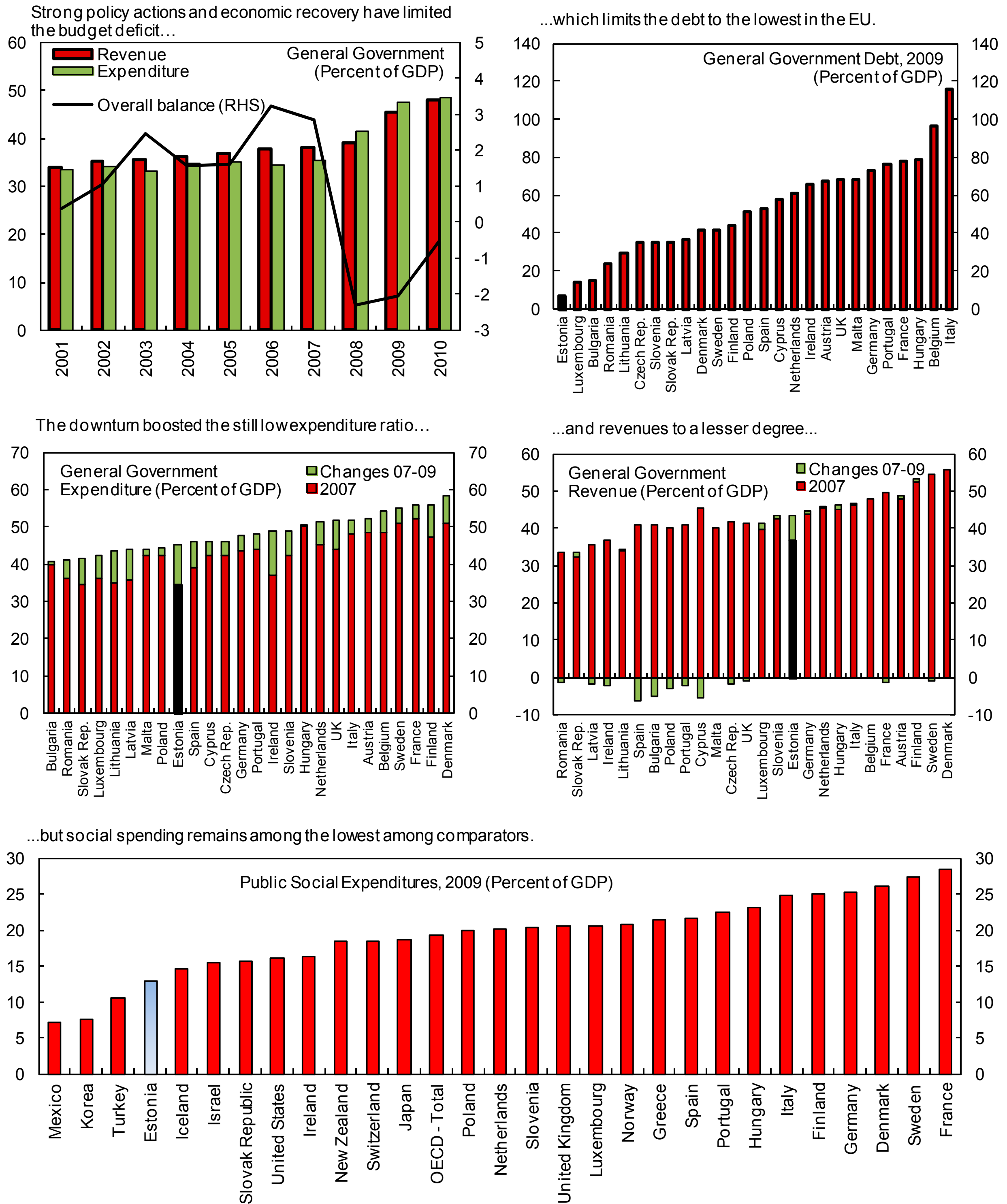


and is tempering exteranal debt burdens.



Sources: Haver; Estonia Statistical Office; and IMF staff calculations.
1/ Other is defined as the sum of financial derivatives, other investments, and errors and omissions.

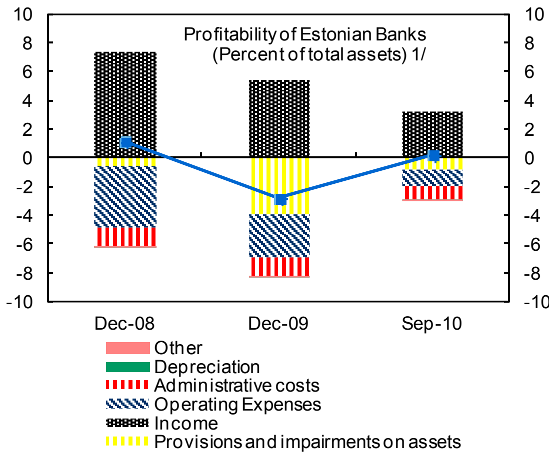
Figure 5. Estonia: Fiscal Developments and Structure



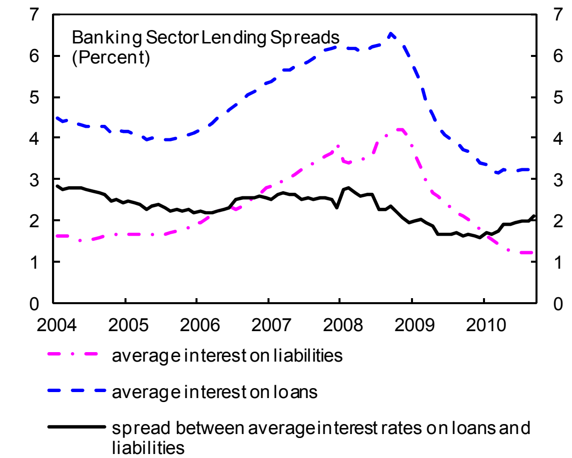
Sources: Haver; Erostat; and OECD.

Figure 6. Estonia: Financial Sector Developments

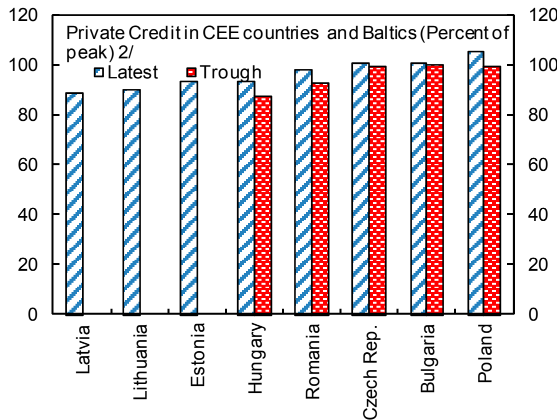
Profitability of banks has recovered, but remains weak.



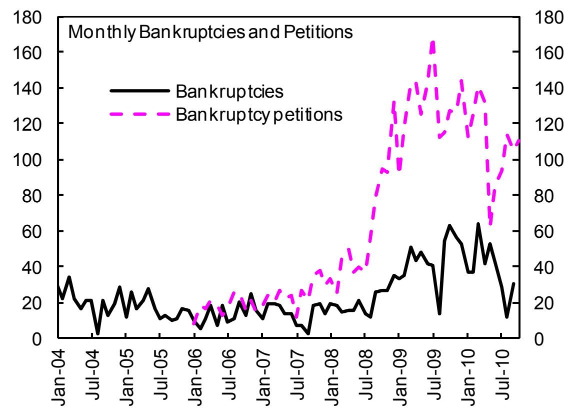
This is in part due to lower loan loss provisions, but also a recovery in interest margins.



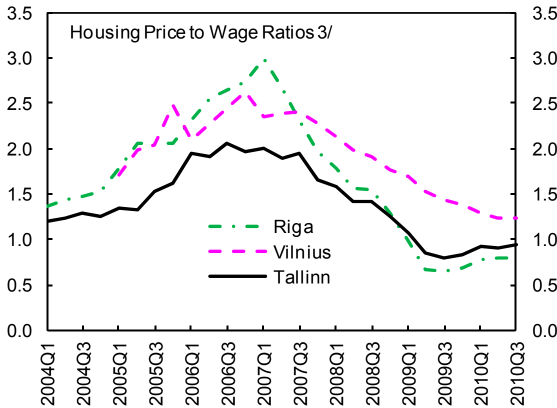
But unlike in CEE countries, the level of credit in Estonia has yet to trough...



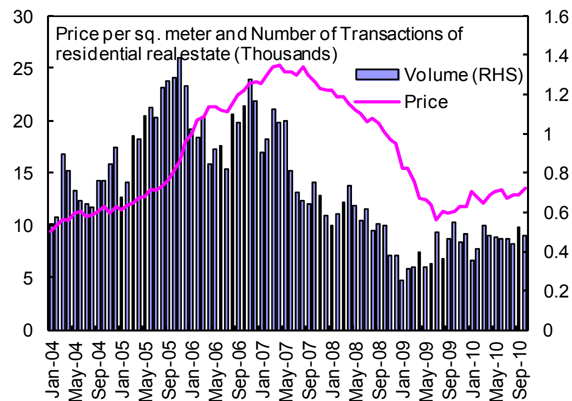
...and risks remain in the private sector.



Even though houses have become much more affordable...



...mortgage activity is still subdued.



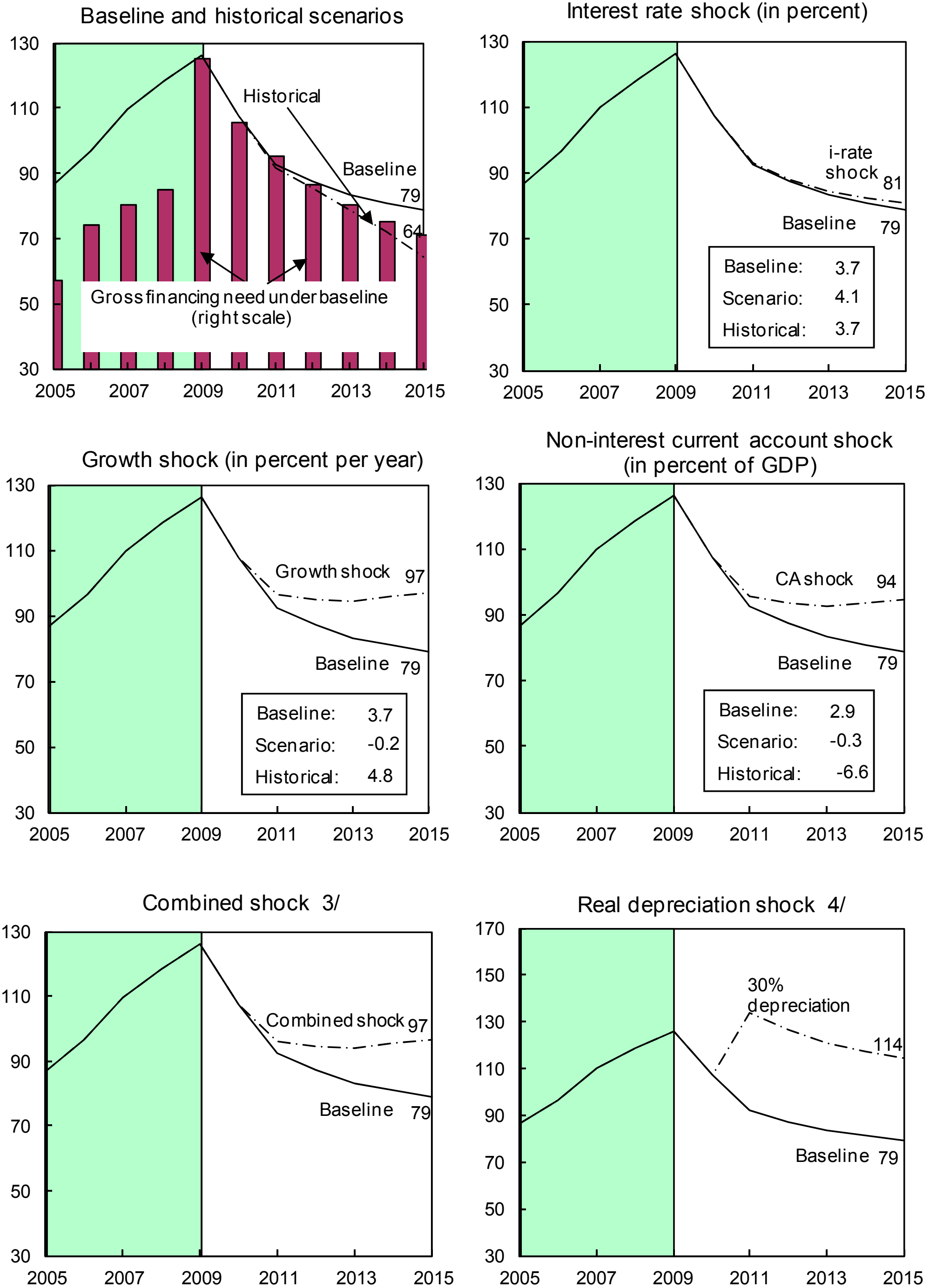
Sources: Bank of Estonia; Eurostat; European Central Bank, Estonian Financial Supervision Authority; Courts Information System; and IMF staff calculations.

