

**FOR  
AGENDA**

SM/07/242

July 10, 2007

To: Members of the Executive Board

From: The Secretary

Subject: **Republic of Estonia—Staff Report for the 2007 Article IV Consultation**

Attached for consideration by the Executive Directors is the staff report for the 2007 Article IV consultation with the Republic of Estonia, which is tentatively scheduled for discussion on **Monday, July 23, 2007**. At the time of circulation of this paper to the Board, the Secretary's Department has received a communication from the authorities of the Republic of Estonia indicating that they consent to the Fund's publication of this paper.

Questions may be referred to Mr. Rozwadowski (ext. 37474) and Ms. Tan (ext. 37472) in EUR.

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the European Central Bank forthwith; the WTO Secretariat on Wednesday, July 18, 2007; and to the European Bank for Reconstruction and Development, the European Commission, the European Investment Bank, and the Organisation for Economic Cooperation and Development, following its consideration by the Executive Board.

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

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INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

**Staff Report for the 2007 Article IV Consultation**

Prepared by Staff Representatives for the 2007 Consultation with the Republic of Estonia

Approved by Alessandro Leipold and Scott Brown

July 10, 2007

EXECUTIVE SUMMARY

**Background:** Overheating is Estonia's main near-term challenge. Surging domestic demand has widened the external current account deficit and pushed the economy against capacity constraints. Wage increases have begun to erode competitiveness and kept inflation above the Maastricht threshold for euro adoption. There are signs of an incipient slowdown but a resurgence of demand and an eventual hard landing, with growth stagnating, cannot be ruled out. A strong fiscal stance is therefore needed to subdue wage and income expectations, improve the odds of a soft landing, and reassure markets about the continued commitment to euro adoption. It would also position the budget for future age-related costs. Other concerns are banking sector risk stemming from years of rapid credit growth and a less benign external environment in the face of increased regional uncertainties.

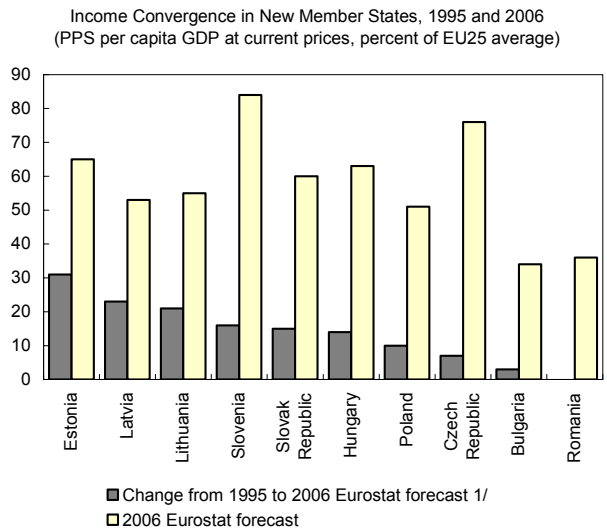
**Authorities' views and policies:** The authorities are concerned about overheating and have responded by moving from a fiscal framework based on balanced budgets to one based on small surpluses. They have also reaffirmed their commitment to euro adoption and taken steps to increase the odds of meeting the Maastricht inflation criterion by 2010, the earliest they consider feasible. On the financial sector, the authorities emphasize that market discipline has started to slow the pace of credit growth. They view the existing prudential requirements as adequate and are focusing their efforts on strengthening cross-border cooperation in bank supervision and crisis management. The authorities view external competitiveness as broadly adequate and remain strongly committed to the currency board arrangement (CBA), in place since 1992.

**Staff views:** A more assertive fiscal stance is needed. For 2007 this means saving any revenue overperformance and resisting spending pressures. For the next four years it means going beyond the modest surplus floors in the fiscal strategy. The strategy on euro adoption is appropriate. The authorities' initiatives to raise public awareness of macroeconomic risks appear to have borne fruit and should be continued. In the meantime, while banks' risk buffers seem reasonably wide, their adequacy should be reviewed regularly by active use of stress testing and sustained monitoring of credit standards, internal controls, and risk assessment procedures. Cross-border cooperation in bank supervision is indispensable; the recent initiatives in this area are welcome. The CBA is robust. While some indicators point to real exchange rate overvaluation, exports remain competitive. Nevertheless, rising cost pressures underscore the need for labor and product market flexibility to ease external adjustment and sustain growth.

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## I. INTRODUCTION

1. **After more than a decade of remarkable growth, Estonia is grappling with an overheated economy in the face of increased regional uncertainties.** Far-reaching structural reforms and macroeconomic stability supported the fastest convergence among the EU's new member states and an exceptionally rapid increase in living standards. But booming domestic demand has now pushed the economy up against capacity constraints and magnified existing convergence-related imbalances. The external current account deficit has widened, inflation is up, and real wages are rising faster than productivity. At the same time, the external environment has turned less benign: pressures on the Latvian currency in February have put a spotlight on financial vulnerabilities in the Baltics, and regional political tensions in April-May have added to the uncertainties. And the safe haven of euro adoption now looks several years away. The consultation largely focused on the authorities' policy options under the current, more demanding, circumstances.



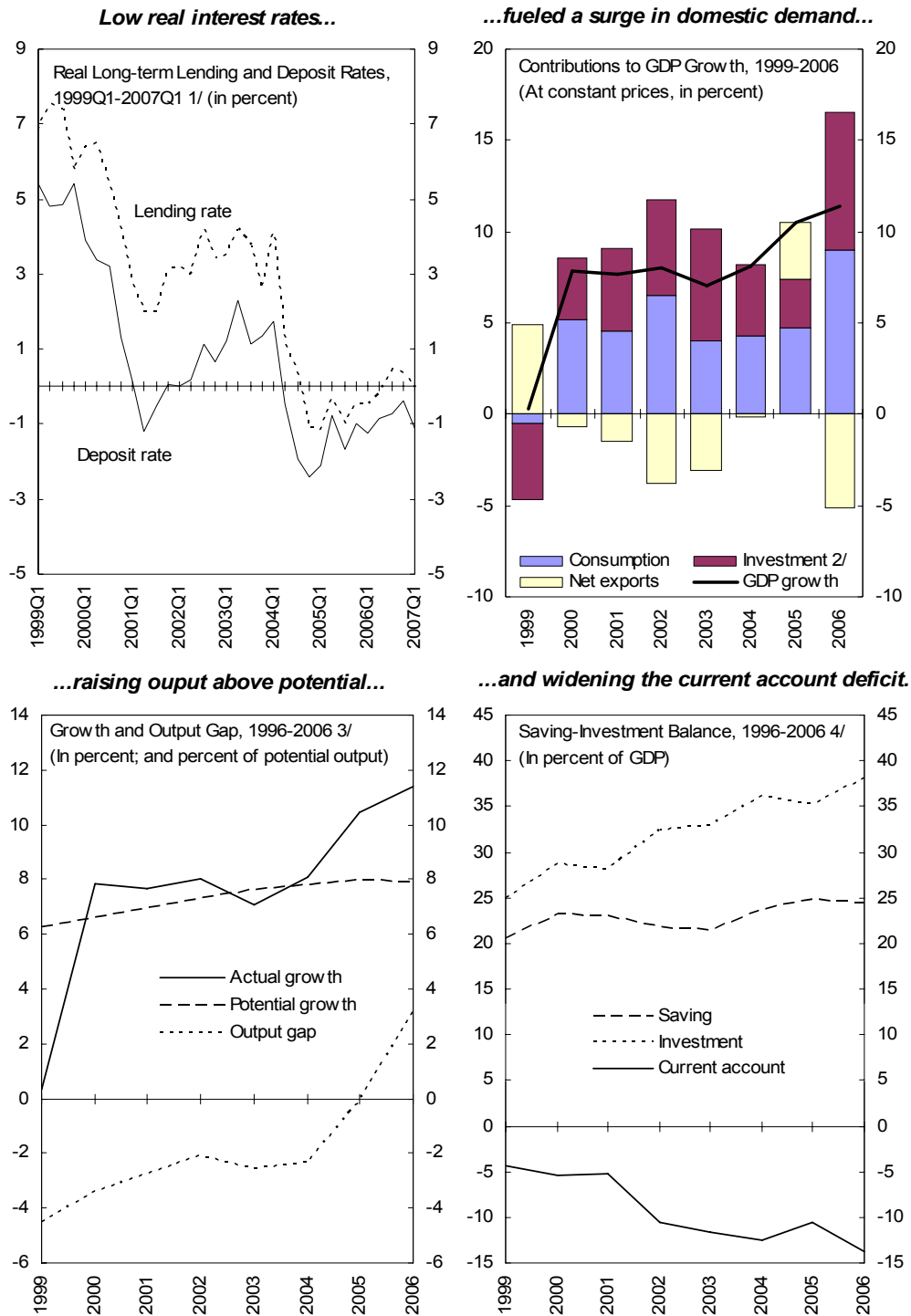
### Box 1. Implementation of Fund Policy Advice

Estonia has had an excellent working relationship with the IMF since becoming a member in May 1992. The authorities' policy decisions have generally been consistent with Board recommendations in the Article IV context. Policy implementation has been characterized by a high degree of ownership, which has proven to be key to Estonia's economic success. In recent years, Estonia's budgets have been less contractionary than advised by the Fund, though in practice fiscal outcomes have turned out to be better than budgeted.

## II. BACKGROUND

2. **Demand surged in 2006 but there are signs of an incipient slowdown.** Rising incomes, the favorable investment climate, and low-interest financing fueled an investment and consumption boom which raised real domestic demand by 15 percent in 2006—more than twice the 2005 increase. Real GDP growth rose to 11.4 percent, well above staff's estimate of potential growth; the external current account deficit widened to nearly 15 percent of GDP; and resources shifted from traded to non-traded sectors (Figure 1). But demand now appears to be moderating: domestic demand growth decelerated in the last quarter of 2006 and the first quarter of 2007, owing mainly to slowing investment. And housing prices, which took off at the end of 2005, have now stabilized relative to family incomes. Preliminary data

Figure 1. Estonia: Selected Economic Indicators



Sources: Bank of Estonia; Estonian Statistical Office; Bank of Latvia; and Fund staff calculations.

