



REPUBLIC OF ESTONIA

2011 ARTICLE IV CONSULTATION

November 2011

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the Article IV consultation with the Republic of Estonia, the following documents have been released and are included in this package:

- **Staff Report** for the Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on October 17, 2011, with the officials of Estonia on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on November 9, 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.
- **Informational Annex** prepared by the IMF.
- **Public Information Notice (PIN)** summarizing the views of the Executive Board as expressed during its discussion of the staff report that concluded the Article IV consultation.

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REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2011 ARTICLE IV CONSULTATION

November 9, 2011

KEY ISSUES

Estonia has experienced a sharp export-led recovery in its first year in the euro area. But price pressures have emerged—largely reflecting global food and fuel prices—and unemployment, while declining, has remained high with increasing long-term joblessness. In 2012, the economy is set to slowdown in line with weakening export markets but the output gap will continue to close. With increased downside risks, Estonia faces the continuing challenge to implement policies preserving macroeconomic policy credibility, while enhancing sustainable growth.

Fiscal policy: Estonia's enviable fiscal position will remain strong even though a deficit of about 2¼ percent of GDP will emerge in 2012. This will imply a fiscal stimulus at a time when a neutral stance would be appropriate. Adhering to the budgetary allocations would be appropriate. Should downside risks materialize, automatic stabilizers should be allowed to operate while preserving credibility. Looking forward, the authorities' medium-term target of a small surplus can be supported by a fully fledged multi-year fiscal framework, which would allow fiscal buffers to be rebuilt.

The financial sector: On balance, risks to the financial sector appear manageable. But potential contagion from the euro area or parent banks requires continued vigilance. Further improvements in cross-border supervision and crisis resolution, preparing for Basel III, and continuing efforts to increase deposit guarantees will be essential. Also, reforms expediting Estonia's bankruptcy process are necessary.

Long-run growth: Besides safeguarding Estonia's competitiveness, increasing sustainable long-run growth will require moving up the value chain, addressing long-term unemployment, and enhancing human capital. Fostering a business-friendly environment by building R&D capability and enhancing cross-border infrastructure can attract tradable sector FDI. Further improvements in vocational training and higher education can alleviate long-run unemployment and boost human resources.

Approved By
Anne-Marie Gulde-Wolf
and Claire Waysand

Discussions took place in Tallinn on October 6–17, 2011. The staff team comprised Messrs. Hoffmaister (head) and Lutz, Ms. Kinoshita (all EUR), and Mr. Kohler (FIN). The team met with President Ilves, Prime Minister Ansip, Finance Minister Ligi, Bank of Estonia Governor Lipstok, and other senior officials, members of Parliament, and private sector and civil society representatives. Mr. Sutt (OED) participated in the discussions. Estonia is an Article VIII country (Information Annex, Appendix I). Data provision is adequate for surveillance (Information Annex, Appendix II).

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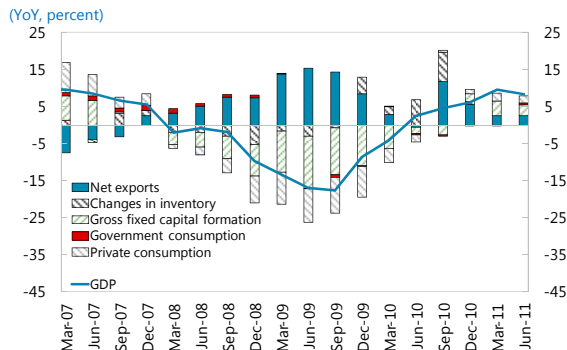
CONTEXT

1. A vibrant recovery has marked Estonia’s first year in the euro area, albeit with nascent tensions. A proven track record of prudent macroeconomic policies—underpinning successful euro adoption and a recent credit rating upgrade—has provided a firm grounding for the strong rebound. Still coming on the heels of one of the EU’s deepest economic contractions, the recovery has exposed underlying difficulties. Price pressures have emerged (albeit still mainly imported) and overall unemployment, while declining, remains high with long-term joblessness on the rise.

2. Estonia’s growth has been among the highest in the EU in 2011. Following a

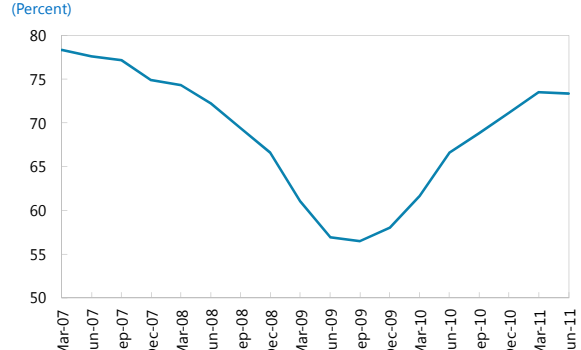
2¼ percent expansion in 2010, activity has strengthened considerably with growth reaching almost 9 percent in the first half of 2011. While it has been predominately export led—exports now exceed pre-crisis levels following six quarters of double-digit growth—final domestic demand has also increased in recent quarters (Figure 1). Capacity constraints have begun prompting investment and an improving labor market has boosted consumer sentiment until recently and increased long-suppressed household consumption. The contribution to growth from inventories has been erratic, largely reflecting initially component imports for subsequent exports.

Contributions to GDP Growth and GDP Growth



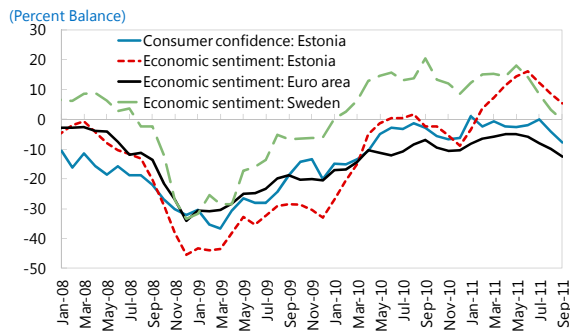
Sources: Statistics Estonia; Haver; and IMF staff calculations.

Industry Capacity Utilization, SA



Source: Haver.

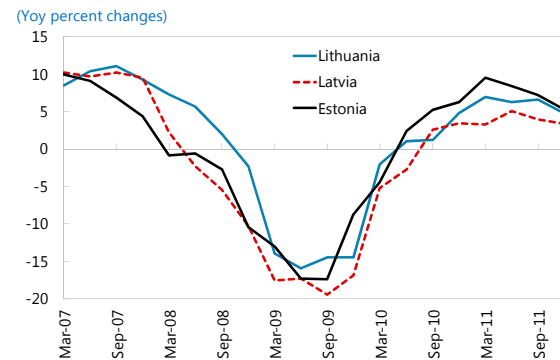
Confidence Indicators 1/



Source: Haver.

1/ Balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Real GDP Growth in Baltics

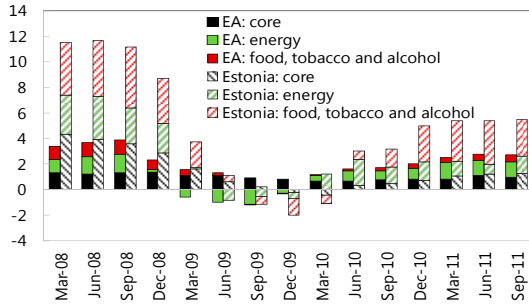


Sources: Haver; Sept. 2011 WEO; and IMF staff projections.

3. Inflation has risen and is the highest in the euro area. While price increases have moderated to about 5½ percent in September, inflation has remained well above the euro-area average since April, 2010. The disproportionate impact of food and energy prices explains the bulk of Estonia’s higher inflation. The HICP-based measure of core inflation (excluding energy, food, tobacco and alcohol) has remained low, but other measures have been higher (Figure 2). Real wages have

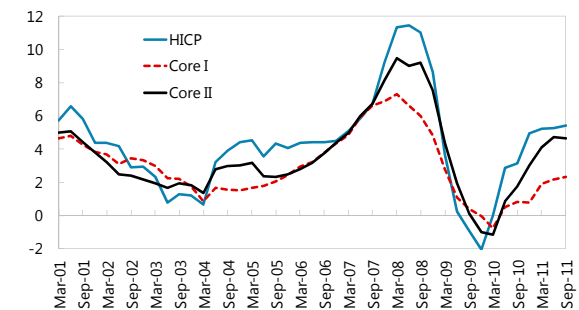
continued declining despite nominal wage increases. The latter, in part, have reflected a rebound in bonus and profit sharing—squeezed in the downturn—despite double-digit unemployment. The unemployment rate has declined from its peak of almost 20 percent in early-2010 to about 13¼ percent in the second quarter of 2011. Still, long-term unemployment has continued rising reflecting jobs-skills mismatch (Figure 3).

Inflation and Contributions in Estonia and Euro Area
(YoY percent changes)



Sources: Eurostat; and IMF staff calculations.

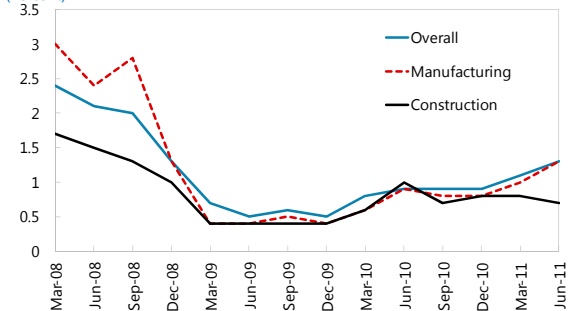
Inflation, 2006Q1-2011Q3 1/
(YoY percent changes)



Source: Haver.

1/ Core I excludes energy, food, alcohol and tobacco; Core II excludes energy and unprocessed food.

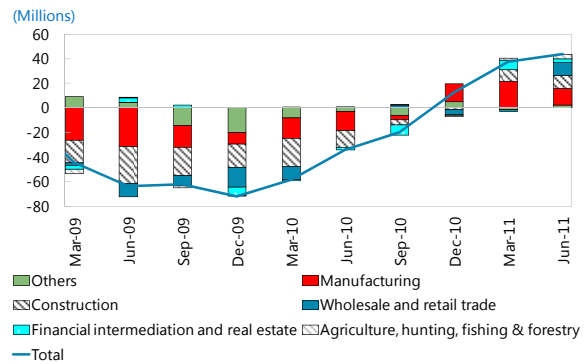
Vacancy Rates 1/
(Percent)



Sources: Haver; and Statistics Estonia.

1/ The vacancy rate measures the proportion of total vacant posts expressed as a percentage of occupied and vacant posts.

Change in Employment by Sectors



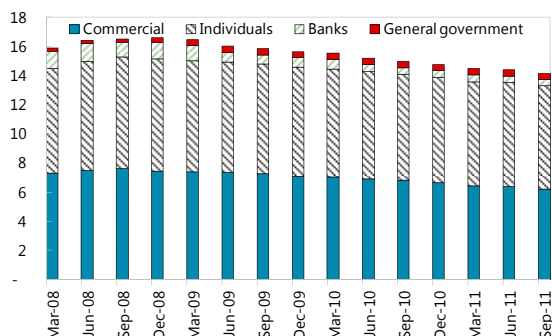
Source: Haver.

4. Domestic credit has continued declining in 2011. By the second quarter of 2011, the stock of outstanding credit had contracted by about 15 percent from its peak at end-2008. Higher frequency data, however, suggest that declines in commercial credit

have slowed and credit to the manufacturing sector has increased starting in early-2011. The decline in lending to individuals has also slowed reflecting slower declines in mortgage lending since March, 2011.

Stock of Bank Loans by Sector

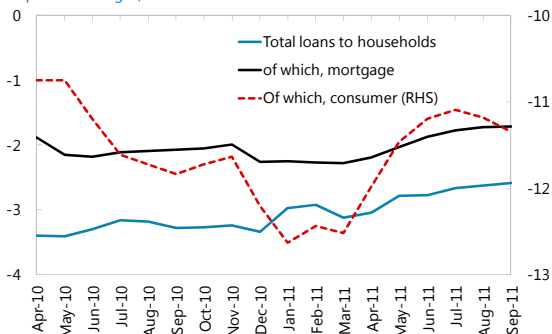
(Billions of euro)



Source: Bank of Estonia.

Monthly Growth of Loans to Individuals

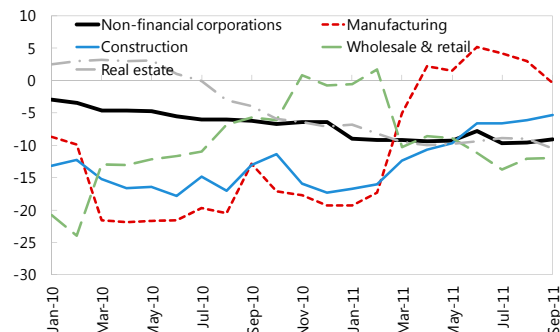
(YoY percent changes)



Sources: Bank of Estonia; and IMF staff calculations.

Monthly Growth of Loans to Non-Financial Corporations

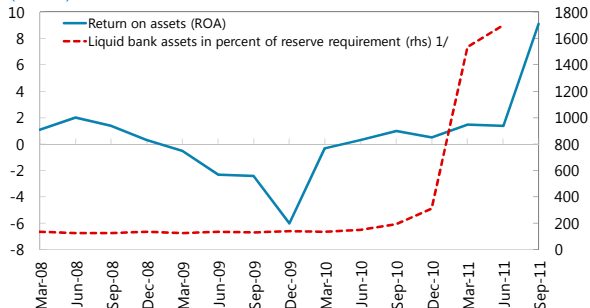
(YoY percent changes)



Sources: Bank of Estonia; and IMF staff calculations.

Banking System Profits and Liquidity

(Percent)



Sources: Bank of Estonia; and IMF staff calculations.

1/Liquid assets defined as liquid foreign securities, claims on the central banks, and claims on other banks.

5. Credit developments have been driven primarily by demand factors.

Commercial real estate and mortgage borrowing—almost 60 percent of domestic credit—has continued to be weighed down by the legacy of Estonia's real estate bust, as a about a quarter of mortgages have loan-to-value ratios above 100 percent. In addition, while household debt (as a share of disposable income) has declined by about 8 percentage points from its peak, it remains elevated at about 92 percent. On the supply side, the banking sector returned to profitability in the third quarter of 2010, as narrowing interest rate margins have been offset by lower cost funding through local deposits. Banks' usable liquidity (i.e., liquid assets net of required reserves) increased substantially in 2011 reflecting the lowering of Estonia's reserve

requirements to the euro area levels, even as substantial amounts of liquidity were repatriated to parent banks—a further indication of Estonia's weak credit demand. Banks have tightened credit standards in the aftermath of the bubble, but narrower margins and generally lower interest rates following euro adoption suggest that supply conditions have not inhibited credit.¹

6. Estonia's long-standing commitment to fiscal prudence has continued in 2011.

The 2011 budget had envisaged a small general government deficit

¹ About eighty percent of third quarter profits are due to the one-off sale of Swedbank Estonia's assets in Lithuania and Latvia to the Swedish parent.

(about 1.5 percent of GDP), but state budget data for the first half suggest that another small surplus is possible in 2011. This has reflected continuing higher-than-expected revenues, including from the sale of CO₂ emission rights that more than offset the initial unwinding of previous “one-off” measures namely, partly restoring pillar II pension contributions temporarily diverted to the budget. Estonia’s public debt has remained the lowest in the EU and its fiscal buffers were about 11½ percent of GDP at end-June 2011.

7. In line with competitiveness gains, the external current account balance was broadly in balance in the first half of 2011.

The merchandise trade deficit narrowed by about 1½ percentage points of GDP with

robust export growth more than offsetting a recovery in imports in the first half of 2011 (Figure 4). Net income outflows have been robust owing to dividends paid to foreign investors. Competitiveness has continued to improve and the real exchange rate is broadly in line with fundamentals (Box 1). In the first half of 2011, the financial account recorded a deficit as banks further reduced liabilities to foreign parent banks associated with liquidity freed up by the harmonization of reserve requirements. As a result, gross external debt has declined from about 125 percent of GDP at end-2009 to about 110 percent of GDP at end-June 2011. The external DSA suggests that external debt dynamics remain sustainable in plausible risk scenarios.

OUTLOOK

8. Following a spike in growth in 2011, economic activity is set to moderate in 2012.

Given the better-than-expected economic performance in the first half of the year, growth is set to triple to 7½ percent in 2011. Growth is projected nonetheless to slow to about 3 percent in 2012. Abstracting from inventories’ temporarily large contribution to growth in 2011, a smaller contribution to growth from net exports—in line with slowing

global markets—is expected to be partially offset by final domestic demand. Fixed investment and, to a lesser extent, consumption are projected to continue gradually strengthen as the economy nears capacity and employment continues expanding. Leaving aside measurement uncertainties, the output gap will continue narrowing in 2012.

Contributions to Growth, 2008-12

| | 2008 | 2009 | 2010 | Proj. 2011 | Proj. 2012 |
|-------------------------|-------|-------|------|---------------|---------------|
| GDP growth | -3.7 | -14.3 | 2.3 | 7.5 | 3.1 |
| Domestic demand | -10.4 | -23.2 | 0.3 | 7.6 | 3.1 |
| Consumption | -2.5 | -8.8 | -1.2 | 2.0 | 2.1 |
| Investment 1/ | -7.9 | -14.4 | 1.4 | 5.6 | 1.0 |
| Net exports | 5.3 | 11.1 | 2.5 | -0.1 | 0.1 |
| Statistical discrepancy | 1.4 | -2.2 | -0.5 | 0.0 | 0.0 |

Sources: Statistics Estonia; and IMF staff calculations.

1/ Includes changes in stocks.

Box 1. Estonia's Competitiveness Developments

Competitiveness gains have continued in 2011.

Standard measures of real exchange overvaluation have declined since last assessed. Gains measured with current account-based methods, nonetheless, may partly reflect cyclical developments with lower imports driving the results rather than improvements in competitiveness. Still, the rebound of exports and their record levels are notable as reflected in a decline in the mid-point overvaluation range.

Direct assessments of the real exchange rate also indicate favorable competitiveness

developments. Since March 2009, the CPI-based real exchange rate has been broadly flat, albeit with a small appreciation in 2010. But the ULC-based real exchange rate has declined by about 10 percentage points (Figure 5). Still, these real exchange rate measures have remained between 5 percent and 10 percent above their pre-crisis levels.

Broader competitiveness indicators also suggest improvements. Estonia's exports as a share of GDP have remained the highest in the Baltic countries

and increased their share in Estonia's main trading partners markets, namely Finland, Sweden, and Russia. Estonia's world export market share has held up despite the 2006–08 real appreciation, suggesting that improvements in non-price competitiveness. Productivity and corporate profits—particularly in the booming export-related manufacturing sector—have increased since 2009.

| | REER Assessment (Percent) | |
|---|------------------------------|--------------------|
| | Current Assessment | 2010 Article IV |
| Macrobalance approach | -7.3 | -9.7 |
| External Sustainability approach | -9.5 | -7.8 |
| Equilibrium Real Exchange Rate approach | 6.6 | 15.4 |
| REER Deviation from Historical Average | 3.2 | 7.2 |
| Mid-point over/undervaluation range (+/-) | -1.5 | 4.1 |
| <i>Memorandum items</i> | | |
| Underlying current account | -1.3 | -2.8 |
| Equilibrium current account (MB) | -2.6 | -5.1 |
| Equilibrium current account (ES) | -3.6 | -4.3 |
| Mitigating factor (e.g., EU funds) | 2.0 | 2.1 |

Source: IMF staff calculations.

9. Inflation is projected to slow in 2012. Price increases are expected to exceed 5 percent in 2011, but should moderate to about 3¼ percent in 2012 as the impact of global food and fuel prices shocks dissipate. Core inflation's outlook remains uncertain in part given wage pressures largely from skill mismatches and increasing capacity utilization. So far, wages increases have not exceeded productivity gains nor have real wages risen. While these trends are likely to broadly continue as activity moderates, pressures may remain on core inflation in 2012.

10. With continued volatility in global financial markets, downside risks to the outlook have risen at end-2011. With two-thirds of Estonia's exports going to the EU, recent European and global developments have tilted risks to the downside. Besides the domestic risk that the unwinding past real and financial sector imbalances be more protracted and weigh on domestic demand, external risks prevail. In addition to the aforementioned global trade developments, a generalized confidence fallout from the euro area sovereign debt crisis could spill over to Estonia through Swedish parent banks. The Swedish banks and authorities appear well-prepared to deal with liquidity pressures, but Swedish

banks rely heavily on short-term wholesale market funding. In an extreme tail-risk event engulfing core EU, Estonia could however face financial distress despite its strong fundamentals.

11. The authorities broadly concurred with the outlook. While official projections had not yet been revised, the authorities agreed that growth would slow in 2012. They noted that, in contrast to the previous downturn, domestic and external imbalances have been greatly reduced. Regarding inflation, they noted that recent increases have been predominately driven by food price increases, partly reflecting limited retail

competition and would keep core inflation developments under close review. They confirmed that exporters have been increasingly facing difficulties in filling vacancies due to a lack of skilled labor. Moreover, the shift of labor toward the tradable sector has been slowed by employment opportunities for construction workers in nearby Nordic economies. Both developments were thought to contribute to recent increases in wages. Regarding the financial sector, the authorities agreed that, given the extensive real estate adjustment and rebound in employment, external risks outweigh domestic risks.

POLICY CHALLENGES

12. Estonia must stand ready to address short-term risks, while medium-term policies should focus on sustainable growth and increased employment. The authorities' policies have been in line with Fund advice (Box 2) and, going forward, uninterrupted

income convergence to EU levels will require continued focus 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, including a domestic bank resolution framework to facilitate rapid bank restructuring. Also, the authorities have been discussing enhancements to their medium-term framework to further entrench their strong fiscal position.

A. Enhancing Estonia's Fiscal Framework

13. Estonia's fiscal position will likely remain strong. The authorities target small budgetary surpluses starting in 2013. These

would be used, when feasible, to reverse crisis-related increases in unemployment contribution rates, cut the personal income tax

rate, cap the amount of incomes subject to the social tax excluding health insurance and rebuild fiscal buffers (Figures 6 and 7).

14. Nonetheless, the 2012 budget will entail a deterioration in the fiscal balance.

In contrast to a small surplus in 2011, the 2012 budget before Parliament shows a deficit that staff estimates to be about 2¼ percent of GDP. The deterioration reflects a decline in revenues associated with the fall of CO₂-emission permit receipts (equivalent to 1 percent of GDP) and pension pillar II contributions previously

diverted to the budget (½ percent of GDP). The budget also shows a limited increase in expenditures, notably a 4.4 percent increase in basic pensions (about ¼ percent of GDP) and increases in public investment (roughly 1 percent of GDP) tied to obligations from previous sales of CO₂ permits. It also foresees an unchanged public sector operating expenditures (including the wage bill) and does not include revenue measures with the exception of small increases in excise taxes on tobacco and alcohol.

Estonia: Selected Fiscal Indicators
(Percent of GDP)

| | 2007 | 2008 | 2009 | 2010 | 2011 Proj. | 2012 Proj. |
|---|------|------|-------|------|---------------|---------------|
| General government balance (ESA95 accrual basis) | 2.4 | -2.9 | -2.0 | 0.3 | 0.3 | -2.3 |
| Cyclically adjusted balance | -1.0 | -4.6 | 1.4 | 3.0 | 1.1 | -1.8 |
| Transfers from the EU 1/ | 2.9 | 2.9 | 5.2 | 5.9 | 6.1 | 6.0 |
| Transfers to the EU (contribution to the EU budget) | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 |
| Cyclically adjusted balance corrected for net EU transfers 1/ | -2.8 | -6.3 | -2.6 | -1.7 | -3.9 | -6.8 |
| Revenues related to AAU (CO ₂) permits | 0.0 | 0.0 | 0.0 | 0.9 | 1.3 | 0.3 |
| Revenues related to other "one-off" measures 2/ | ... | ... | ... | 0.6 | 0.2 | 0.0 |
| Underlying cyclically adjusted balance 3/ | -2.8 | -6.3 | -2.6 | -3.2 | -5.4 | -7.1 |
| Fiscal impulse 4/ | ... | ... | ... | ... | 2.2 | 1.7 |
| Memorandum items: | | | | | | |
| General government balance (cash basis) | 2.8 | -2.3 | -2.1 | 0.4 | 0.5 | -2.5 |
| Revenue loss related to restoring pillar II pension contributions | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.0 |
| Expenditures related to AAU (CO ₂) permits | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.5 |
| Output gap | 11.2 | 5.1 | -10.0 | -8.2 | -2.5 | -1.4 |

Sources: Estonian authorities; and IMF staff projections.

1/ Virtually all EU funds in Estonia are channelled through the budget.

2/ Extraordinary dividends from Eesti Energia and the Port of Tallinn.

3/ Corrected for net EU transfers, and AAU and other "one-off" measures.