1/ For 2010, cumulative profits up to Septemeber 2010 are shown.

2/ There is only one bar for each of the Baltics because the latest is the trough. The peak differs across countries: 2008Q3 in Estonia and Latvia; 2008Q4 in Lithuania; 2009Q1 in Hungary and Romania; 2008Q3in Czech Rep. and 2009Q4 for Poland and Bulgaria.

3/ Ratios are measured by Price per square meter divided by gross wages.

Figure 7. Estonia: External Debt Sustainability: Bound Tests 1/ 2/
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data; and IMF 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/ Large projected declines in 2010-11 reflect in part the expected impact of reserve requirement harmonization associated with euro adoption.
3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.
4/ One-time real depreciation of 30 percent occurs in 2010.

Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2007–12
(in units as indicated)

	2007	2008	2009	2010 Proj.	2011 Proj.	2012 Proj.
National income, prices and wages						
Nominal GDP (kroons, billions)	247.6	252.0	216.9	224.0	233.7	245.8
GDP (euro, billions)	15.8	16.1	13.9	14.3	14.9	15.7
Real GDP growth (year-on-year in percent)	6.9	-5.1	-13.9	2.4	3.6	3.9
Average HICP (year-on-year change in percent)	6.7	10.6	0.2	2.7	4.0	3.0
GDP deflator (year-on-year change in percent)	10.5	7.2	-0.1	0.8	0.7	1.3
Average monthly wage (year-on-year growth in percent)	20.4	13.8	-5.0	0.6	2.6	2.6
Unemployment rate (ILO definition, percent)	4.7	5.5	13.8	17.6	15.7	13.8
Average nominal ULC (year-on-year growth in percent)	14.2	20.1	0.1	-6.7	0.7	0.3
Saving-investment balances (Percent of GDP)						
National saving	22.4	19.7	23.2	23.0	24.1	25.1
Private	16.9	19.7	24.6	23.5	26.4	27.2
Public	5.6	0.0	-1.4	-0.5	-2.3	-2.1
Domestic investment	39.6	29.5	18.7	20.0	21.4	22.7
Private	35.9	26.1	15.2	16.0	17.8	19.6
Public	3.8	3.4	3.4	3.9	3.6	3.2
Foreign saving	17.2	9.7	-4.5	-3.0	-2.7	-2.3
General government (ESA95 basis; percent of GDP)						
Revenue and grants	38.2	39.2	45.5	46.3	45.1	43.6
Expenditure and net lending	35.6	41.9	47.2	47.3	46.4	44.9
Fiscal balance	2.6	-2.7	-1.7	-1.0	-1.3	-1.3
External sector (Percent of GDP)						
Trade balance	-17.2	-13.2	-4.0	-2.4	-3.6	-4.3
Service balance	6.0	7.6	9.7	9.2	9.7	9.5
Income balance	-6.7	-5.3	-2.7	-5.1	-4.9	-4.4
Current account	-17.2	-9.7	4.5	3.0	2.7	2.3
Gross international reserves (euro, millions)	2237	2776	2766	1936	1759	2995
In months of imports	2.5	3.1	4.7	2.7	2.3	3.6
In percent of gross short-term debt (including trade credits)	42.7	37.6	43.9	47.9	114.6	297.5
In percent of base money	118.9	114.8	121.8	82.9	75.5	…
Gross external debt/GDP (Percent) 1/	109.8	118.5	125.8	107.5	92.5	87.3
Net external debt/GDP (Percent) 2/	35.4	38.8	37.0	28.7	17.2	7.0
General government external debt/GDP (Percent)						
Excluding government assets held abroad	2.4	3.1	6.0	5.8	5.6	5.3
Including government assets held abroad 3/	-6.9	-4.8	-2.4	-1.8	-1.7	-1.6
Exchange rate (EEK/US$ - period average) 4/	11.4	10.7	11.3	…	…	…

Social Indicators (reference year):

Population (2010): 1.34 million; Per capita GDP (2009): €10,342; Life expectancy at birth (2007): 75.0 (female) and 66.6 (male);
Poverty rate (share of the population below the established risk-of-poverty line, 2008): 19.7 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, 2001–12 1/

(Percent of GDP)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
										Staff Proj.		
Revenue and grants	33.6	35.2	35.5	36.2	36.8	37.8	38.2	39.2	45.5	46.3	45.1	43.6
Revenue	33.0	34.6	34.4	34.1	34.1	35.0	35.3	36.2	40.3	39.8	38.3	37.3
Tax revenue	29.2	30.6	30.3	29.8	30.0	29.9	31.2	32.1	34.7	34.3	34.1	33.4
Direct taxes	18.0	18.8	18.8	18.5	17.4	17.2	18.4	19.9	20.6	20.5	20.0	19.4
Personal income tax	6.5	6.4	6.5	6.3	5.6	5.6	5.9	6.3	5.7	5.6	5.7	5.7
Corporate profits tax	0.7	1.1	1.6	1.7	1.4	1.5	1.6	1.7	1.8	1.4	1.4	1.4
Social security tax	6.3	6.3	5.9	5.7	5.6	5.6	5.9	6.5	7.2	7.0	6.5	5.9
Medical insurance tax	4.1	4.1	4.1	4.1	4.1	4.1	4.4	4.9	5.2	4.8	4.8	4.8
Unemployment insurance tax	...	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.8	1.2	1.2	1.2
Land and property taxes	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
VAT	7.9	8.4	8.2	7.5	8.4	8.9	9.0	8.2	8.7	8.7	8.7	8.6
Excises	3.3	3.2	3.1	3.5	3.8	3.4	3.3	3.6	4.6	4.8	4.9	5.0
Other taxes (incl. on intern. trade)	0.0	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.3	0.4	0.4	0.4
Nontax revenue	3.8	4.0	4.1	4.3	4.1	5.1	4.1	4.1	5.6	5.5	4.2	3.9
Grants	0.6	0.6	1.1	2.1	2.7	2.8	3.0	3.0	5.2	6.5	6.8	6.3
Expenditure	33.3	34.2	33.0	34.6	35.2	34.6	35.4	41.5	47.6	46.6	46.7	44.9
Current expenditure	30.4	30.8	30.4	31.9	31.8	30.8	31.6	38.1	44.2	42.7	43.1	41.7
Expenditure on goods and services	19.8	19.9	19.4	19.7	20.2	19.6	20.7	24.8	28.2	26.6	27.4	26.4
Wages and salaries	6.7	6.9	7.4	7.1	6.8	6.3	6.5	7.6	8.3	7.6	7.5	7.3
Other goods and services	13.1	13.0	12.0	12.6	13.3	13.3	14.2	17.2	19.9	19.0	19.8	19.0
Current transfers and subsidies	10.3	10.6	10.8	12.0	11.4	11.0	10.8	13.2	15.8	15.9	15.4	15.1
Subsidies	0.7	0.9	1.0	1.3	0.7	0.6	0.3	0.3	0.3	0.3	0.3	0.3
Transfers to households	9.6	9.7	9.6	10.1	9.8	9.4	9.3	11.7	14.3	14.3	13.9	13.6
of which: Pensions	6.1	6.0	6.1	6.0	6.0	5.8	5.8	7.0	8.5	8.5	8.6	8.4
Family benefits	1.2	1.1	1.0	1.4	1.3	1.2	1.2	1.5	1.8	1.8	1.9	1.9
Sickness benefits	0.7	0.7	0.6	0.8	0.7	0.8	0.8	1.0	1.0	0.8	0.8	0.8
Unemployment benefits	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	1.1	0.6	0.4	0.4
Income maintenance	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	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	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	0.6	0.7	0.7
Other	0.2	0.4	0.5	0.5	0.6	0.6	0.6	1.0	1.0	1.0	1.0	1.0
Transfers to the EU budget	...	...	...	0.6	1.0	1.0	1.4	1.9	2.0	2.2	2.2	2.2
Interest payments	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2
Capital expenditure	2.9	3.5	2.6	2.7	3.4	3.8	3.8	3.4	3.4	3.9	3.6	3.2
Overall surplus (+) / deficit (-)	0.4	1.1	2.5	1.6	1.6	3.2	2.9	-2.3	-2.1	-0.3	-1.6	-1.3
Financing												
Domestic financing	...	...	...	...	...	...	...	...	-2.0	-0.8	2.0	2.0
Foreign financing	...	...	...	...	...	...	...	...	4.0	1.1	-0.4	-0.6
Memorandum items:												
Primary fiscal balance (+, surplus)	0.6	1.3	2.7	1.8	1.8	3.4	3.0	-2.2	-1.8	-0.1	-1.3	-1.1
Overall balance, ESA95 basis 2/	-0.1	0.3	1.7	1.6	1.6	2.3	2.6	-2.7	-1.7	-1.0	-1.3	-1.3
Total general government debt												
Excluding government assets held abroad	4.8	5.7	5.6	5.0	4.6	4.4	3.7	4.6	7.2	6.9	6.6	6.3
Including government assets held abroad	1.5	0.4	-2.3	-3.1	-3.7	-4.9	-5.6	-3.3	-1.3	-1.0	0.7	1.9
Nominal GDP (kroons, billion)	109.1	121.7	136.4	151.5	175.0	209.5	247.6	252.0	216.9	224.0	233.7	245.8

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, 2002-12

	2002	2003	2004	2005	2006	2007	2008	2009	Projections 2010	2011	2012
				(In millions of EURO)							
Current Account	-825	-985	-1,095	-1,116	-2,053	-2,721	-1,568	628	436	409	366
Primary Current Account 1/	-480	-523	-586	-661	-1,365	-1,666	-707	1,008	1,163	1,139	1,058
Trade Balance	-1,180	-1,376	-1,569	-1,550	-2,304	-2,730	-2,125	-560	-349	-532	-679
Exports	3,704	4,055	4,764	6,348	7,774	8,141	8,539	6,536	8,334	8,770	9,347
Of which : goods for processing	1,146	1,204	804	647	1,281	994	825	836	1,065	1,121	1,195
Imports	-4,883	-5,430	-6,333	-7,898	-10,078	-10,872	-10,664	-7,096	-8,682	-9,303	-10,026
Of which : goods for processing	-964	-962	-672	-587	-1,214	-923	-916	-801	-981	-1,051	-1,132
Services Balance	632	733	891	839	890	949	1,225	1,345	1,317	1,447	1,487
Receipts	1,800	1,960	2,294	2,612	2,871	3,194	3,512	3,159	3,367	3,589	3,807
of which: travel and tourism	585	592	717	784	811	754	805	780	832	887	940
Payments	-1,168	-1,227	-1,403	-1,773	-1,981	-2,245	-2,288	-1,813	-2,050	-2,142	-2,320
Income	-345	-463	-509	-455	-688	-1,055	-861	-381	-727	-730	-693
Current Transfers	67	119	92	50	49	115	194	223	194	224	250
Capital and Financial Account	834	1,186	1,449	1,311	2,679	2,652	1,932	-526	-1,266	-585	870
Capital Transfers	41	62	69	85	289	164	167	384	587	644	630
Financial Account	794	1,123	1,380	1,226	2,391	2,488	1,765	-910	-1,854	-1,229	240
Direct Investment 2/	167	685	554	1,751	550	715	420	100	537	590	602
From abroad	307	822	771	2,307	1,432	1,991	1,180	1,209	786	894	977
Outward (by Estonians)	-140	-137	-217	-556	-882	-1,276	-760	-1,109	-249	-304	-374
Net equity investment 2/	59	32	-44	-1,355	-54	-266	49	-140	-249	-32	-32
Loans and other investments 3/	568	407	870	830	1,894	2,038	1,296	-870	-2,141	-1,787	-330
of which:											
Banks	340	697	897	531	1,583	2,215	1,023	-912	-1,713	-1,393	-256
Government	-194	-211	37	-94	-251	-329	340	416	128	0	0
Monetary Authorities	38	37	11	-44	24	62	-111	74	19	21	21
Errors and Omissions	50	-53	-135	117	-145	159	139	-100	0	0	0
Overall balance	59	148	219	312	481	90	503	2	-830	-176	1,236
Memorandum Items:					(In percent of GDP, unless otherwise stated)						
Current Account	-10.6	-11.3	-11.3	-10.0	-15.3	-17.2	-9.7	4.5	3.0	2.7	2.3
Trade balance	-15.2	-15.8	-16.2	-13.9	-17.2	-17.2	-13.2	-4.0	-2.4	-3.6	-4.3
Non-factor services balance	8.1	8.4	9.2	7.5	6.6	6.0	7.6	9.7	9.2	9.7	9.5
Income balance	-4.4	-5.3	-5.3	-4.1	-5.1	-6.7	-5.3	-2.7	-5.1	-4.9	-4.4
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
Reinvested earnings, net	-2.2	-4.2	-4.7	-3.5	-5.2	-6.6	-4.5	-1.5	-3.2	-3.4	-3.3
Other income, net	-2.4	-1.4	-1.7	-2.0	-1.9	-1.4	-1.8	-2.2	-2.8	-2.5	-2.1
Current transfers	0.9	1.4	1.0	0.4	0.4	0.7	1.2	1.6	1.4	1.5	1.6
Export growth (in percent)	-1.4	9.5	17.5	33.2	22.5	4.7	4.9	-23.5	27.5	5.2	6.6
Import growth (in percent)	5.6	11.2	16.6	24.7	27.6	7.9	-1.9	-33.5	22.4	7.1	7.8
Net FDI	2.1	7.9	5.7	15.7	4.1	4.5	2.6	0.7	3.7	4.0	3.8
Gross International Reserves (EURO millions) 4/ 5	964	1,099	1,318	1,648	2,121	2,237	2,776	2,766	1,936	1,759	2,995
In months of imports	2.4	2.4	2.5	2.5	2.5	2.5	3.1	4.7	2.7	2.3	3.6
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	1.1	3.0
Total external debt 8/											
Gross	57.8	64.4	77.2	86.6	96.9	109.8	118.5	125.8	107.5	92.5	87.3
Net 9/	10.4	12.9	17.5	18.2	27.4	35.4	38.8	37.0	28.7	17.2	7.0
NIIP	-54.1	-65.9	-86.5	-85.2	-73.9	-73.6	-78.6	-80.8	-72.6	-62.5	-53.1
General government external debt 10/											
Excluding Govt. assets held abroad	2.8	2.8	3.9	3.7	3.6	2.4	3.1	6.0	5.8	5.6	5.3
Including Govt. assets held abroad	-2.5	-5.1	-4.2	-4.5	-5.7	-6.9	-4.8	-2.4	-1.8	-1.7	-1.6
Debt Service/Exports of GNFS (in percent)	33.8	31.9	37.1	37.6	45.6	56.1	66.7	109.3	77.6	68.3	59.9