1/ 10+ year euro denominated loan, 1+ year kroon denominated time deposit, both adjusted by the official CPI inflation.

2/ Includes statistical discrepancy.

3/ Calculated using HP filter.

4/ There is a break in the GDP series in 2000 which makes the periods 1996-2000 and 2000-06 not comparable.

indicate that the current account deficit exceeded 21 percent of GDP in the first quarter of 2007, though this was mainly due to increased repatriation of profits.

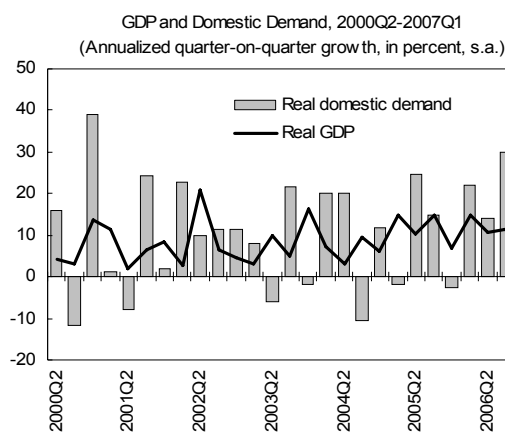
Estonia: Growth Rates of Real GDP and Main Components  
Year-on-year percent change

	2001	2002	2003	2004	2005	2006
GDP	7.7	8.0	7.1	8.1	10.5	11.4
Private Consumption 1/	7.4	11.2	6.9	6.9	8.2	15.7
Government Consumption	2.6	1.9	0.3	2.2	1.1	2.8
Gross fixed capital formation	9.7	24.1	7.0	13.5	12.7	19.7
Exports (goods & services)	2.0	1.7	7.6	17.1	21.5	10.0
Imports (goods & services)	3.5	6.0	10.6	15.2	15.9	14.7
Net exports 2/	-1.5	-3.8	-3.1	-0.1	3.1	-5.2

Sources: Estonian statistical office; and staff calculations.

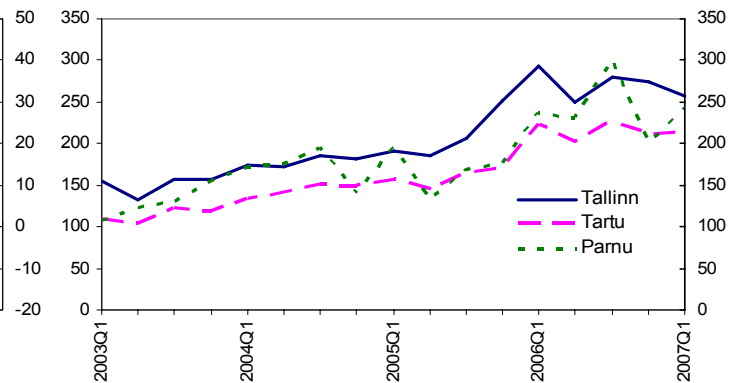
1/ Includes consumption of nonprofit institutions serving households.

2/ Contribution to real GDP growth

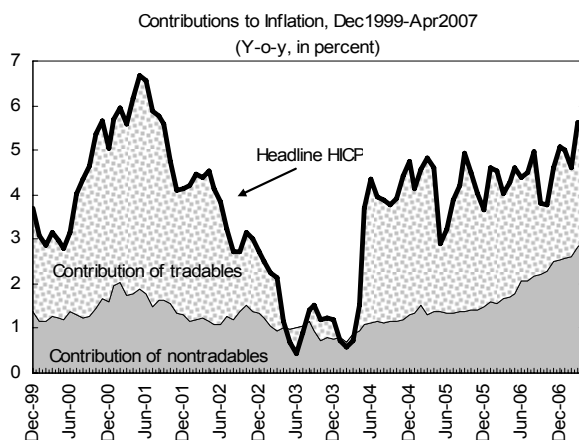


Source: Statistical Office

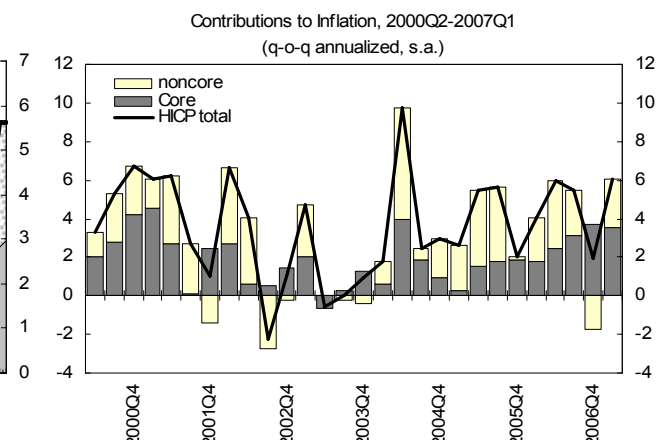
Average apartment price as a share of monthly wages  
(2000Q1=100)



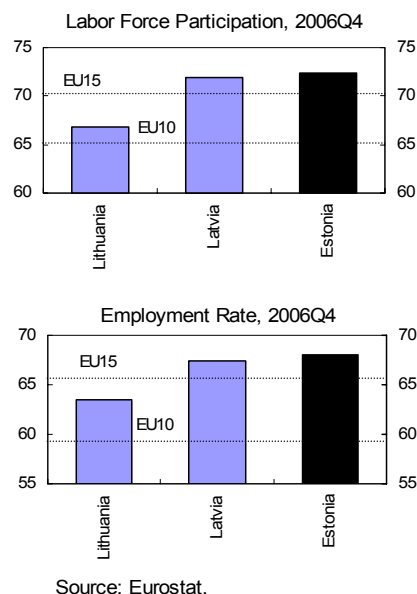
3. **Inflation has accelerated into the 5–6 percent range, well above the Maastricht threshold for euro adoption (currently about 3 percent).** A rising contribution of nontradables prices is evidence that overheating pressures are being added to the underlying convergence-related price dynamic. The increasing role of core inflation suggests that it will be difficult to meet the Maastricht criterion within the next few years.



Sources: Eurostat; and IMF staff calculations.



4. **Domestic growth and new employment opportunities in the EU have tightened the labor market, increasing labor costs** (Figure 2). The unemployment rate has fallen sharply in the past two years to a post-transition low of less than 6 percent. Previously marginal groups were the biggest beneficiaries, suggesting that there is little slack left in the labor market. Vacancy rates rose in 2006, particularly in the services and construction sectors where demand was strongest and employers had to compete for labor with foreign firms. The tightening fueled real wage increases, which reached 14 percent year-on-year in the first quarter of 2007. Labor force survey data suggests that the increase in real wages overtook productivity growth in mid-2005, pushing up real unit labor costs (ULC) and thus reducing the share of profits in value added. The national income accounts-based measure of real ULC, which displayed a more benign trend through mid-2006, has now also started to rise.



5. **More generally, indicators of external competitiveness are mixed** (Box 2). Increasing penetration of world markets since 2000 (notwithstanding a modest retreat in 2006) and continued strong profitability are “bottom line” evidence that exports remain competitive. On the other hand, CGER estimates and other indices calculated by staff suggest a real exchange rate overvaluation in the order of 10 percent—the mid-point of a wide range of estimates. However, these indices, always subject to considerable uncertainty, need to be treated with even more caution in a rapidly changing and fast-growing economy like Estonia’s.<sup>1</sup>

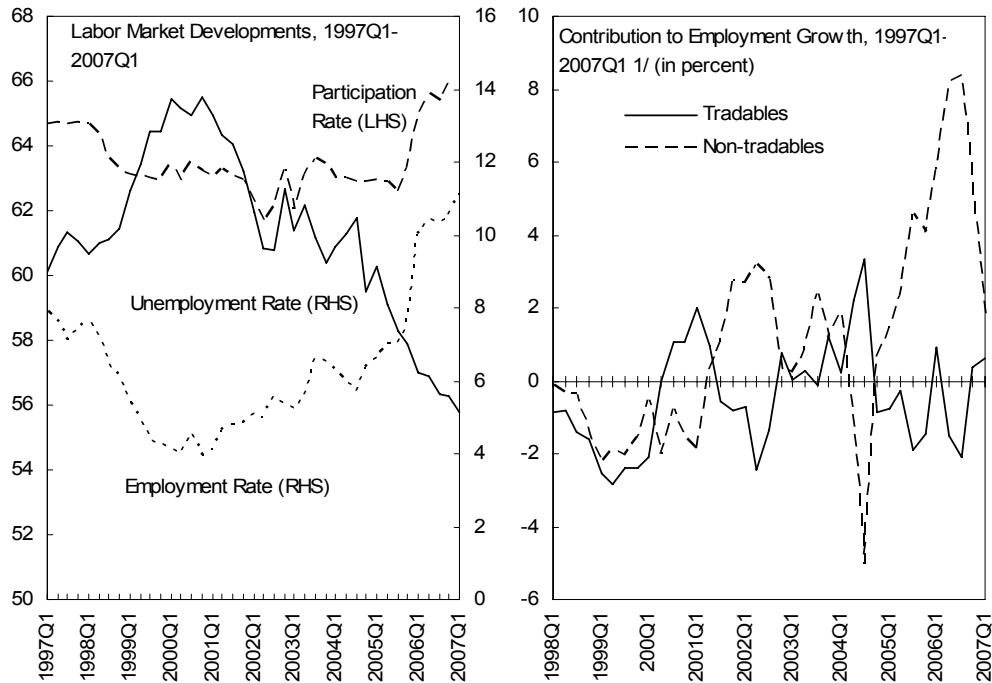
6. **Estonia’s regional integration has meant that the capital account has become a two-way street.** Gross FDI inflows—largely reinvested profits—continued to rise relative to GDP, but net FDI fell as residents invested abroad and now covers less than a quarter of the current account deficit (Figure 3). The decline in net FDI flows was offset by increased bank financing, intermediated by local affiliates of Nordic banks. Gross external debt, nearly all private, was 96 percent of GDP at end-2006 while net debt was 27 percent of GDP.