4/ First difference in the cyclically adjusted balance, with sign reversed.

15. In the central scenario, efforts will be needed to limit the budget's stimulative impact, albeit uncertainties abound. The budget implies a positive fiscal impulse, largely from CO₂-related investments as there is no expansionary impact from the lost revenue related to restoring pillar II contributions. With the output gap continuing to close in the central scenario, fiscal stimulus is not needed and a neutral stance would be appropriate. With further compression of current expenditure unrealistic, adherence to budgetary allocations will help in this regard.

Consideration could be given to under executing the budget using existing margins. Should revenue windfalls emerge, these should be saved consistent with the authorities' long-standing fiscal restraint. But if downside risks materialize automatic stabilizers should be allowed to operate while maintaining credibility, which can require adhering to the Stability and Growth Pact.

16. Estonia's fiscal buffers provide a comparative strength, but volatile global markets call for caution. Estonia's liquid fiscal reserves could be used to finance the fiscal

deficit. But in the context of heightened financial market uncertainty, this would leave Estonia with potentially fewer and more expensive options should the global shock persist or tail risks materialize. In this connection, alternative sources of financing should be considered, possibly including credit lines with liquid domestic commercial banks and European Investment Bank resources as were previously tapped.

17. Looking forward, the authorities' medium-term target (a small surplus) can safeguard Estonia's fiscal position but achieving it will require unwavering expenditure restraint. The authorities have maintained strict expenditure control, but spending pressures will intensify as income convergence to EU levels proceeds. Specifically, the public sector wage freeze—instituted following nominal wage cuts—and the deep cuts in operational spending to meet the Maastricht criteria will likely be tested. Also, medium-term pressures have emerged for the cohort of pensioners that remain in the pre-reform system, as well as from increases in disability pensions. The time-bound nature of CO₂ permit-related investment can help limit spending increases. Still, to achieve the fiscal target without raising taxes, staff estimates that expenditures on nonwage goods and services would need to decline by at least 2 percentage points of GDP during 2011–15. In this connection, the pace of consolidation should be mindful of long-term investment needs and cyclical developments.

18. Establishing a fully fledged multi-year fiscal framework can further enhance credibility by supporting the medium-term target and limiting pro-cyclical policies. An array of frameworks has been considered in

the European context. The successful implementation and operation of such a frame in Estonia will require that it reflect its tradition of simplicity and transparency, which have facilitated monitoring and accountability (Annex I). Its central element would be multi-year expenditure ceilings. These ceilings could be announced, for instance, when a new government takes office, as in Finland, or on a rolling basis, as in Sweden. These would be set to be consistent with the medium-term fiscal target and macroeconomic prospects. Automatic stabilizers should be allowed to operate in the face of moderate economic cycles. The framework could be established possibly as a reform of the State Budget Act and be mindful of evolving EU obligations, including the forthcoming legislation on economic governance.

19. Fiscal buffers should continue to be an integral part of Estonia's fiscal framework. Estonia thus faces the question of how large these should be and how quickly to rebuild them. During the downturn, fiscal buffers allowed the authorities to minimize the needed extent for contractionary pro-cyclical fiscal policy without relying on financial markets (Annex II). Buffers should in principle be commensurate with the volatility and risks. Estonia's recent output and fiscal revenue volatilities suggest that higher buffers would be justified. But judging by Estonia's low financing needs, the opposite would be true. Regardless, liquid assets entail costs as well as benefits. A speedy accumulation of buffers could run the risk of weakening domestic demand and lowering long-run growth. On balance, given increased global uncertainty gradually rebuilding buffers to their pre-crisis level would be appropriate.

20. The authorities stressed that the 2012 budget addresses the dual goals of maintaining Estonia's favorable economic environment and increasing stability.

CO₂ emission-related investments would help address the risks from an uncertain global environment, as would increases in basic pensions exceeding the indexation rule. On the other hand, the freezing of state operating expenditures would accelerate structural reforms and further improve the state's efficiency. Under their risk scenario (growth of 1 percent), the deficit was projected to increase to 2.9 percent and automatic stabilizers would be allowed to operate. The authorities noted that they would consider expenditure and revenue measures as needed should the slowdown be larger or more protracted. As to its financing, the authorities intended to largely rely on the still-sizable fiscal buffers but did not rule out alternate options.

21. In the medium term, the authorities underscored that a small surplus was needed to maintain stability and support broader economic and social objectives.

In the central scenario, they would target a small surplus in 2013 when the EU obligations of CO₂-related investments would expire. Future growth-supporting cuts in labor taxation (including unemployment insurance contributions and capping the base for the social tax) were intended to promote employment, while tight expenditure controls would allow for a gradual rebuilding of fiscal buffers. While discussions remained in an early stage, the authorities saw merits in enhancing their fiscal framework to accommodate more formally a multi-year framework, by perhaps amending the "organic" State Budget Act. The merits of expenditure ceilings were acknowledged, with some preference expressed toward rolling ceilings as in the State Budget Strategy. A monitoring role was envisaged for the State Auditing Office in verifying compliance with such a framework.

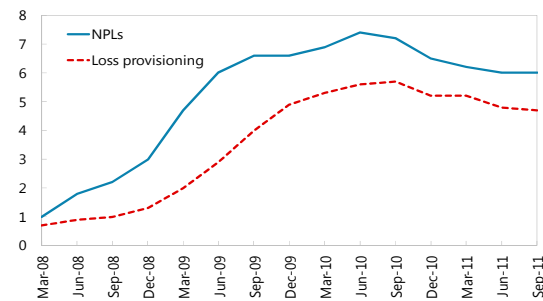
B. Locking-in Financial Sector Resilience

22. The mostly Nordic-owned banking system has weathered the global financial crisis. Non-performing loans (NPLs, loans at least 60 days past due) rose steadily in the aftermath of the Estonian housing market bust, hastened also in the aftermath of the Lehman Brothers collapse (Figure 8). Still, provisioning against loan losses has kept pace with the deterioration of asset quality. NPLs have started declining recently, mainly due to write-downs and, to a lesser extent, from a strengthening economy. Moreover, Estonian banks' average capital adequacy ratios have continued to exceed international norms

(including the EC's decisions in mid-October and future Basel III capital requirements).² Also, banking sector profits turned positive in the second quarter of 2010, following losses in six consecutive quarters, but these remain below their pre-crisis levels.

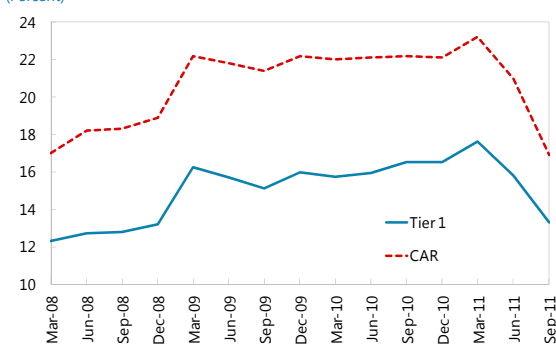
² The declines in the second and third quarters of 2011 are associated with the restructuring of the Swedbank ownership structure mentioned in footnote 1.

Asset Quality and Provisioning
(Percent of total loans)



Source: Bank of Estonia.

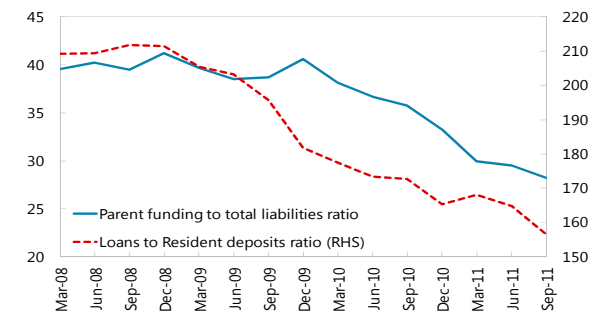
Estonian Banks' Capital Buffers
(Percent)



Source: Bank of Estonia.

that have proven to be a stable financing source. Still, these parent banks have remained largely reliant on short-term wholesale funding³ and are exposed to a booming Swedish housing market as well as indirectly to the euro area periphery through assets in other euro area economies.

Foreign Support and Local Financing of Assets
(Percent)



Sources: Bank of Estonia; and IMF staff calculations.

23. Even though asset quality has improved, risks remain and continued vigilance will be needed. Specifically,

- *Domestic risks.* The bulk of household debt comprises floating-rate euro-denominated mortgage loans with rates based on the six-month euribor. Given euro adoption, these loans do not face exchange rate risk but still face interest rate risk. Furthermore, with about a quarter of mortgages in negative equity, organic improvement in the health of banks' assets with individuals depends primarily on house price increases.
- *External risks.* Estonian banks have continued to rely on foreign funding, currently about 30 percent of total liabilities. The bulk of this financing consists of Swedish parent-bank deposits

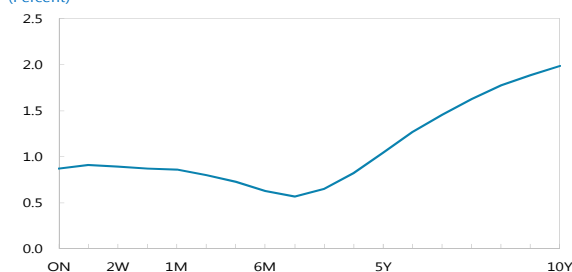
24. On balance, financial sector risks appear manageable. A number of mitigating factors are at play. Specifically,

- Domestically, Estonian banks' comfortable prudential ratios provide a risk-weighted assets buffer of almost 9 percentage points before breaching the current Basel tier 1 capital ratio minimum (4.5 percent). Furthermore, banks now have access to the ECB's liquidity facilities providing a solid liquidity backstop. Market indicators suggest broadly stable borrowing costs. Specifically, average interest rates have not yet trended up and eonia forward interest rate swaps through four years do not point to higher interest rates. In

³ Sweden, Country Report No. 11/172. <http://www.imf.org/external/pubs/ft/scr/2011/cr11171.pdf>.

addition, Estonian banks have been reducing dependence on foreign funding.

Eonia Forward Curve, as of November 2011
(Percent)



Sources: Bloomberg; and IMF staff calculations.

- Externally, Swedish parent banks are well capitalized and their liquidity management and capital buffers have improved. Recent Fund staff assessment of Sweden's financial sector indicated that risks were contained, reflecting only a limited potential of external contagion via financial channels to Estonian banks.⁴ Moreover, Fund staff estimates that a 40 percent drop in Swedish housing prices—compared to an estimated overvaluation up to 25 percent—would be required to reduce banks' collateral below the face value of outstanding covered bonds. In addition, foreign parents view their Estonian investments as strategically important as a significant source of profits, and thus are less likely to be significantly withdrawn. Finally, Estonia is not directly exposed to the euro area periphery and its indirect exposure through parent banks is small, about 0.5 percent and 3.5 percent respectively of total Swedish and Danish banking sector assets, with the latter mostly consisting of exposure to Ireland.

⁴ See Sweden, Country Report No. 11/172. <http://www.imf.org/external/pubs/ft/scr/2011/cr11171.pdf>.

25. The European Banking Authority's (EBA's) and Eesti Pank's stress tests support this assessment. Under the EBA's adverse scenario, Swedish banks' average tier I capital ratio would be 9.5 percent in 2012. Danish and Finnish banks have even higher tier I ratios in 2012 under the adverse scenario. Also, The Eesti Pank's stress test from early-2011 shows that NPLs would increase but that capital ratios would remain adequate.⁵ Similarly, a more recent exercise by Eesti Pank and Estonia's Financial Supervision Authority (FSA) recreating the 2008 shock, suggests that capital would remain above statutory minimums. These tests do not reflect, however, the impact of a sharp deterioration in investor confidence nor cross-border contagion in an extreme tail event.

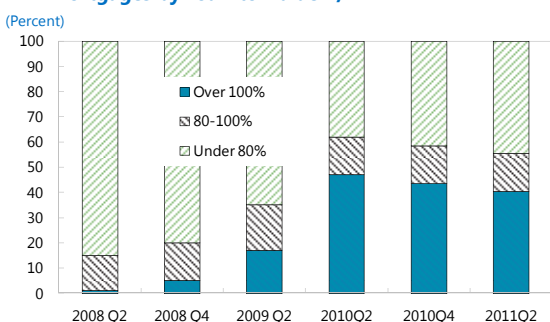
26. Going forward, safeguarding financial stability will require continued efforts in an increasingly challenging global financial environment. In this regard, the authorities should pursue:

- Further Improving cross-border supervision.* While the 2010 Nordic-Baltic Memorandum of Understanding is non-binding, it provides a framework for regional prudential information sharing and crisis resolution. Continued progress to implement its key elements, including defining criteria for burden sharing and establishing a shared financial database, will be needed to ensure its effectiveness. In addition, the authorities, in cooperation with other supervisors, should consider conducting joint cross-border stress tests,

⁵ Eesti Pank, *Financial Stability Review* (1/2011). Stress includes a decline of 1.4 and an increase of 2.0 percentage points respectively in growth and unemployment, as well as higher interest rates.

including by assessing the impact of more adverse assumptions than those in the EBA's 2011 stress tests. In view of deep regional financial linkages and rising external risks, the importance of these tools have increased for crisis resolution as well as to safeguard confidence and enhance crisis prevention.

NPL Mortgages by Loan-to-Value 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.

- Continuing preparations for Basel III.* Early institutional adoption of Basel III requirements, particularly regarding the liquidity framework and higher quality capital, should continue and would reduce funding risks and avoid possible credit supply interruptions in times of heightened stress. But this should be balanced against the potential costs of reducing banks' margins and creating headwinds for the credit recovery. In this regard, understanding the anticipated impact of Basel III on prudential ratios will be needed to ensure that forward-looking capital buffers serve to reassure markets. Coordination with home supervisors will be essential as will be consistency with forthcoming EU directives.
- Enhancing the deposit guarantee scheme.* Since the 2009 FSAP, the authorities have made progress to improve Estonia's

scheme by increasing the fund's assets and reducing the pay-out period to 20 days. With the deposit guarantee fund's assets currently about 2.1 percent of eligible deposits, further efforts are needed to reach the authorities' target of 2.5 percent of deposits, which nonetheless remains short of the FSAP recommendations.⁶

27. These efforts can also be supported by further improvements in Estonia's bankruptcy law and restructuring framework.

The Estonian Supreme Court's May 2011 decision on the Reorganization Act for corporations provided a number of clarifications to enhance its effectiveness.⁷ Also, the FSA has been provided the authority to expeditiously resolve problem banks through nationalization since early 2011. However, the authority for bank resolution through a flexible asset separation tool—before and after nationalization—and framework for cross border resolution could be considered. The bankruptcy regime could be further strengthened to, inter alia, speed up the process. Finally, reforms are needed to facilitate out-of-court debt restructuring and a pre-packed, expedited bankruptcy process could further reduce costs.

28. The authorities expressed commitment to continue bolstering financial stability.

They stressed the importance of continued progress on implementing the Baltic-Nordic MOU. The

⁶ Republic of Estonia: Financial System Stability Assessment, IMF Country Report No. 09/89 (March 2009).

⁷ The Reorganization Act was adopted in 2008 and the corresponding act for natural persons was adopted in April 2011.

authorities noted that progress in this regard also depends on their regional partners and, in this connection, pointed to the forthcoming December high-level meeting of the Baltic-Nordic Financial Stability Group. They noted that capital and liquidity buffers above Basel III thresholds would support financial stability, and welcomed banks increased funding through local deposits. The authorities agreed that additional tools for bank resolution—

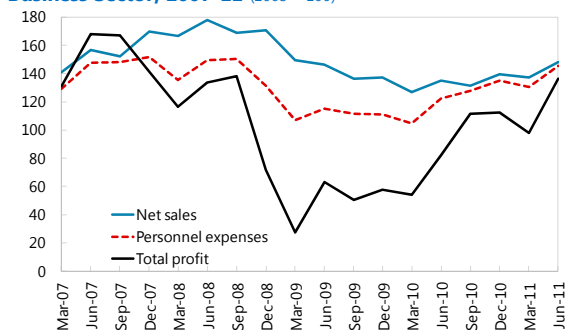
notably asset separation and cross-border coordination—were needed and planned, but would this require progress at the EU level and coordination with regional partners. Regarding the bankruptcy process, they noted ongoing the work to identify bottlenecks and, while reform efforts were in their early stages, they hoped to address this by 2013.

C. Tapping Estonia's Sustainable Growth Potential

29. Besides safeguarding competitiveness gains, bolstering sustainable growth will entail enhancing Estonia's attractiveness for FDI. In addition to the ongoing rebalancing the economy toward the tradable sector, Estonia will need to move up the export value chain. In this regard, the authorities' recently approved "Estonia 2020 Competitiveness Strategy" provides a welcome roadmap. Specifically, it targets

further improving the business environment to attract FDI with export potential. This will be achieved by building R&D capability, improving education in technical fields, and enhancing infrastructure with continued use of EU funds. Doing so has become increasingly pressing as Estonia's high trade integration with Nordic countries means it faces growing competition for Nordic FDI from emerging markets, particularly in Asia (Annex III).

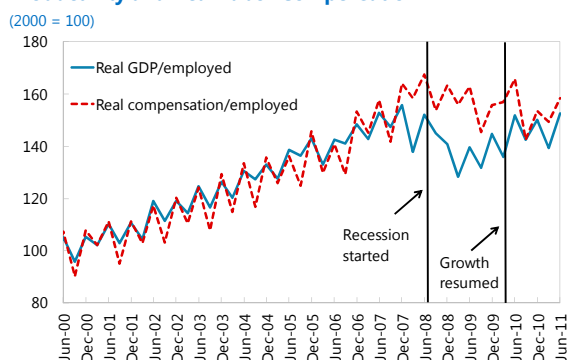
Net Sales, Personnel Expenditures and Total Profit of Business Sector, 2007-11 (2005 = 100)



Source: Statistics Estonia.

30. Fully drawing on Estonia's resources and developing their potential will also require addressing emerging labor market tensions. While its flexible labor market has enabled rapid declines in unemployment, the duration of joblessness has risen. Despite double-digit unemployment, skill mismatches as well as job opportunities in Nordic

Productivity and Real Labor Compensation (2000 = 100)



Sources: Statistics Estonia; and IMF staff calculations.

neighbors have resulted in labor shortages and increases in manufacturing job vacancies (Annex IV). In this regard, the authorities' ongoing efforts to harmonize vocational education with the needs of the labor market, increase voucher training programs, and improve job-matching through a new one-stop IT platform are welcome. Looking ahead,

continued attention will be required to foster development of human resources in technical fields as well as to attract highly-trained individuals from abroad.

31. The authorities stressed commitment to further enhance Estonia's business friendly environment and address emerging labor market tensions. In this regard, they underscored their commitment to safeguard competitiveness by increasing human capital and productivity as elaborated in the competitive strategy as well as by lowering labor taxation. The authorities noted that active labor market policies, including targeted wage subsidies for problem populations, have contributed to lower

unemployment. In this regard, they pointed to the doubling to €2,000 of the ceiling of the voucher training program for the unemployed. Also, the Public Employment Services introduced a new IT platform providing one-stop services in early 2011, thereby improving the efficiency of the job-matching process. Regarding rising long-run unemployment, the authorities noted that the success in reducing short-term unemployment had also contributed to its rise. In addition to increases in manufacturing job vacancies, they noted that increases in cross-border construction jobs had lowered unemployment but contributed to pressure wages, which may continue in the medium-term.

STAFF APPRAISAL

32. Estonia faces an increasingly challenging environment as it looks to continue implementing policies preserving macroeconomic policy credibility and safeguarding sustainable growth. Following a strong recovery in its first year in the euro area, Estonia's economic activity will likely slow in 2012. In the central scenario, nonetheless, Estonia's economy will continue to approach its potential. Inflation is poised to slow even though pressures on core inflation can remain. Recently, downside risks to the outlook have increased. In addition to a slowdown in exports, a generalized confidence fallout from the euro area sovereign debt crisis could spill over to Estonia despite its strong fundamentals.

33. Estonia's fiscal position will remain strong but there will be a need to limit the stimulative impact of the 2012 budget in the central scenario, albeit uncertainties abound. Time-bound increases in public

investment underlie the budget's positive impulse, while a neutral budget would be appropriate. Recognizing that further significant compression of current expenditures is unrealistic, observance of budgetary allocations will be helpful in this regard. But if downside risks materialize, automatic stabilizers should be allowed to operate while maintaining Estonia's hard-earned fiscal credibility. In addition, given the uncertainty regarding the extent and duration of the global slowdown, fiscal buffers should be preserved and alternative sources of financing be considered.

34. Looking beyond the current conjuncture, the authorities' medium-term target can safeguard Estonia's strong fiscal position. This will require continued expenditure restraint to counter spending pressures that are likely to emerge. The authorities' ongoing efforts to enhance central government productivity through

centralization of accounting and personnel management can help. Still without raising taxes, achieving the fiscal target on a sustainable basis, implementing the authorities' plan to reduce labor taxation, and restore fiscal buffers will require reducing non-wage goods and services by at least 2 percentage points of GDP in the medium term. The pace of consolidation should be mindful of long-term investment needs and cyclical developments.

35. A fully fledged multi-year fiscal framework can support the medium-term target, bolster Estonia's high fiscal credibility, and limit pro-cyclical policies. A successful framework should reflect Estonia's fiscal tradition of simplicity and transparency, which has facilitated monitoring and accountability. The central element of such a framework would be multi-year expenditure ceilings and their strict observance while revenue collections adjust to cyclical conditions. In addition, fiscal buffers should continue to be an integral part of Estonia's fiscal framework. While there are benefits as well as costs of holding liquid assets, gradually rebuilding buffers appears appropriate given increased global uncertainty.

36. For the financial sector, the challenge entails safeguarding stability in the context of heightened global financial tension. Estonian banks have scant direct and indirect exposure to euro area sovereign debt, while at the same time capital and liquidity buffers have increased substantially since 2007. However, the legacy of the previous crisis continues to burden balance sheets and dependence on financing from parent banks remains high, although both of these factors are declining. The latter has proven a stable source of financing, but parent banks in turn

rely on short-term wholesale funding. Limiting potential contagion will thus require continued improvements in cross-border supervision. Developing regional crisis resolution tools—in close cooperation with relevant authorities—can provide critical backstop to Estonia's sizable fiscal and financial buffers. The scheduled December high-level meeting of Nordic regulators provides an opportunity to make progress in this critical area. In addition, an early and gradual institutional adoption of Basel III requirements can reduce funding risks but its implementation should avoid creating headwinds for credit conditions.

37. Financial resilience can also be supported by further enhancing the regional and domestic resolution frameworks for banks and addressing weaknesses in Estonia's bankruptcy law. The recent adoption of a domestic resolution law provides a welcome tool to minimize the cost of a bank failure. This could be supplemented by introducing a bank-asset separation authority as well as by developing cross-border bank resolution tools in coordination with the EU and regional partners. In addition, legal clarifications regarding the Reorganization Act for corporations have improved its effectiveness, while the recent adoption of an analogous law for individuals ensures broader coverage. Still, reforms are needed to shorten the lengthy and costly bankruptcy process.