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 owner.
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, 2005–15

(Percent of GDP, unless otherwise indicated)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
						Projection					
GDP real growth (percent)	9.4	10.6	6.9	-5.1	-13.9	2.4	3.6	3.9	3.9	3.7	3.7
Contribution to real GDP growth (percent)											
Consumption 1/	5.5	8.3	5.4	-2.3	-10.2	-1.4	1.2	1.6	1.8	2.0	2.1
Investment 2/	4.4	8.3	7.0	-8.5	-15.0	2.4	1.6	2.0	2.3	2.5	2.7
Exports (goods and nonfactor services)	13.6	5.2	1.1	0.3	-13.3	11.1	3.4	4.0	4.3	4.5	4.6
Imports (goods and nonfactor services)	-14.0	-11.2	-6.5	5.5	24.7	-9.6	-2.6	-3.6	-4.5	-5.3	-5.7
National saving	23.8	23.4	22.4	19.7	23.2	23.0	24.1	25.1	24.6	23.6	23.4
Private	19.5	18.5	16.9	19.7	24.6	23.5	26.4	27.2	25.6	23.5	22.6
Public	4.3	4.9	5.6	0.0	-1.4	-0.5	-2.3	-2.1	-1.0	0.1	0.8
Investment	33.8	38.7	39.6	29.5	18.7	20.0	21.4	22.7	24.3	26.0	27.9
Private	30.3	34.9	35.9	26.1	15.2	16.0	17.8	19.6	21.9	24.4	26.3
Public	3.4	3.8	3.8	3.4	3.4	3.9	3.6	3.2	2.4	1.6	1.6
Foreign saving	10.0	15.3	17.2	9.7	-4.5	-3.0	-2.7	-2.3	-0.3	2.4	4.5
Memorandum items:											
Fiscal balance 3/	1.6	3.2	2.9	-2.3	-2.1	-0.3	-1.6	-1.3	-0.6	0.3	1.0
Revenues and grants	36.8	37.8	38.2	39.2	45.5	46.3	45.1	43.6	41.5	40.0	39.6
Expenditure and net lending	35.2	34.6	35.4	41.5	47.6	46.6	46.7	44.9	42.1	39.6	38.6
Cyclically-adjusted balance	0.7	0.7	-0.9	-3.9	1.1	2.1	-0.1	-0.6	-0.4	0.4	1.0
Total general government debt	4.6	4.4	3.7	4.6	7.2	6.9	6.6	6.3	6.0	5.7	5.4
Net non-debt creating capital inflows ("+" inflow)	4.3	5.9	3.9	4.0	2.5	6.1	8.0	7.6	6.8	6.3	6.3
Capital transfers 4/	0.8	2.2	1.0	1.0	2.8	4.1	4.3	4.0	2.8	1.9	1.8
Net equity investment	-12.1	-0.4	-1.7	0.3	-1.0	-1.7	-0.2	-0.2	-0.2	-0.2	-0.2
Net foreign direct investment	15.7	4.1	4.5	2.6	0.7	3.7	4.0	3.8	4.2	4.6	4.7
HICP inflation (average, in percent)	4.1	4.4	6.7	10.6	0.2	2.7	4.0	3.0	2.5	2.5	2.5
CPI inflation (average, in percent)	4.1	4.4	6.6	10.4	-0.1	2.8	4.0	3.0	2.5	2.5	2.5
Employment growth (average, year-on-year in percent)	2.0	6.4	1.4	0.2	-9.2	-5.0	1.6	1.6	1.8	1.7	0.5
Unemployment rate (percent)	7.9	5.9	4.7	5.5	13.8	17.6	15.7	13.8	11.6	9.4	8.3
Average wage growth (percent)	11.4	16.2	20.4	13.8	-5.0	0.6	2.6	2.6	2.8	3.0	3.0
Labor compensation share of GDP	44.2	44.4	46.7	51.2	51.2	47.4	47.4	46.9	46.6	46.3	45.5
Output gap (in percent of potential output)	2.9	8.3	12.0	5.0	-9.2	-7.0	-4.4	-2.2	-0.8	-0.1	0.0

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/ Mainly EU capital grants, all of which are channelled through the budget.

Table 5. Estonia: Indicators of External Vulnerability, 2005–10
(Percent of GDP, unless otherwise indicated)

	2005	2006	2007	2008	2009	Latest Observation	Date
Financial indicators							
Public sector external debt 1/	3.7	3.6	2.4	3.1	6.0	5.8	Q3 2010
Broad money (Year-on-year, percent)	41.9	28.2	13.5	5.5	0.1	2.8	Q3 2010
Base Money (Year-on-year, percent)	33.0	30.7	1.6	28.5	-5.1	-10.6	Q3 2010
Private sector credit (Year-on-year, percent) 2/	64.9	62.1	33.0	8.4	-5.2	-5.5	Q3 2010
External Indicators							
Exports (Year-on-year, percent)	33.2	22.5	4.7	4.9	-23.5	36.8	Q3 2010
Imports (Year-on-year, percent)	24.7	27.6	7.9	-1.9	-33.5	31.0	Q3 2010
Current account balance	-10.0	-15.3	-17.2	-9.7	4.5	3.7	Q1-3 2010
Capital and financial account balance	11.7	20.0	16.8	12.0	-3.8	-6.0	Q1-3 2010
Gross official reserves (Millions of euros)	1,648	2,121	2,237	2,776	2,766	2,279	Q3 2010
NFA of the consolidated banking system (Millions of euros)	-667	-1,597	-3,404	-3,236	-2,624	-1,785	Q3 2010
Central Bank short-term foreign liabilities (Millions of euros)	9,167.1	12,361.0	15,824.3	16,344.5	14,870.5	15,257.6	Q3 2010
Short term foreign assets of the financial sector (Millions of euros) 3/	61,003	77,742	119,813	151,900	126,606	110,102	Q3 2010
Short term foreign liabilities of the financial sector (Millions of euros)	49,232	62,871	84,527	48,360	48,733	47,573	Q3 2010
Open net foreign currency position of the financial sector (Millions of euros)	633	506	2,213	3,316	4,006	4,201	Q3 2010
Official reserves in months of imports (Excl. imports of goods for processing)	2.7	2.9	2.7	3.4	5.3	4.4	Q3 2010
Broad money to reserves (Ratio)	3.2	3.2	3.4	2.9	3.0	3.6	Q3 2010
Total short term external debt to reserves 4/	2.0	2.2	2.3	2.7	2.3	2.7	Q3 2010
Total external debt 5/	87	97	110	119	126	117	Q2 2010
of which: Public sector debt 1/	3.7	3.6	2.4	3.1	6.0	5.8	Q3 2010
Net external debt 6/	18	27	35	39	37	28	Q3 2010
Debt service to exports of GNFS	37.6	45.6	56.1	66.7	109.3	...	
External interest payments to exports of GNFS (Percent)	2.3	2.9	4.7	6.5	4.7	…	
External Amortization payments to exports of GNFS (Percent)	35.2	42.7	51.4	60.3	104.6	...	
Exchange rate (Per US$, period average)	12.6	12.5	11.4	10.6	11.2	11.4	Nov-10
REER (Percent change, period average; appreciation (+))	1.4	-10.4	4.5	6.8	1.0	-0.2	Nov-10
Financial Market Indicators							
Stock market index 7/	664	856	742	274	404	673	Nov-10
Foreign currency debt rating 8/	A	A	A	A	A-	A	Oct-10
Money market spread 9/	0.02	-0.05	2.01	4.10	1.07	0.4	Dec-10

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.

Table 6. Country: External Debt Sustainability Framework, 2005-15

(Percent of GDP, unless otherwise indicated)

	Actual					Projections						
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Debt-stabilizing non-interest current account 7/
1 **Baseline: External debt**	86.6	96.6	109.8	118.5	125.9	107.5	92.5	87.3	83.2	81.0	79.0	-1.7
2 Change in external debt 1/	9.4	10.0	13.2	8.7	7.4	-18.4	-15.1	-5.2	-4.0	-2.2	-2.0	
3 Identified external debt-creating flows (4+8+9)	-11.0	-5.6	-10.6	-5.7	12.8	-7.0	-7.3	-7.2	-4.9	-2.4	0.2	
4 Current account deficit, excluding interest payments	8.1	13.0	13.8	4.9	-7.8	-5.6	-5.6	-5.5	-2.9	-1.4	1.0	
5 Deficit in balance of goods and services	6.4	10.6	11.3	5.6	-5.7	-6.8	-6.1	-5.1	-3.9	-2.1	0.0	
6 Exports	80.1	79.5	71.6	74.8	69.9	81.7	82.8	83.7	85.1	86.7	88.5	
7 Imports	86.5	90.1	82.9	80.4	64.3	75.0	76.6	78.6	81.3	84.7	88.4	
8 Net non-debt creating capital inflows (negative)	-10.6	-6.0	-6.1	-6.1	-9.6	-0.9	-1.0	-1.3	-1.5	-1.5	-1.5	
9 Automatic debt dynamics 2/	-8.5	-12.7	-18.4	-4.5	30.3	-0.5	-0.7	-0.4	-0.5	0.5	0.7	
10 Contribution from nominal interest rate	1.9	2.3	3.4	4.8	3.3	2.6	2.9	3.0	2.8	3.4	3.5	
11 Contribution from real GDP growth	-6.3	-7.6	-5.2	5.1	20.2	-3.1	-3.6	-3.4	-3.2	-2.9	-2.8	
12 Contribution from price and exchange rate changes 3/	-4.1	-7.4	-16.6	-14.4	6.8	...	...	...	...	...	...	
13 Residual, incl. change in gross foreign assets (2-3) 4/	20.4	15.6	23.8	14.4	-5.4	-11.4	-7.7	2.0	0.9	0.2	-2.2	
External debt-to-exports ratio (in percent)	108.0	121.5	153.2	158.4	180.0	131.5	111.7	104.2	97.8	93.4	89.3	
Gross external financing need (in billions of US dollars) 5/	7.9	12.4	17.5	20.2	24.1	20.1	19.0	18.1	17.6	17.2	17.0	
in percent of GDP	57.1	73.9	80.4	85.1	125.0	105.5	95.2	86.5	80.4	75.0	70.7	
Scenario with key variables at their historical averages 6/						107.5	91.7	85.4	78.7	72.0	64.3	-12.8
Key Macroeconomic Assumptions Underlying Baseline												
Real GDP growth (in percent)	9.4	10.6	6.9	-5.1	-13.9	2.4	3.6	3.9	3.9	3.7	3.7	
GDP deflator in US dollars (change in percent)	5.6	9.3	20.7	15.1	-5.4	-3.9	1.3	0.7	1.0	1.1	1.1	
Nominal external interest rate (in percent)	2.8	3.2	4.5	4.8	2.2	2.0	2.8	3.4	3.3	4.3	4.5	
Growth of exports (US dollar terms, in percent)	27.1	19.9	16.3	14.2	-23.9	15.1	6.3	5.9	6.6	6.8	6.9	
Growth of imports (US dollar terms, in percent)	25.1	25.9	18.8	6.0	-34.9	14.9	7.3	7.3	8.5	9.2	9.5	
Current account balance, excluding interest payments	-8.1	-13.0	-13.8	-4.9	7.8	5.6	5.6	5.5	2.9	1.4	-1.0	
Net non-debt creating capital inflows	10.6	6.0	6.1	6.1	9.6	0.9	1.0	1.3	1.5	1.5	1.5	

Source: Estonian authorities; and IMF staff estimates and projections.