<sup>1</sup> This is recognized in *Methodology for CGER Exchange Rate Assessments*, November 2006 (<http://www.imf.org/external/np/pp/eng/2006/110806.pdf>).

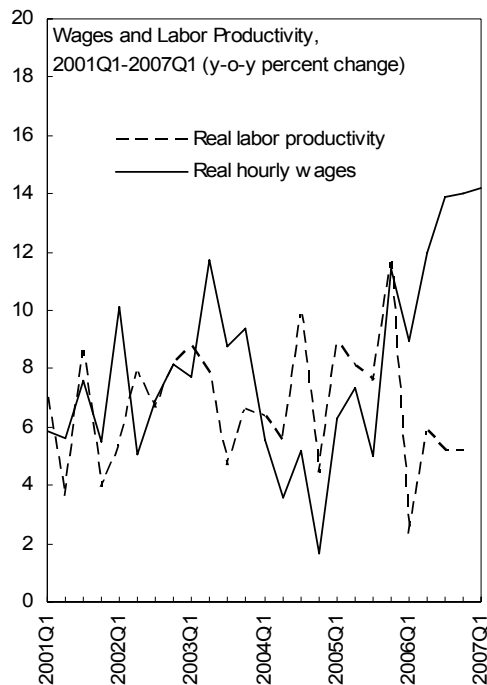


Figure 2. Estonia: Labor Market Developments

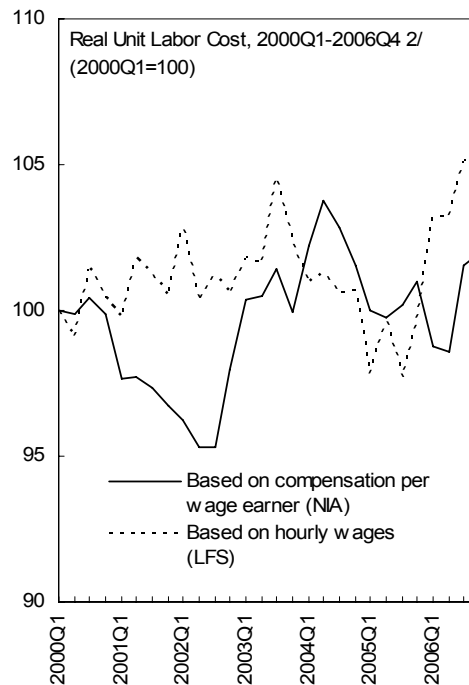
**Strong labor demand raised employment... ...particularly in the non-tradables sector...**



**...which caused wages to rise sharply...**



**...raising unit labor costs.**



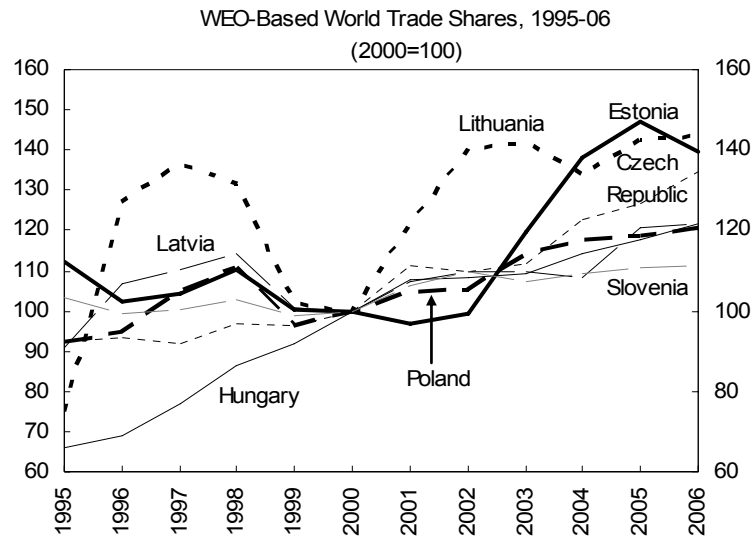
Sources: Statistics Estonia, and staff calculations.

1/ Tradables includes the following sectors: agriculture, forestry, fishery, mining and quarrying, and manufacturing. Non-tradables includes the rest.

2/ Real labor productivity is defined as real value added per hour worked. All series are seasonally adjusted. Growth rates are y-o-y changes.

### Box 2. Estonia: Competitiveness

Strong export growth has boosted Estonia's market share by 40 percent since 2000, even after some reversal in 2006. Constant market shares analysis confirms the importance of Estonia-specific factors behind this strong export growth. In contrast, indices calculated by staff, including measures derived from the CGER macro balances and external sustainability approaches, show real exchange rate overvaluation in 2006 (see next page of this box). This is consistent with the observation that the share of labor compensation in GDP seems greater than warranted by labor productivity. However, the CGER methodology presumes that parameters are stable—an assumption that may not be warranted in a fast-converging economy undergoing substantial structural changes.



Sources: WEO database (Winter 2006); Eurostat; DG EcFin; and staff calculations.

#### Constant Market Shares (CMS) Analysis of Export Changes 1/

(Billions of U.S. dollars, unless otherwise indicated)

	1995–2005	2002–05	2004–05
Change in exports			
In billions of U.S. dollars	5.87	3.37	2.17
Average annual growth rate (percent)	15.40	21.15	39.19
Due to:			
World trade effect	2.40	2.45	0.60
Commodity composition effect	-0.19	-0.09	-0.06
Market distribution effect	1.35	-0.15	-0.04
Estonia-specific factors	2.31	1.16	1.67
Memo item:			
Percent change in terms of trade (- is deterioration)	-3.14	-3.49	-2.16

Source: U.N., COMTRADE; and IMF Staff estimates.

1/ CMS analysis decomposes export growth into four components: growth due to changes in world total demand; growth due to changes in world commodity-specific demand; growth due to market distribution effects; and finally, growth due to residual effects. The last (residual) component captures the impact of Estonia-specific factors—competitiveness-related factors (such as movements in the exchange rate or changes in product type/quality) and terms of trade changes.

## Box 2. Estonia: Competitiveness (continued)

### Estimated Real Exchange Rate Overvaluation, 2006 (In percent)

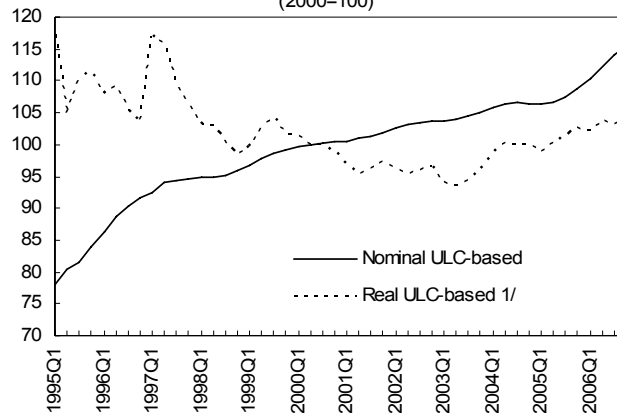
REER-deviation from trends 1/	6
Macrobalance approach (CGER-MB)	10-21
External sustainability approach (CGER-ES)2/	9-20
GDP per capita/PPP approach 3/	0

1/ Percent difference between REER-real ULC based in 2006 and its average level during 2001-05.

2/ The real exchange rate correction needed to generate a current account deficit that would stabilize NIIP at 100% of GDP, assuming real interest rate of 6% (historical average), growth rate of 7 percent (potential rate over next 5 years), and current account elasticity ranging from 0.35 to 0.75.

3/ Measured as the deviation from the predicted ratio of Estonia's domestic price level to the U.S. price level given Estonia's GDP per capita relative to the U.S. (at PPP exchange rate).

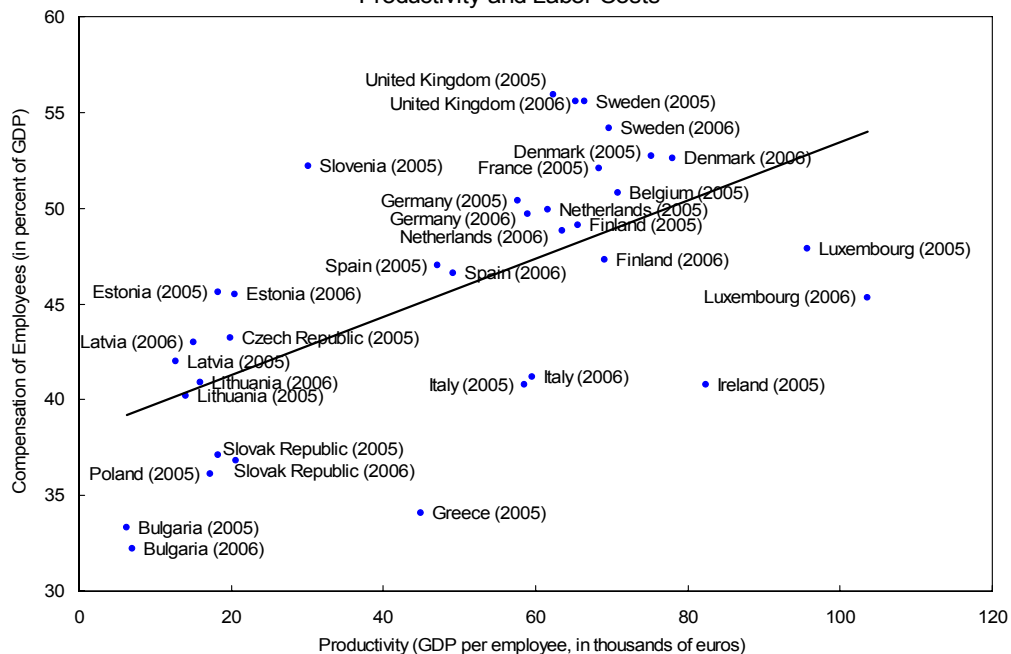
Real Effective Exchange Rates, 1995Q1-2006Q4  
(2000=100)



Source: Staff calculations.