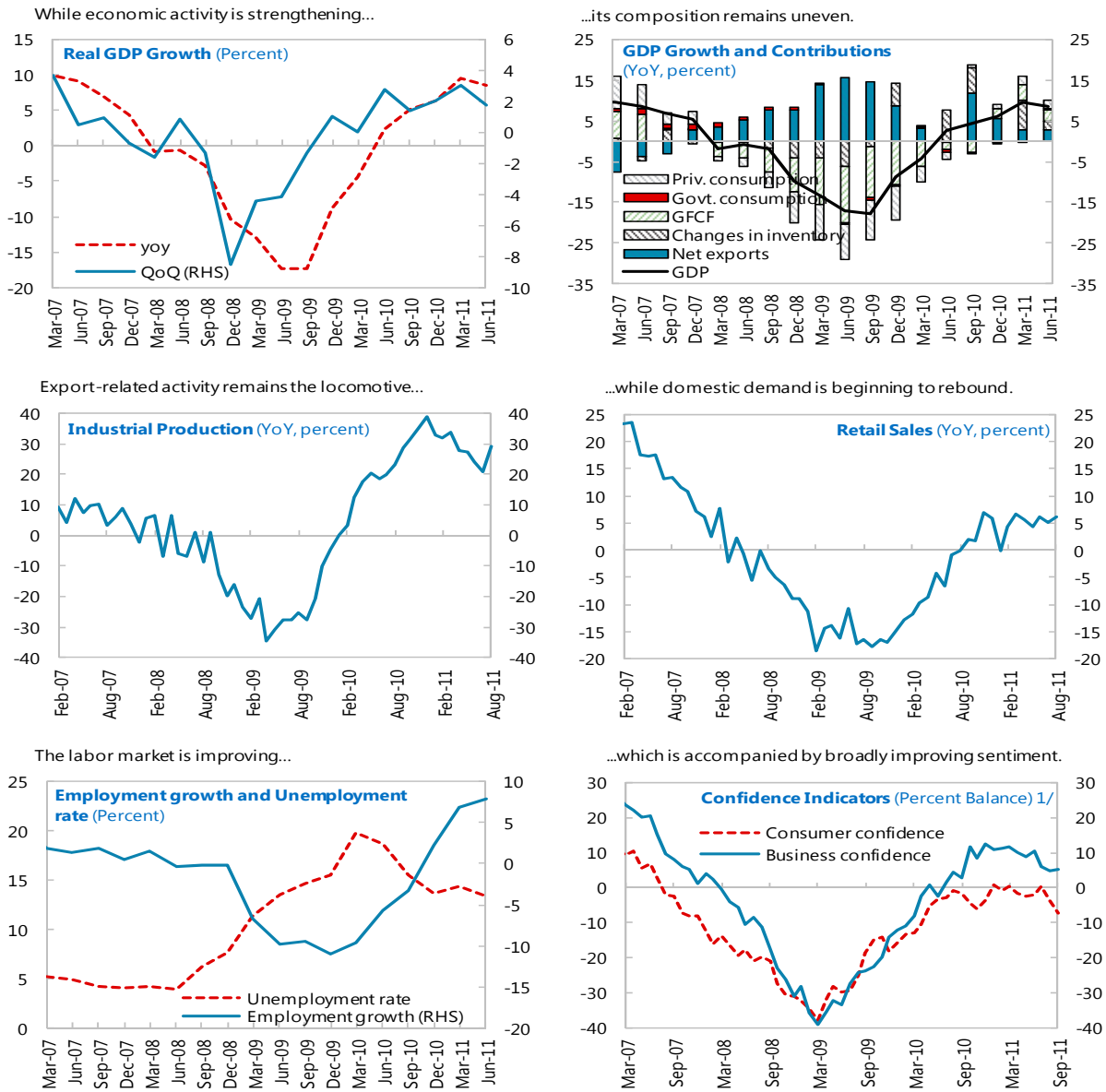
38. More broadly, sustainable growth will entail enhancing Estonia's attractiveness for FDI, addressing skill mismatches, and increasing human capital. Estonia's 2020 Competitiveness Strategy highlights the need for further improvements in the business environment to continue to draw FDI. The urgency of boosting knowledge-

based activities and remaining an attractive destination for FDI has been heightened by growing competition from emerging markets. Furthermore, fully drawing on Estonia's resources and developing their potential will also require addressing skill mismatches and continuing attention to foster human resources in technical fields as well as to

attract highly-trained individuals to support sustainable income convergence to EU levels.

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

Figure 1. Estonia: The Strengthening Economic Rebound, 2007-11

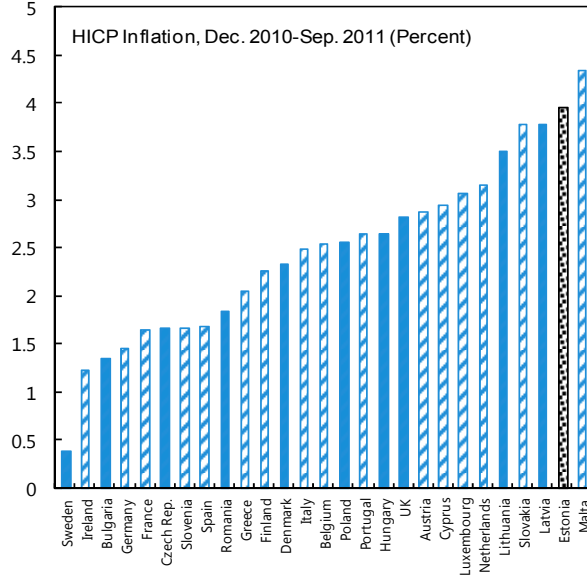


Source: Haver.

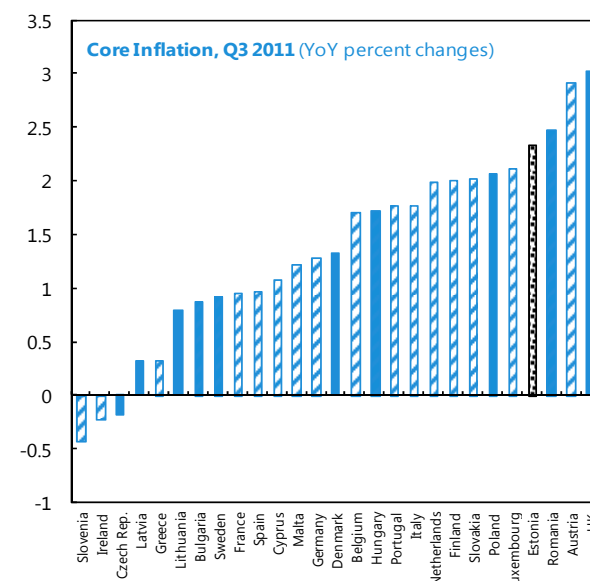
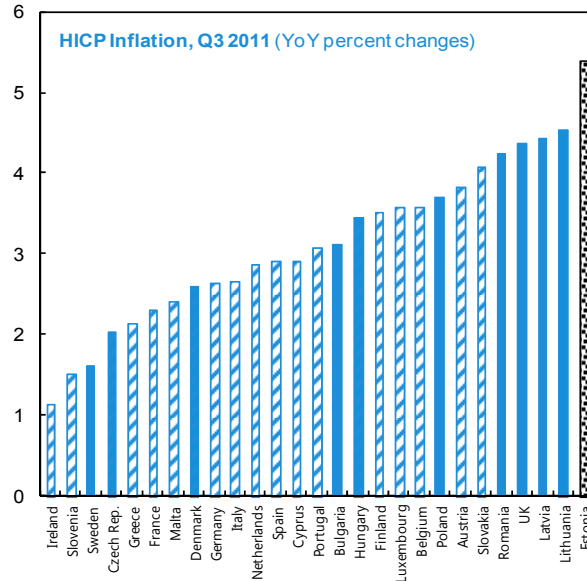
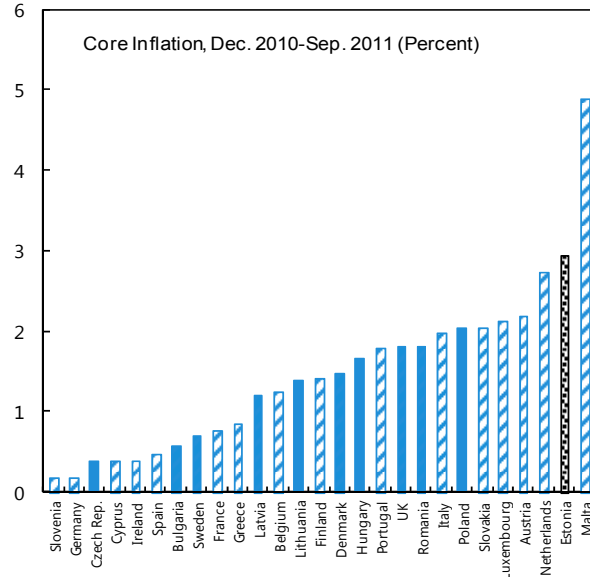
1/ Balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Figure 2. Estonia: Recent Price Development, 2010-11 1/ 2/ 3/

Although inflation is among the highest in the EU...



...core inflation remains somewhat more subdued.



Source: Eurostat.

1/ Core is defined as HICP excluding energy, food, alcohol and tobacco.

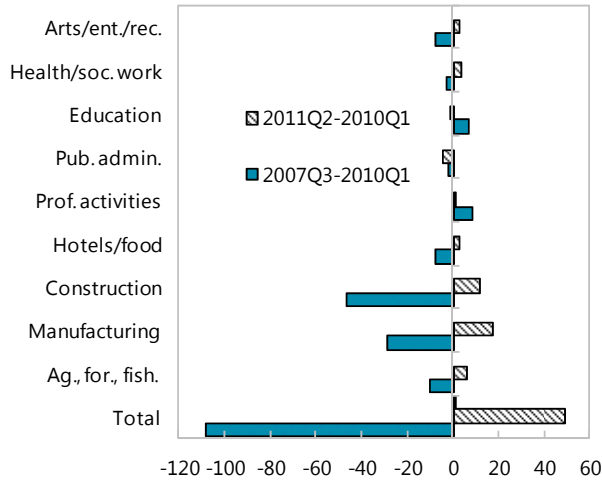
2/ Data for the UK are from Dec. 2010-Aug. 2011 for monthly chart, and from Jun. 2010-Jun. 2011 for quarterly chart.

3/ Striped lines are euro area member countries.

Figure 3. Estonia: Legacies of the Bust

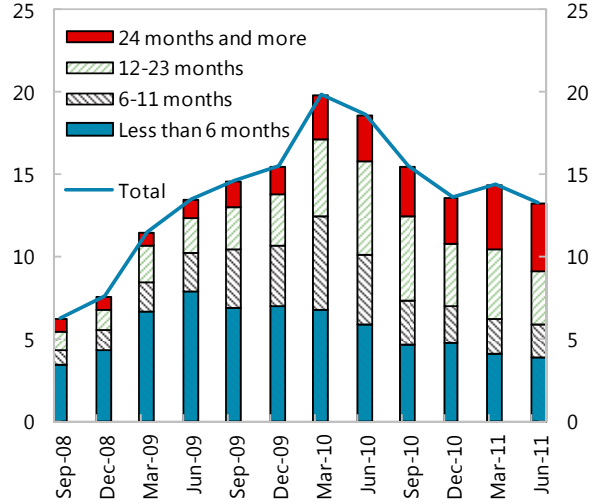
Recent employment gains have yet to recover from earlier losses, but are generally focused on the tradable sector...

Jobs, Lost or Gained
(Thousands of jobs)



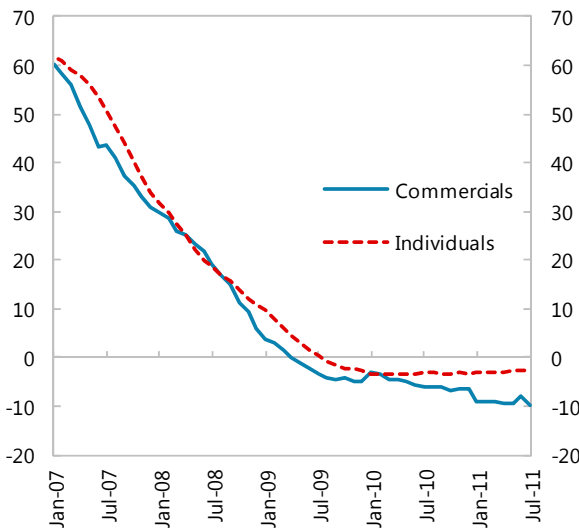
...and while the number of unemployed are declining, they are experiencing increasingly longer durations.

Unemployment Rates by Duration
(YoY, percent)



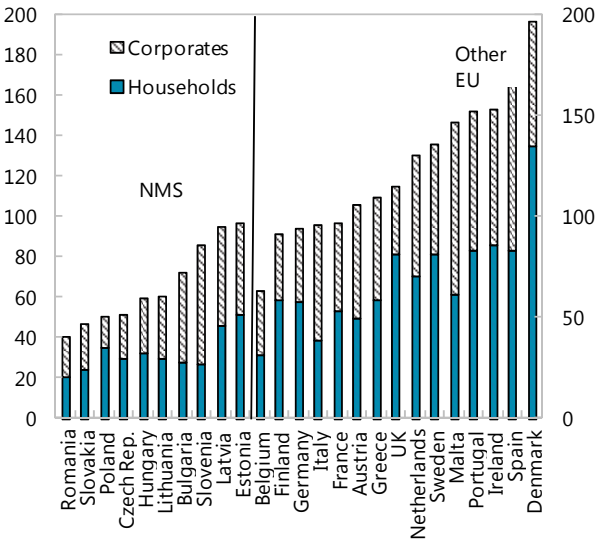
Households and enterprises are on balance repaying their loans...

Credit Growth
(YoY, percent)



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

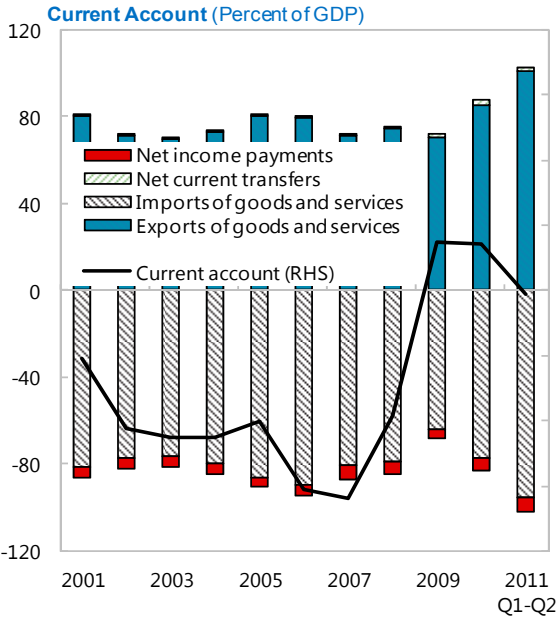
Nonfinancial Private Sector Loans, 2010
(Percent of GDP)



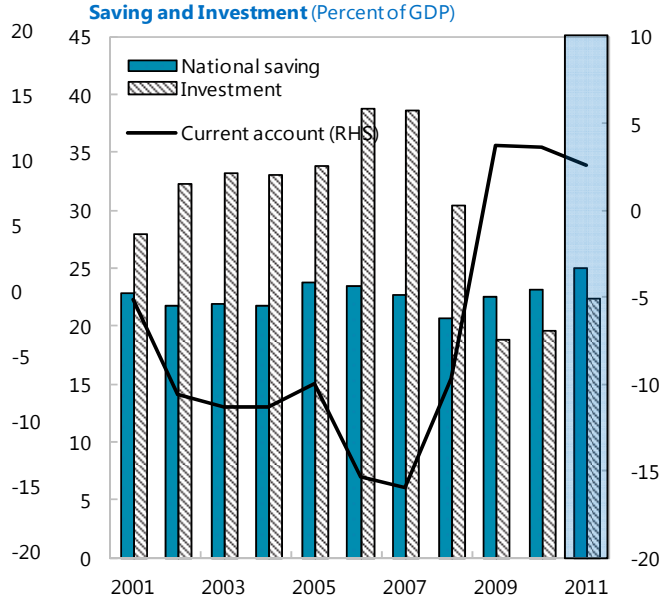
Sources: Eurostat; Statistics Estonia; and Bank of Estonia.

Figure 4. Estonia: External Developments, 2001-11

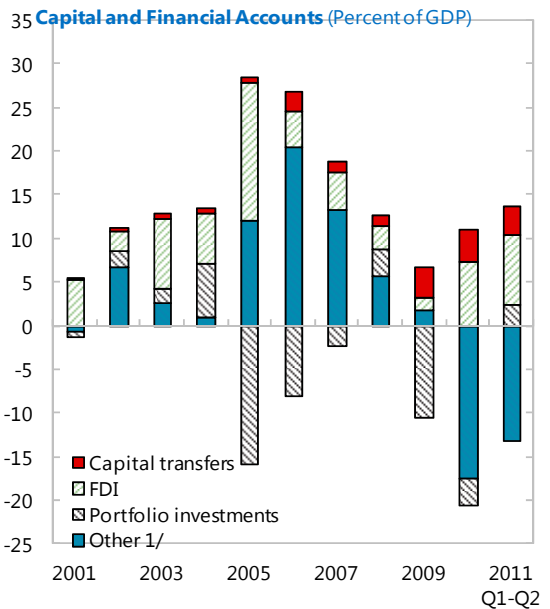
The strong current account improvement is beginning to be reversed, as imports (including for inventories) are growing...



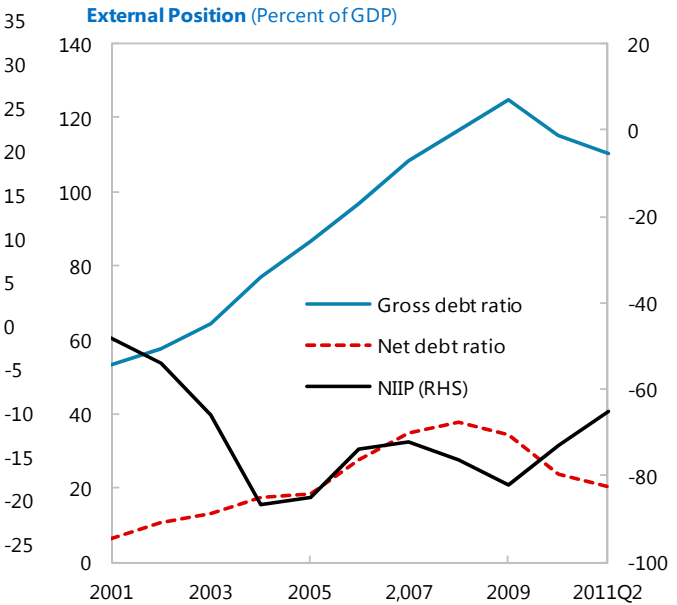
...while both saving and investment ratios (including stockbuilding) are recovering.



Bank deleveraging is reflected in external capital flows...



...and is tempering external debt burdens.



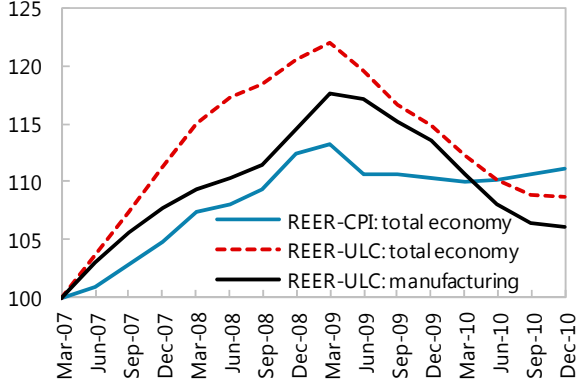
Sources: Haver; Statistics Estonia; and IMF staff calculations.

1/ Other is defined as the sum of financial derivatives, other investments, and errors and omissions.

Figure 5. Estonia: External Competitiveness, 2005-11

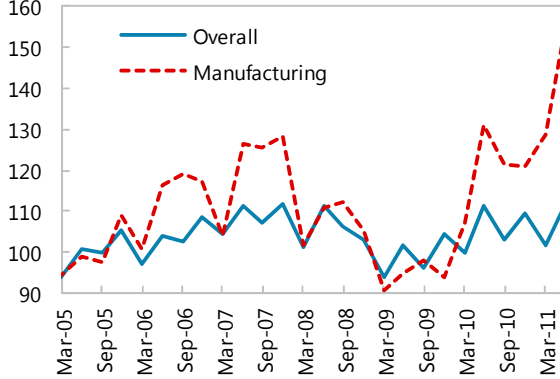
Competitiveness improved markedly due to sharp nominal wage declines after the crisis...

REER vs EU27 Index (2007Q1=100)



...which also benefitted from sharp increases in the productivity in the manufacturing sector

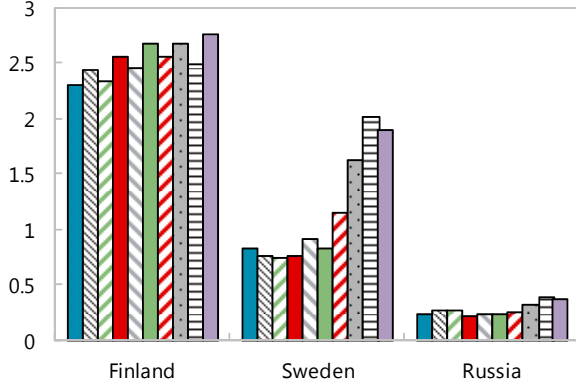
Productivity (2005=100)



Estonia's market shares remain robust in its export markets ...

Estonia's Market Share in Selected Countries

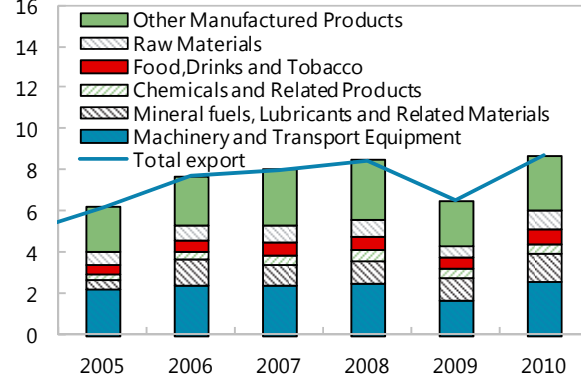
(2009Q1-2011Q2 percent)



...with machinery and transport equipment, and mineral products being the main exports.

Export Composition

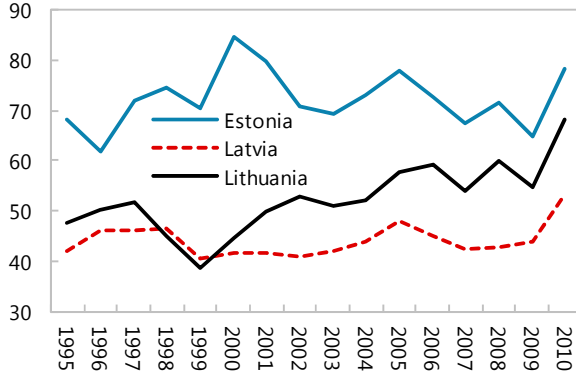
(Billions of euros)



Estonia remains the most export-oriented economy in the Baltics...

Baltics: Exports of Goods and Services

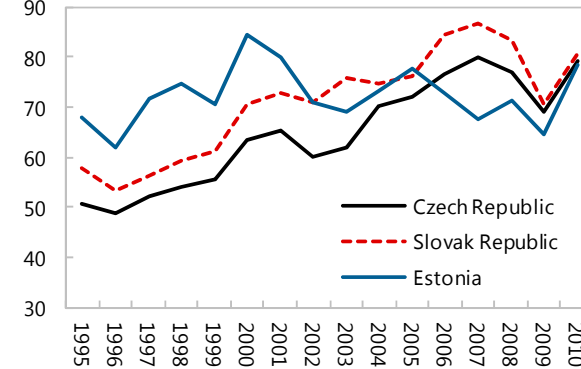
(Percent of GDP)



...but the CEE countries caught up with Estonia by 2010.

Selected EU Countries: Exports of Goods and Services

(Percent of GDP)

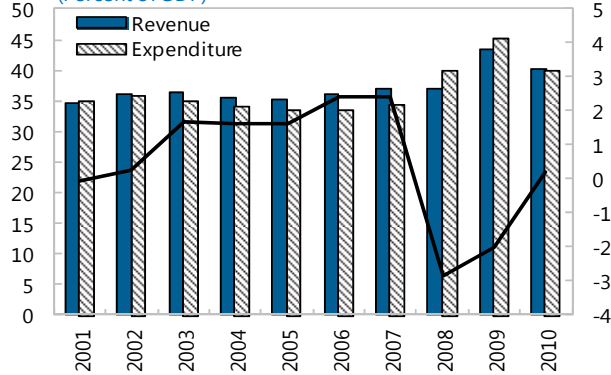


Sources: DOTS; Haver; WEO; and EU Commission.

Figure 6. Estonia: Fiscal Developments and Structure

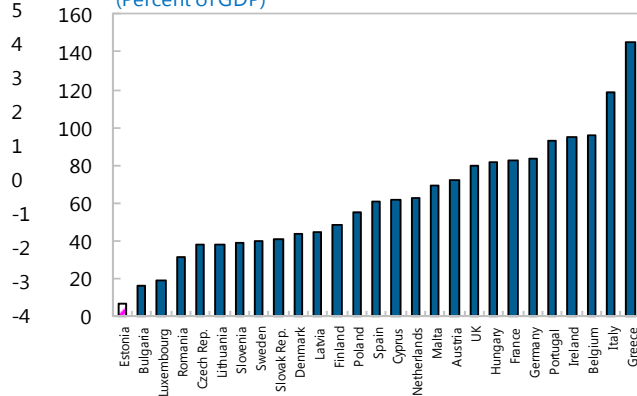
Strong policy actions and economic recovery have returned a small surplus...

General Government
(Percent of GDP)



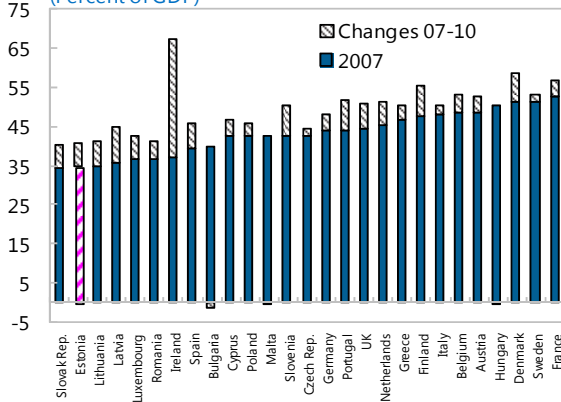
...which limits the debt to the lowest in the EU.