1/ Large reductions projected for 2010-11 reflect in part the expected impact of reserve requirement harmonization associated with euro adoption.

2/ 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.

3/ 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).

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

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

6/ 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.

7/ 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 7. Estonia: Financial Soundness Indicators of the Banking Sector, 2005-10

	2005	2006	2007	2008	2009	3/31/2010	6/30/2010
Capital adequacy							
Regulatory capital as percent of risk-weighted assets	11.72	13.16	14.78	18.86	22.32	22.04	22.12
Regulatory Tier I capital to risk-weighted assets	11.71	10.04	10.55	13.18	16.10	15.78	15.97
Capital as percent of assets	8.64	8.41	8.61	8.80	8.63	8.72	8.80
Capital adequacy (on consolidated basis)							
Regulatory capital as percent of risk-weighted assets	10.72	10.79	10.84	13.32	15.75	14.93	14.93
Regulatory Tier I capital to risk-weighted assets	10.01	8.64	8.25	10.47	11.86	11.13	11.17
Capital as percent of assets	8.72	7.61	7.70	9.26	8.56	8.54	8.62
Sectoral distribution of bank credit to the private sector (as percent of total credit to private sector)							
Real estate/Construction and Development loans	14.31	19.09	17.20	17.13	17.69	19.11	19.42
Consumer loans	3.27	4.46	4.93	4.94	4.88	4.69	4.69
Industrial/Commercial loans	8.54	9.83	10.22	5.65	5.68	5.05	5.11
Transportation and Road Construction Loans	4.58	4.16	3.85	1.57	1.64	2.36	2.42
Asset quality							
Non-performing loans (NPL) as percent of gross loans	0.20	0.18	0.44	1.94	5.20	5.63	6.13
NPL net of provisions as percent of tier I capital	1.22	1.56	3.82	16.53	28.05	30.52	31.45
Large exposures as percent of tier I capital	28.38	8.65	0.58	1.17	11.85	12.94	12.74
Earnings and profitability							
Gross profits as percent of average assets (ROAA)	1.96	1.70	2.59	1.18	-6.02	-0.28	0.26
Gross profits as percent of average equity capital (ROAE)	21.04	19.77	30.00	13.24	-24.40	-3.41	1.19
Net interest margin (net interest income as percent of interest bearing assets)	na	na	na	0.51	0.34	0.36	0.41
Net interest income as percent of gross income	45.90	56.18	45.17	56.82	47.10	45.97	52.74
Non-interest income as percent of gross income	54.10	43.82	54.83	43.18	66.30	54.76	53.83
Trading income as a percent of gross income	18.51	18.57	17.79	7.37	12.70	16.08	8.06
Non-interest expenses as percent of gross income	50.94	51.91	40.71	65.19	66.30	54.76	53.83
Personnel expenses as percent of non-interest expenses	34.29	35.28	35.43	28.31	33.90	39.60	41.96
Spread between reference loan and deposit rates	1.95	2.11	2.15	2.21	1.59	1.79	1.42
Liquidity							
Liquid assets as percent of total assets	24.93	19.19	18.12	19.01	13.03	12.52	13.96
Liquid assets as percent of short-term liabilities	39.46	31.98	34.89	31.95	27.68	26.13	28.61
Foreign currency loans as percent of total loans	79.9	78.1	80.50	86.11	87.78	88.69	89.15
Deposits as percent of assets	51.3	51.2	58.50	54.30	61.08	61.38	63.09
Sensitivity to market risk							
Off-balance sheet operations as percent of assets	50.08	55.45	46.88	43.56	46.96	45.65	49.33
Gross asset position in derivatives as a percentage of tier I capital	2.37	2.78	5.57	5.44	3.23	3.35	3.06
Gross liability position in derivatives as a percentage of tier I capital	1.30	3.39	3.94	4.42	2.55	3.10	3.07
Net open position in foreign exchange as a percentage of tier I capital	7.81	21.70	16.02	18.31	44.56	47.44	47.12
Net open position in equities as a percentage of tier I capital	58.77	51.97	65.54	58.71	77.05	79.01	79.06

Source: Bank of Estonia.

ANNEX I. IMPACT OF GLOBAL FUEL AND FOOD PRICES[8]

36. **Reduced-form VAR models have been used to examine the relative impact of global food and fuel price shocks on Estonia**. Specifically, these models have included four variables of interest: global food and fuel price indexes from WEO, and HICP and core price indexes from Eurostat. Using logged indexes from January 2000 to July 2010, five separate models were estimated: Estonia, Latvia, Lithuania, as well as averages for the euro area and the EU. For consistency and cross-model comparability, all models have included three lags, which was the highest number of lags where these were stable. Global shocks were placed first in a Choleski ordering and the resulting impulse responses were normalized to reflect a shock equal to one percentage point.

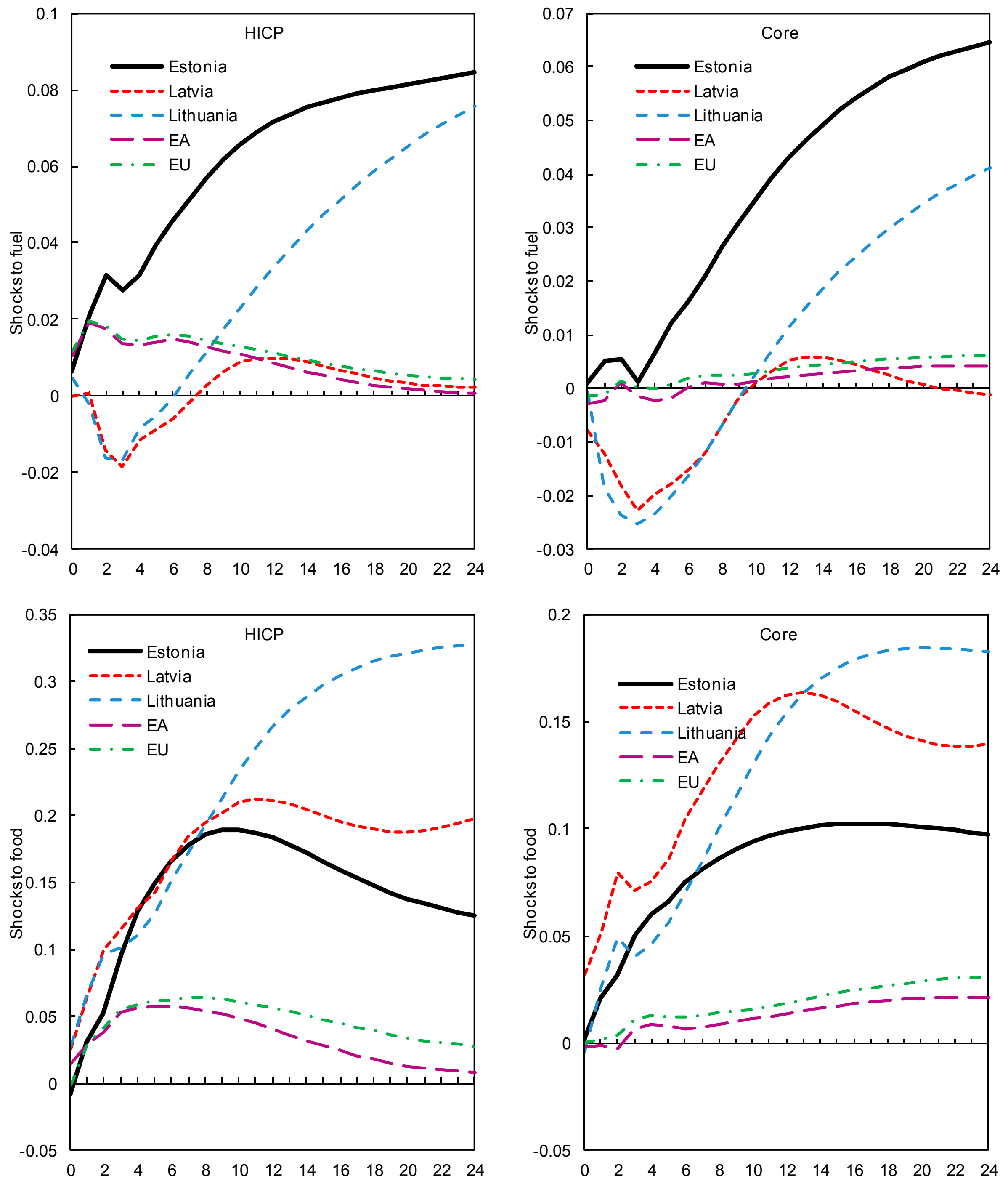
37. **The results suggest that prices in Estonia and, to a lesser extent, the other Baltic countries are disproportionately affected by global food and fuel prices**. This holds not only for HICP and but also for core prices. Keeping in mind the illustrative nature of these models, the following stylized facts emerge:

- *Global fuel prices* have the largest effect on Estonia's prices. While the immediate impact is felt on HICP, core prices also increase but with a delay of roughly three months. The price responses in the other Baltic countries are similar but smaller; the initial price declines are puzzling and merit further study. Regardless, these results contrasts with the euro area and EU responses were the effect on prices was not only smaller but centered on HICP with limited impact on core prices.

- *Global food prices* have a similar impact in Estonia as in the other Baltic countries in first six months but afterward price increases are greater in the latter. Moreover, these shocks feed quickly into core prices throughout the Baltic countries. While the price responses in the euro area or EU are smaller, they too experience an increase in core prices albeit with a delay.

[8] Prepared by Zhaogang Qiao.

Figure A1. Estonia: Price Reponse to Shocks on World Fuel and Food Prices 1/

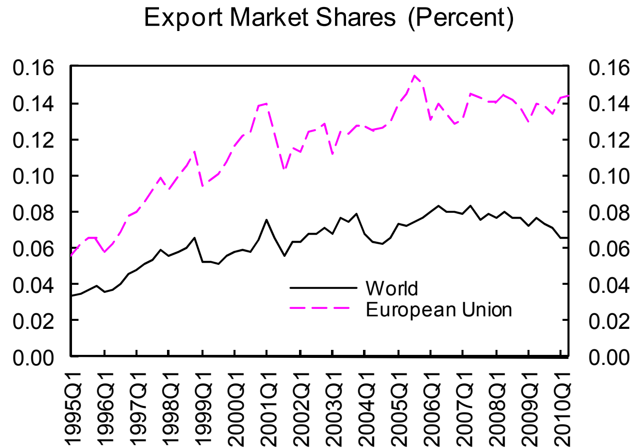


Sources: Haver; WEO; and IMF staff estimates.
1/ Based on a series of four variable VAR models, with its variables ordered as follows: global food and fuel prices and HICP and core price indexes. Three lags were included as models with higher lags were unstable. For comparability across country and regional models, impulse responses were scaled to depict a shock equal to one in all cases.

Annex II. Non-Price Competitiveness, Export Composition, and Comparative Advantage[9]

Non-Price Competitiveness

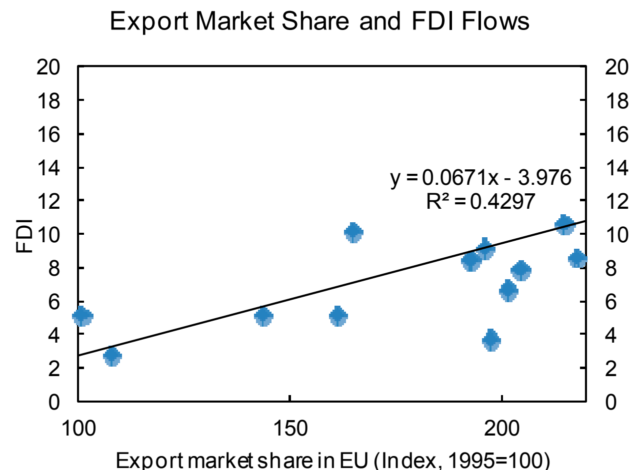
38. **Estonia's export market share has remained broadly stable despite a significant real appreciation**. While there was a strong upward trend in the REER and a considerable decline in trading partner's activity during the current crisis, Estonia's export market share to the EU held up and in fact increased slightly. While Estonia's world export market share declined—likely reflecting the growing importance of Asian exports—export developments highlight the importance of factors other than price and cost competitiveness.