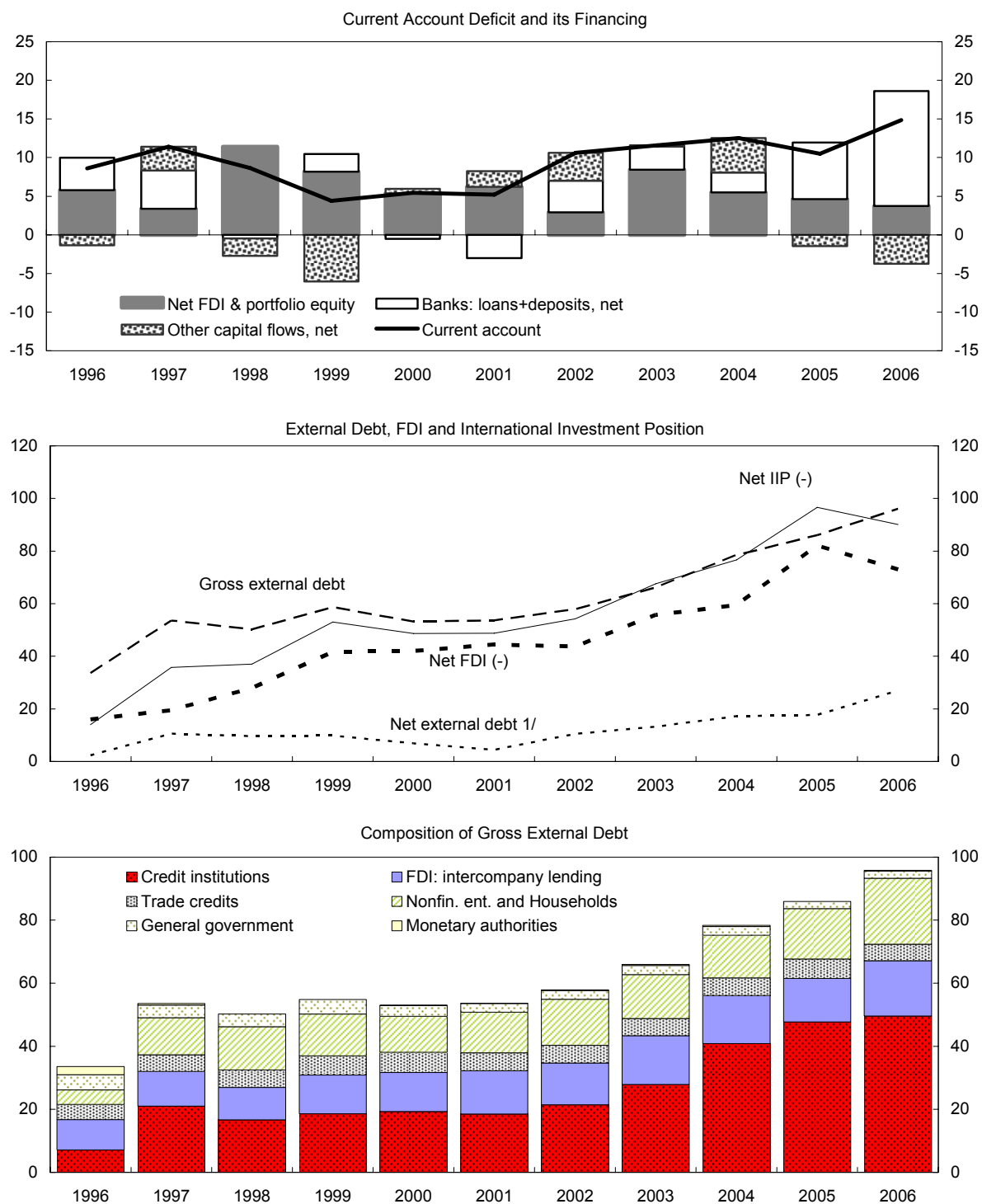
1/ Real ULC is calculated using the industry (ex-construction) deflator. It is a proxy for labor's share in manufacturing value added.

### Productivity and Labor Costs



Sources: Eurostat and staff calculations.

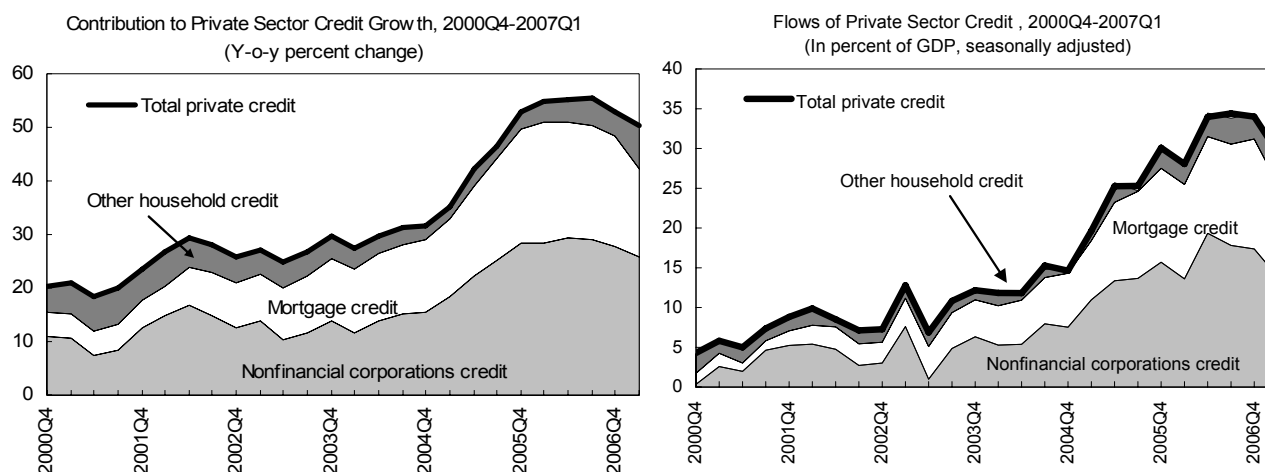
Figure 3. Estonia: Current Account, FDI, and External Debt, 1996-2006  
(In percent of GDP)



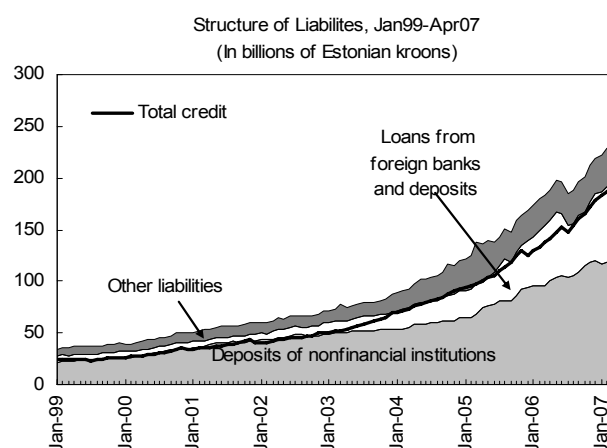
Source: Bank of Estonia.

1/ Net of portfolio, financial derivatives, other investment, and reserve assets held by the Bank of Estonia.

7. **Credit expansion, while still vigorous, has slowed.** The deceleration of bank credit which began in the second half of 2006 continued in the first few months of 2007. About half



of the new credit was to non-financial corporations; the rest was to households and of this four-fifths was mortgages. Three-quarters of bank lending was euro-denominated. Domestic deposits fund roughly half of bank lending but resources from Nordic parent banks are gaining importance. Intense competition for market share has driven bank lending rates very low; indeed real lending rates were negative until recently (Figure 1).



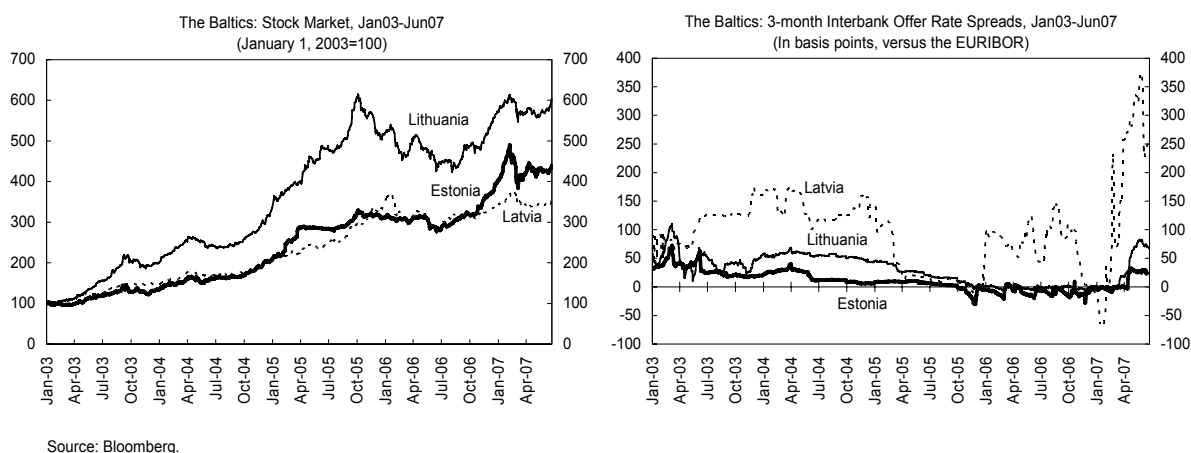
8. **Banking sector indicators are strong.** Banks are well capitalized, although liquidity ratios have declined in recent years. Profitability is high compared with banks in the EU. Non-performing loans (NPLs) more than 90 days overdue are negligible although there has been some increase in arrears in the 1-60 day range, and NPLs are lagging indicators in a period of rapid credit growth. Ultimately, since Estonian banks are affiliates of larger institutions that manage risk on a consolidated basis, their soundness depends on parent institutions' readiness to supply liquidity or capital if necessary. Parent banks' incentive to stand behind their Estonian affiliates is likely strengthened by the affiliates' good track records and by the parents' interest in protecting their brand names in an integrated regional market. The cyber-attacks on Estonian internet servers earlier this year temporarily disrupted access to major banks' websites, but did not compromise the integrity of the financial system.