General Government Debt, 2010
(Percent of GDP)



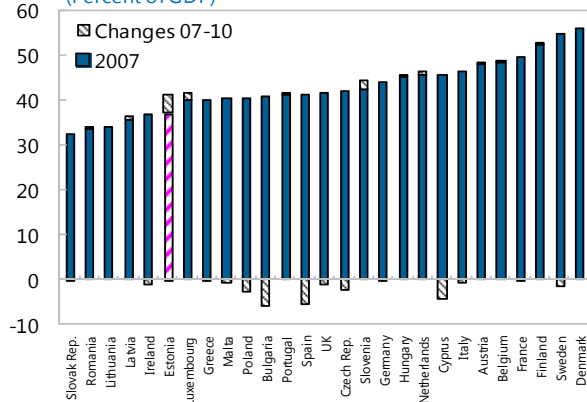
The downturn boosted the still-low expenditure ratio...

General Government Expenditure
(Percent of GDP)



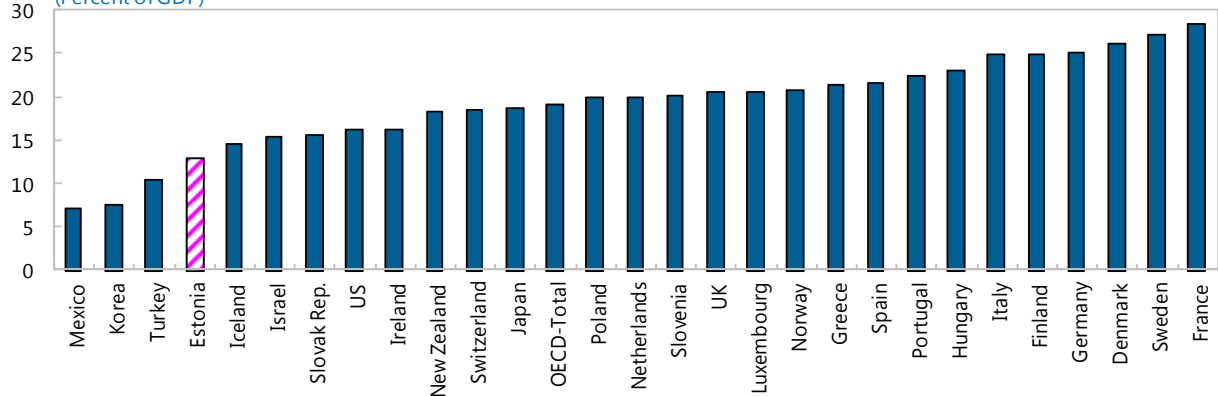
...and revenues to a lesser degree...

General Government Revenue
(Percent of GDP)



...but social spending remains among the lowest among comparators.

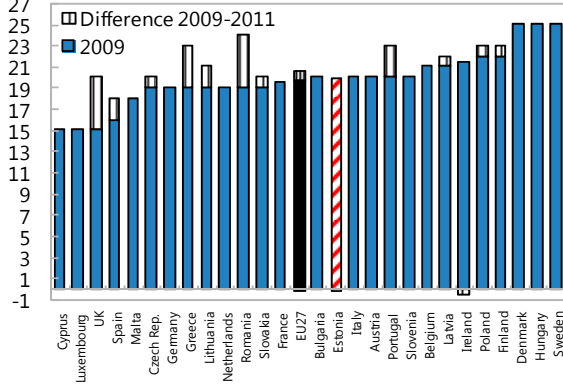
Public Social Expenditures, 2009
(Percent of GDP)



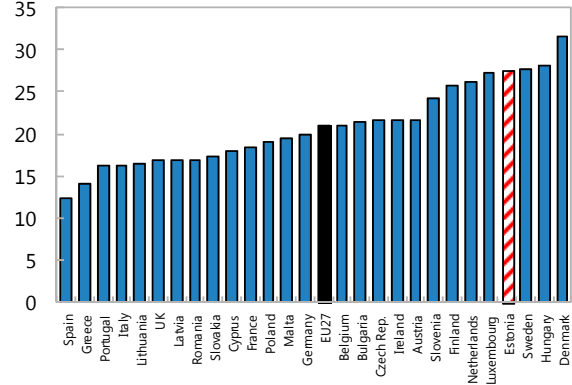
Sources: Haver; Erostat; and OECD.

Figure 7. Estonia: Statutory and Implicit Tax Rates, 2009-11

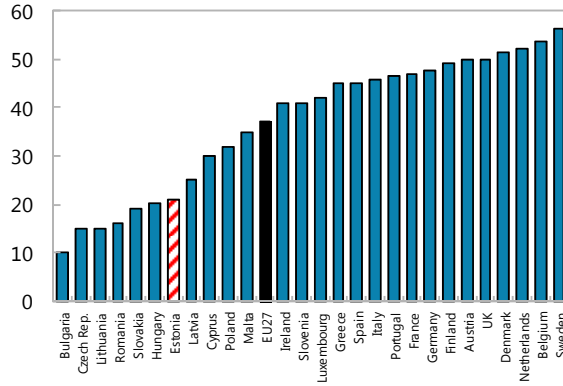
Standard Value-added Tax Rate 1/
(Percent)



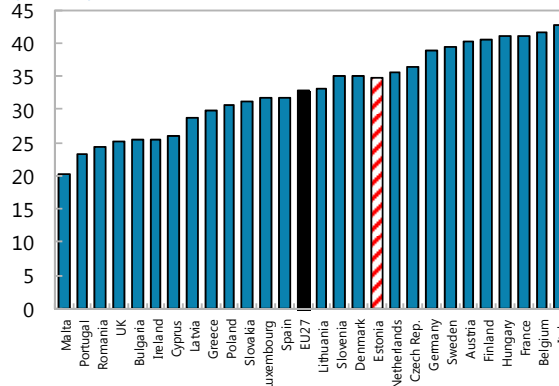
Implicit Tax Rate on Consumption, 2009
(Percent)



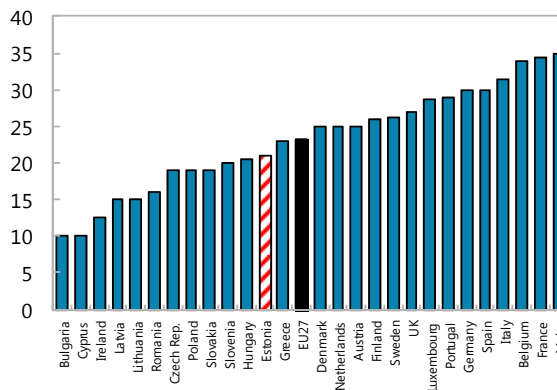
Statutory Personal Income Tax Rate, 2011
(Percent)



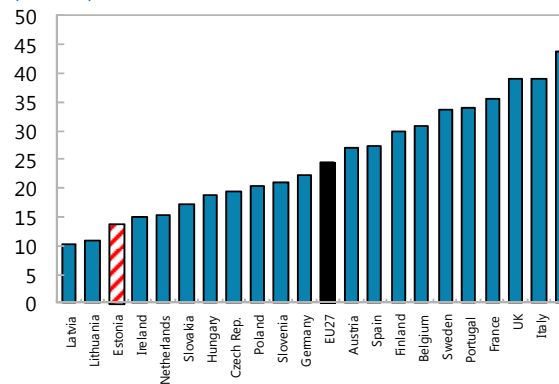
Implicit Tax Rate on Labor, 2009 2/
(Percent)



Statutory Corporate Income Tax Rate, 2011
(Percent)



Implicit Tax Rate on Capital, 2009
(Percent)



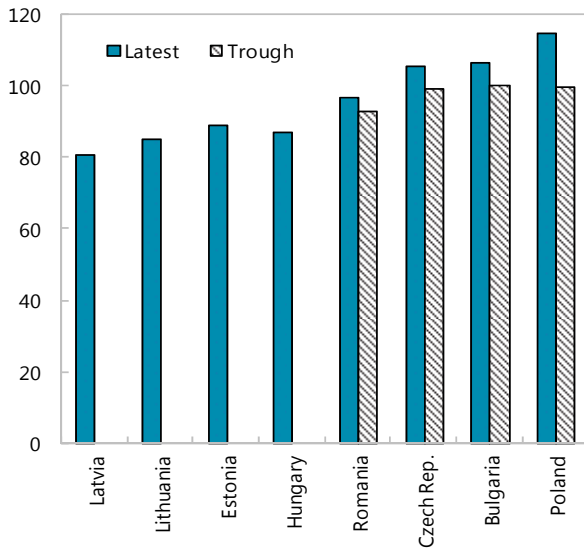
Source: Eurostat.

1/ 2011 VAT rates refer to those applicable in May 2011.

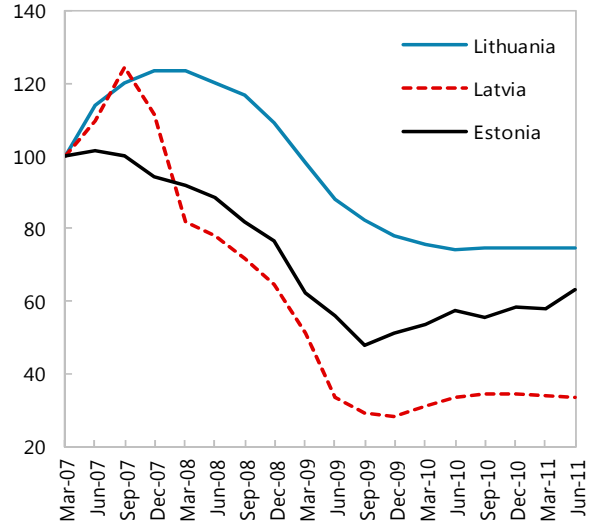
2/ Includes social contributions.

Figure 8. Estonia: Financial Sector Developments

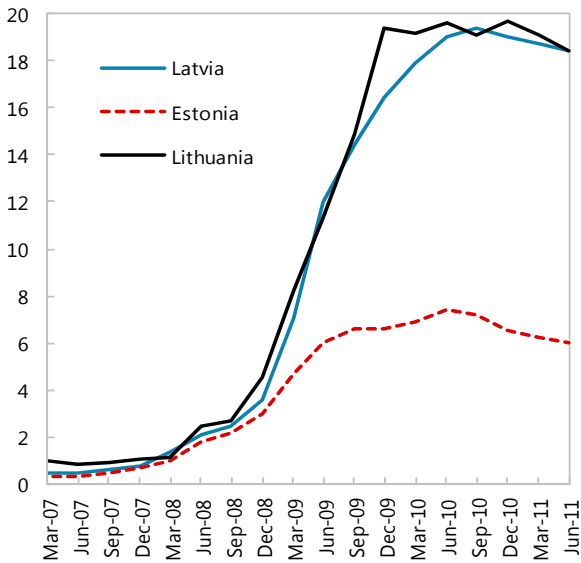
Private Credit in CEE Countries and Baltics 1/
(Percent of peak)



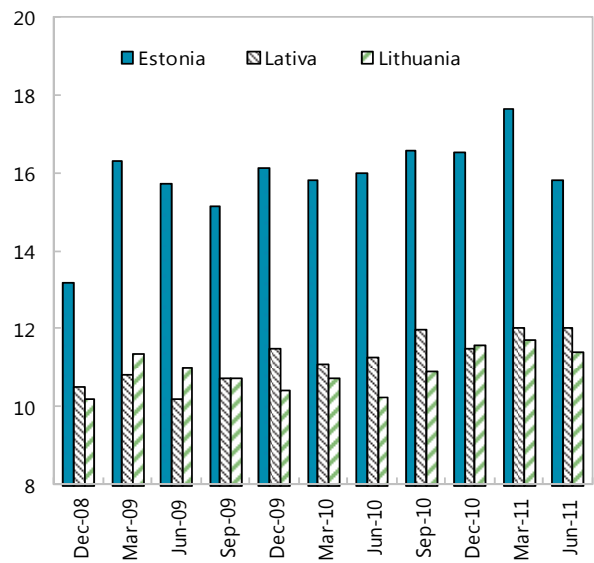
Housing Price Index
(2007Q1=100)



Non-performing Loans 2/
(Percent of outstanding loans)



Regulatory Tier 1 Capital to Risk-weighted Assets
(Percent)

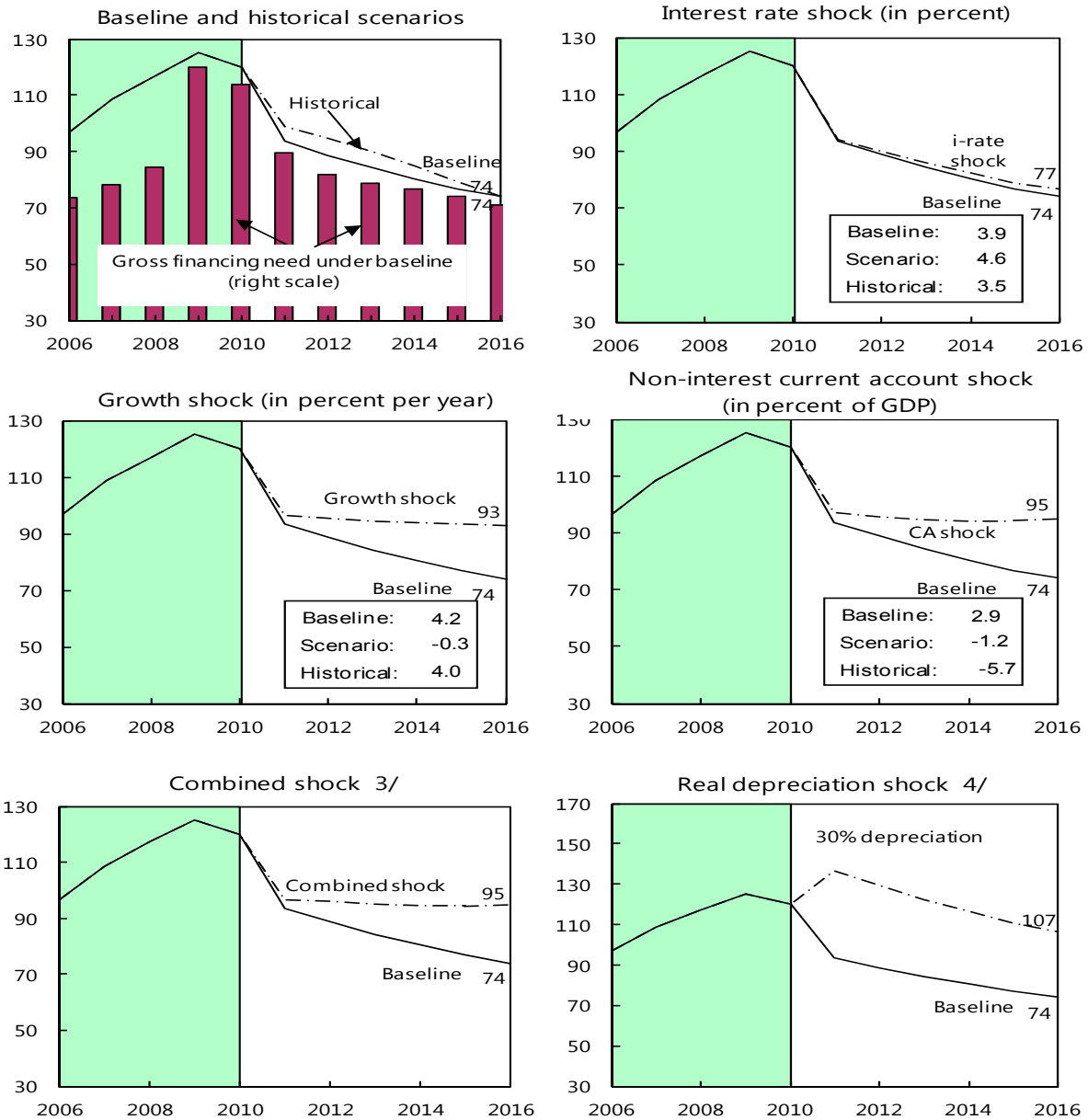


Sources: Haver; Global Property Guide; country authorities; and IMF staff calculations.

1/ For countries with only one bar, the latest is the trough. Latest data are as of 2011Q2.

2/ In Lithuania, NPLs include impaired loans + loans past due by 60 days but not impaired; in Latvia, NPLs are loans overdue by more than 90 days; in Estonia, they are loans overdue by more than 60 days.

Figure 9. 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. Four-year historical average for the variable is also shown.

2/ Large projected declines in 2010-11 reflect in part the actual and 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 2011.

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

| | 2007 | 2008 | 2009 | 2010 | 2011 Proj. | 2012 Proj. |
|---|-------|-------|-------|-------|---------------|---------------|
| National income, prices and wages | | | | | | |
| GDP (euro, billions) | 16.1 | 16.3 | 13.8 | 14.3 | 15.8 | 16.7 |
| Real GDP growth (year-on-year in percent) | 7.5 | -3.7 | -14.3 | 2.3 | 7.5 | 3.1 |
| Average HICP (year-on-year change in percent) | 6.7 | 10.6 | 0.2 | 2.7 | 5.1 | 3.1 |
| GDP deflator (year-on-year change in percent) | 11.6 | 5.3 | -1.0 | 1.1 | 3.0 | 2.4 |
| Average monthly wage (year-on-year growth in percent) | 20.4 | 13.8 | -4.6 | 0.9 | 4.5 | 4.7 |
| Unemployment rate (ILO definition, percent) | 4.7 | 5.5 | 13.8 | 16.9 | 13.5 | 11.5 |
| Average nominal ULC (year-on-year growth in percent) | 13.6 | 18.4 | 0.9 | -5.4 | 0.6 | 3.1 |
| Saving-investment balances (Percent of GDP) | | | | | | |
| National saving | 22.7 | 20.7 | 22.5 | 23.1 | 24.9 | 25.0 |
| Private | 17.2 | 20.9 | 24.6 | 23.4 | 25.6 | 28.1 |
| Public | 5.4 | -0.2 | -2.1 | -0.3 | -0.7 | -3.1 |
| Domestic investment | 38.6 | 30.4 | 18.8 | 19.5 | 22.4 | 22.9 |
| Private | 34.9 | 27.0 | 15.4 | 16.6 | 19.7 | 19.7 |
| Public | 3.7 | 3.3 | 3.4 | 3.0 | 2.7 | 3.1 |
| Foreign saving | 15.9 | 9.7 | -3.7 | -3.6 | -2.6 | -2.1 |
| General government (ESA95 basis; percent of GDP) | | | | | | |
| Revenue and grants | 36.4 | 36.5 | 43.2 | 40.9 | 41.0 | 39.5 |
| Expenditure and net lending | 34.0 | 39.5 | 45.2 | 40.6 | 40.7 | 41.8 |
| Fiscal balance | 2.4 | -2.9 | -2.0 | 0.3 | 0.3 | -2.3 |
| External sector (Percent of GDP) | | | | | | |
| Trade balance | -16.4 | -13.0 | -4.0 | -1.7 | 0.2 | -0.6 |
| Service balance | 6.5 | 7.6 | 9.8 | 9.2 | 6.8 | 6.5 |
| Income balance | -6.6 | -5.4 | -3.6 | -5.6 | -5.7 | -5.3 |
| Current account | -15.9 | -9.7 | 3.7 | 3.6 | 2.6 | 2.1 |
| Gross international reserves (euro, millions) | | | | | | |
| Gross international reserves | 2237 | 2776 | 2766 | 1935 | ... | ... |
| In months of imports | 2.5 | 3.1 | 4.7 | 2.6 | ... | ... |
| In percent of gross short-term debt (including trade credits) | 42.7 | 39.9 | 41.6 | 32.7 | ... | ... |
| In percent of base money | 118.9 | 114.8 | 121.8 | 82.9 | ... | ... |
| Gross external debt/GDP (Percent) 1/ | 108.5 | 117.1 | 125.0 | 120.0 | 93.5 | 88.7 |
| Net external debt/GDP (Percent) 2/ | 34.6 | 37.6 | 35.2 | 28.7 | 13.1 | 2.8 |
| General government external debt/GDP (Percent) | | | | | | |
| Excluding government assets held abroad | 2.7 | 3.2 | 5.4 | 4.9 | 4.5 | 4.2 |
| Including government assets held abroad 3/ | -6.6 | -4.8 | -3.0 | -2.1 | -1.9 | -1.8 |
| Exchange rate (EEK/US\$ - period average) 4/ | 11.4 | 10.7 | 11.3 | 11.8 | ... | ... |
| Money and credit (year-on-year growth in percent) | | | | | | |
| Domestic credit to nongovernment | 33.0 | 7.2 | -5.3 | -8.5 | ... | ... |
| Base money | 1.6 | 28.5 | -6.1 | 2.8 | ... | ... |
| Broad money | 13.5 | 5.5 | 0.8 | 2.8 | ... | ... |

Social Indicators (reference year):

Population (2010): 1.34 million; Per capita GDP (2010): €10,822; Life expectancy at birth (2009): 79.5 (female) and 69.1 (male);

Poverty rate (share of the population below the established risk-of-poverty line, 2009): 23.4 percent; Main exports: machinery and appliances.

Sources: Estonian authorities; Eurostat; 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 was pegged at 15.6466 kroons to the euro. Estonia adopted the euro on January 1, 2011.