Source: Direction of Trade.

39. **Non-price competitiveness thus appears to play an important role in Estonia's competitiveness**. While standard determinants of exports performance such as relative prices and foreign demand can largely explain its export performance (Figure A1, upper row), non-price competitiveness—encompassing technological and structural aspects—has also contributed to export developments. Estonia's technological competitiveness has improved, reflecting in part increased R&D expenditures and number of patents (Figure A1, lower row). This thus suggests that innovation-enhancing activities have helped exports to move up the technology and quality ladder relative to Estonia's competitors. Regarding structural competitiveness, Estonia scores reasonably well compared to its EU 27 peers (Table A1).

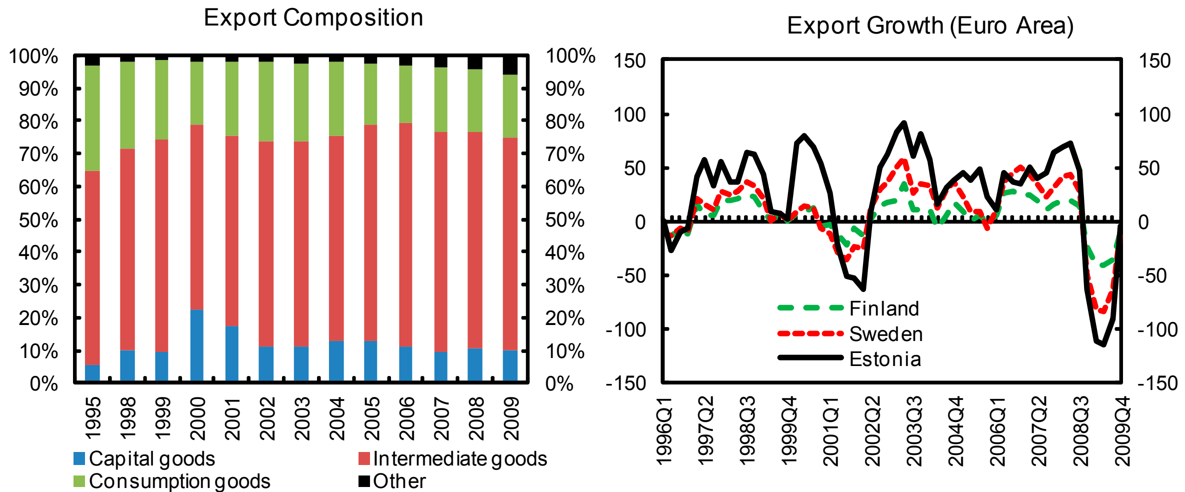
40. **FDI has contributed to the importance of non-price competitiveness through vertical linkages but has also heightened dependence on exporting low-cost inputs** Estonia has benefited from FDI by gaining access to technology and markets, which has improved its exports performance. The increasing degree of Estonia's integration with EU supply chains has been reflected in the share of intermediate goods in Estonia's exports, which accounts for about 60



Sources: Eurostat; and IMF staff calculations.

[9] Prepared by Mariusz Jarmuzek.

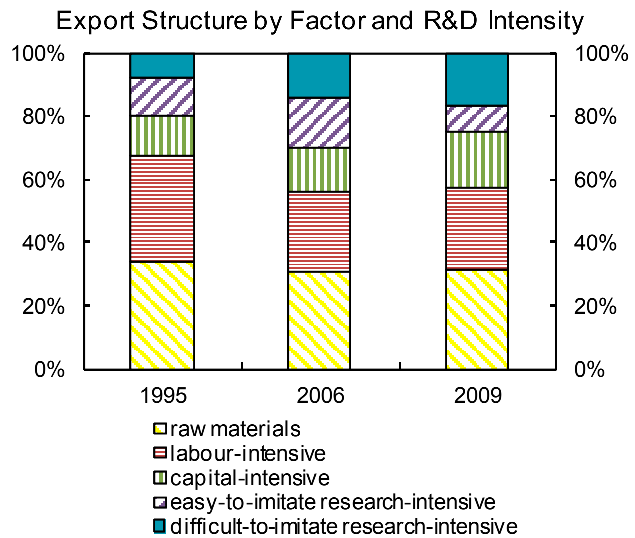
percent of exports. The degree of concentration integration can also be seen in the high correlation of Estonia's exports with the exports of main trading partners. The correlation is particularly strong with Finland, but less so with Sweden, reflecting the vertical nature of linkages of these countries with Estonia through FDI. As Estonia's income convergence proceeds, future FDI-related projects will likely depend on maintaining its cost advantage.



Sources: UN Comtrade; and IMF staff calculations.

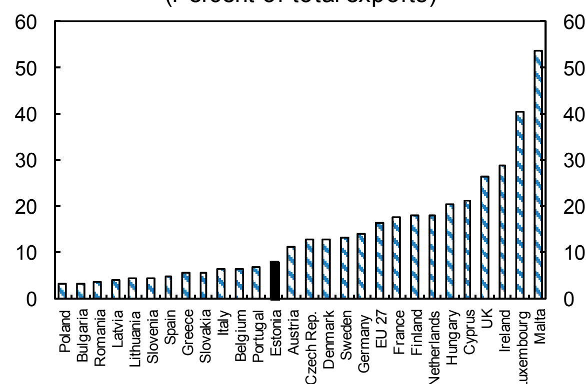
Export Composition

41. **There has been a favorable shift in Estonia's export composition towards products with higher value-added**. The shift has been from raw materials and labor-intensive goods to capital- and research-intensive goods, indicating a gradual climbing up the technology and quality ladder. Specifically, the shift has been particularly pronounced in a decline in the relative importance of textiles and foodstuffs that have been to a certain extent replaced by machinery and chemical products. There has also been an increase in importance of capital- and research-intensive goods, with the latter shifting from the easy-to-imitate research intensive products to the difficult-to-imitate research-intensive products. These developments have enhanced Estonia's resilience to external shocks as higher value-added product categories are typically less sensitive to price and demand fluctuations compared to raw materials and labor-intensive goods.



Sources: UN Comtrade; and IMF staff calculations.

42. **While the shift toward research-intensive products has been noticeable, Estonia still lags behind its EU peers in this respect.** Both patenting activity and R&D have increased in Estonia over the last decade, but the relevant indicators are still below the EU average (Figure A2). Consequently, the share of exports of high technology products in total exports lags those of many EU partners.



Source: Eurostat.

43. **The concentration of Estonia's exports in a small number of markets has been beneficial, but going forward diversification will be important**. Exports are highly concentrated in terms of trading partners, with Finland and Sweden accounting for around 35 percent of total exports of goods and services. Exports are also highly concentrated in terms of product range, with textiles, wood products, and chemicals accounting for the large portion of Estonia's exports to Finland and Sweden. The challenge will therefore be to diversify Estonia's export base by further increasing its market share in the EU, particularly in Sweden, and/or broaden its market to less traditional partners, within the EU. This would be important to reduce Estonia's vulnerability to developments in trading partner's domestic market and to developments in the main export markets of key trading partners.

Exports by SITC, 1995-2009

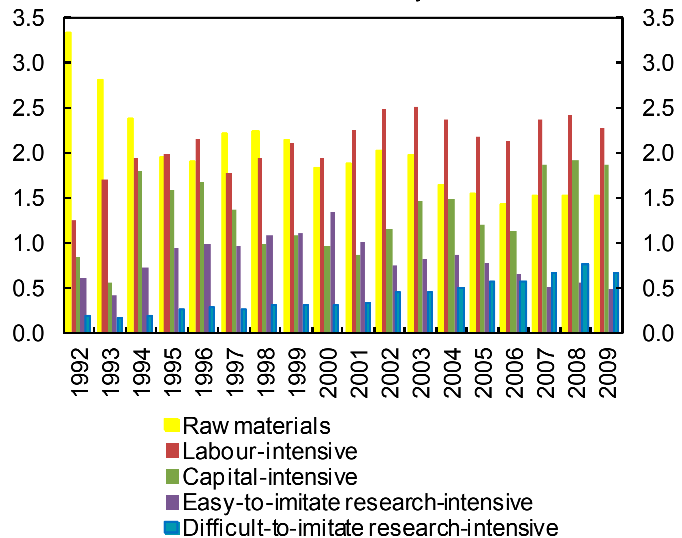
	1995	2000	2005	2006	2008	2009
Foodstuff	16.2	6.8	7.4	7.4	9.3	10.4
Mineral products	6.5	2.4	7.7	16.4	12.8	17.0
Products of chemical industry	10.5	6.0	7.0	6.8	8.5	8.7
Textiles and textile articles	17.5	13.3	8.8	6.4	5.4	5.1
Wood, paper and articles of thereof	14.1	15.8	13.3	11.9	11.5	12.0
Metals and articles of thereof	6.9	7.0	9.1	9.4	12.1	8.7
Machinery and mechanical appliances, electrical equipment	14.0	36.3	28.2	24.5	21.8	19.5
Vehicles, aircrafts, vessels	4.8	2.5	6.8	6.6	7.8	6.5
Furniture, sportswear	6.1	6.5	8.0	7.3	7.2	8.3
Other manufactured articles	3.4	3.4	3.6	3.2	3.6	3.8

Source: Statistics Estonia.

Revealed Comparative Advantage

44. **While Estonia has broadly continued to reveal a comparative advantage in lower value-added products, there have been some gains in higher value-added products**. Specifically, the revealed comparative advantage index (RCA),[10] broken down by two metrics suggest

- *factor intensity* indicates that Estonia has maintained its comparative advantage in raw materials and labor-intensive goods and is developing a comparative advantage in capital-intensive goods. The comparative advantage in raw materials has generally been on a downward trend, with a recent pick up in petroleum products associated with oil transit from Russia. The comparative advantage in labor-intensive goods has remained broadly stable, driven mainly by cork and wood manufactures and furniture. The comparative advantage in capital-intensive goods has recently gained strength due mainly to road vehicles and beverages.



Sources: UN Comtrade; OECD; and IMF staff calculations.

- *R&D intensity* shows a steady increase in difficult-to-imitate research-intensive goods, but Estonia has yet to develop a comparative advantage in these types of goods yet.

[10] The revealed comparative advantage index measures the relative advantage of a specific class of goods or services (Balassa, 1965). It is based on the Ricardian comparative advantage concept and computed as: $RCA = (E_{ij} / E_{it}) / (E_{nj} / E_{nt})$, where E are exports and the indexes i, j, n, and t denote respectively country and commodity of interest and sets of trading countries and commodities. A comparative advantage (disadvantage) is "revealed" if RCA>1 (RCA<1).

This picture is broadly in line with an analysis of RCA based on technology intensity that points to Estonia's comparative advantage in low- and medium-technology products, with high-technology products still having comparative disadvantage.