Financial Soundness Indicators of the Banking Sector, 2000-2007Q1

	2000	2001	2002	2003	2004	2005	2006	2007Q1
Regulatory capital as percent of risk-weighted assets	13.2	14.4	15.3	14.5	13.4	11.7	13.2	13.7
Gross profits as percent of average equity capital (ROAE)	8.0	20.7	14.7	14.1	20.0	21.0	19.8	21.2
Non-performing loans (NPL) as percent of gross loans	1.0	1.3	0.8	0.4	0.3	0.2	0.2	0.2
Liquid assets as percent of total assets	25.4	24.3	21.2	19.5	22.3	24.9	19.2	17.6

Source: Eesti Pank.

9. **Estonia's track record of sound macroeconomic and prudential policies helped it brush off contagion effects of exchange rate pressures in Latvia earlier this year.** While macroeconomic developments show similarities among the Baltic countries—booming domestic demand, rising inflation, widening external current account deficits, and burgeoning credit—Estonia is distinguished by its stronger fiscal position and its more dynamic and diversified economy (Figure 4). Eesti Pank's timely response in 2005-06 to early signs of overheating (increasing public awareness of risks, raising the risk weight on mortgages and reserve requirements on deposits) also helped to maintain confidence. Credit ratings agencies—most recently S&P—have maintained Estonia's investment grade and “stable” outlook, citing the competitive economy, the CBA, favorable prospects for euro adoption, and the tough fiscal policy stance. Money market spreads did increase slightly in April but remain relatively small. In the equity market, the global correction in February-March 2007 reversed the previous six months' gains in the Tallinn index, which has since, however, regained some of the lost ground.



Source: Bloomberg.

10. **Estonia's long-standing commitment to fiscal prudence—budget surpluses are the norm and government debt is negligible—was reinforced in 2006 by a large fiscal surplus.** This solid performance was partly driven by a strong increase in non-tax revenue which more than offset the impact of a long-planned cut in the income tax rate. The revenue increase was partly a one-off: the authorities' achievement was to resist spending it.

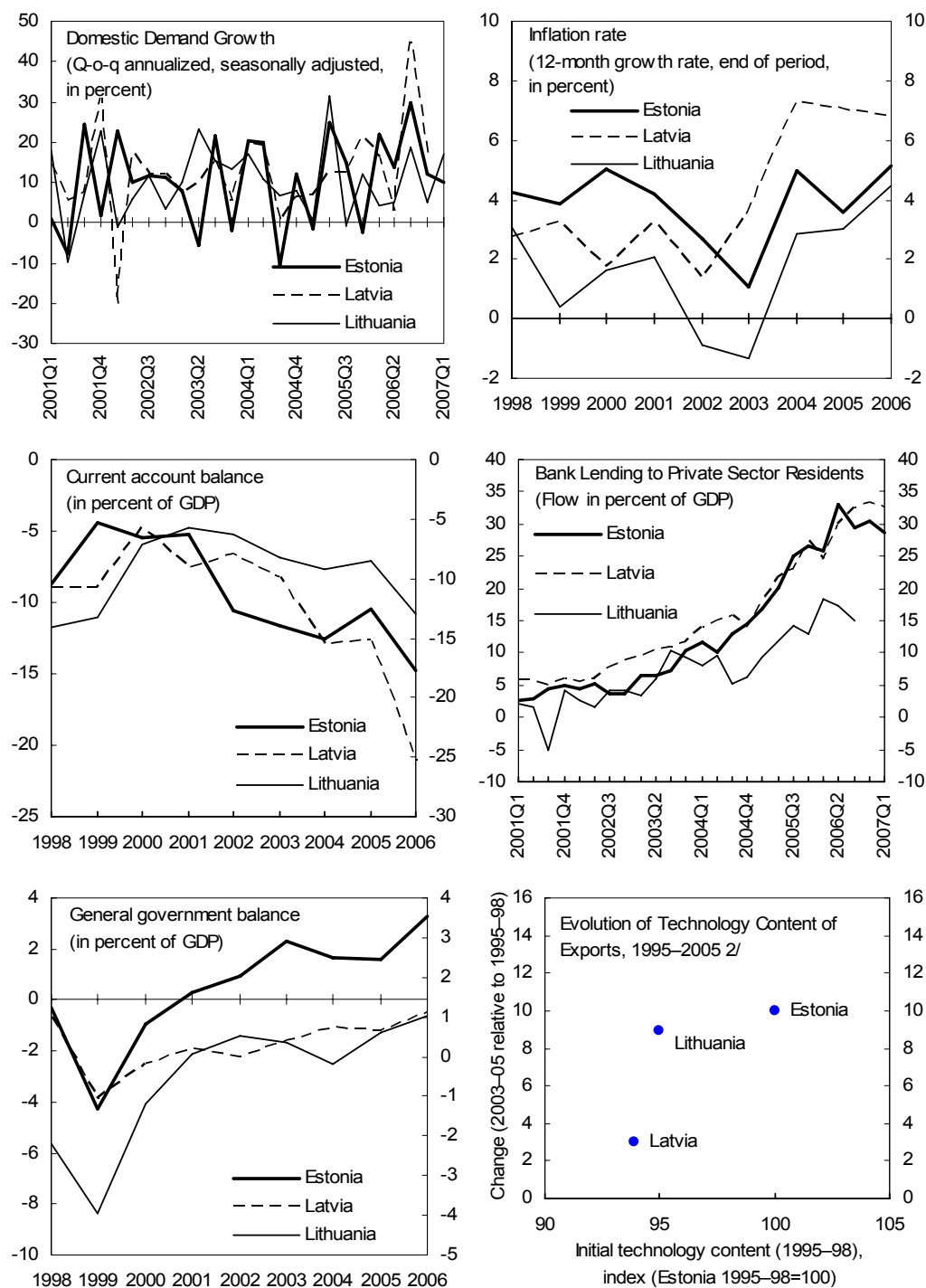
Estonia: Selected Fiscal Indicators, 2003-06  
(Percent of GDP)

	2003	2004	2005	2006
General government balance	2.5	1.6	1.6	3.3
Fiscal Impulse 1/		1.7	-0.3	-0.1
Gross public debt	5.7	5.2	4.4	4.1

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

1/ First difference in the structural balance, calculated based on a HP filter estimate of the output gap and adjusted for the impact of EU funds on domestic vs. external demand, with sign reversed.

Figure 4. The Baltics: Recent Developments, 2000-07



Source: Eurostat; UN Comtrade; and IMF staff calculations.

1/ 2006 data as of September 2006.

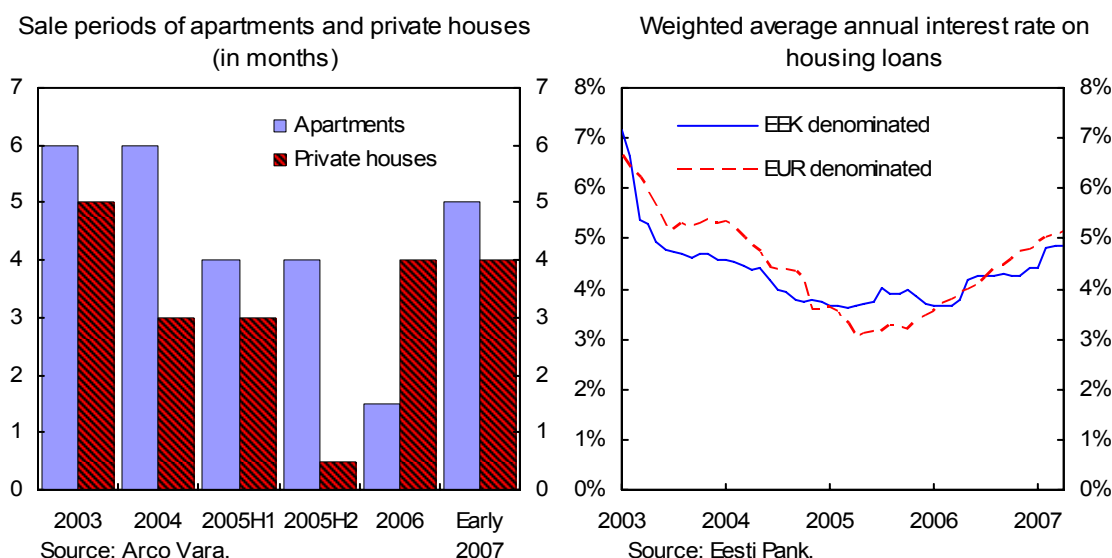
2/ Technology content of exports is defined as the weighted share of exports in each of 3 technology categories (low-tech, resource intensive, and medium- and high-tech) where the weights reflect the share of each category in total exports and the relative ranking of each technology category (1/6, 1/3, 1/2, respectively).

### III. DISCUSSIONS WITH THE AUTHORITIES

11. **Discussions focused on increasing the likelihood of a soft landing and containing risks in the now less-forgiving economic environment.** The mission also discussed the challenges of population aging and sustaining productivity growth.