Table 2. Estonia: General Government Accounts, 2001-10

(ESA95 basis; in percent of GDP)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|
| Statement of Operations | | | | | | | | | | |
| Revenue | 34.7 | 36.0 | 36.5 | 35.6 | 35.2 | 36.1 | 36.4 | 36.5 | 43.2 | 40.9 |
| Taxes | 19.6 | 20.0 | 20.2 | 20.0 | 20.0 | 20.2 | 20.6 | 19.8 | 22.2 | 20.7 |
| Direct taxes | 7.2 | 7.5 | 8.0 | 7.9 | 7.0 | 7.1 | 7.4 | 7.8 | 7.6 | 6.8 |
| Indirect taxes | 12.3 | 12.5 | 12.1 | 12.1 | 13.1 | 13.2 | 13.1 | 11.9 | 14.7 | 13.9 |
| Capital taxes | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Social contributions | 10.7 | 11.0 | 10.7 | 10.4 | 10.4 | 10.2 | 10.6 | 11.7 | 13.3 | 13.3 |
| Current transfers | 1.0 | 0.9 | 1.3 | 1.1 | 1.0 | 1.2 | 0.9 | 0.9 | 1.2 | 1.4 |
| Capital transfers | 0.2 | 0.3 | 0.4 | 0.3 | 0.3 | 0.8 | 0.8 | 0.4 | 1.7 | 1.4 |
| Other revenue | 3.4 | 3.8 | 3.9 | 3.8 | 3.6 | 3.7 | 3.5 | 3.7 | 4.8 | 4.1 |
| Expenditure | 34.8 | 35.8 | 34.8 | 34.0 | 33.6 | 33.6 | 34.0 | 39.5 | 45.2 | 40.6 |
| Expense | 30.5 | 30.4 | 30.5 | 30.5 | 29.9 | 29.3 | 28.8 | 33.4 | 41.3 | 38.7 |
| Compensation of employees | 10.2 | 10.3 | 10.2 | 10.2 | 9.9 | 9.3 | 9.5 | 11.2 | 12.8 | 11.9 |
| Use of goods and services | 7.8 | 7.7 | 7.9 | 7.0 | 6.9 | 6.5 | 6.2 | 7.0 | 7.7 | 7.5 |
| Interest | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 |
| Subsidies | 1.0 | 1.0 | 0.9 | 0.8 | 0.7 | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 |
| Capital transfers | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.8 | 1.1 | 1.3 | 0.8 | 0.9 |
| Social benefits | 10.6 | 10.3 | 10.1 | 10.6 | 10.3 | 10.0 | 9.9 | 12.1 | 16.0 | 14.9 |
| Other expense | 0.4 | 0.6 | 0.8 | 1.2 | 1.6 | 1.7 | 1.1 | 0.6 | 2.9 | 2.2 |
| Net acquisition of nonfinancial assets | 4.3 | 5.4 | 4.3 | 3.5 | 3.7 | 4.3 | 5.2 | 6.1 | 4.0 | 1.9 |
| of which: acquisitions of nonfinancial assets | 4.1 | 5.3 | 4.4 | 3.8 | 4.0 | 4.8 | 5.1 | 5.3 | 5.2 | 3.9 |
| Gross Operating Balance [= revenue minus expense (excluding consumption of fixed capital)] | 4.3 | 5.7 | 6.0 | 5.1 | 5.3 | 6.8 | 7.6 | 3.2 | 1.9 | 2.2 |
| Net Operating Balance [= revenue minus expense (including consumption of fixed capital)] | 2.6 | 4.1 | 4.5 | 3.6 | 3.8 | 5.3 | 6.1 | 1.5 | -0.1 | 0.0 |
| Net lending (+)/borrowing (-) (= revenue minus expenditure) | -0.1 | 0.3 | 1.7 | 1.6 | 1.6 | 2.5 | 2.4 | -2.9 | -2.0 | 0.3 |
| Government financing | | | | | | | | | | |
| Statistical discrepancy | -0.5 | -0.5 | -0.3 | 0.3 | -0.2 | -0.1 | -0.1 | 0.0 | -0.1 | 0.0 |
| Net acquisition of financial assets | 1.1 | 2.4 | 3.6 | 2.5 | 2.8 | 3.8 | 3.0 | -1.7 | 0.8 | 0.5 |
| Net incurrence of liabilities | 0.7 | 1.7 | 1.6 | 1.1 | 1.0 | 1.2 | 0.5 | 1.3 | 2.7 | 0.2 |
| Financial Balance Sheet | | | | | | | | | | |
| Financial assets | 35.8 | 36.2 | 37.5 | 39.7 | 40.1 | 39.4 | 36.2 | 34.8 | 42.3 | 49.0 |
| Currency and deposits | 3.3 | 4.0 | 3.2 | 4.1 | 4.7 | 4.5 | 3.6 | 3.6 | 6.8 | 5.6 |
| Securities other than shares | 3.1 | 5.5 | 7.9 | 7.5 | 7.3 | 8.7 | 8.7 | 6.6 | 6.8 | 6.5 |
| Loans | 0.3 | 0.3 | 1.1 | 1.9 | 1.6 | 1.3 | 1.0 | 1.0 | 1.6 | 1.5 |
| Shares and other equity | 26.1 | 23.6 | 22.5 | 21.9 | 22.2 | 20.7 | 18.5 | 19.0 | 21.1 | 29.4 |
| Other financial assets | 2.9 | 2.9 | 2.8 | 4.2 | 4.3 | 4.2 | 4.4 | 4.6 | 6.0 | 6.1 |
| Financial liabilities | 6.7 | 7.6 | 8.4 | 8.6 | 8.2 | 8.0 | 7.3 | 8.5 | 12.7 | 12.5 |
| Currency and deposits | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Securities other than shares | 0.6 | 1.8 | 1.4 | 1.5 | 1.3 | 1.4 | 0.8 | 1.1 | 1.7 | 1.7 |
| Loans | 4.2 | 4.1 | 4.3 | 3.7 | 3.4 | 3.0 | 2.9 | 3.5 | 5.5 | 5.0 |
| Shares and other equity | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other financial assets | 1.9 | 1.8 | 2.6 | 3.5 | 3.6 | 3.6 | 3.6 | 3.9 | 5.5 | 5.8 |
| Net financial worth | 29.1 | 28.6 | 29.2 | 31.1 | 31.9 | 31.4 | 28.9 | 26.3 | 29.6 | 36.5 |
| <i>Memorandum items:</i> | | | | | | | | | | |
| GDP (millions of Euros) | 6,970.9 | 7,776.3 | 8,718.9 | 9,685.3 | 11,181.7 | 13,390.8 | 16,069.4 | 16,304.2 | 13,839.6 | 14,305.3 |
| General government debt (Maastricht definition) | 4.8 | 5.7 | 5.6 | 5.0 | 4.6 | 4.4 | 3.7 | 4.5 | 7.2 | 6.7 |
| Net lending/borrowing (cash basis) | 0.4 | 1.1 | 2.5 | 1.6 | 1.6 | 3.2 | 2.8 | -2.3 | -2.1 | 0.4 |
| Sources: Eurostat; Statistics Estonia; and IMF staff calculations. | | | | | | | | | | |

Table 3. 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 | 37.7 | 38.7 | 45.6 | 45.1 | 45.3 | 43.7 |
| Revenue | 33.0 | 34.6 | 34.4 | 34.1 | 34.1 | 35.0 | 34.8 | 35.8 | 40.4 | 39.2 | 37.6 | 36.3 |
| Tax revenue | 29.2 | 30.6 | 30.3 | 29.8 | 30.0 | 29.9 | 30.7 | 31.7 | 34.7 | 34.0 | 32.5 | 32.4 |
| Direct taxes | 18.0 | 18.8 | 18.8 | 18.5 | 17.4 | 17.2 | 18.1 | 19.6 | 20.7 | 20.8 | 19.7 | 18.8 |
| Personal income tax | 6.5 | 6.4 | 6.5 | 6.3 | 5.6 | 5.6 | 5.8 | 6.2 | 5.7 | 5.4 | 5.4 | 5.4 |
| Corporate profits tax | 0.7 | 1.1 | 1.6 | 1.7 | 1.4 | 1.5 | 1.6 | 1.6 | 1.9 | 1.4 | 1.3 | 1.3 |
| Social security tax | 6.3 | 6.3 | 5.9 | 5.7 | 5.6 | 5.6 | 5.8 | 6.4 | 7.2 | 7.0 | 6.2 | 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 | 4.6 | 4.6 |
| Unemployment insurance tax | ... | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.3 | 0.3 | 0.8 | 1.3 | 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 | 0.3 | 0.3 |
| VAT | 7.9 | 8.4 | 8.2 | 7.5 | 8.4 | 8.9 | 8.9 | 8.1 | 8.7 | 8.7 | 8.4 | 8.6 |
| Excises | 3.3 | 3.2 | 3.1 | 3.5 | 3.8 | 3.4 | 3.3 | 3.5 | 4.6 | 4.7 | 4.6 | 4.6 |
| 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 | 0.5 | 0.4 |
| Nontax revenue | 3.8 | 4.0 | 4.1 | 4.3 | 4.1 | 5.1 | 4.1 | 4.1 | 5.6 | 5.2 | 5.1 | 3.9 |
| Grants | 0.6 | 0.6 | 1.1 | 2.1 | 2.7 | 2.8 | 2.9 | 2.9 | 5.2 | 5.9 | 7.7 | 7.4 |
| Expenditure | 33.3 | 34.2 | 33.0 | 34.6 | 35.2 | 34.6 | 34.9 | 41.0 | 47.7 | 44.7 | 44.8 | 46.2 |
| Current expenditure | 30.4 | 30.8 | 30.4 | 31.9 | 31.8 | 30.8 | 31.1 | 37.7 | 44.2 | 41.8 | 42.1 | 43.1 |
| Expenditure on goods and services | 19.8 | 19.9 | 19.4 | 19.7 | 20.2 | 19.6 | 20.4 | 24.5 | 28.2 | 25.5 | 27.2 | 28.2 |
| Wages and salaries | 6.7 | 6.9 | 7.4 | 7.1 | 6.8 | 6.3 | 6.4 | 7.5 | 8.3 | 7.7 | 7.0 | 6.9 |
| Other goods and services | 13.1 | 13.0 | 12.0 | 12.6 | 13.3 | 13.3 | 14.0 | 17.0 | 19.9 | 17.8 | 20.2 | 21.3 |
| Current transfers and subsidies | 10.3 | 10.6 | 10.8 | 12.0 | 11.4 | 11.0 | 10.6 | 13.1 | 15.8 | 16.1 | 14.8 | 14.7 |
| 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 | 9.1 | 11.6 | 14.3 | 14.7 | 13.4 | 13.4 |
| of which: Pensions | 6.1 | 6.0 | 6.1 | 6.0 | 6.0 | 5.8 | 5.7 | 7.0 | 8.5 | 8.8 | 8.1 | 8.1 |
| Family benefits | 1.2 | 1.1 | 1.0 | 1.4 | 1.3 | 1.2 | 1.2 | 1.5 | 1.8 | 2.0 | 1.8 | 1.7 |
| Sickness benefits | 0.7 | 0.7 | 0.6 | 0.8 | 0.7 | 0.8 | 0.8 | 1.0 | 1.0 | 0.6 | 0.6 | 0.6 |
| Unemployment benefits | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | 1.1 | 1.0 | 0.4 | 0.5 |
| 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 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 |
| Other | 0.2 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 1.0 | 1.0 | 1.1 | 1.3 | 1.3 |
| Transfers to the EU budget | ... | ... | ... | 0.6 | 1.0 | 1.0 | 1.4 | 1.9 | 2.0 | 2.3 | 2.5 | 2.5 |
| Interest payments | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| Capital expenditure | 2.9 | 3.5 | 2.6 | 2.7 | 3.4 | 3.8 | 3.7 | 3.3 | 3.4 | 3.0 | 2.7 | 3.1 |
| Overall surplus (+) / deficit (-) | 0.4 | 1.1 | 2.5 | 1.6 | 1.6 | 3.2 | 2.8 | -2.3 | -2.1 | 0.4 | 0.5 | -2.5 |
| Memorandum items: | | | | | | | | | | | | |
| Primary fiscal balance (+, surplus) | 0.6 | 1.3 | 2.7 | 1.8 | 1.8 | 3.4 | 3.0 | -2.2 | -1.8 | 0.6 | 0.6 | -2.3 |
| Overall balance, ESA95 basis | -0.1 | 0.3 | 1.7 | 1.6 | 1.6 | 2.5 | 2.4 | -2.9 | -2.0 | 0.3 | 0.3 | -2.3 |
| Total general government debt | | | | | | | | | | | | |
| Excluding government assets held abroad | 4.8 | 5.7 | 5.6 | 5.0 | 4.6 | 4.4 | 3.7 | 4.5 | 7.2 | 6.6 | 6.0 | 5.7 |
| Including government assets held abroad | 1.5 | 0.4 | -2.3 | -3.1 | -3.7 | -4.9 | -5.7 | -3.5 | -1.2 | -0.4 | -1.7 | 0.8 |
| Nominal GDP (euro, billion) | 7.0 | 7.8 | 8.7 | 9.7 | 11.2 | 13.4 | 16.1 | 16.3 | 13.8 | 14.3 | 15.8 | 16.7 |

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

1/ Cash basis.

Table 4. Estonia: Summary Balance of Payments, 2002-12

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Projections | |
|--|--|--------|--------|--------|---------|---------|---------|--------|--------|-------------|---------|
| | | | | | | | | | | 2011 | 2012 |
| (In millions of EURO) | (In millions of euro) | | | | | | | | | | |
| Current Account | -825 | -985 | -1,095 | -1,116 | -2,053 | -2,562 | -1,578 | 513 | 513 | 405 | 356 |
| Primary Current Account 1/ | -480 | -523 | -586 | -660 | -1,365 | -1,504 | -699 | 1,015 | 1,319 | 1,310 | 1,239 |
| Trade Balance | -1,179 | -1,375 | -1,569 | -1,550 | -2,304 | -2,641 | -2,123 | -559 | -250 | 39 | -98 |
| Exports | 3,704 | 4,055 | 4,764 | 6,348 | 7,774 | 8,132 | 8,542 | 6,550 | 8,778 | 10,533 | 11,195 |
| Of which : goods for processing | 1,146 | 1,204 | 804 | 647 | 1,281 | 994 | 825 | 837 | 1,095 | 1,314 | 1,397 |
| Imports | -4,883 | -5,430 | -6,333 | -7,898 | -10,078 | -10,773 | -10,664 | -7,109 | -9,028 | -10,494 | -11,293 |
| Of which : goods for processing | -964 | -962 | -672 | -587 | -1,214 | -923 | -915 | -801 | -929 | -1,080 | -1,162 |
| Services Balance | 632 | 733 | 891 | 839 | 890 | 1,042 | 1,244 | 1,358 | 1,312 | 1,082 | 1,094 |
| Receipts | 1,800 | 1,960 | 2,294 | 2,612 | 2,871 | 3,289 | 3,537 | 3,174 | 3,422 | 3,684 | 3,907 |
| of which: travel and tourism | 585 | 592 | 717 | 784 | 811 | 754 | 808 | 780 | 809 | 871 | 924 |
| Payments | -1,168 | -1,227 | -1,403 | -1,773 | -1,981 | -2,247 | -2,293 | -1,815 | -2,109 | -2,601 | -2,813 |
| Income | -344 | -463 | -509 | -455 | -688 | -1,059 | -878 | -502 | -805 | -905 | -882 |
| Current Transfers | 67 | 119 | 92 | 50 | 49 | 95 | 179 | 215 | 256 | 189 | 242 |
| Capital and Financial Account | 834 | 1,185 | 1,449 | 1,311 | 2,679 | 2,615 | 1,937 | -450 | -1,128 | -846 | 1,135 |
| Capital Transfers | 41 | 62 | 69 | 85 | 289 | 174 | 202 | 483 | 519 | 613 | 636 |
| Financial Account | 793 | 1,123 | 1,381 | 1,226 | 2,390 | 2,441 | 1,736 | -934 | -1,647 | -1,458 | 500 |
| Direct Investment 2/ | 167 | 684 | 554 | 1,751 | 550 | 708 | 421 | 209 | 1,062 | 717 | 747 |
| From abroad | 307 | 822 | 771 | 2,307 | 1,432 | 1,985 | 1,182 | 1,323 | 1,162 | 1,010 | 1,098 |
| Outward (by Estonians) | -140 | -138 | -216 | -556 | -881 | -1,276 | -760 | -1,114 | -100 | -292 | -351 |
| Net equity investment 2/ | 59 | 32 | -44 | -1,355 | -54 | -265 | 49 | -141 | -291 | -32 | -32 |
| Loans and other investments 3/ | 567 | 406 | 870 | 830 | 1,894 | 1,998 | 1,265 | -1,001 | -2,418 | -2,144 | -216 |
| of which: | | | | | | | | | | | |
| Banks | 339 | 696 | 897 | 531 | 1,583 | 2,216 | 1,023 | -911 | -1,747 | -1,392 | -128 |
| Government | -194 | -211 | 37 | -94 | -251 | -337 | 317 | 336 | -9 | 0 | 0 |
| Monetary Authorities | 38 | 37 | 11 | -44 | 24 | 62 | -111 | 74 | 7 | 8 | 8 |
| Errors and Omissions | 50 | -53 | -135 | 117 | -145 | 38 | 143 | -60 | -216 | 0 | 0 |
| Overall balance | 59 | 147 | 220 | 312 | 481 | 90 | 503 | 3 | -831 | -440 | 1,492 |
| Memorandum Items: | (In percent of GDP, unless otherwise stated) | | | | | | | | | | |
| Current Account | -10.6 | -11.3 | -11.3 | -10.0 | -15.3 | -15.9 | -9.7 | 3.7 | 3.6 | 2.6 | 2.1 |
| Trade balance | -15.2 | -15.8 | -16.2 | -13.9 | -17.2 | -16.4 | -13.0 | -4.0 | -1.7 | 0.2 | -0.6 |
| Non-factor services balance | 8.1 | 8.4 | 9.2 | 7.5 | 6.6 | 6.5 | 7.6 | 9.8 | 9.2 | 6.8 | 6.5 |
| Income balance | -4.4 | -5.3 | -5.3 | -4.1 | -5.1 | -6.6 | -5.4 | -3.6 | -5.6 | -5.7 | -5.3 |
| Compensation of employees, net | 0.2 | 0.3 | 1.1 | 1.5 | 1.9 | 1.3 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Reinvested earnings, net | -2.2 | -4.2 | -4.7 | -3.5 | -5.2 | -6.5 | -4.5 | -2.2 | -5.2 | -3.9 | -3.9 |
| Other income, net | -2.4 | -1.4 | -1.7 | -2.0 | -1.9 | -1.4 | -1.8 | -2.3 | -1.3 | -2.7 | -2.3 |
| Current transfers | 0.9 | 1.4 | 1.0 | 0.4 | 0.4 | 0.6 | 1.1 | 1.6 | 1.8 | 1.2 | 1.4 |
| Export growth (in percent) | -1.4 | 9.5 | 17.5 | 33.2 | 22.5 | 4.6 | 5.0 | -23.3 | 34.0 | 20.0 | 6.3 |
| Import growth (in percent) | 5.6 | 11.2 | 16.6 | 24.7 | 27.6 | 6.9 | -1.0 | -33.3 | 27.0 | 16.2 | 7.6 |
| Net FDI | 2.2 | 7.9 | 5.7 | 15.7 | 4.1 | 4.4 | 2.6 | 1.5 | 7.4 | 4.5 | 4.5 |
| Gross International Reserves (euro millions) 4/ 5/ | 964 | 1,099 | 1,318 | 1,648 | 2,121 | 2,237 | 2,776 | 2,766 | 1,935 | ... | ... |
| In months of imports | 2.4 | 2.4 | 2.5 | 2.5 | 2.5 | 2.5 | 3.1 | 4.7 | 2.6 | ... | ... |
| 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 | 0.3 | ... | ... |
| Total external debt 8/ | | | | | | | | | | | |
| Gross | 57.8 | 64.4 | 77.2 | 86.6 | 96.9 | 108.5 | 117.1 | 125.0 | 120.0 | 93.5 | 88.7 |
| Net 9/ | 10.4 | 12.9 | 17.5 | 18.2 | 27.4 | 34.6 | 37.6 | 35.2 | 28.7 | 13.1 | 2.8 |
| NIIP | -54.1 | -65.9 | -86.5 | -85.2 | -73.9 | -72.1 | -76.5 | -82.0 | -72.8 | -59.3 | -50.3 |
| General government external debt 10/ | | | | | | | | | | | |
| Excluding Govt. assets held abroad | 2.8 | 2.8 | 3.9 | 3.7 | 3.6 | 2.7 | 3.2 | 5.4 | 4.9 | 4.5 | 4.2 |
| Including Govt. assets held abroad | -2.5 | -5.1 | -4.2 | -4.5 | -5.7 | -6.6 | -4.8 | -3.0 | -2.1 | -1.9 | -1.8 |
| Debt Service/Exports of GNFS (in percent) | 33.8 | 31.9 | 37.1 | 37.8 | 45.5 | 55.7 | 67.0 | 105.0 | 59.8 | 58.2 | 56.5 |

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 acquisition 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 5. Estonia: Macroeconomic Framework, 2005–16

(Percent of GDP, unless otherwise indicated)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|------------|-------|------|------|-------|-------|-------|------|------|------|------|------|
| | Projection | | | | | | | | | | | |
| GDP real growth (percent) | 8.9 | 10.1 | 7.5 | -3.7 | -14.3 | 2.3 | 7.5 | 3.1 | 3.7 | 3.6 | 3.6 | 3.6 |
| Contribution to real GDP growth (percent) | | | | | | | | | | | | |
| Consumption 1/ | 5.9 | 8.3 | 5.9 | -2.5 | -8.8 | -1.2 | 2.0 | 2.1 | 1.9 | 2.5 | 2.5 | 2.4 |
| Investment 2/ | 4.5 | 8.8 | 4.2 | -6.4 | -16.6 | 1.0 | 5.6 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 |
| Exports (goods and nonfactor services) | 13.6 | 4.7 | 2.7 | 0.4 | -13.2 | 14.6 | 14.8 | 3.8 | 5.1 | 5.2 | 5.4 | 5.5 |
| Imports (goods and nonfactor services) | -15.1 | -11.7 | -5.3 | 4.8 | 24.3 | -12.1 | -14.9 | -3.8 | -4.5 | -5.2 | -5.4 | -5.4 |
| National saving | 23.8 | 23.4 | 22.7 | 20.7 | 22.5 | 23.1 | 24.9 | 25.0 | 24.0 | 22.3 | 21.6 | 21.0 |
| Private | 19.5 | 18.5 | 17.2 | 20.9 | 24.6 | 23.4 | 25.6 | 28.1 | 26.3 | 23.2 | 21.6 | 20.2 |
| Public | 4.3 | 4.9 | 5.4 | -0.2 | -2.1 | -0.3 | -0.7 | -3.1 | -2.3 | -0.8 | 0.0 | 0.7 |
| Investment | 33.8 | 38.7 | 38.6 | 30.4 | 18.8 | 19.5 | 22.4 | 22.9 | 23.3 | 23.7 | 24.1 | 24.5 |
| Private | 30.3 | 34.9 | 34.9 | 27.0 | 15.4 | 16.6 | 19.7 | 19.7 | 21.7 | 22.1 | 22.5 | 23.0 |
| Public | 3.4 | 3.8 | 3.7 | 3.3 | 3.4 | 3.0 | 2.7 | 3.1 | 1.7 | 1.6 | 1.6 | 1.6 |
| Foreign saving | 10.0 | 15.3 | 15.9 | 9.7 | -3.7 | -3.6 | -2.6 | -2.1 | -0.7 | 1.4 | 2.5 | 3.6 |
| <i>Memorandum items:</i> | | | | | | | | | | | | |
| Fiscal balance 3/ | 1.6 | 3.2 | 2.8 | -2.3 | -2.1 | 0.4 | 0.5 | -2.5 | -0.7 | -0.1 | 0.6 | 1.2 |
| Revenues and grants | 36.8 | 37.8 | 37.7 | 38.7 | 45.6 | 45.1 | 45.3 | 43.7 | 42.9 | 42.2 | 42.1 | 41.8 |
| Expenditure and net lending | 35.2 | 34.6 | 34.9 | 41.0 | 47.7 | 44.7 | 44.8 | 46.2 | 43.6 | 42.3 | 41.5 | 40.7 |
| Cyclically-adjusted balance | 0.9 | 1.0 | -0.6 | -3.9 | 1.4 | 3.2 | 1.3 | -2.0 | -0.5 | -0.2 | 0.5 | 1.2 |
| Total general government debt | 4.6 | 4.4 | 3.7 | 4.5 | 7.2 | 6.6 | 6.0 | 5.7 | 5.4 | 5.1 | 4.8 | 4.6 |
| Net non-debt creating capital inflows ("+" inflow) | 4.3 | 5.9 | 3.8 | 4.1 | 4.0 | 9.0 | 8.2 | 8.1 | 8.5 | 8.0 | 8.1 | 8.3 |
| Capital transfers 4/ | 0.8 | 2.2 | 1.1 | 1.2 | 3.5 | 3.6 | 3.9 | 3.8 | 3.3 | 2.3 | 2.1 | 2.0 |
| Net equity investment | -12.1 | -0.4 | -1.7 | 0.3 | -1.0 | -2.0 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| Net foreign direct investment | 15.7 | 4.1 | 4.4 | 2.6 | 1.5 | 7.4 | 4.5 | 4.5 | 5.4 | 6.0 | 6.2 | 6.5 |
| HICP inflation (average, in percent) | 4.1 | 4.4 | 6.7 | 10.6 | 0.2 | 2.7 | 5.1 | 3.1 | 2.8 | 2.8 | 2.8 | 2.8 |
| CPI inflation (average, in percent) | 4.1 | 4.4 | 6.6 | 10.4 | -0.1 | 2.9 | 5.1 | 3.1 | 2.8 | 2.8 | 2.8 | 2.8 |
| Employment growth (average, year-on-year in percent) | 2.0 | 6.4 | 1.4 | 0.2 | -9.3 | -4.2 | 3.5 | 1.6 | 1.4 | 1.0 | 0.5 | 0.5 |
| Unemployment rate (percent) | 7.9 | 5.9 | 4.7 | 5.5 | 13.8 | 16.9 | 13.5 | 11.5 | 9.5 | 7.9 | 6.8 | 5.8 |
| Average wage growth (percent) | 11.4 | 16.2 | 20.4 | 13.8 | -4.6 | 0.9 | 4.5 | 4.7 | 5.0 | 5.0 | 5.0 | 5.0 |
| Labor compensation share of GDP | 44.2 | 44.4 | 46.0 | 50.5 | 51.5 | 48.2 | 47.1 | 47.4 | 47.9 | 48.1 | 48.1 | 48.0 |
| Output gap (in percent of potential output) | 2.5 | 7.3 | 11.2 | 5.1 | -10.0 | -8.2 | -2.5 | -1.4 | -0.4 | 0.1 | 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 6. Estonia: Indicators of External Vulnerability, 2005–11