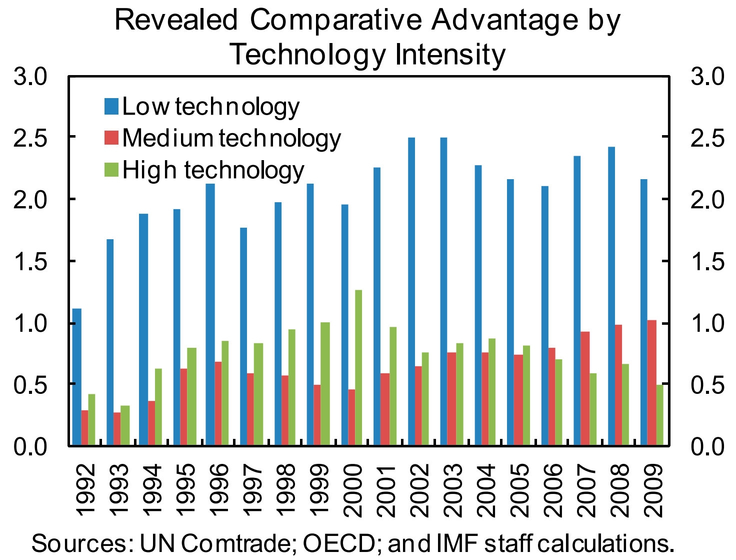
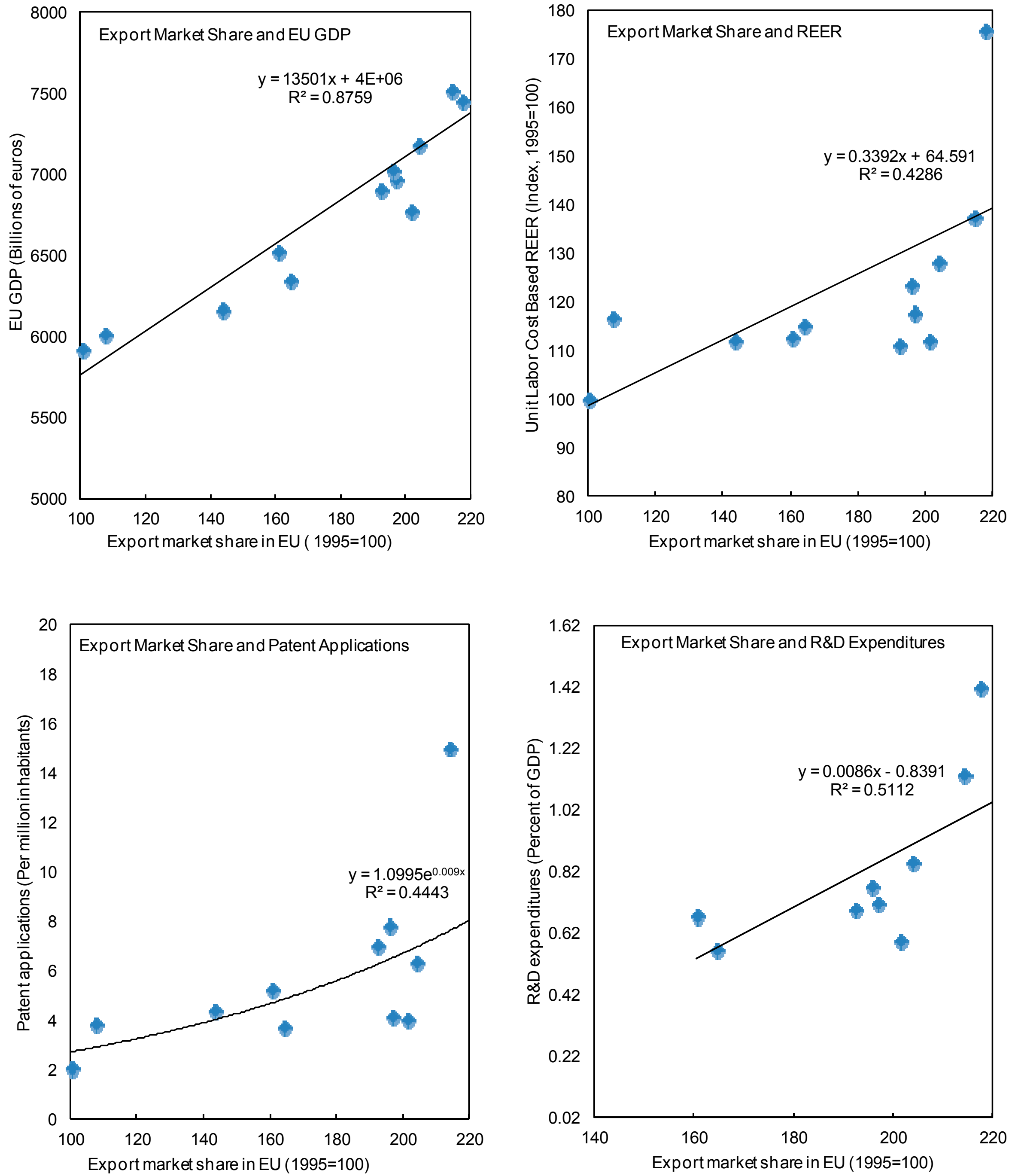
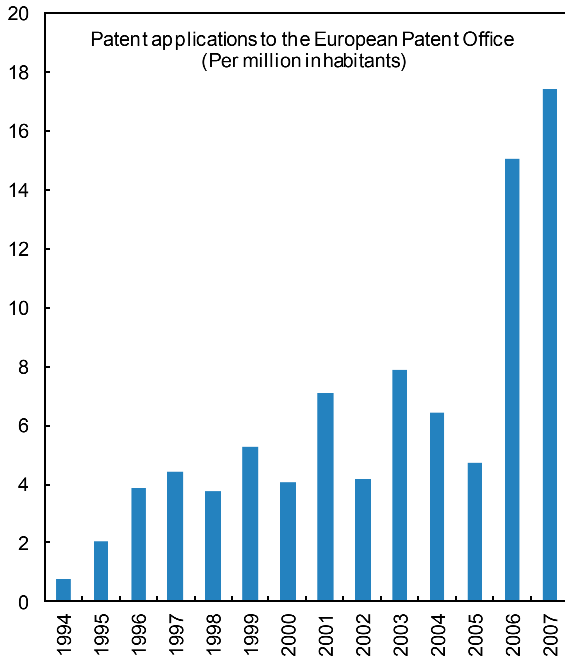


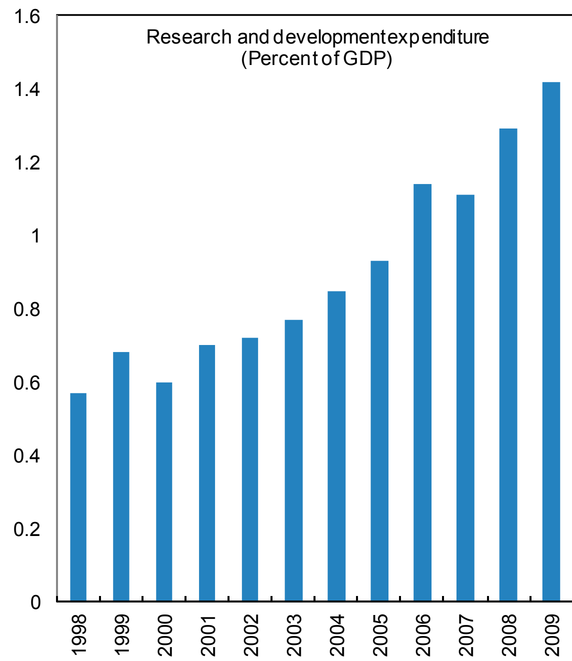
Figure B1. Estonia: Price and Non-price Competitiveness

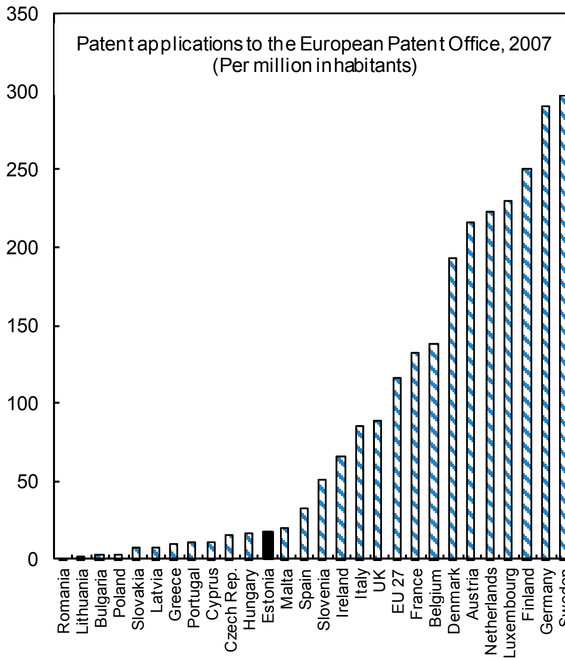


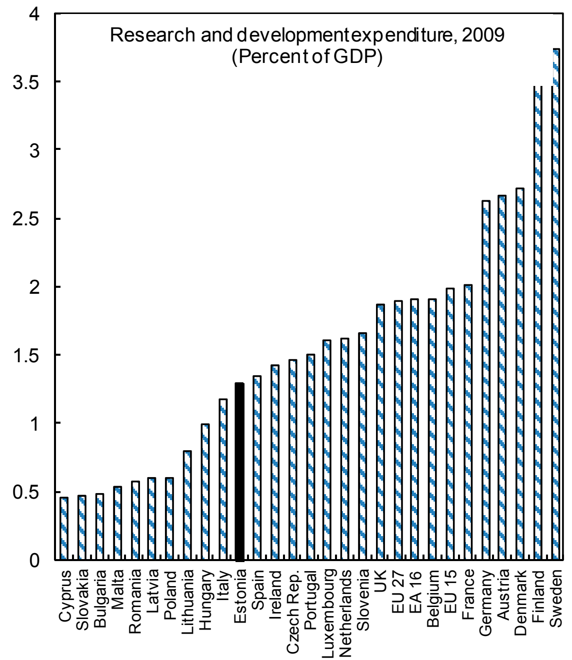
Sources: Eurostat; and IMF staff calculations.

Figure B2. Estonia: Research Intensive Activities









Source: Eurostat.

Table B1. Estonia: Selected Institutional Competitiveness Indicators

	Overall Ranking	Among EU27	Among NMS 12 1/	Total Ranked
Institutions				
International Institute for Management Development, 2010 2/				
Overall	34	15	3	58
Economic performance	52	22	7	58
Government efficiency	24	7	1	58
Business efficiency	36	12	1	58
Infrastructure	27	13	2	58
World Economic Forum, 2010	33	12	1	139
Fraser Institute Economic Freedom of the World, 2009	11	3	1	141
Heritage Foundation: Index of Economic Freedom, 2010	16	6	1	179
Transparency International: Corruption Perception Index, 2009	27	13	2	180
IBRD, Doing Business, 2010				
Overall	24	7	1	183
Starting a business	37	9	3	183
Dealing with licenses	20	6	1	183
Employing workers	161	24	10	183
Registering property	13	3	3	183
Getting credit	43	13	7	183
Protecting investors	57	12	5	183
Paying taxes	38	7	2	183
Trading across boarders	3	1	1	183
Enforcing contracts	49	15	4	183
Closing a business	61	21	6	183
IBRD, Governance Indicators, 2008				
Voice and accountability	36 3/	15	2	209
Political stability	69 4/	18 4/	8	210
Government effectiveness	35 5/	14	3	212
Regulatory quality	18 6/	9 6/	1	208
Rule of law	33 7/	13 7/	2	210
Control of corruption	44	17	4	208

Sources: IMD; WEF; Fraser Institute; Heritage Foundation; Transparency International; and IBRD.
1/ European Union (EU) new member states.
2/ Cyprus, Latvia and Malta are not in the country sample.
3/ Tied with Micronesia.
4/ Tied with France and Croatia.
5/ Tied with Malaysia.
6/ Tied with Belgium.
7/ Tied with Spain.

ANNEX III. 2009 FSSA UPDATE RECOMMENDATIONS AND IMPLEMENTATION

Sector	Priority	Recommendation	Status
Short term			
All	High	Formulate a policy for emergency liquidity assistance (ELA), including the basis for taking a decision to grant ELA, the collateral required, the terms for lending and documentation. Coordinate ELA policy with those of the major home countries, notably Sweden.	Framework is in place, and being modified upon euro adoption in 2011.
Banking	High	Assess the policies and measures of the relevant Estonian authorities for crises, including one in which the Estonian banks are unable to obtain liquidity from their parent.	Under consideration. Member of Eurozone starting from 2011.
Banking	High	A crisis simulation exercise should be held. Such an exercise should include Swedbank's Baltic subgroup and be conducted together with the other Baltic authorities and the Swedish authorities.	Under consideration. Inclusion of Baltic subgroup not relevant, as Swedbank's Baltic structure is to be reorganized.
Pension	High	The MoF needs to complete the regulation of the payout phase of the pension scheme including addressing potential moral hazard issues.	Completed.
All	Medium	Increase staffing of the Financial Supervisory Authority (FSA) and strengthen code of conduct.	Staffing has been increased.
Banking	Medium	Implement joint FSA-Bank of Estonia (BoE) macroeconomic stress tests.	The FSA and BoE stress testing is coordinated and the tests are complementary.
Banking	Medium	Conclude group-specific MOUs and ascertain that there are no expectation gaps in the supervision of Swedbank's sub consolidated group in the other Baltic countries and Russia.	The group-specific MOU between the relevant supervisory authorities was concluded in 2009. Swedbank's Baltic structure is going to be reorganized. The recommendation regarding supervision of the Russian branch of Swedbank no longer relevant.
Banking	Medium	Reconsider the coinsurance feature of the deposit guarantee scheme.	Coinsurance removed in Oct. 2008.
Banking	Medium	Consider ways to shorten significantly the payout period from the Guarantee Fund.	Legislation to shorten the payout period to 20 days from January 2011.
Pension	Medium	The Ministry of Finance (MoF) should develop a set of minimum standards for asset management for pension fund managers.	No specific action to date. However, legislation which strengthens investment rules has been prepared.
Pension	Medium	Develop a framework for guiding the fee structure of pension fund managers.	No specific action; needs further analysis. Nevertheless some legal changes of fee structure have been implemented (abolishment of issuing fees of fund units).