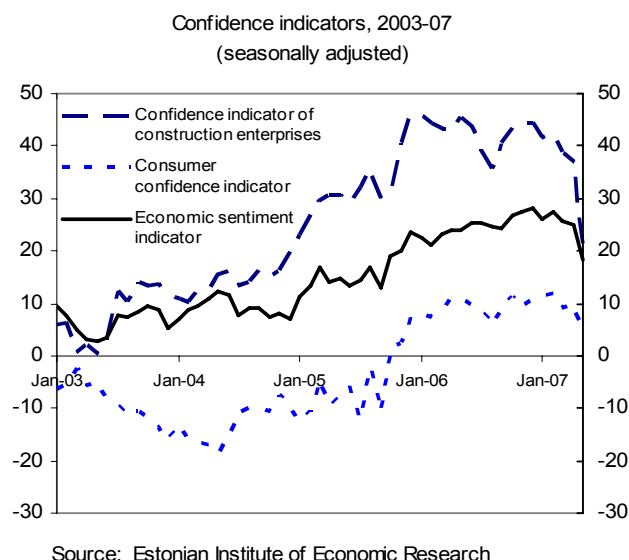
#### A. Macroeconomic Outlook

12. **Forward-looking indicators suggest that the recent moderation of demand may continue.** While consumption still has momentum, driven by large private sector bonuses and public sector wage increases and by the prospect of income tax cuts and pension increases, it is likely to lose steam. The housing market has already cooled—apartments for sale are sitting longer on the market—and appears unlikely to reignite soon as prices are already unaffordable for many households and euro area interest rates are rising. The flow of



credit has slowed and the major banks affirmed that they are tightening lending conditions across the board. More broadly, market sentiment has shifted in apparent recognition that the pace of income growth is not sustainable in the face of capacity constraints.

13. **Against this background, the mission and the authorities had both prepared baseline scenarios in which demand slows in 2007, and the economy returns to a medium-term convergence path consistent with external stability.** In staff's projection, GDP growth declines to





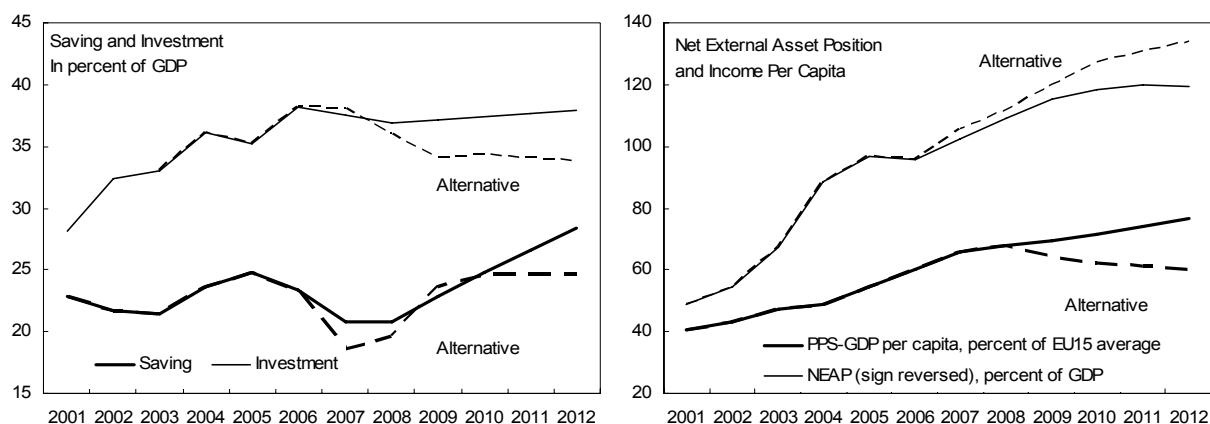
about 9 percent in 2007—still above potential—as supply constraints bind. Consumption and investment growth slow in the face of capacity constraints, declining profitability, and a rising debt burden, although domestic demand is still strong enough to drive inflation up to 5½ percent and edge the current account deficit above 15 percent of GDP for the year. In the outer years, income growth declines further as profitability is squeezed, leading to slower wage growth. The demand slowdown drives GDP growth toward its potential rate and reduces the current account deficit. External debt sustainability analysis suggests that under the baseline scenario, a current account adjustment of some 6 percentage points of GDP would stabilize the debt ratio and the net external asset position by the end of the projection period (Table 3 and Figure 5). An adjustment of this magnitude should not cause major economic strain so long as the flexibility and growth of the economy are sustained.

Baseline Macroeconomic Forecasts, 2007-09

	IMF				Eesti Pank (Spring 2007)			Ministry of Finance (Spring 2007)		
	2006	2007	2008	2009	2007	2008	2009	2007	2008	2009
Real GDP growth (%)	11.4	9.1	6.9	6.0	8.4	6.5	5.6	9.2	8.3	7.7
Inflation (%)	4.4	6.0	6.9	3.5	5.1	5.6	4.3	4.9	5.2	4.4
Current account (% of GDP)	-14.8	-16.6	-16.1	-14.4	-15.2	-13.8	-12.6	-14.9	-14.2	-13.4

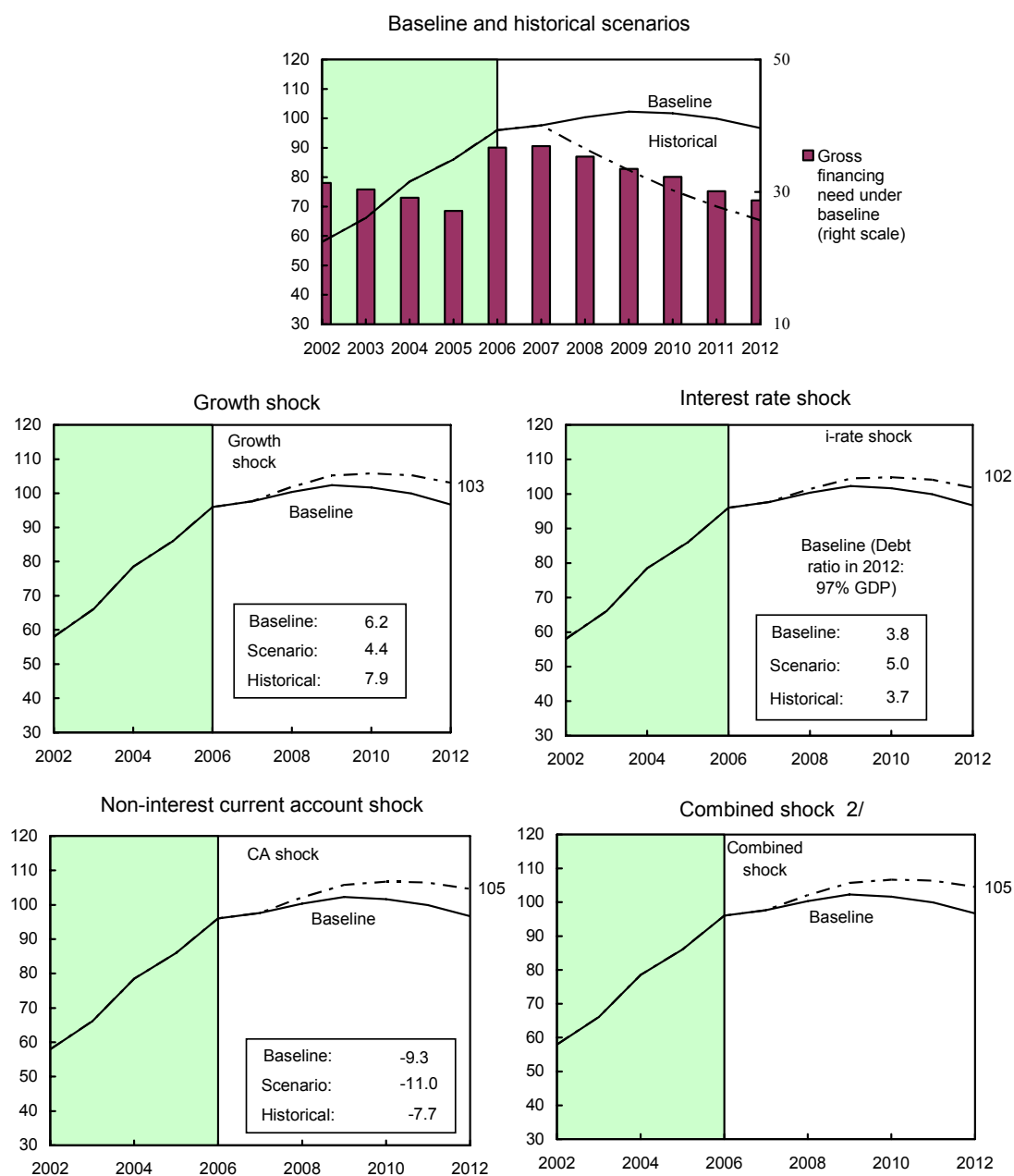
Sources: Eesti Pank; Ministry of Finance; and staff projections.

Salient Features of the Staff's Medium-Term Scenarios, 2001-12



14. **The authorities and staff agreed that this soft landing was not a sure thing.** The main risk is that the slowing of demand may not be sustained. A prolonged boom would fuel inflation, boost production costs—particularly wages—and erode competitiveness. At the same time household debt and real estate exposures would rise, amplifying balance-sheet vulnerabilities. The pricing-in of risk premia would then cause a rise in interest rates and possibly a real estate market correction. Weakened competitiveness would slow growth, producing second-round effects on investment and possibly a credit crunch as banks retrenched in response to deteriorating balance sheets. A period of stagnation and possible financial sector strains could ensue if the wage and price adjustments needed to restore competitiveness were slow to materialize. The authorities' alternative scenario was similar though slightly less severe.