(Percent of GDP, unless otherwise indicated)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Latest Observation | |
|--|---------|----------|----------|----------|----------|----------|--------------------|---------|
| | | | | | | | | Date |
| Financial indicators | | | | | | | | |
| Public sector external debt 1/ | 3.7 | 3.6 | 2.7 | 3.2 | 5.4 | 4.9 | 5.3 | Q2 2011 |
| Broad money (Year-on-year, percent) | 41.9 | 28.2 | 13.5 | 5.5 | 0.8 | 3.0 | 0.0 | Q2 2011 |
| Base Money (Year-on-year, percent) | 33.0 | 30.7 | 1.6 | 28.5 | -6.1 | -39.5 | ... | |
| Private sector credit (Year-on-year, percent) 2/ | 64.9 | 62.1 | 33.0 | 8.4 | -3.9 | -8.9 | -4.1 | Jul-11 |
| External Indicators | | | | | | | | |
| Exports (Year-on-year, percent) | 33.2 | 22.5 | 4.6 | 5.0 | -23.3 | 34.0 | 33.5 | Jul-11 |
| Imports (Year-on-year, percent) | 24.7 | 27.6 | 6.9 | -1.0 | -33.3 | 27.0 | 37.0 | Jul-11 |
| Current account balance | -10.0 | -15.3 | -15.9 | -9.7 | 3.7 | 3.6 | 0.8 | Q2 2011 |
| Capital and financial account balance | 11.7 | 20.0 | 16.3 | 11.9 | -3.3 | -7.9 | 1.0 | Q2 2011 |
| Gross official reserves (Millions of euros) | 1,648 | 2,121 | 2,237 | 2,776 | 2,766 | 1,935 | 156 | Aug-11 |
| NFA of the consolidated banking system (Millions of euros) | -667 | -1,597 | -3,404 | -3,282 | -2,624 | -1,612 | -306 | Q2 2011 |
| Central Bank short-term foreign liabilities (Millions of euros) | 9,167.1 | 12,361.0 | 15,863.6 | 16,337.0 | 14,752.4 | 14,546.4 | 15,160.0 | Q2 2011 |
| Short term foreign assets of the financial sector (Millions of euros) 3/ | 61,003 | 77,742 | 119,812 | 151,901 | 126,604 | 105,872 | 0 | Q2 2011 |
| Short term foreign liabilities of the financial sector (Millions of euros) | 49,234 | 62,873 | 84,528 | 48,270 | 48,706 | 53,802 | 0 | Q2 2011 |
| Open net foreign currency position of the financial sector (Millions of euros) | 633 | 506 | 2,213 | 3,316 | 4,006 | 3,763 | -1,570 | Q2 2011 |
| Official reserves in months of imports (Excl. imports of goods for processing) | 2.7 | 2.9 | 2.7 | 3.4 | 5.3 | 2.9 | 5.6 | Q2 2011 |
| Broad money to reserves (Ratio) | 3.2 | 3.2 | 3.4 | 2.9 | 3.0 | 4.4 | 54.2 | Q2 2011 |
| Total short term external debt to reserves 4/ | 2.0 | 2.1 | 2.3 | 2.5 | 2.4 | 3.4 | 43.6 | Q2 2011 |
| Total external debt 5/ | 87 | 97 | 109 | 117 | 125 | 120 | 110 | Q2 2011 |
| of which: Public sector debt 1/ | 3.7 | 3.6 | 2.7 | 3.2 | 5.4 | 4.9 | 5.3 | Q2 2011 |
| Net external debt 6/ | 18 | 27 | 35 | 38 | 35 | 29 | 21 | Q2 2011 |
| Debt service to exports of GNFS | 37.8 | 45.5 | 55.7 | 67.0 | 105.0 | 59.8 | ... | |
| External interest payments to exports of GNFS (Percent) | 2.3 | 2.9 | 4.7 | 6.4 | 4.6 | 2.6 | ... | |
| External Amortization payments to exports of GNFS (Percent) | 35.5 | 42.6 | 51.0 | 60.5 | 100.4 | 57.3 | ... | |
| Exchange rate (Per US\$, period average) | 12.6 | 12.5 | 11.4 | 10.6 | 11.2 | 11.8 | 1.3 | Sep-11 |
| REER (Percent change, period average; appreciation (+)) | 1.4 | -10.3 | 4.6 | 6.8 | 1.0 | -2.1 | 0.3 | Jul-11 |
| Financial Market Indicators | | | | | | | | |
| Stock market index 7/ | 664 | 856 | 742 | 274 | 405 | 698 | 676 | Jul-11 |
| Foreign currency debt rating 8/ | A | A | A | A | A- | A- | AA- | Aug-11 |
| Money market spread 9/ | 0.02 | -0.05 | 2.01 | 4.10 | 2.35 | 0.11 | ... | |

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 7. Estonia: External Debt Sustainability Framework, 2006-16

(Percent of GDP, unless otherwise indicated)

| | Historical | | | | | Projections | | | | | | Debt-stabilizing non-interest current account 7/ |
|---|------------|-------|-------|-------|-------|-------------|------|------|------|------|-------|--|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
| 1 Baseline: External debt | 96.8 | 108.5 | 117.1 | 125.0 | 120.0 | 93.5 | 88.7 | 84.3 | 80.3 | 76.7 | 73.9 | -8.2 |
| 2 Change in external debt 1/ | 10.3 | 11.7 | 8.6 | 8.0 | -5.0 | -26.5 | -4.8 | -4.4 | -4.0 | -3.6 | -2.8 | |
| 3 Identified external debt-creating flows (4+8+9) | -5.7 | -12.9 | -5.3 | 14.6 | -11.9 | -15.4 | -9.8 | -9.9 | -8.4 | -7.4 | -6.6 | |
| 4 Current account deficit, excluding interest payments | 13.0 | 12.6 | 4.9 | -7.0 | -5.8 | -5.6 | -5.2 | -3.6 | -2.1 | -1.0 | 0.2 | |
| 5 Deficit in balance of goods and services | 10.6 | 9.9 | 5.4 | -5.8 | -7.4 | -7.1 | -6.0 | -5.5 | -4.6 | -3.6 | -2.7 | |
| 6 Exports | 79.5 | 71.1 | 74.1 | 70.3 | 85.3 | 89.8 | 90.3 | 92.4 | 94.6 | 96.9 | 100.0 | |
| 7 Imports | 90.0 | 81.0 | 79.5 | 64.5 | 77.9 | 82.7 | 84.3 | 86.9 | 90.1 | 93.3 | 97.3 | |
| 8 Net non-debt creating capital inflows (negative) | -6.0 | -6.0 | -6.1 | -10.4 | -5.4 | -4.8 | -4.9 | -6.1 | -6.9 | -7.1 | -7.5 | |
| 9 Automatic debt dynamics 2/ | -12.7 | -19.6 | -4.1 | 31.9 | -0.6 | -5.0 | 0.3 | -0.3 | 0.5 | 0.7 | 0.7 | |
| 10 Contribution from nominal interest rate | 2.3 | 3.3 | 4.8 | 3.3 | 2.2 | 3.2 | 3.1 | 2.8 | 3.5 | 3.5 | 3.3 | |
| 11 Contribution from real GDP growth | -7.2 | -5.5 | 3.7 | 20.8 | -2.8 | -8.2 | -2.8 | -3.1 | -2.9 | -2.7 | -2.6 | |
| 12 Contribution from price and exchange rate changes 3/ | -7.7 | -17.4 | -12.6 | 7.9 | ... | ... | ... | ... | ... | ... | ... | |
| 13 Residual, incl. change in gross foreign assets (2-3) 4/ | 15.9 | 24.6 | 13.9 | -6.6 | 6.8 | -11.1 | 5.0 | 5.5 | 4.4 | 3.8 | 3.8 | |
| External debt-to-exports ratio (in percent) | 121.8 | 152.7 | 158.0 | 177.9 | 140.7 | 104.2 | 98.3 | 91.2 | 84.8 | 79.1 | 73.9 | |
| Gross external financing need (in billions of US dollars) 5/ | 12.4 | 17.2 | 20.2 | 23.1 | 21.6 | 20.0 | 19.3 | 19.5 | 19.9 | 20.0 | 20.2 | |
| in percent of GDP | 73.6 | 78.0 | 84.5 | 119.9 | 113.7 | 96.2 | 88.2 | 85.0 | 82.5 | 79.2 | 75.7 | |
| Scenario with key variables at their historical averages 6/ | | | | | 120.0 | 98.7 | 94.5 | 90.1 | 84.7 | 79.0 | 73.8 | -14.4 |
| Key Macroeconomic Assumptions Underlying Baseline | | | | | | | | | | | | For debt stabilization |
| hide Nominal GDP (US dollars) | 16.8 | 22.0 | 24.0 | 19.3 | 19.0 | 20.8 | 21.9 | 22.9 | 24.1 | 25.3 | 26.7 | |
| Real GDP growth (in percent) | 10.1 | 7.5 | -3.7 | -14.3 | 2.3 | 7.5 | 3.1 | 3.7 | 3.6 | 3.6 | 3.6 | |
| GDP deflator in US dollars (change in percent) | 9.8 | 21.9 | 13.1 | -6.3 | -1.0 | 1.9 | 1.8 | 1.2 | 1.3 | 1.4 | 1.9 | |
| Nominal external interest rate (in percent) | 3.2 | 4.5 | 4.8 | 2.2 | 1.8 | 3.0 | 3.5 | 3.4 | 4.3 | 4.6 | 4.6 | |
| Growth of exports (US dollar terms, in percent) | 19.9 | 17.1 | 13.5 | -23.7 | 19.5 | 24.0 | 6.1 | 7.2 | 7.2 | 7.3 | 8.1 | |
| Growth of imports (US dollar terms, in percent) | 25.9 | 17.9 | 6.8 | -34.7 | 18.9 | 25.1 | 7.6 | 7.9 | 8.5 | 8.5 | 9.2 | |
| Current account balance, excluding interest payments | -13.0 | -12.6 | -4.9 | 7.0 | 5.8 | 5.6 | 5.2 | 3.6 | 2.1 | 1.0 | -0.2 | |
| Net non-debt creating capital inflows | 6.0 | 6.0 | 6.1 | 10.4 | 5.4 | 4.8 | 4.9 | 6.1 | 6.9 | 7.1 | 7.5 | |

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 8. Estonia: Financial Soundness Indicators of the Banking Sector, 2005-12

(Percent unless otherwise noted)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011Q2 |
|--|-------|-------|-------|-------|--------|-------|--------|
| Capital adequacy (on consolidated basis) | | | | | | | |
| Regulatory capital as percent of risk-weighted assets | 10.72 | 10.79 | 10.84 | 13.27 | 15.72 | 16.25 | 15.91 |
| Regulatory Tier I capital to risk-weighted assets | 10.01 | 8.64 | 8.25 | 10.44 | 11.83 | 12.75 | 12.60 |
| Capital as percent of assets | 8.72 | 7.61 | 7.70 | 9.26 | 8.58 | 9.77 | 10.44 |
| Sectoral distribution of bank credit to the private sector (as percent of total credit to private sector) | | | | | | | |
| Commerical real estate/Construction and Development loans | 19.63 | 22.81 | 21.16 | 19.55 | 20.68 | 19.92 | 19.84 |
| Mortgage loans | 41.60 | 42.70 | 42.70 | 40.91 | 41.88 | 43.02 | 43.81 |
| Consumer loans | 10.01 | 9.06 | 9.79 | 9.00 | 8.15 | 7.89 | 7.50 |
| Industrial/Commercial loans | 7.16 | 5.95 | 5.98 | 6.45 | 5.95 | 5.37 | 5.63 |
| Transportation and Road Construction Loans | 6.03 | 4.71 | 4.47 | 3.87 | 4.37 | 3.97 | 3.85 |
| Asset quality | | | | | | | |
| Non-performing loans (NPL) as percent of gross loans | 0.20 | 0.18 | 0.44 | 1.94 | 5.20 | 5.38 | 5.11 |
| NPL net of provisions as percent of tier I capital | 1.22 | 1.56 | 3.82 | 16.53 | 28.05 | 25.63 | 26.03 |
| Large exposures as percent of tier I capital | 28.38 | 8.65 | 0.58 | 1.17 | 11.85 | 18.41 | 31.57 |
| Earnings and profitability | | | | | | | |
| Gross profits as percent of average assets (ROAA) | 1.98 | 1.72 | 2.65 | 1.19 | -2.76 | 0.34 | 1.49 |
| Gross profits as percent of average equity capital (ROAE) | 21.02 | 19.20 | 30.19 | 13.37 | -24.58 | 2.10 | 10.67 |
| Net interest margin (net interest income as percent of interest bearing asset) | na | na | na | 0.51 | 0.34 | 0.51 | 0.43 |
| Net interest income as percent of gross income 1/ | 45.90 | 56.18 | 45.17 | 56.82 | 47.10 | 52.26 | 29.44 |
| Non-interest income as percent of gross income | 54.10 | 43.82 | 54.83 | 41.91 | 59.32 | 46.00 | 38.05 |
| Trading income as a percent of gross income 1/ | 18.51 | 18.57 | 17.79 | 7.37 | 12.70 | 10.01 | 6.82 |
| Non-interest expenses as percent of gross income 1/ | 50.94 | 51.91 | 40.71 | 65.19 | 66.30 | 54.49 | 54.03 |
| Personnel expenses as percent of non-interest expenses 1/ | 34.29 | 35.28 | 35.43 | 28.31 | 33.90 | 39.14 | 42.23 |
| Spread between reference loan and deposit rates (basis points) | 195 | 211 | 215 | 221 | 159 | 169 | 197 |
| Liquidity | | | | | | | |
| Liquid assets as percent of total assets | 24.93 | 19.19 | 18.12 | 19.01 | 13.03 | 10.77 | 7.68 |
| Liquid assets as percent of short-term liabilities | 39.46 | 31.98 | 34.89 | 31.95 | 27.68 | 21.08 | 14.61 |
| Foreign currency loans as percent of total loans | 79.87 | 78.13 | 80.50 | 86.11 | 87.78 | 90.11 | 1.73 |
| Deposits as percent of assets | 51.31 | 51.23 | 44.47 | 43.59 | 48.79 | 53.67 | 55.26 |
| Sensitivity to market risk | | | | | | | |
| Off-balance sheet operations as percent of assets | 51.47 | 57.92 | 48.44 | 44.25 | 47.65 | 44.05 | 45.27 |
| Gross asset position in derivatives as a percentage of tier I capital | 2.37 | 2.78 | 5.57 | 5.44 | 3.23 | 2.69 | 2.73 |
| Gross liability position in derivatives as a percentage of tier I capital | 1.30 | 3.39 | 3.94 | 4.42 | 2.55 | 2.83 | 2.49 |
| Net open position in foreign exchange as a percentage of tier I capital | 7.81 | 21.70 | 16.02 | 18.31 | 44.56 | 47.52 | 24.29 |
| Net open position in equities as a percentage of tier I capital | 58.77 | 51.97 | 65.54 | 58.71 | 77.05 | 72.76 | 80.57 |

Source: Bank of Estonia.

1/ Average of four quarters ending in 2011Q1.

Annex I. A Fiscal Framework for Estonia

1. The success of Estonia's long-standing currency board arrangement and its accession into the euro area has been predicated on, inter alia, fiscal prudence. Budgetary surpluses were the norm, resulting not only in the lowest level of general government debt in the EU but also in an accumulation of sizable liquid government assets, and sizable cuts in direct flat tax rates.

2. Despite Estonia's sound fiscal reputation, surging revenue growth during the recent boom period resulted in pro-cyclical expenditure growth, which exacerbated the boom and the following pro-cyclical retrenchment measures once the bust set in. Estonia's favorable economic circumstances boosted perceptions of the speed of real income convergence and of permanent incomes. This in turn led in the mid-2000s to higher expenditures on public wages (in order to compete with the private sector), and on social benefits, especially pensions, to promote social cohesion and limit income disparities. In addition, rising government surpluses and fiscal buffers during this period increased pressures to boost public infrastructure expenditures to facilitate further income convergence. These pro-cyclical policies, along with income tax cuts motivated and further fueled the unsustainable expansion, requiring contractionary policies once the bust began.

3. In this connection, Estonia's fiscal framework can be improved further to limit pro-cyclical fiscal policy. The European Commission has noted that performance and accrual budgeting have been gradually

introduced in 2010–11.¹ Limitations have also been tightened recently regarding the contracting of loans by local governments. Plans are also underway to enhance Estonia's "soft" medium-term balanced budget rule, possibly by amending the State Budget Act.² Still, the counter-cyclical operation of the budgetary framework can be improved by introducing binding expenditure ceilings in a multi-year context.

4. The usefulness of fiscal rules has become increasingly recognized, and lies at the heart of recent EU-wide efforts to strengthen economic governance (the so-called legislative "six pack"). In light of the sizable deterioration of overall balances and debt levels during the recent crisis, a number of economies have or are considering enshrining a medium-term objective fiscal target (MTO) in some legal (such as in the "organic" State Budget Law) or constitutional framework for longer-term sustainability. Other economies with a tradition of prudence (Sweden and Finland, for example), in contrast, have found medium-term political commitments to be sufficient to provide the necessary discipline.

5. In Estonia, achieving the medium-term target for the overall balance could usefully be supplemented with a multi-year expenditure rule. The rule would be based on a medium-

¹ "National fiscal governance reforms across EU Member States: Analysis of the information contained in the 2009–10 Stability and Convergence Programmes," *European Economy Occasional Papers* 67, August 2010.

² See "Republic of Estonia—Stability Programme 2011," <http://www.fin.ee/index.php?id=79456>.

term macroeconomic forecast consistent with achieving the ultimate fiscally sustainable target. Revenues would be allowed to vary with deviations of actual developments from initial forecasts in order to prevent pro-cyclical policies, thereby enabling automatic stabilizers to operate (with due respect accorded to the Stability and Growth Pact). Consideration could be given to the advice of outside “experts” to monitor the accuracy of the macroeconomic and fiscal forecasts and outcomes. In the Estonian context, the State Auditing Authority already fulfills some of these functions.

6. While multi-year expenditure rules can help minimize pro-cyclical policies, they are not without their own operational difficulties. Expenditure rules should cover as broadly as possible governmental economic activities (e.g., at the general government level), but this may need to be traded off against the cost this exacts in the timeliness of their monitoring. Another tradeoff emerges when specifying the fiscal targets in cyclically adjusted terms, even

after possibly excluding some cyclically sensitive components, as this entails estimating output gaps and underlying potential output developments. This poses a greater challenge for economies, such as Estonia, undergoing significant economic changes and real income convergence, as trends and cycles are often difficult to disentangle. The costs that these intrinsic measurement difficulties pose for the transparency and the monitoring of framework must be weighed against potential benefits in economic policy making. A non-cyclically adjusted framework would be simpler to monitor but would be unable to account for movements of a purely cyclical nature.

7. While the use of MTOs, supplemented by medium-term expenditure rules, and possibly by independent fiscal authorities are valuable additional mechanisms, the success of achieving and maintain a sustainable fiscal position will ultimately depend upon political commitments of elected authorities to formulate and deliver prudent policies..

Annex II. A Rationale for Fiscal Buffers and Their Size

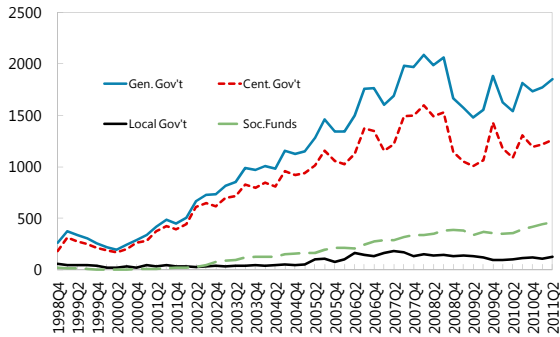
1. Fiscal buffers can serve as self-insurance in the event of extreme distress during crises. The higher the degree of uncertainty in output, fiscal revenues, and cyclically-related expenditures (such as social benefits), the larger the potential need for insurance for smooth fiscal operations. Larger buffers could also be justified by a higher probability of being shut out of markets or of banking sector recapitalization.

2. Fiscal buffers nonetheless entail opportunity costs. For highly advanced economies, costs will boil down to the foregone interest on higher yielding (non-liquid) assets. In this regard, the size of fiscal

buffers would be determined as part of public sector’s asset management. For countries with infrastructure needs, growth-enhancing physical infrastructure investment would be the relevant alternative use of liquid assets. Resources devoted to fiscal buffers would thus be weighed against the benefits of infrastructure development.

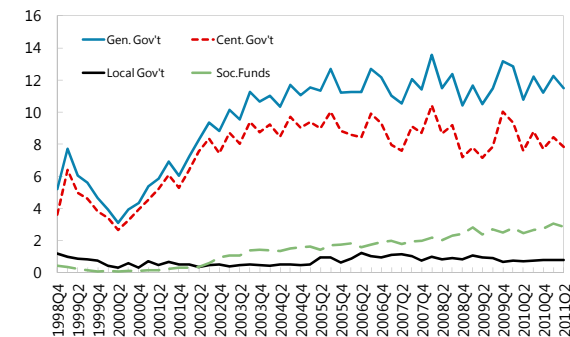
3. In Estonia, fiscal surpluses during the economic boom had given rise to sizable buffers, which are among the largest in the EU. This reflects its comparatively prudent fiscal policy—a requirement under its previous currency board arrangement—as well as a legacy of the economic boom.

Government Liquid Financial Assets
(Millions of euro)



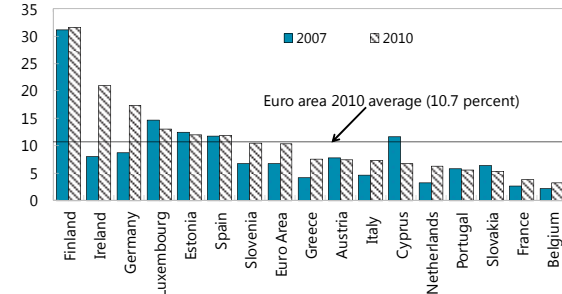
Source: Statistics Estonia.

Government Liquid Financial Assets
(Percent of GDP)



Source: Statistics Estonia.

Euro Area: Fiscal Buffers, 2007 and 2010 1/ 2/
(Percent of GDP)

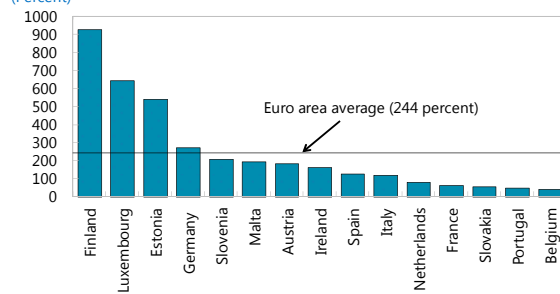


Source: Eurostat Government Finance Statistics.

1/ Fiscal buffers include liquid financial assets of the consolidated general government (currency and deposits and securities other than shares).

2/ Malta is not included due to missing data for 2010.

Euro Area: Another Measure of Fiscal Buffers, 2009 1/ 2/
(Percent)



Source: Eurostat.

1/ Fiscal buffers are measured as a percentage of government deficits and short-term debt due within 1 year.

2/ Cyprus and Greece are not included due to missing data.

During 2001–07 general government surpluses averaged about 1.8 percent of GDP, which were saved as liquid assets (i.e., currency and deposits, and securities other than shares). Over this period, liquid assets rose at their peak roughly seven-fold to about €2 billion and had tripled as a share of GDP by end-2007. After a temporary decline during the crisis, liquid assets have recovered to about €1.8 billion in the second quarter of 2011. The bulk of the buffers has been held at the central government level, with social security and local governments holding the remainder.

4. During Estonia’s sharp economic downturn in 2008–09, fiscal buffers were mainly used to finance fiscal deficits and largely eschewing financial markets. The combined 2008–09 general government deficit totaled €783 million, with the state budget borrowing €215 million in financing from the EIB and a local bank (with the latter, totaling €50 million, has already been repaid).

5. While fiscal buffers have declined, they remain above the euro area average. At roughly 2 percentage points of GDP above average, Estonia’s buffers as a share of GDP rank fifth among the 17 euro area at end-2010. Estonia’s liquid assets nonetheless rank among the highest when compared to fiscal financing needs (fiscal deficit plus short-term debt falling due).¹ With the exception of Finland, whose buffers include pension pillar II assets, only Luxembourg’s buffers are larger than Estonia’s.