ANNEX III. 2009 FSSA UPDATE RECOMMENDATIONS AND IMPLEMENTATION (CONCLUDED)

Sector	Priority	Recommendation	Status
Medium-term			
Banking	High	Draft legislation introducing a resolution framework that recognizes the uniqueness of banks and allows the transfer of assets and liabilities of an insolvent bank without having to invoke the formal bankruptcy procedures. Introduce legislation for appointing a temporary administrator of a bank.	Work is underway, legislation allowing asset transfers has been approved, but transfers require shareholder consent.
Banking	High	Strengthen the Guarantee Fund in various ways: (i) establish contingency plans for ensuring the necessary liquidity for the Guarantee Fund in the case of failure of one of the two major banks and for the ultimate financing of such payments; and (ii) increase the target for the fund to 4 percent of guaranteed deposits.	Expedited procedures to provide liquidity in a crisis have been approved. Also, the target for the fund was set a 2.5 percent of eligible deposits.
Pension	High	Supervisory framework should move from a compliance-based to a risk-based approach.	No specific legal actions to date. However, the FSA has started to improve their supervisory system towards a more risk-based approach.
Pension	High	MoF should require institutional separation between asset management company and depository/custodial services.	Institutional separation not required. Legislation to minimize conflicts of interest has been prepared.
All	Medium	Strengthen the ethics rules for FSA employees.	Strengthened ethics rules have been drafted but await approval of supervisory board.
Banking	Medium	The FSA should conduct on-site verification of accuracy of reporting and loan documentation every 2–3 years.	Underway.
Pensions	Medium	Gradually relax investment limits on equity exposures.	Done.

ANNEX IV. MEDIUM-TERM FISCAL FRAMEWORKS[1]

45. **Fiscal frameworks can take a variety of forms, although all are designed to deliver strengthened public finances and sustainability, as well as to promote appropriate policies from a cyclical perspective**. Fiscal rules have become increasingly common with the growing need to consolidate public sector accounts with some 80 countries now employing them.[2] Among these rules are:

- *Balanced budget rules* (e.g., Austria, Canada, Finland, New Zealand, Portugal, Spain, Sweden, United Kingdom) whether applied to an overall, structural or cyclical balance are useful to deliver a debt target. An annual balanced budget rule is the easiest to monitor and enforce but may result in pro-cyclical policy. Balancing a cyclically-adjusted budget, while preferable from a macro perspective, requires estimating an economy's cyclical position.

- *Debt rules* (e.g., EU members) directly target sustainability, but provide limited scope for cyclical flexibility when the target is binding and scant policy guidance otherwise.

- *Expenditure rules* (e.g., Bulgaria, Finland, Japan, Luxembourg, and Sweden) guard against pro-cyclical policy (as revenues fluctuate with the cycle) but do not target sustainability. These rules are thus typically supplemented by debt and/or balanced-budget rules.

46. **While all frameworks reflect country-specific circumstances, they should also reflect a number of critical elements including**:

- *Simplicity*. To facilitate monitoring and enforcement, numerically targets or ceilings should be clearly defined and easily computed. This requirement must be balanced against the need to account for cyclical developments and assess output gaps.

- *Broadness of coverage*. While it should strive to encompass the entire public sector, that is, the general government, the complexity of fiscal institutions and the degree of autonomy of sub-national authorities may require supplementary rules or limiting its scope.

- *Flexibility*. It should not unduly constrain policy response to shocks—with exceptional circumstances spelled out before hand—and include means to deal ex-post with deviations.

- *Accountability and enforceability*. These can take a variety of forms reflecting institutions and historic circumstances, ranging from political commitments to legal, or even constitutional, limits, and may be supplemented by independent monitoring.

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[1] Prepared by Mark Lutz.

[2] See http://www.imf.org/external/np/sec/pn/2009/pn09139.htm for a discussion of fiscal rules, and an annex of rules currently in place.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

Staff Report for the 2010 Article IV Consultation—Informational Annex

Prepared by the European Department

January 11, 2011

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II. Statistical Issues 4

APPENDIX I. ESTONIA: FUND RELATIONS[1]
(As of November 30, 2010)

Membership Status: Joined May 26, 1992; Article VIII.

General Resources Account:	**SDR Million**	**Percent of Quota**
Quota	65.20	100.00
Fund holdings of currency	65.19	99.99
Reserve position in Fund	0.01	0.01

SDR Department:	**SDR Million**	**Percent of Allocation**
Holdings	62.03	100.1

Outstanding Purchases and Loans: None

Financial Arrangements: None

Projected Obligations to Fund: None

Exchange Rate Arrangements:

As of January 1, 2011, Estonia's currency is the euro, which floats freely and independently against other currencies.

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, except for those measures imposed for security reasons in accordance with Regulations of the Council of the European Union, as notified to the Executive Board in accordance with Decision No. 144-(52/51). An updated and comprehensive list of all EU restrictions can be found at: http://ec.europa.eu/external_relations/cfsp/sanctions/measures.htm

Article IV Consultation:

The 2009 Article IV consultation was concluded by the Executive Board on January 6, 2010.

[1]Updated information relating to members' positions in the Fund can be found on the IMF web site (http://www.imf.org/external/np/fin/tad/exfin1.aspx).

FSAP and ROSCs:

A review under the Financial Sector Assessment Program (FSAP) was completed at the time of the 2000 Article IV Consultation. Further Reports on Observance of Standards and Codes (ROSC) modules were discussed in the 2001 Article IV Consultations and updated during the 2002 Consultation. A FAD mission concluded a fiscal transparency ROSC in January 2009 and an FSAP update was completed in February 2009. MONEYVAL conducted its evaluation of Estonia's AML/CFT framework in February 2008, and its report was released in December 2008.

Technical Assistance:

TECHNICAL ASSISTANCE FROM THE FUND, 2000–10

DEPT	Project	Action	Timing	Counterpart
FAD	Pension Reform	Mission	April 2000	Ministries of Finance and Social Affairs
MAE	Banking Supervision	Staff Visit	December 2000	Bank of Estonia
FAD	Tax Policy	Mission	March 2001	Ministry of Finance
INS	Financial Markets	Training	September 2002	Bank of Estonia
FAD	Medium-term Budget	Technical Assistance	December 2003	Ministry of Finance
FAD	Tax Reform	Technical Assistance	February 2005	Ministry of Finance
FAD	Tax Reform	Technical Assistance	October 2009	Ministry of Finance

Appendix II. Estonia: Statistical Issues

1. Data provision to the Fund is generally adequate for surveillance purposes. A May 2001 data ROSC mission found that the quality of macroeconomic statistics was generally good. The 2009 fiscal transparency ROSC indicated that Estonia now meets nearly all of the requirements of the transparency code, and approaches best international practice in some areas.

2. Estonia is a subscriber to the Special Data Dissemination Standard (SDDS). Also, the Bank of Estonia (BoE) and the Statistical Office of Estonia (SE) periodically update on their websites a wide variety of data on the key variables for the monetary, fiscal, real, and external sectors.

A. Monetary and Financial Statistics

3. The BoE has adopted the framework of the ECB for the compilation of monetary and financial statistics, which is consistent with the IMF's *Monetary and Financial Statistics Manual*. STA and BoE have completed the data work on mapping Estonia's monetary data into the *Standardized Report Forms* which have been published in the June issue of the *IFS Supplement*.

4. Aggregate financial data are compiled by the BoE and reported on a monthly basis. The majority of statistics are disseminated on the Bank of Estonia's webpage on the 17th banking day after the end of the reporting period, with data on off-balance sheet activities published on the 18th banking day. Data for individual banks are also available on a quarterly basis since 2008Q1 on the Finanacial Supervision Authority's webpage.

5. Estonia participated in the Fund's Coordinated Compilation Exercise for Financial Soundness Indicators and regularly provides a large number of FSIs.

B. Balance of Payments Statistics

6. Quarterly balance of payments and IIP data are compiled by the BoE. Daily exchange rate data are available with a one working day lag. Monthly import/export data are available with a two month lag. Quarterly balance of payments and public and private external debt data are available with a 70-day lag.

C. Government Finance Statistics

7. All fiscal data are published by the Ministry of Finance (MoF). Historical data are also available on SE's website.

- Monthly central government operations data are available with a lag of up to 25 days after the end of the month. The government began reporting monthly data on a consolidated government basis in January 1999 on its Estonian-language web site. Quarterly data on foreign loans and guarantees by the central government are

published in Estonian with a monthly lag. The MoF is using one of its two allowed SDDS flexibility options on the timeliness of monthly central government operations data, and have recently started to disseminate these data on the National Summary Data Page.

- Comprehensive annual data on central and local government operations (cash basis) are reported in the *GFS Yearbook*. These data include a statement of operations and the government balance sheet, including data on financial assets and liabilities, both domestic and foreign. Quarterly data for general government, based on the *GFSM 2001* framework, are now regularly reported for inclusion in the *International Finance Statistics*.

D. National Accounts

8. Data on GDP (quarterly and annually) are published by SE with a lag of three months after the end of the quarter. Flash estimates of aggregate GDP are available two months after the end of the reference period. The monthly CPI is available seven days after the end of the reference period. Monthly PPI and export price indices are available four weeks after the end of the reference period. Monthly indicators of retail trade, industrial output, industrial sales, are reported approximately six weeks to two months after the end of the reference period. Nominal monthly wage data and quarterly nominal and real wage data are published with a two-month lag.

ESTONIA: TABLE OF COMMON INDICATORS REQUIRED FOR SURVEILLANCE
(As of December 31, 2010)

	Date of latest observation	Date received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of publication[6]	Memo Items: Data Quality – Methodological soundness[7]	Memo Items: Data Quality – Accuracy and reliability[8]
Exchange Rates	Dec. 31, 2010	12/31/10	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	Nov. 2010	12/06/10	M	M	M		
Reserves/Base Money	Nov. 2010	12/23/10	M	M	M	O, LO, LO, LO	O, O, O, NA
Broad Money	Nov. 2010	12/23/10	M	M	M		
Central Bank Balance Sheet	Nov. 2010	12/23/10	M	M	M		
Consolidated Balance Sheet of the Banking System	Nov. 2010	12/23/10	M	M	M		
Interest Rates[2]	Dec. 31, 2010	12/31/10	D	W	W		
Consumer Price Index	Nov. 2010	12/07/10	M	M	M	O, O, O, O	LO, LO, O, LO
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	Nov. 2010	12/16/10	M	M	M	LO, LO, O, O	LO, LO, O, NO
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	Nov. 2010	12/16/10	M	M	M		
Stocks of Central Government and Central Government-Guaranteed Debt[5]	Q2 2010	9/23/10	Q	Q	Q		
External Current Account Balance	Q3 2010	12/9/10	Q	Q	Q	O, O, LO, O	O, O, O, O
Exports and Imports of Goods and Services	Oct. 2010	12/10/10	M	M	M		
GDP/GNP	Q3 2010	12/09/10	Q	Q	Q	O, O, O, LO	LO, LO, LO, LNO
Gross External Debt	Q3 2010	12/09/10	Q	Q	Q		
International Investment Position[9]	Q3 2010	12/09/10	Q	Q	Q		

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately.
[2] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[5] Including currency and maturity composition.
[6] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A), Irregular (I); Not Available (NA).
[7] Reflects the assessment provided in the data ROSC published on November 6, 2001 and based on the findings of the mission that took place during May 10-18, 2001 for the dataset corresponding to the variable in each row. For fiscal, also takes account of the 2009 Fiscal Transparency ROSC. The assessment indicates whether international standards concerning concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O), largely observed (LO), largely not observed (LNO), or not observed (NO).
[8] Same as footnote 7, except referring to international standards concerning (respectively) source data, statistical techniques, assessment and validation, and revision studies.
[9] Includes external gross financial asset and liability positions vis-à-vis nonresidents.

INTERNATIONAL MONETARY FUND
Public Information Notice
EXTERNAL RELATIONS DEPARTMENT

Public Information Notice (PIN) No. 11/14
FOR IMMEDIATE RELEASE
February 2, 2011

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

IMF Executive Board Concludes 2010 Article IV Consultation with the Republic of Estonia

On January 31, 2011, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Estonia.[1]

Background

On January 1, Estonia was successful in its all-out efforts to join the euro, while holding the distinction of being the only European Union country, aside from Sweden, whose fiscal deficit does not exceed the Maastricht limit.

Amidst a strengthening export-led recovery, economic growth recovered in 2010. Exports of intermediate inputs and capital goods have grown briskly, mirroring developments in Estonia's main trading partners. Domestic demand has remained subdued, nonetheless, with private consumption burdened by weak labor markets and household balance sheets weakened by the bursting of an earlier credit boom. While unemployment has declined from its peak of about 20 percent in early-2010 to about 15½ percent more recently, continued progress in job creation will likely be hampered by a lack of skilled workers in growing sectors.