Figure 5. Estonia: External Debt Sustainability, Bounds Tests 1/  
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks in case of growth and non-interest current account shocks, and 2 standard deviation shocks in case of interest rate shock. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

## B. Fiscal Policy

15. **With the macroeconomic outlook uncertain, the authorities agreed that the fiscal stance should be kept tight to help steer the economy toward a soft landing.** For 2007, the government had for the first time presented parliament with a surplus budget, setting an important precedent and sending a helpful signal of fiscal restraint. But staff pointed out that this budget contained a substantial increase in current expenditure (12 percent in real terms), including large public sector wage increases. Moreover, the projected surplus, while larger than budgeted, was significantly smaller than last year's outcome, implying an undesirable fiscal stimulus. Given that it would be difficult at this late date to produce the negative fiscal

Budgets and Outcomes, 2005-07  
(% of GDP, cash basis)

	2005		2006		2007	
	Budget	Outcome	Budget	Outcome	Budget	Outcome <sup>1</sup>
Revenue	40.9	37.2	39.1	38.7	37.7	38.7
Expenditure	41.0	35.6	39.1	35.4	37.0	37.1
Balance	-0.1	1.6	0.1	3.3	0.7	1.6

Source: Ministry of Finance

<sup>1</sup> Authorities' projection.

impulse suggested by a widening output gap, staff advised the authorities not to introduce new expenditures in the supplementary budget but instead to save any revenue overperformance. The authorities responded that the public sector wage increases were needed to attract and retain high-quality staff and emphasized that real increases would not exceed productivity gains in the private sector. Regarding the supplementary budget, the government planned not to allow for increased spending. However, the government decided to increase public pensions in mid-2007 in line with expected strong social tax revenues.

16. **The authorities agreed with staff that fiscal surpluses should be sustained in the 2008–11 budget strategy, but differed on the magnitude.** Staff made a case for surpluses of 2–3 percent of GDP on average. First, with output projected to be above capacity through 2010, a strong fiscal program was needed to contain demand pressures both directly and by dampening household expectations. Second, substantial surpluses would signal continued fiscal responsibility, reinforcing the investment climate and supporting the CBA. And third, they would help position the budget for the costs associated with population aging.<sup>2</sup> The authorities considered it politically unfeasible to target such large surpluses, but announced a target of at least 1½ percent of GDP. This was subsequently reduced to ½ percent—

<sup>2</sup> Age-related expenditures and policy options are discussed in an accompanying Selected Issues paper.

characterized as a floor—in the medium-term strategy document approved by the cabinet at end-May.

17. **Staff raised concerns about the medium-term budgetary implications of changes in taxation and pension entitlements currently under consideration.** The government has announced that income tax rates will be cut by a further 2 percentage points and the income tax threshold will be raised by 50 percent by 2011, and it has broached plans to raise (first pillar) public pension benefits significantly over the next four years. Also, a revamp of the corporate income tax, required by 2009 to conform with the EU's parent-subsidiary directive, is likely to be revenue-reducing. Staff argued that care should be taken to ensure that the medium-term budget targets are not compromised. The authorities reiterated their commitment to maintaining fiscal discipline, noting that offsetting measures will be implemented if necessary to respect their surplus targets.

18. **The authorities outlined their progress in strengthening the medium-term budgetary framework (MTBF).** They have aligned it with the political cycle (2008–11), pinned down the surplus target, and plan to use it as a basis for the annual budget process starting with the 2008 budget. Staff advised them to plan expenditure on the basis of conservative growth assumptions and to adhere to the implied expenditure ceilings irrespective of revenue developments. Staff also suggested that the MTBF include an economic classification of expenditure priorities to enhance transparency. The authorities have requested a fiscal transparency ROSC, which is likely to take place this fall.

### C. Euro Adoption

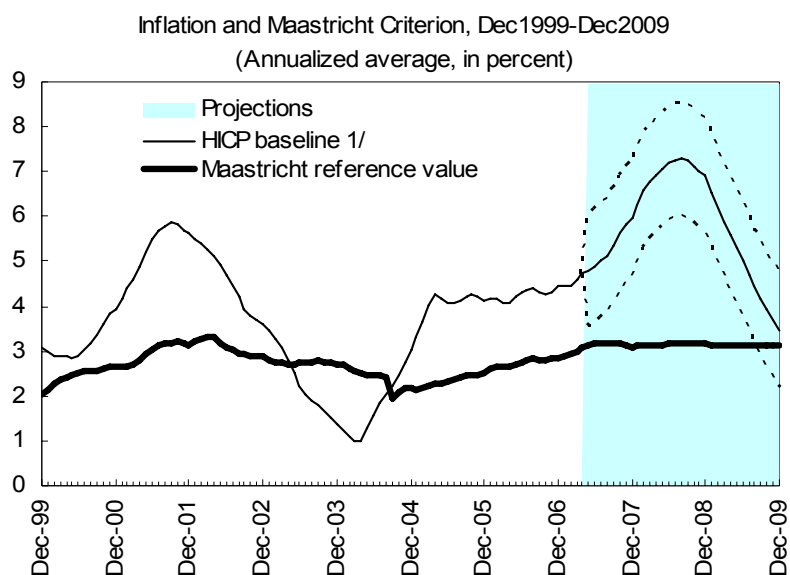
19. **With euro adoption several years away, the mission stressed the need to signal continued commitment to this goal.** Estonia meets all but one of the Maastricht criteria by comfortable margins; the sole obstacle is inflation, which, on current projections, would not fall below the Maastricht threshold before 2010 (Box 3). While the authorities do not possess effective macroeconomic instruments to reduce inflation, they recognized the importance of sending a clear signal of commitment to euro adoption. They thus decided to advance planned increases in several excise taxes to early 2008, ensuring that the impact on inflation will have faded by the time inflation comes within reach of the Maastricht criterion. This strong signal was supported by statements reaffirming that euro entry was a government priority and identifying 2011 as a possible date.

### D. Financial Sector Risks

20. **The authorities viewed currency risk as negligible in Estonia given their unwavering commitment to the CBA.** They recognized that the wide external imbalance, the delay in euro adoption, and earlier exchange rate pressures in Latvia had given rise to a market perception of increased risk, but they did not share that perception. If market pressures were to develop, the automatic adjustment mechanism of a CBA would come into play via a contraction of kroon liquidity and possibly large market-driven interest rate increases. The CBA was further anchored by the prospective exit to the euro and the structure of the financial system in Estonia—practically no government debt, rudimentary asset

### Box 3. Estonia: Inflation Projections

Staff's projections, assuming current policies, have Estonia not meeting the Maastricht inflation criterion before 2010. Demand pressures will continue to push up core inflation in 2007 and excise tax increases will provide a further boost in 2008; inflation should start to come down in 2009 as the impact of these factors subsides.



Source: Eurostat; Eesti Pank; and Fund staff estimates and projections.

1/ The dotted lines define one-standard-deviation confidence bands around this series' projection, where the standard deviation was calculated from actual data for the period January 2000-December 2006.

The projections are made using a disaggregated approach that takes into account the macroeconomic environment. Core inflation (67 percent of the HICP basket) reflects domestic demand pressures. Administered prices (18 percent) evolve in line with announced government plans. Non-administered energy prices (6 percent) and unprocessed food prices (9 percent) are in line with the WEO petroleum and food price projections.

markets, and a banking sector composed of affiliates of larger Nordic banks. The mission agreed that these conditions made disruptive exchange rate movements highly unlikely.

21. **Instead, the authorities were concerned about balance-sheet risks accumulated over several years of rapid credit growth.** They noted that the brisk competition for market share and the relative immaturity of the market—which has not seen a downturn since the bank privatizations earlier this decade—may have led to insufficient attention to borrowers' debt servicing capacity in the event of a housing market correction or a recession. While Eesti Pank did not have effective instruments to slow credit growth, it had required larger buffers by increasing reserve requirements and the risk weight on mortgages.

22. **The recent slowdown in credit growth suggested that market discipline had now taken hold.** Eesti Pank's campaign to increase the awareness of risk through public statements and policy signals, combined with increased financial market concern about Baltic risks, had contributed to a shift in behavior: parent banks—subject to market discipline by ratings agencies and shareholders—had called for tighter credit conditions and a scale-back of lending targets by as much as fifty percent. Against this background, the authorities considered that risk buffers were likely still sufficient.

23. **The mission acknowledged that risk buffers were large but noted that their adequacy should be tested against a more demanding standard than used so far; the authorities were unconvinced.** While banks do perform stress tests under instructions from their parent banks or the Financial Supervision Authority (FSA), the mission advised the authorities to press for scenarios embedding more severe and more varied shocks, tailored to Estonian conditions. Staff also urged the authorities to perform a systemic stress test based on a large but plausible macroeconomic shock, including possibly a large increase in the interest rate, and to use the outcome to review capital requirements. The authorities noted that Basel II rules, to take effect in 2008, would require banks to carry out more systematic programs of stress testing; moreover, in the run-up to Basel II, the FSA was currently assessing the risk models prepared by the largest subsidiaries of Nordic banks. They agreed that a systemic stress test could be informative but pointed out that since local banks are affiliates of larger institutions which manage risk centrally, assessments based on the relatively small Estonian part of the overall portfolio were of doubtful usefulness. Moreover, intrusive regulatory interventions could lead to offshore activity or to the conversion of subsidiaries to branches. The mission recognized that increased integration complicated both supervision and regulation but noted that a clear assessment of Estonia-specific risks would allow the authorities to press—if necessary—for a joint intervention with the home country supervisor.

24. **The FSA emphasized that it was already focusing its efforts on strengthening cross-border coordination in bank supervision.** Informal contacts with partner supervisors were frequent and helpful. In addition, the FSA and the Swedish Financial Inspectorate (FI) exchanged information routinely and held regular formal meetings. More recently, the FSA had begun having direct meetings with the head offices of Swedish financial institutions with large affiliates in Estonia. The FSA and FI were also preparing a joint letter of intent establishing procedures under which each would participate in the other's onsite inspections. The authorities were looking forward to an FSAP update in early 2008 as an opportunity for further review.<sup>3</sup>

25. **The authorities also underscored the need for a multilateral approach in developing crisis management procedures.** They stressed that the first line of defense in the event of a bank run would be the banks' own resources, including from parent institutions. While Eesti Pank could furnish some additional liquidity and the Deposit

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<sup>3</sup> The FSAP will be preceded by a MONEYVAL mutual evaluation of Estonia's AML/CFT measures.