6. Considering Estonia’s economic and fiscal revenue volatility, fiscal buffers

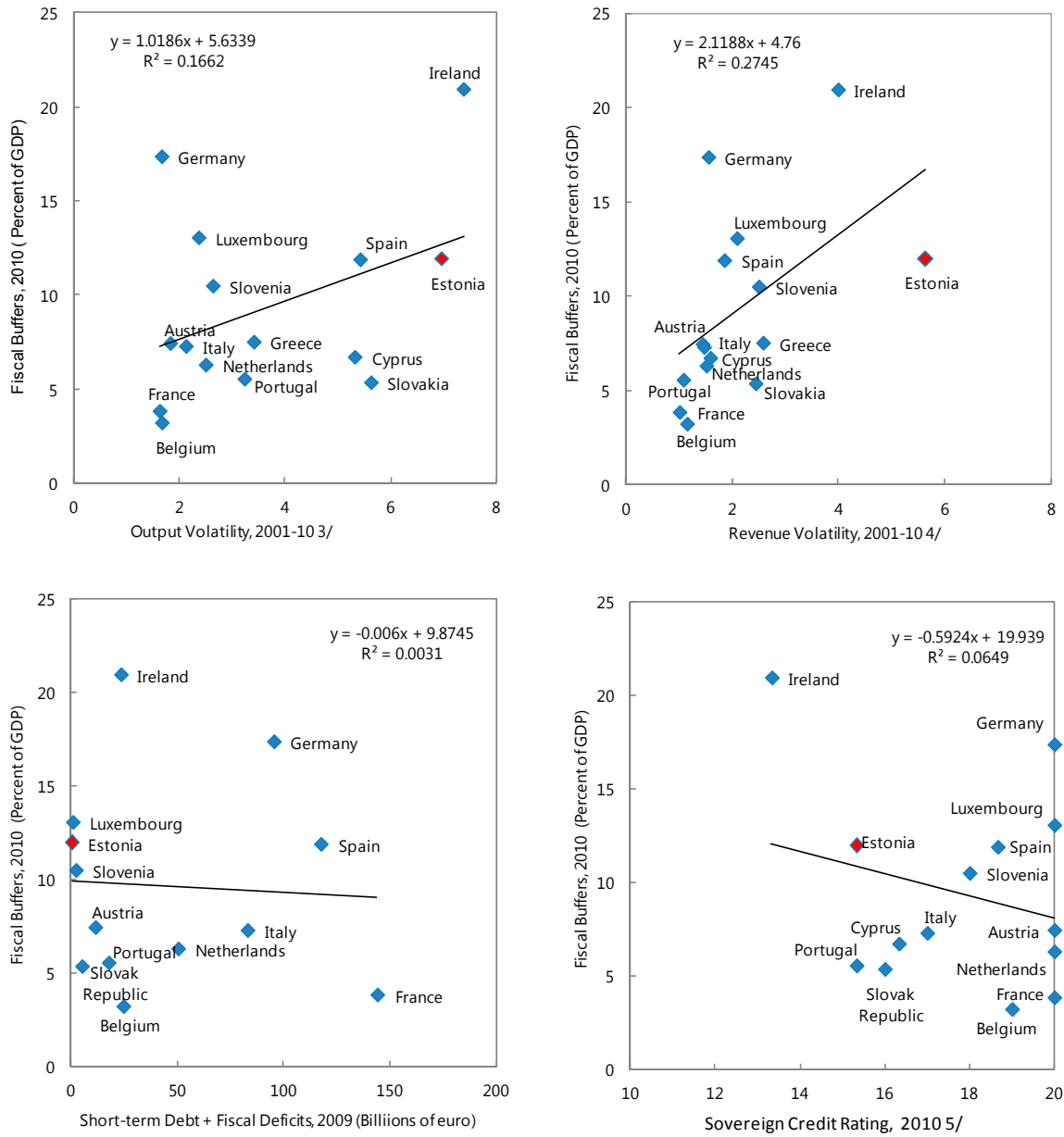
nonetheless do not appear to be out of line (Figure A1). The association of economic volatility and fiscal buffers generally suggest that more volatile countries have larger buffers. In this regard, Estonia’s buffers in relation to its volatility fall below the average (as expressed by the regression line), when measured as a share of GDP. The deviation from the average should not be taken literally—it would imply increasing buffers substantially—but does suggest that some increase might be justified by Estonia’s volatility.

7. But judging by Estonia’s low financing needs, fiscal buffers appear above average. There is, however, only a weak relation between fiscal buffers and financing needs, with significant outliers.

8. Turning to fiscal buffers and market access, the relation is weak. Countries with higher probability of accessing markets (proxied by higher credit ratings) hold buffers that if all are slightly less than those with lower probability. This weak relation, however, could be associated with the impact that fiscal buffers have in turn on the probability of market access. A country with higher buffers appears to be deemed more credit worthy and thus would have a higher credit rating.

¹ The size of Finland’s large fiscal buffers reflect their publically mandated, and partly funded, pay-as-you-go pillar II pension system, and thus are not strictly comparable to those for Estonia.

Figure A1. Euro Area: Fiscal Buffers, Volatility, Financing Needs and Credit Ratings, 2001-10 1/ 2/



Sources: WEO; Eurostat; and Bloomberg.

1/ Fiscal buffers refer to liquid financial assets of the consolidated general government (currency and deposits and securities other than shares).

2/ The data exclude Finland and Malta. Greece and Cyprus were excluded in the lower left panel due to missing data on short-term debt.

3/ Output volatility is defined as the average of the deviations from average real GDP growth in the given period.

4/ Revenue volatility is defined as the average of the deviations from average growth rate of total revenue in the given period.

5/ Sovereign credit rating is the average of three ratings (S&P, Moody's and Fitch) with a scale of 1-20 (20 being the highest).

Annex III. Trade and FDI Linkages

A. Trade Structure and Linkages

1. Estonia's export performance has benefited from its high integration with Nordic countries, particularly by being part of the Finnish and Swedish global supply chains (Table 1). Finland and Sweden account for 33 percent of Estonia's exports. Estonia processes imported intermediate inputs and exports these to Finland and Sweden, which in turn export the final goods to third markets. Estonia's other export markets—the Baltics (14 percent) and Russia (10 percent)—represent a smaller share of Estonia's exports.

2. Estonia's trade exposure to EU countries thus includes a significant indirect linkage through Nordic markets. Specifically, in total commodity exports, the indirect Nordic linkage accounts for about 1/3 of Estonia's total EU exposure. Similarly, Estonia's exposure to Brazil, India, and China (BRICs) is greater than its direct linkage. In machinery and equipment exports, 17 percent of is actually exported to BRICs, with about 12½ percent exported directly. Such secondary linkages are mostly absent in the Baltic peers as they are not currently part of global supply chains; their main exports are mineral and wood products whose productions processes are less likely to be vertically integrated..

Exports and Imports by Main Trading Partner
(Percent)

| | Exporting to | Share of total | Importing from | Share of total |
|--------------------------|--------------|----------------|----------------|----------------|
| Commodity total 1/ | Finland | 17 | Baltics | 19 |
| | Sweden | 16 | Finland | 15 |
| | Baltics | 14 | Russia | 11 |
| | Russia | 10 | Sweden | 11 |
| Machinery & equipment 2/ | Finland | 30 | Germany | 15 |
| | Russia | 12 | Finland | 12 |
| | Sweden | 10 | China | 10 |
| Mineral products 2/ | Baltics | 20 | Russia | 62 |
| | Russia | 20 | Baltics | 12 |
| | | | Finland | 9 |

Source: Statistics Estonia.

1/ 2010 data.

2/ 2009 data.

Trade Exposure via Finland and Sweden, 2010
(Percent)

| | | Total commodity | Machinery and equipment |
|----------------------|----------|-----------------|-------------------------|
| Exposure to EU 1/ | Direct | 19.0 | 19.2 |
| | Indirect | 9.9 | 8.4 |
| | Total | 28.9 | 27.7 |
| Exposure to BRICs 2/ | Direct | 10.0 | 12.4 |
| | Indirect | 2.0 | 4.3 |
| | Total | 12.0 | 16.7 |
| Exposure to Baltics | Direct | 16 | 12 |
| | Indirect | 0.2 | 0.1 |
| | Total | 16.1 | 12.2 |

Source: IMF Staff calculations.

1/ EU excluding Finland, Sweden, Latvia and Lithuania.

2/ Brazil, Russia, India and China.

Exports and Imports by Main Commodity Sectors, 2010
(Percent)

| Sectors | Share of total exports | Sectors | Share of total imports |
|---|------------------------|---|------------------------|
| Machinery and Equipment | 22.6 | Machinery and Equipment | 23.5 |
| Mineral Products | 15.7 | Mineral Products | 17.5 |
| Agricultural products and food preparations | 9.5 | Agricultural products and food preparations | 11.1 |
| Wood and products thereof | 9.1 | Metals and products thereof | 9.0 |
| Metals and products thereof | 9.1 | Wood and products thereof | 8.0 |

Source: Statistics Estonia.

3. Estonia’s trade pattern reflects a large share of intra-industry trade. Machinery and equipment and mineral product exports represent about 40 percent of Estonia’s exports, which mirrors imports of these products. Exports of machinery and equipment mainly entail processing intermediate goods, but a large share of exports of mineral products reflects transit trade of oil: Estonia re-exports its Russian oil imports to the Baltics.

4. Even though Estonia’s export markets are mostly Nordic and neighboring countries, its imports come from a broader set of countries. This reflects greater trade integration with EU countries other than Finland, as a large share of imports also comes from Germany and Poland, as well as China.

5. Finland has remained Estonia’s the most important export destination, though its relative importance has declined. Between 2000 and 2010, there was a small decline in Estonia’s export markets to Finland in favor of the Baltics and Russia. In contrast, there was a significant change in the relative importance of the source countries of imports for Estonia. The Baltic peers are the most important for Estonia. The Baltic peers are the most

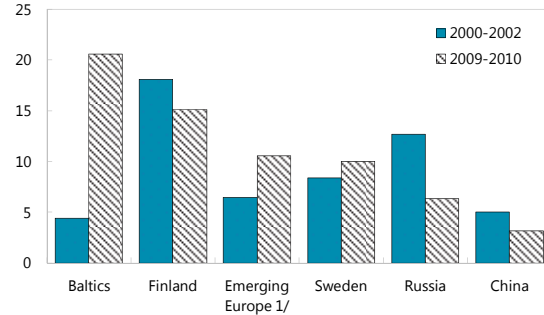
B. FDI Linkages

6. Estonia’s exports have been supported and enhanced by FDI from the Nordic countries. Financial sector FDI from Sweden has accounted for the bulk of total FDI in Estonia. The manufacturing sector is the second largest FDI-receiving sector, which comes primarily from Finland. Finland proximity may explain why it is the largest foreign investor in Estonia.

7. Manufacturing FDI has been found to be linked with a host country’s export

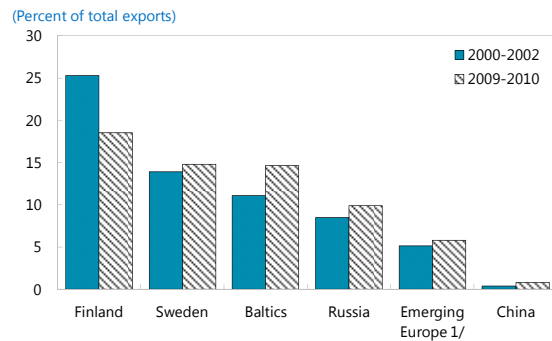
important source of imports for Estonia, taking over from Finland.

Imports by Source Country, 2000 - 2010
(Percent of total imports)



Sources: IMF Direction of Trade; and IMF staff calculations.
1/ Emerging Europe excludes Russia, Latvia and Lithuania.

Exports by Source Country, 2000 - 2010
(Percent of total exports)

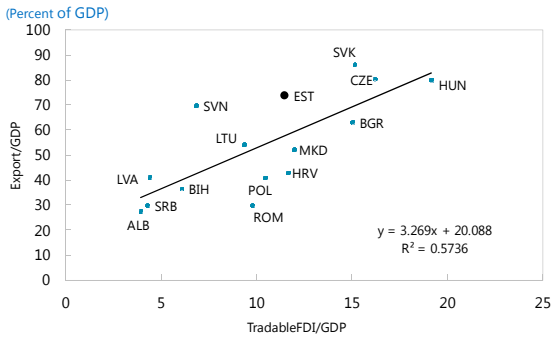


Sources: IMF Direction of Trade; and IMF staff calculations.
1/ Emerging Europe excludes Russia, Latvia and Lithuania.

performance. This comes about by augmenting domestic capital, helping transfer of technology and new products, and providing training for the local workforce and upgrading technical and managerial skills (text figure).^{1,2}

¹ Higher FDI in the tradable sector leads to better export performance and an improvement in external balance (Kinoshita , Yuko, 2011, “Sectoral Composition of FDI and External Vulnerability in Eastern Europe”, IMF Working Paper, WP/11/123).

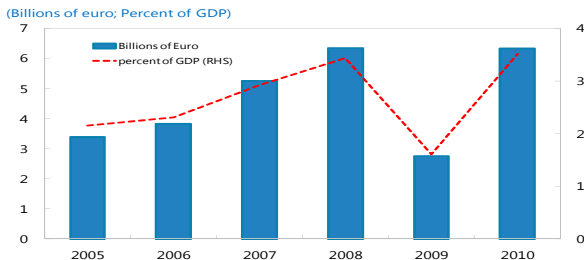
Correlations of Trade and FDI, 2007



Sources: WEO; WIW Database for Foreign Direct Investment.

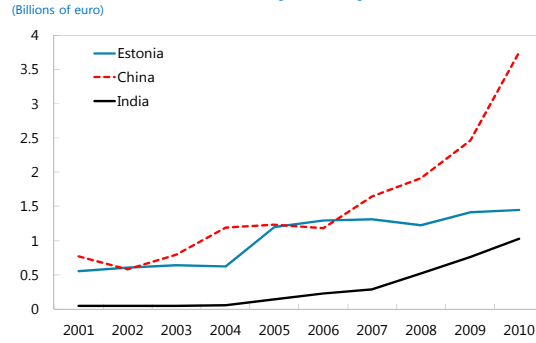
8. Estonia faces competition for Nordic FDI from other emerging markets particularly in Asia. Even though Finland’s outward FDI bounced back in 2010, Estonia’s share has declined. Finnish FDI has been increasingly directed towards China and India, while Estonia’s share has remained roughly unchanged. In nominal terms, Finnish FDI in Estonia has been stagnant since mid-2000, with Finland’s FDI in China surpassing that in Estonia in 2006. This partly reflects a loss of Estonia’s price competitiveness and rising unit labor cost during the boom years. During the crisis, recessions had prompted further Finnish and Swedish manufactures to expand overseas production in Asia to cut costs. Estonia continues to attract manufacturing FDI but green-field investments are increasingly from small and medium-sized firms located in Finland.

Finland: FDI Outflows



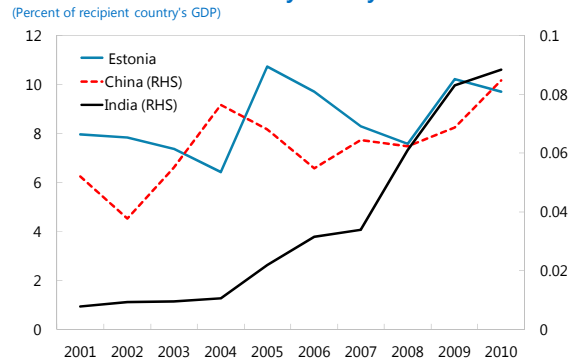
Sources: WEO; and IFS.

Finland: Outward FDI Stock by Country



Sources: WEO; and IFS.

Finland: Outward FDI Stock by Country



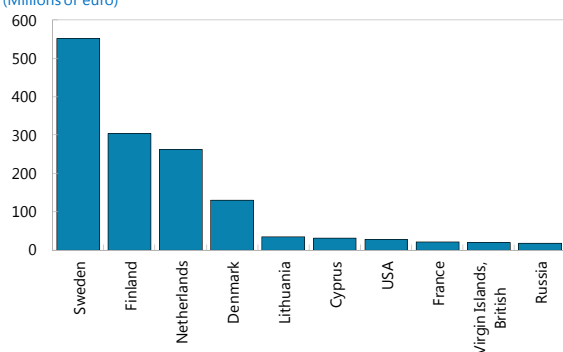
Sources: WEO; and IFS.

9. Estonia’s ability to attract FDI will be a central element in boosting long-run growth. In particular, FDI can be a catalyst for a country to climb up the value chain via transfer of new technology and skills. Estonia has been the best performer in exports compared to the Baltic countries, but it has been caught up by the CEE countries in 2010 (Figure 5). In addition, FDI in the tradable sector (manufacturing) as a share of GDP had declined in Estonia during the boom years. Enhancing human capital and infrastructure would help tilt capital inflows more towards the tradable sector in line with the ongoing rebalancing of the economy.

² Ibid.

FDI Inflow by Country, 2010Q2-2011Q1

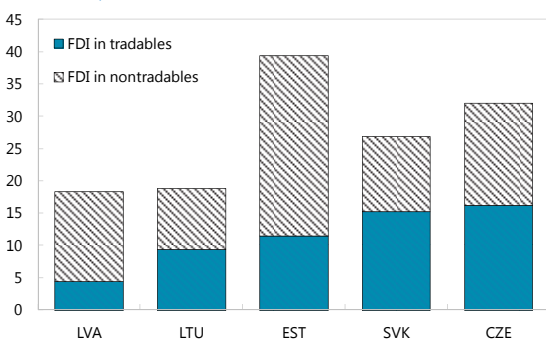
(Millions of euro)



Sources: Bank of Estonia; WEO; and Kinoshita (2011).

Composition of FDI Stock, 2007

(Percent of GDP)



Sources: Bank of Estonia; WEO; and Kinoshita (2011).

Appendix. Estonia Export Destinations, 2007-09 1/

| | Millions of USD | Percent of total exports |
|---|-----------------|--------------------------|
| By country and region | | |
| Finland | 5922 | 18.2 |
| Sweden | 4325 | 13.3 |
| Latvia | 3377 | 10.4 |
| Russia | 3107 | 9.5 |
| Lithuania | 1789 | 5.5 |
| Germany | 1759 | 5.4 |
| Euro area (exc. Estonia, Germany, and Finland) | 2790 | 8.6 |
| Other EU advanced countries | 1840 | 5.7 |
| Other Non-EU advanced countries | 1225 | 3.8 |
| CEE | 902 | 2.8 |
| SEE | 94 | 0.3 |
| CIS and Turkey | 1125 | 3.5 |
| Other Advanced countries (US, Japan) | 1945 | 6.0 |
| BRICS (exc. Russia) | 390 | 1.2 |
| Others | 1959 | 6.0 |
| Total | 32551 | 100 |
| By region | | |
| EU | 16637 | 51.1 |
| Euro Area (EU-17, inc. Finland) | 10472 | 32.2 |
| Finland and Sweden | 10248 | 31.5 |
| Other Emerging Europe (inc. Russia and Baltics) | 10395 | 31.9 |
| Baltics | 5167 | 15.9 |
| Russia | 3107 | 9.5 |
| Other | 5519 | 17.0 |
| Total | 32551 | 100 |

Source: Directions of Trade.

1/ Cumulative exports between 2007-09.

Annex IV. Labor Market Development and Skill Mismatches

A. Recent Developments

1. Labor market conditions have improved steadily since the first quarter of 2010. Employment growth has increased by 7¾ percent (year-on-year) and the unemployment rate has declined to about 13¼ percent in the second quarter of 2011 from its 20-percent peak. Likewise, youth unemployment has fallen (Figure A2). Still, long-term unemployment has been rising.

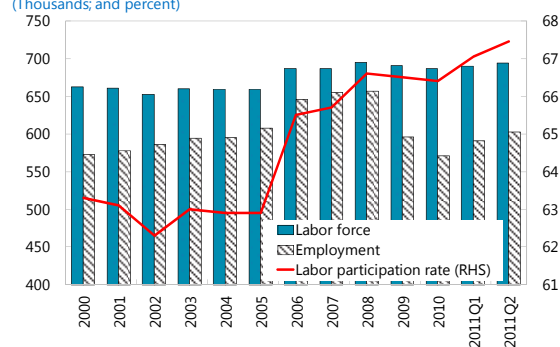
2. Reflecting its flexibility, Estonia’s labor market has adjusted quicker than its neighbors (Figure A2). According to survey data, Estonia has the lowest collective bargaining coverage among EU countries, its wage changes are among the most frequent, and its share of bonus pay ranks among the highest.¹ Relatively low level of employment protection legislation (EPL) may also contribute to a high turnover of labor force in Estonia

3. Labor participation rate has been on a rising trend except during 2008–10. Together with a stable trend in population growth, this implies that recent increases in outward cross-border workers to Nordic countries have not yet had significant effect on Estonia’s labor supply.

| | Cooperation in labor-employment relations | Flexibility of wage determination | Hiring and Firing Practices | Pay and productivity | Reliance on professional management | Brain drain | Female participation in labor force | Overall Index 2/ |
|----------------|---|-----------------------------------|-----------------------------|----------------------|-------------------------------------|-------------|-------------------------------------|------------------|
| Baltics | 1.02 | 1.20 | 0.99 | 1.20 | 1.05 | 0.85 | 1.15 | 1.07 |
| Estonia | 1.09 | 1.22 | 1.05 | 1.28 | 1.16 | 1.00 | 1.16 | 1.14 |
| Latvia | 0.98 | 1.16 | 1.08 | 1.10 | 0.95 | 0.80 | 1.11 | 1.03 |
| Lithuania | 1.00 | 1.20 | 0.85 | 1.21 | 1.05 | 0.74 | 1.18 | 1.03 |
| GIPS | 0.94 | 0.73 | 0.72 | 0.88 | 1.05 | 1.04 | 0.98 | 0.91 |
| Greece | 0.82 | 0.63 | 0.74 | 0.79 | 0.89 | 0.77 | 0.90 | 0.79 |
| Ireland | 1.11 | 0.69 | 0.95 | 1.05 | 1.32 | 1.37 | 0.98 | 1.07 |
| Portugal | 0.91 | 0.86 | 0.59 | 0.85 | 0.95 | 0.97 | 1.09 | 0.89 |
| Spain | 0.91 | 0.76 | 0.62 | 0.85 | 1.05 | 1.06 | 0.94 | 0.88 |

Source: Global Competitiveness Indicators -- Labor Market Efficiency, World Economic Forum.
 1/ Each sub-index is calculated as a ratio of raw score to a cross-country average.
 2/ Overall index is an average of all sub-indices. A higher score reflects a more efficient labor market.

Labor force, Employment, and Participation Rates
(Thousands; and percent)



Source: Statistics Estonia.

4. Despite a decline in overall unemployment, long-term unemployment—accounting for about half of joblessness—has been rising.² Labor force surveys show that Estonia’s long-term unemployment has been more prevalent among the youth (people between the ages of 15 and 25 years) lacking higher education. Still job vacancies are rising particularly in the manufacturing sector reflecting mismatched skills.

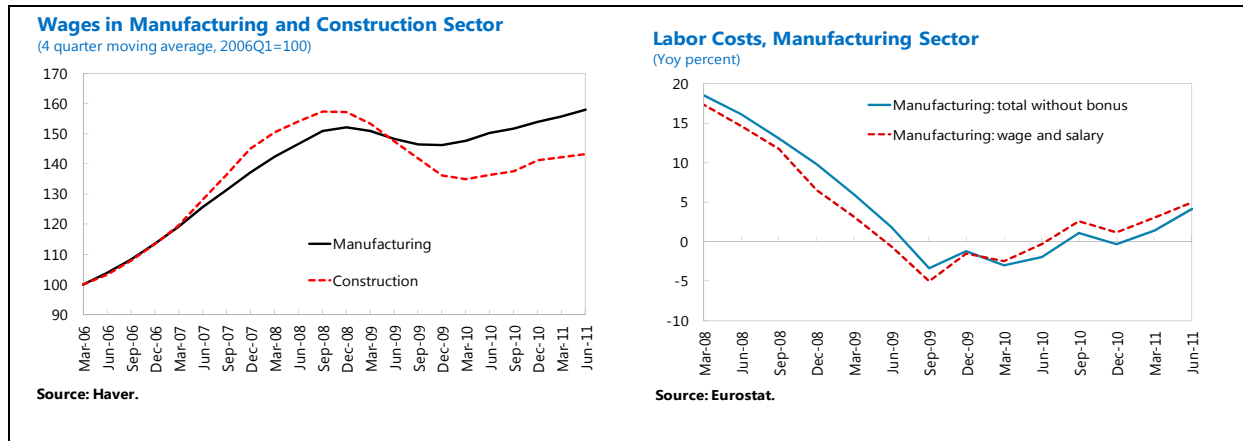
5. While the unemployment rate has remained in the double-digits, gross wages have started to increase again. This could reflect a number of factors. Given that wage increases have been more pronounced in manufacturing, labor shortage appear to be

¹ Dabušinskas, Aurelijus and Tairi Rõõm, 2011, "Survey Evidence on Wage and Price Setting in Estonia," Bank of Estonia Working Papers Series 6/2011.

² Long-term unemployment refers to unemployed persons who have been looking for a job for more than 24 months.

more acute in this sector. In the construction sector, increases in cross-border workers to

Finland have contributed to a rise in wages despite moderate employment growth



B. Skill Mismatches in Labor Market

6. Addressing skill mismatches in the labor market is one of the main challenges facing Estonia. During the real estate and construction booms, a bloated demand for labor in the construction sector served to divert workers away from other sectors through rapidly increasing wages. The latter peaked in September 2008 and were 60 percent higher than in March 2006. During the bust, labor shedding took place in the construction sector, with about 43 percent of total jobs lost was in the construction sector. With no corresponding pick-up in manufacturing employment, unemployment increased rapidly. While the recovery has strengthened, laid-off construction workers have not been able to secure jobs in the manufacturing sector—where vacancies have increased—mostly due to the lack of needed skills

7. Recent trends in the relationship between vacancy and unemployment rates suggest that job matching has become more difficult. During March 2008 and March 2010,

the recessionary phrase in the business cycle can be traced as a movement to the right along the Beveridge curve³. The unemployment rate had started to fall since March 2010 as job vacancies started to pick up. More recently, however, there was an uptick in unemployment despite an increase in the vacancy rate.