Inflation has picked up in 2010 and, despite double-digit unemployment, so have wages. Prices have surprised on the upside reflecting global food and fuel prices. Core prices have also begun increasing but at a moderate rate. Recent wage increases have defied not only high unemployment but also increases in vacancies and long-term unemployment. These developments point to the difficulties mismatched skills pose to

[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. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

resource reallocation in an otherwise flexible labor market. Regardless, business sector profitability has increased smartly in 2010 and Estonia's competitiveness has improved though it has yet to fully recover the losses experienced during the boom years.

Looking forward, growth is envisaged to gradually increase but remain below its pre-crisis rate. In its first year in the euro area, staff projects that Estonia's growth will accelerate from about 2½ percent in 2010 to about 3½ percent in 2011 as exports continue to propel growth. Inflation is also projected to rise from about 2¾ percent in 2010 to about 4 percent in 2011 reflecting the full-year impact of food and fuel price shocks. Core inflation should remain subdued. At end-2010, downside risks have become more prevalent with renewed tensions in global financial markets.

The key policy challenge that Estonia faces is to ensure that its economy remains on a sustainable growth path.

Executive Board Assessment

Executive Directors congratulated Estonia on its successful adoption of the euro—the result of sound macroeconomic policies and resolute commitment to fiscal discipline underpinning a long-standing currency board arrangement. Directors welcomed a return to export-led growth and the prospect of a further rebalancing of the economy. They noted the challenges ahead in maintaining growth while reducing high unemployment. Against this backdrop, Directors were reassured by the authorities' commitment to continue fiscal prudence, closely monitor price developments, improve the resilience of the financial system, and enhance productivity and external competitiveness, taking full advantage of the euro zone membership.

Directors supported the 2011 budget, which continues to rely on tight expenditure control. Strict adherence to the budget's spending limits would further enhance Estonia's credibility in its first year in the euro area. Directors concurred that Estonia has ample fiscal space for automatic stabilizers to operate up to the Maastricht limit, if downside risks materialize, with a few seeing scope for a more accommodative policy stance in support of economic activity in the short run.

Directors welcomed the authorities' medium-term goal of returning to budget surpluses to restore fiscal reserves and keep public debt at low levels. While achieving this target will require substantial expenditure compression, it will be important to protect education and investment spending, and at the same time continue to improve expenditure efficiency. Directors recommended considering revenue measures such as indirect and environmental taxes, if the need arises. Enhancing Estonia's medium-term fiscal framework and transparency would aid consolidation efforts and avert pro-cyclical fiscal policies.

Directors observed that the financial sector had weathered the crisis relatively well but risks remain from the earlier credit boom. Safeguarding stability in the context of continued global financial market tension and upcoming changes in regulations is a priority. While euro area membership is expected to help lessen liquidity risks, supervisory vigilance remains critical to maintain adequate bank provisioning and capitalization. Directors encouraged the authorities to do their utmost to ensure that the implementation of the new household debt restructuring law does not undermine

confidence in the rule of law or financial intermediation. They welcomed the 2010 Nordic-Baltic Memorandum of Understanding on crisis management, and looked forward to further progress in developing bank resolution frameworks in coordination with the relevant cross-border authorities.

Directors welcomed the “Estonia 2020” competitiveness strategy, noting that its prompt implementation should help boost employment and productivity. They encouraged continued efforts to promote resource reallocation to the tradable sector, facilitated by flexible labor markets and appropriate wage policies. These efforts should be complemented with education and retraining programs to address skill mismatches and improved capacity to absorb EU-structural funds for infrastructure and human capital development.

Public Information Notices (PINs) form part of the IMF's efforts to promote transparency of the IMF's views and analysis of economic developments and policies. With the consent of the country (or countries) concerned, PINs are issued after Executive Board discussions of Article IV consultations with member countries, of its surveillance of developments at the regional level, of post-program monitoring, and of ex post assessments of member countries with longer-term program engagements. PINs are also issued after Executive Board discussions of general policy matters, unless otherwise decided by the Executive Board in a particular case. The staff report (use the free Adobe Acrobat Reader to view this pdf file) for the 2010 Article IV Consultation with Estonia is also available.

Estonia: Selected Macroeconomic and Social Indicators, 2008–11
(In units as indicated)

	2008	2009	2010	2011
			Projection	
National income, prices and wages				
Nominal GDP (kroons, billions)	252.0	216.9	224.0	233.7
GDP (euro, billions)	16.1	13.9	14.3	14.9
Real GDP growth (year-on-year in percent)	-5.1	-13.9	2.4	3.6
Average HICP (year-on-year change in percent)	10.6	0.2	2.7	4.0
GDP deflator (year-on-year change in percent)	7.2	-0.1	0.8	0.7
Average monthly wage (year-on-year growth in percent)	13.8	-5.0	0.6	2.6
Unemployment rate (ILO definition, percent)	5.5	13.8	17.6	15.7
Average nominal ULC (year-on-year growth in percent)	20.1	0.1	-6.7	0.7
Saving-investment balances (in percent of GDP)				
National saving	19.7	23.2	23.0	24.1
Private	19.7	24.6	23.5	26.4
Public	0.0	-1.4	-0.5	-2.3
Domestic investment	29.5	18.7	20.0	21.4
Private	26.1	15.2	16.0	17.8
Public	3.4	3.4	3.9	3.6
Foreign saving	9.7	-4.5	-3.0	-2.7
General government (in percent of GDP)				
Revenue and grants	39.2	45.5	46.3	45.1
Expenditure and net lending	41.5	47.6	46.6	46.7
Fiscal balance	-2.3	-2.1	-0.3	-1.6
External sector (in percent of GDP)				
Trade balance	-13.2	-4.0	-2.4	-3.6
Service balance	7.6	9.7	9.2	9.7
Income balance	-5.3	-2.7	-5.1	-4.9
Current account	-9.7	4.5	3.0	2.7
Gross international reserves (euro, millions)	2776	2766	1936	1759
In months of imports	3.1	4.7	2.7	2.3
In percent of gross short-term debt (including trade credits)	37.6	43.9	47.9	114.6
In percent of base money	114.8	121.8	82.9	75.5
Gross external debt/GDP (in percent) 1/	118.5	125.8	107.5	92.5
Net external debt/GDP (in percent) 2/	38.8	37.0	28.7	17.2
General government external debt/GDP (in percent)				
Excluding government assets held abroad	3.1	6.0	5.8	5.6
Including government assets held abroad 3/	-4.8	-2.4	-1.8	-1.7
Exchange rate (EEK and euro/US$ - period average) 4/	10.7	11.3	11.8	…
Money and credit (year-on-year growth in percent)				
Domestic credit to nongovernment	7.2	-5.3	…	…
Base money	28.5	-6.1	…	…
Broad money	5.5	0.8	…	…

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/ Until 2011, the Estonian kroon was pegged at 15.6466 kroons to the euro. The euro was adopted on January 1, 2011.

Statement by Per Callesen, Executive Director for the Republic of Estonia and Andres Sutt, Senior Advisor to the Executive Director January 31, 2011

The authorities thank Mr. Hoffmaister and the mission team for the frank and constructive discussions. They broadly share the staff's assessment in most areas and appreciate the medium-term focus of the policy discussions.

Estonia became the 17th member of the Eurozone on January 1, 2011. This achievement marks a historic milestone in Estonia's economic integration. In the authorities' view, over the past 18 years the currency board arrangement has served Estonia as a policy anchor exceptionally well. During this period the living standards of the society measured by the GDP per capita have increased from less than a third to around two thirds of the EU average. They see this as proof that no exchange rate regime is superior to another, and that what matters is the overall consistency of economic policies.

Flexible product and labor markets and the authorities' determined adjustment policy have laid the foundation for a robust export led recovery. Exporters have utilized fully the turnaround in the world trade, and the robust activity in the Nordic countries and in the core of the Eurozone. With domestic demand remaining still relatively subdued, the Estonian economy grew by 5 percent y-o-y in the third quarter of 2010, at the second-fastest pace in the European Union.

Competitiveness revisited

Swift restructuring in exporting industries through the process-optimization and improved labor productivity has sharpened the competitive edge of the Estonian exporters; a development mirrored in the decline of the unit labor costs. Exports growing 48 percent y-o-y in November 2010 (including 49 percent to the EU markets), were highest on the record, revealing a sustained competitive position. As staff's analysis also demonstrates, Estonia has advanced in non-price competitiveness, an important factor for income convergence to continue.

The authorities view corporate restructuring driven competitiveness gains much more profound than perceived improvements in competitiveness through nominal exchange rate adjustments. The Estonian experience further proves that it is possible to reverse significant loss in price competitiveness in a relatively short time period. Indeed, the Estonian exporters have outperformed several competitors, which had exchange rate depreciation.

Anchoring inflation expectations

The authorities are mindful of short run inflation risks. With global food and energy prices on the rise and the pass-though effects to the economy being relatively quick, the headline inflation topped 5 percent in December 2010. However, core inflation has remained subdued at around 1 percent, which is comparable with that in the Eurozone.

The authorities agree with the risks to the inflation outlook, but view the pick-up in inflation as temporary, given the still high unemployment and the slack in the economy. The authorities continue to monitor price developments closely, and among other anti-inflationary measures, will promote stronger competition. Further, the euro induced price transparency should exert downward pressures, particularly on consumer durables and wearing apparel.

Fiscal prudence is set to continue

Effective expenditure controls, stronger than expected growth performance, extra income from the CO_2 quota sales, and efficient tax collection yielded to only a modest deficit for 2010, which is estimated to be in the order of 1 percent of the GDP.

A return to fiscal sustainability was a standalone objective of the authorities, essential to maintain investor confidence at home and abroad. Keeping the deficit below the 3 percent Maastricht ceiling, made the Euro adoption possible. In their view, forceful fiscal consolidation during the crisis did not harm the economic recovery. Quite the contrary, the authorities used this opportunity to increase the efficiency of public finances through streamlining the expenditure management and tax collection, while at the same time preserving a social safety net and speeding up the use of the EU structural funds.

The authorities are committed to return to a fiscal surplus by 2013 and to restore the fiscal reserves to a pre-crisis level. They see merit in more binding fiscal rules, including expenditure ceilings, which are simple, transparent and easily enforceable. They intend to implement changes to the fiscal framework alongside the revisions of the SGP framework.

Financial stability

The proactive use of macro-prudential policies in the run-up to the bubble paid off well during the crisis. High capital and liquidity requirements served as an extra buffer for a strong Nordic-owned banking sector, supporting both investor and customer confidence.

Proactive cross-border cooperation was equally relevant.

As the credit cycle has turned, the NPLs have peaked at 7.6 percent in August 2010, below the authorities own estimate of 8.2 percent made in late 2009, and well below the mainstream market estimates of a double-digit loan losses. With almost 80 percent of NPLs covered by loan-loss provisions, cumulative loan losses with provisions from 2008 to 2010 have amounted to below 6 percent of GDP. This is a remarkably low outturn given the size of the output drop, and compares favorably to other countries that experienced the credit boom before the crisis. The authorities see a very low likelihood of further pick-up in the NPLs.

Further, the banking sector has returned to a healthy profitability and the credit supply to the economy is competitively priced. The Eurozone membership has reduced both the perceived and actual risks to financial stability, in particular with respect to liquidity risks. That said, the authorities concur with staff that there is scope to further enhance cross-border cooperation and to fine-tune the crisis resolution framework. They are cognizant of any

residual domestic and global risks to financial stability and will utilize the most recent experience gained at home and internationally to act preemptively.

Outlook and policy agenda for 2011 and beyond

The authorities expect the economy to grow close to 4 percent in 2011 and 2012, which would imply that the economy will reach its pre-crisis output peak in 2012, an outturn few believed in the not too distant past. Beyond this horizon, the authorities estimate the growth potential to be in the order of 3–5 percent in the long run, sufficient to ensure continued convergence in living standards.

Reducing high unemployment levels and boosting employment are among the authorities' key priorities. Achieving an employment rate of 76 percent among the 20-64 age group, and increasing the productivity per employed person to 80 percent of the EU average are two key objectives in Estonia's EU2020 strategy. To that end, the authorities aim to increase the investments in human capital, including through higher spending on education, vocational training and re-training, and the promotion of life-long learning. Population aging related challenges underscore further the importance of an increased labor participation in all age groups.

The authorities will focus on raising the international competitiveness of the R&D and innovation environment, and on developing the institutions and infrastructure supporting economic activities. They target an R&D investment level of 3 percent of the GDP, and aim to increase Estonia's share in the world trade to at least 0.11 percent by 2020.

In the field of environmentally friendly economy and energy, the authorities commit to reducing greenhouse gas emissions in accordance with the EU commitments. They intend to increase the share of renewable energy in the final energy consumption to 25% by 2020, and maintain the final energy consumption at the 2010 level.

The Eurozone membership, a business friendly investment climate and the Nordic business culture with a still significant labor-cost advantage, when compared with the Nordic countries, make Estonia attractive for investment. With a continued prudence in policies, the authorities see Estonia as well placed to meet upcoming challenges