8. The job-skill mismatch is more visible in the manufacturing sector. Wages have

³ The job vacancy rate is negatively related to the unemployment rate in a pattern known as the “Beveridge” curve. Movements along the curve trace the business cycle. In the expansionary phase, for instance, one moves along the curve in a northeast direction as vacancy rates rises and the unemployment rate falls. Shifts in the curve represent changes in structural unemployment. A rightward shift of the Beveridge curve implies a decline in the labor market’s efficiency: i.e., the job matching process has become less efficient due to mismatches between the unemployed and available jobs (Rodenburg, Peter, 2011, “The Remarkable Transformation of the UV curve”. *European Journal of the History of Economic Thought* 18 (1): pp.125-153).

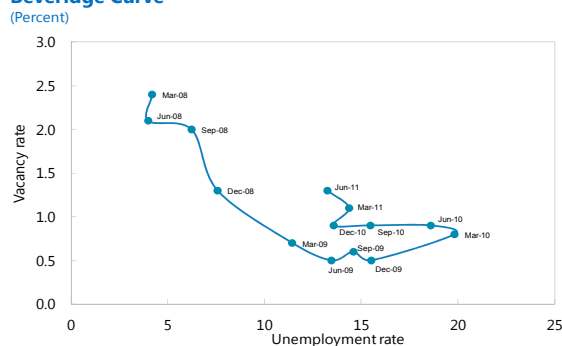
started to increase in manufacturing despite rising job vacancies, while wages are still stagnant in the construction sector. A risk of the high unemployment rate would become entrenched unless the mismatches are further addressed by retraining and improving education. On this front, there have been a number of measures put in place to reduce unemployment. Wage subsidies targeting high-risk groups have contributed to reduce youth and long-term unemployed.

9. In Estonia, labor market developments suggest that the Beveridge curve could have shifted up in March 2010. Specifically in a simple regression line, a shift dummy is statistically significant and it increases the regression’s explanatory power; the adjusted R² increases about 50 percentage points to 0.83 compared to a regression without the dummy. The outward shift could reflect a cyclical factor in the early stages of a recovery,⁴ but it could also imply a structural change in the efficiency of job matching associated with worsening skill mismatches.

10. The job-skill mismatch is more visible in the manufacturing sector. Wages have started to increase in manufacturing despite rising job vacancies, while wages are still stagnant in the construction sector. A risk of the high unemployment rate would become entrenched unless the mismatches are further addressed by retraining and improving education. On this front, there have been a number of measures put in place to reduce unemployment. Wage subsidies targeting high-risk groups have contributed to reduce youth and long-term unemployed.

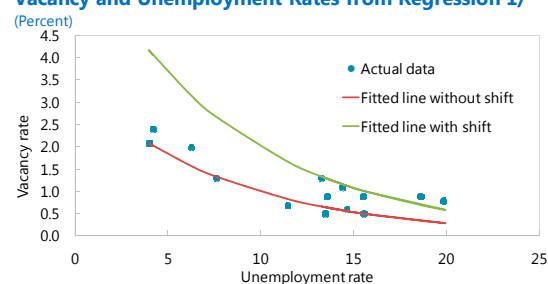
⁴ Tasci, Murat and John Lindner, 2010, “Has the Beveridge Curve Shifted?” Federal Reserve Bank of Cleveland, *Economic Trends*, August 10.

Beveridge Curve



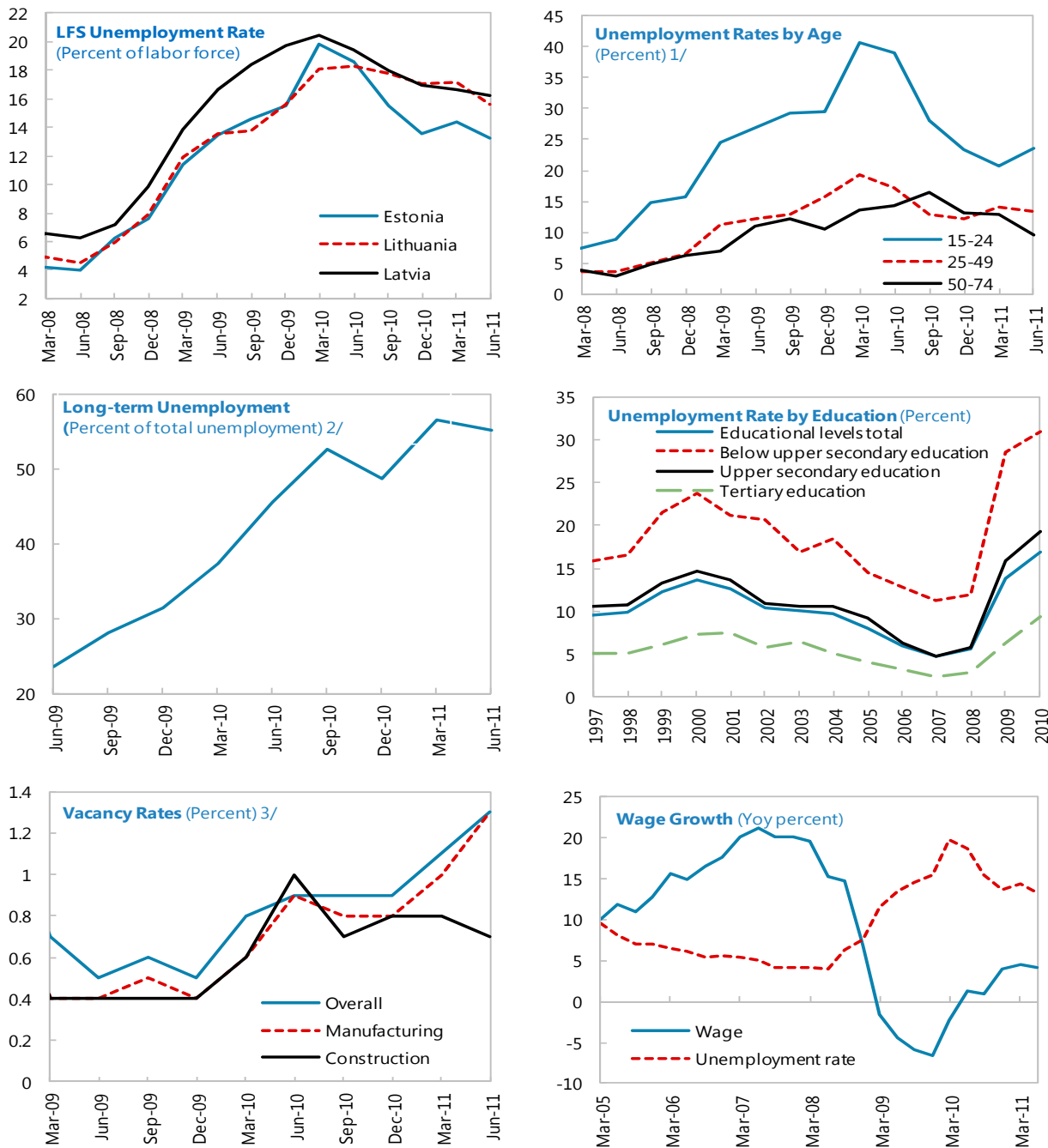
Source: Haver.

Vacancy and Unemployment Rates from Regression 1/



Sources: Haver; and IMF Staff calculations.
 1/ Fitted values are calculated from regression: $\ln Vr = [1.2] - [0.12] * Un + [0.7] * dummy$, where Vr and Un denote the log of vacancy rate and unemployment rate, and dummy is a binary variable that takes on the value of 1 starting in March 2010. The adjusted R-squared for the regression equals 0.83.

Figure A2. Estonia: Labor Market Developments



Sources: Haver; DX; and Statistics Estonia.

1/ Defined as youth aged between 15-24 years old.

2/ Defined as unemployed by more than one year.

3/ The vacancy rate measures the proportion of total vacant posts expressed as a percentage of occupied and vacant posts.



REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2011 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

November 9, 2011

Prepared By

European Department

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FUND RELATIONS

(As of October 31, 2011)

Membership Status

Joined: May 26, 1992; Article VIII

General Resources Account

| | SDR Million | Percent 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 Allocation |
|---------------------------|-------------|--------------------|
| Net cumulative allocation | 61.97 | 100.00 |
| Holdings | 62.03 | 100.10 |

Outstanding Purchases and Loans

None

Latest Financial Arrangements

In millions of SDR, (mm/dd/yyyy)

| Type | Approval Date | Expiration Date | Amount Approved | Amount Drawn |
|----------|---------------|-----------------|-----------------|--------------|
| Stand-by | 03/01/2000 | 08/31/2001 | 29.34 | 0.00 |
| Stand-By | 12/17/1997 | 03/16/1999 | 16.10 | 0.00 |
| EFF | 07/29/1996 | 08/28/1997 | 13.95 | 0.00 |

Projected Payments to Fund

None

Implementation of HIPC Initiative:

Not applicable.

Implementation of MDRI Assistance:

Not applicable.

Implementation of PCDR Assistance:

Not applicable.

Exchange 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:

Estonia is on the 12-month consultation cycle. The last Article IV consultation was concluded on January 31, 2011. The Executive Board assessment is available at

<http://www.imf.org/external/pubs/ft/scr/2011/cr1134.pdf>

FSAP Participation 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 adopted in December 2008.

Technical Assistance:

The following table summarizes the technical assistance missions provided by the Fund to Estonia since 2000.

Resident Representative: Mark Allen (stationed in Warsaw, Poland).

ESTONIA: TECHNICAL ASSISTANCE FROM THE FUND, 2000–11

| Department | Issue | Action | Date | 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 |

STATISTICAL ISSUES

Estonia's 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 approached best international practice in some areas. Estonia subscribed to the SDDS on September 30, 1998, with metadata posted on the DSSB on January 27, 1999, and met SDDS specifications on March 30, 2000. The latest (2010) annual observance report for Estonia for the SDDS was posted on the Fund's website in May 2011.

(http://dsbb.imf.org/images/pdfs/AnnualReports/2010/EST_SDDS_AR2010.pdf)

(SDDS webpage for EST)

<http://dsbb.imf.org/Pages/SDDS/CtyCtgList.aspx?ctycode=EST>

National Accounts

The national accounts are compiled by Statistics Estonia (SE) in accordance with the guidelines of the European System of Accounts 1995 (ESA 95). Quarterly GDP estimates at current and at constant prices are compiled using the production, income and expenditure approaches and statistical

discrepancies among them have at times been sizable. The annual and the quarterly national accounts are compiled at previous year prices and chain-linked to 2005. As of September 2011, data are compiled on the basis of the new version of classification of activities EMTAK 2008, and using double deflation. Data were revised at this time back through 2002, with earlier revisions to be subsequently introduced.

Public Finance

Fiscal data are published by the Ministry of Finance (MoF), while historical data are also available on Statistics Estonia's website. Monthly central government data are disseminated with a lag of up to 25 days after the end of the month. Quarterly data on foreign loans and guarantees by the central government are published in Estonian with a monthly lag. The Ministry is using one of its two allowed SDDS flexibility options on the timeliness of monthly central government operations data, and disseminate these data on the National Summary Data page. Comprehensive annual data on central and general government operations (accrual 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 the general government are included in the *International Finance Statistics*.

Monetary and Financial Statistics

The Bank of Estonia (BoE) compiles and reports monetary and financial statistics consistent with the IMF's *Monetary and Financial Statistics Manual*. 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. Data for individual banks are also available on a quarterly basis since 2008Q1 on the Financial Supervision Authority's webpage. Estonia also regularly provides requested Financial Soundness Indicators.

External Sector

Quarterly balance of payments, external debt, and international investment position (IIP) data are compiled by the BoE consistent with the *Balance of Payments Manual* fifth edition (BMP5). Daily exchange rate data are available with a one working day lag. Monthly import/export data are available with a two month lag. The Data Template on International Reserves and Foreign Currency Liquidity is disseminated monthly according to the operational guidelines and is hyperlinked to the Fund's DSBB.

Dissemination of Statistics

The Estonian authorities disseminate a range of economic statistics, with a significant amount of data are available on the Internet:

- metadata for data categories defined by the Special Data Dissemination Standard are posted on the IMF's DSBB (<http://dsbb.imf.org>);
- the Bank of Estonia website (<http://www.eestipank.info/frontpage/en/>) provides data on monetary statistics, balance of payments, IIP, external debt and other main economic indicators;

- the Statistics Estonia website (<http://www.stat.ee/en>) provides information on economic and social development indicators;
- the Ministry of Finance homepage (<http://www.stat.ee/en>) includes information on the government's annual multi-year State Budget Strategy, as well as information and data on the national budget, and government finance statistics (deficit, debt, financial assets).

ESTONIA: TABLE OF COMMON INDICATORS REQUIRED FOR SURVEILLANCE—AS OF OCTOBER 31, 2011

| | 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 | Data Quality – Accuracy and reliability ⁹ |
| Exchange Rates | October 31, 2011 | October 31, 2011 | D | D | D | | |
| International Reserve Assets and Reserve Liabilities of the Monetary Authorities ¹ | September 2011 | October 7, 2011 | M | M | M | | |
| Reserve/Base Money | September 2011 | October 14, 2011 | M | M | M | O, LO, LO, LO | O, O, O, NA |
| Broad Money | September 2011 | October 28, 2011 | M | M | M | | |
| Central Bank Balance Sheet | September 2011 | October 14, 2011 | M | M | M | | |
| Consolidated Balance Sheet of the Banking System | September 2011 | October 28, 2011 | M | M | M | | |
| Interest Rates ² | September 2011 | October 25, 2011 | M | M | M | | |
| Consumer Price Index | September 2011 | October 7, 2011 | M | M | M | O, O, O, O | LO, LO, O, LO |
| Revenue, Expenditure, Balance and Composition of Financing ³ – General Government ⁴ | Q2/2011 | September 23, 2011 | Q | Q | Q | LO, LO, O, O | LO, LO, O, NO |
| Revenue, Expenditure, Balance and Composition of Financing ³ – Central Government | September 2011 | October 2011 | M | M | M | | |
| Stocks of Central Government and Central Government-Guaranteed Debt ⁵ | September 2011 | October 2011 | M | M | M | | |
| External Current Account Balance | Q2/2011 | September 8, 2011 | Q | Q | Q | O, O, LO, O | O, O, O, O, O |
| Exports and Imports of Goods and Services | August 2011 | October 12, 2011 | M | M | M | | |
| GDP/GNP | Q2/2011 | September 8, 2011 | Q | Q | Q | O, O, O, LO | LO, LO, LO, LNO |
| Gross External Debt | Q2/2011 | September 8, 2011 | Q | Q | Q | | |
| International Investment Position ⁹ | Q2/2011 | September 8, 2011 | Q | Q | Q | | |

¹ Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

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); Not Available (NA).

⁷ Reflects the assessment provided in the data ROSC published on November 6, 2001, and based on the findings of the respective missions that took place during May 10-18, 2001 for the dataset corresponding to the variable in each row. For fiscal data, 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. 11/144
FOR IMMEDIATE RELEASE
November 29, 2011

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

IMF Executive Board Concludes 2011 Article IV Consultation with the Republic of Estonia

On November 28, 2011, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation¹ with Estonia, and considered and endorsed the staff appraisal without a meeting on a lapse-of-time basis².

Background

A vibrant recovery has marked Estonia's first year in the euro area, albeit amid nascent tensions. The economy's strong rebound has been grounded in a proven track record of prudent macroeconomic policies, which also underpinned a successful euro adoption and a recent credit rating upgrade. But coming on the heels of one of the EU's deepest economic contractions, the recovery has exposed underlying difficulties. Price pressures have emerged (still mainly imported) and unemployment, while declining, remains high with long-term joblessness on the rise. The latter has mostly reflected mismatched skills.

Following strong growth in 2011—among the highest in the EU—the pace of economic activity and price increases are set to moderate in 2012. In line with weakening export markets, growth is projected to slow to about 3 percent. This is expected to be only partially offset by stronger final domestic demand. The output gap will nonetheless continue to narrow in 2012. Inflation should also moderate as the impact of global food

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.

² The Executive Board takes decisions under its lapse-of-time procedure when the Board agrees that a proposal can be considered without convening formal discussions.

and fuel prices shocks dissipate. Core inflation's outlook remains uncertain given wage pressures largely stemming from labor shortages and mismatched skills. So far, wages increases have not exceeded productivity gains. As a result, economy-wide profitability and external competitiveness have improved. These trends are likely to broadly continue but pressures can remain on core inflation.

With continued volatility in global financial markets, downside risks to the outlook have risen at end-2011. With two-thirds of Estonia's exports going to the EU, recent European and global developments have tilted risks to the downside. Besides the domestic risk that the unwinding past real and financial sector imbalances be more protracted and weigh on domestic demand, external risks associated with the euro area sovereign debt crisis prevail.

Executive Board Assessment

In concluding the 2011 Article IV consultation with Estonia, Executive Directors endorsed the staff's appraisal as follows:

Estonia faces an increasingly challenging environment as it looks to continue implementing policies preserving macroeconomic policy credibility and safeguarding sustainable growth. Following a strong recovery in its first year in the euro area, Estonia's economic activity will likely slow in 2012. In the central scenario, nonetheless, Estonia's economy will continue to approach its potential. Inflation is poised to slow even though pressures on core inflation can remain. Recently, downside risks to the outlook have increased. In addition to a slowdown in exports, a generalized confidence fallout from the euro area sovereign debt crisis could spill over to Estonia despite its strong fundamentals.

Estonia's fiscal position will remain strong but there will be a need to limit the stimulative impact of the 2012 budget in the central scenario, albeit uncertainties abound. Time-bound increases in public investment underlie the budget's positive impulse, while a neutral budget would be appropriate. Recognizing that further significant compression of current expenditures is unrealistic, observance of budgetary allocations will be helpful in this regard. But if downside risks materialize, automatic stabilizers should be allowed to operate while maintaining Estonia's hard-earned fiscal credibility. In addition, given the uncertainty regarding the extent and duration of the global slowdown, fiscal buffers should be preserved and alternative sources of financing be considered.

Looking beyond the current conjuncture, the authorities' medium-term target can safeguard Estonia's strong fiscal position. This will require continued expenditure restraint to counter spending pressures that are likely to emerge. The authorities' ongoing efforts to enhance central government productivity through centralization of accounting and personnel management can help. Still without raising taxes, achieving the fiscal target on a sustainable basis, implementing the authorities' plan to reduce

labor taxation, and restore fiscal buffers will require reducing non-wage goods and services by at least 2 percentage points of GDP in the medium term. The pace of consolidation should be mindful of long-term investment needs and cyclical developments.

A fully fledged multi-year fiscal framework can support the medium-term target, bolster Estonia's high fiscal credibility, and limit pro-cyclical policies. A successful framework should reflect Estonia's fiscal tradition of simplicity and transparency, which has facilitated monitoring and accountability. The central element of such a framework would be multi-year expenditure ceilings and their strict observance while revenue collections adjust to cyclical conditions. In addition, fiscal buffers should continue to be an integral part of Estonia's fiscal framework. While there are benefits as well as costs of holding liquid assets, gradually rebuilding buffers appears appropriate given increased global uncertainty.

For the financial sector, the challenge entails safeguarding stability in the context of heightened global financial tension. Estonian banks have scant direct and indirect exposure to euro area sovereign debt, while at the same time capital and liquidity buffers have increased substantially since 2007. However, the legacy of the previous crisis continues to burden balance sheets and dependence on financing from parent banks remains high, although both of these factors are declining. The latter has proven a stable source of financing, but parent banks in turn rely on short-term wholesale funding. Limiting potential contagion will thus require continued improvements in cross-border supervision. Developing regional crisis resolution tools—in close cooperation with relevant authorities—can provide critical backstop to Estonia's sizable fiscal and financial buffers. The scheduled December high-level meeting of Nordic regulators provides an opportunity to make progress in this critical area. In addition, an early and gradual institutional adoption of Basel III requirements can reduce funding risks but its implementation should avoid creating headwinds for credit conditions.

Financial resilience can also be supported by further enhancing the regional and domestic resolution frameworks for banks and addressing weaknesses in Estonia's bankruptcy law. The recent adoption of a domestic resolution law provides a welcome tool to minimize the cost of a bank failure. This could be supplemented by introducing a bank-asset separation authority as well as by developing cross-border bank resolution tools in coordination with the EU and regional partners. In addition, legal clarifications regarding the Reorganization Act for corporations have improved its effectiveness, while the recent adoption of an analogous law for individuals ensures broader coverage. Still, reforms are needed to shorten the lengthy and costly bankruptcy process.

More broadly, sustainable growth will entail enhancing Estonia's attractiveness for Foreign Direct Investments (FDI), addressing skill mismatches, and increasing human capital. Estonia's 2020 Competitiveness Strategy highlights the need for further improvements in the business environment to continue to draw FDI. The urgency of

boosting knowledge-based activities and remaining an attractive destination for FDI has been heightened by growing competition from emerging markets. Furthermore, fully drawing on Estonia's resources and developing their potential will also require addressing skill mismatches and continuing attention to foster human resources in technical fields as well as to attract highly-trained individuals to support sustainable income convergence to EU levels.

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 2011 Article IV Consultation with Estonia is also available.

Estonia: Selected Macroeconomic and Social Indicators, 2009–12
(In units as indicated)

| | 2009 | 2010 | 2011 | 2012 |
|---|-------|-------|------------|------|
| | | | Projection | |
| National income, prices and wages | | | | |
| GDP (euro, billions) | 13.8 | 14.3 | 15.8 | 16.7 |
| Real GDP growth (year-on-year in percent) | -14.3 | 2.3 | 7.5 | 3.1 |
| Average HICP (year-on-year change in percent) | 0.2 | 2.7 | 5.1 | 3.1 |
| GDP deflator (year-on-year change in percent) | -1.0 | 1.1 | 3.0 | 2.4 |
| Average monthly wage (year-on-year growth in percent) | -4.6 | 0.9 | 4.5 | 4.7 |
| Unemployment rate (ILO definition, percent) | 13.8 | 16.9 | 13.5 | 11.5 |
| Average nominal ULC (year-on-year growth in percent) | 0.9 | -5.4 | 0.6 | 3.1 |
| Saving-investment balances (in percent of GDP) | | | | |
| National saving | 22.5 | 23.1 | 24.9 | 25.0 |
| Private | 24.6 | 23.4 | 25.6 | 28.1 |
| Public | -2.1 | -0.3 | -0.7 | -3.1 |
| Domestic investment | 18.8 | 19.5 | 22.4 | 22.9 |
| Private | 15.4 | 16.6 | 19.7 | 19.7 |
| Public | 3.4 | 3.0 | 2.7 | 3.1 |
| Foreign saving | -3.7 | -3.6 | -2.6 | -2.1 |
| General government (ESA95 basis; percent of GDP) | | | | |
| Revenue and grants | 43.2 | 40.9 | 41.0 | 39.5 |
| Expenditure and net lending | 45.2 | 40.6 | 40.7 | 41.8 |
| Fiscal balance | -2.0 | 0.3 | 0.3 | -2.3 |
| External sector (in percent of GDP) | | | | |
| Trade balance | -4.0 | -1.7 | 0.2 | -0.6 |
| Service balance | 9.8 | 9.2 | 6.8 | 6.5 |
| Income balance | -3.6 | -5.6 | -5.7 | -5.3 |
| Current account | 3.7 | 3.6 | 2.6 | 2.1 |
| Gross international reserves (euro, millions) | 2766 | 1935 | ... | ... |
| In months of imports | 4.7 | 2.6 | ... | ... |
| In percent of gross short-term debt (including trade credits) | 41.6 | 32.7 | ... | ... |
| In percent of base money | 121.8 | 82.9 | ... | ... |
| Gross external debt/GDP (in percent) 1/ | 125.0 | 120.0 | 93.5 | 88.7 |
| Net external debt/GDP (in percent) 2/ | 35.2 | 28.7 | 13.1 | 2.8 |
| General government external debt/GDP (in percent) | | | | |
| Excluding government assets held abroad | 5.4 | 4.9 | 4.5 | 4.2 |
| Including government assets held abroad 3/ | -3.0 | -2.1 | -1.9 | -1.8 |
| Exchange rate (EEK/US\$ - period average) 4/ | 11.3 | 11.8 | ... | ... |
| Money and credit (year-on-year growth in percent) | | | | |
| Domestic credit to nongovernment | -5.3 | -5.0 | ... | ... |
| Base money | -51 | 39.5 | ... | ... |
| Broad money | 0.1 | 3.0 | ... | ... |

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.