Guarantee Fund could provide coverage comparable to that in Sweden and Finland, the authorities emphasized that under some circumstances complementary support by home country institutions would be needed. In late 2006, the authorities had signed two MOUs which defined procedures to be followed in the event of a crisis: an international MOU involving Swedish and Baltic central banks and a domestic agreement among Eesti Pank, the FSA, and the Ministry of Finance.<sup>4</sup> While the MOUs provided a framework for a rapid response, they did not precommit either side to specific measures or address burden sharing. The authorities were also participating in domestic and cross-country multi-party crisis simulation exercises.

**26. The mission reiterated the case for removing distortionary tax incentives favoring housing investment.** The authorities agreed that the mortgage interest deduction could be cut further and eventually eliminated but said that no proposals were presently under consideration. On the capital gains tax, they pointed out that the exemption of owner-occupied housing was common practice internationally; in Estonia recent improvements in tax administration had raised compliance rates for the tax on non-exempt housing.

### E. Competitiveness and Productivity

**27. The authorities saw no problems with the current level of competitiveness.** The main indicators they rely on—export performance and the profitability of the export sector—were healthy in 2006 and they expected them to remain so as wage growth moderated. Staff pointed to real exchange rate indices suggesting some erosion of competitiveness in 2006–07 (Box 2). The authorities agreed that excessive wage increases could erode competitiveness but they noted that it was normal for the real exchange rate to appreciate during a boom; this should unwind when the economy slows down. This dynamic was amplified in Estonia by the widespread use of bonuses, which typically constitute 20 percent of total salary and are partly linked to indices that move with the business cycle—sales, profits, or turnover. The high wage growth in the first quarter of 2007 was thus in part the result of bonuses based on the exceptional performance of firms last year. Symmetrically, bonuses provided room for some automatic wage moderation in downturns.

Bonus Payments, 2006					
	All companies	Companies employing mainly:			
		High-skilled white-collar workers	Low-skilled white-collar workers	High-skilled blue-collar workers	Low-skilled blue-collar workers
		(in percent)			
Share of enterprises paying performance-related bonuses	46.8	48.5	57.7	47.5	31.1
Bonuses depend on:					
Enterprise profit	27.4	56.3	26.7	19.3	28.6
Enterprise turnover	23.1	18.8	40.0	19.3	7.1
Individual work effort	49.6	25.0	33.3	61.4	64.3
Source: Eesti Pank					

Source: Eesti Pank

<sup>4</sup> Details on the international MOU can be found at:

[http://www.eestipank.info/pub/en/majandus/finantskeskkond/keskpanga\\_roll/mou1218.pdf](http://www.eestipank.info/pub/en/majandus/finantskeskkond/keskpanga_roll/mou1218.pdf).

28. **Staff and the authorities agreed that labor market flexibility is key to sustaining productivity growth and easing external adjustment.** While the mobility of labor across jobs in Estonia is high by European standards, some indicators (notably, the World Bank's *Doing Business* index) have highlighted rigidities that could pose problems in a downturn. The government has initiated a review of the 1992 Employment Contracts Act with a view to simplifying hiring and firing procedures and reassessing the framework for severance payments and unemployment insurance. Proposals are also underway to ease the labor shortage by doubling the quota for long-term non-EU workers to 1 percent of the population and, more importantly, streamlining the application procedure for work permits. To encourage immigration of skilled workers, the authorities intend to introduce a floor for the salaries of foreign workers.

29. **The mission emphasized the importance of promoting sustained productivity growth over the medium term.** The mission presented research showing that total factor productivity growth, particularly in trade and business services, has been the main driving force behind Estonia's remarkable growth performance to date.<sup>5</sup> The basis of this performance—liberal economic institutions, conservative macroeconomic policies and increasing integration with EU markets—remains in place; the challenge is to continue to move toward (and eventually shift) the technology frontier. The authorities indicated that Estonia is moving up the value-added ladder—labor-intensive industries such as textiles are losing their comparative advantage and moving overseas as entrepreneurs shift toward knowledge-based and R&D-intensive activities. Staff noted that its own work supported the same conclusion.

#### IV. STAFF APPRAISAL

30. **After more than ten years of exceptional growth and stability, the resilience of the economy is being tested by burgeoning demand and increased regional uncertainty.** Rapid transformation inevitably entails risks but the strong policies and flexible institutions that have underpinned Estonia's enviable economic performance to date should mitigate them. There are signs of an incipient market-driven adjustment, but this is still fragile. Thus, assertive policies—within the authorities' limited room for maneuver—are needed to improve the odds of a soft landing, and continued supervisory vigilance is needed to contain financial sector risks.

31. **For the immediate future, a tight fiscal stance is needed to curtail demand and signal a renewed commitment to a conservative fiscal posture.** Since the 2007 budget implies a surplus well short of the remarkable 2006 outcome, the authorities need to send a clear signal of their determination to keep the fiscal position tight, reassuring financial markets and dampening unrealistic expectations on the part of consumers and borrowers. At

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<sup>5</sup> See the accompanying Selected Issues paper for an analysis of productivity developments based on firm-level data.



the present stage, that signal can best be sent by placing a moratorium on new spending under the supplementary budget in spite of a large projected revenue overperformance.

32. **Equally important is a more ambitious medium-term fiscal framework.** Estonia's past commitment to budget balance or surplus served it well, but a more ambitious and transparent framework is now needed to lock down expectations, buttress the CBA, and position the budget for future age-related expenditures. The 2008–11 budget strategy, approved after the mission's departure, is a welcome departure insofar as it establishes the principle of surpluses rather than balance. But the surplus floors cited in the strategy fall well short of what is needed: if adhered to, they would deliver a procyclical impulse and increase rather than reduce the size of government relative to GDP. And the practice of specifying floors rather than targets muddies the signal of the government's intentions (particularly since budgets have overperformed by large margins in recent years) and undermines fiscal policy transparency. A review the 2008 budget target later in the year in light of economic growth and evolving risks will be the opportunity to prepare a budget that is appropriately tight. The mid-2008 revision of the MTBF for the outer years should be used to prepare a strategy that sends clearer signals of the authorities' medium-term fiscal program.

33. **Although the banking system appears strong, financial sector risks call for sustained supervisory vigilance.** While the authorities' commitment to the CBA is credible, a collapse in real estate prices, a sharp hike in interest rates, or a protracted economic slowdown could lead to financial stress. The authorities' campaign to raise public awareness of macroeconomic risks appears to have borne fruit and should be kept up. In the meantime, though the risk buffers seem wide, the authorities should regularly review their adequacy through more active use of stress testing as well as sustained close supervision of credit standards, internal controls, and risk assessment procedures. In particular, the FSA could increase the frequency and comprehensiveness of stress tests, as well as the severity of the shocks used.

34. **Bank supervision and risk management have been complicated by Estonia's close integration with the Nordic countries and the openness of its capital account.** Thus, recent steps to institutionalize cooperation with the Swedish financial supervisor are welcome and cooperation will need to become still closer when the region moves to Basel II in 2008. The authorities' review of the risk models developed by the larger banks in the run-up to Basel II is a welcome opportunity to ensure that those models and the associated stress tests are well adapted to the Estonian situation. Based on this assessment, there may be a case for reviewing the adequacy of risk buffers, in consultation with the home supervisor.

35. **Euro adoption should remain a key objective.** Adopting the euro will lock in the benefits of the CBA while eliminating the residual balance-sheet risks associated with a separate currency. In view of the robustness of the CBA and the policy framework, markets have accepted a three- to four-year postponement but a longer or open-ended delay would not be welcome. The authorities have few instruments to accelerate the process but they need to reassure markets and minimize the costs of delay. The recent decision to change the timing of planned excise tax increases in order to maximize the chances of euro entry by 2011 was

both an effective step to reach that goal and a clear signal of the authorities' commitment to it.

**36. With some indicators pointing to real exchange rate overvaluation, and given the CBA and prospective euro adoption, labor and product market flexibility are essential.**

In a rapidly converging economy such as Estonia's, competitiveness must be assessed in a dynamic context and from a medium-term perspective. In this regard, market flexibility will facilitate a shift of resources from non-traded to traded sectors, easing the external adjustment, and a shift toward the higher value-added sectors, improving the foundation for continued growth. The existing vibrant business environment must be maintained by keeping red tape and other operating costs to a minimum. While the labor market has shown remarkable flexibility in the upswing, the ongoing review of the Employment Contracts Act is a good opportunity to weed out outmoded labor market rules and procedures whilst preserving an appropriate balance between flexibility and social objectives. In the face of current labor market tightness and a secular decline in the labor supply, relaxing temporary immigration restrictions across the skill spectrum could help keep business costs down and relieve growth bottlenecks.

**37.** It is recommended that the Article IV consultation with Estonia remain on the standard 12-month cycle.

Table 1. Estonia: Selected Macroeconomic Indicators, 2001–08  
(In units as indicated)

	2001	2002	2003	2004	2005	2006 Est.	2007 Proj.	2008 Proj.
<b>National income, prices and wages</b>								
Nominal GDP (kroons, billions)	108.2	121.4	132.9	146.7	173.1	204.6	236.2	263.6
GDP (euro, millions)	6,916	7,757	8,494	9,375	11,061	13,073	15,098	16,848
Real GDP growth (year-on-year in percent)	7.7	8.0	7.1	8.1	10.5	11.4	9.1	6.9
Average CPI (year-on-year change in percent)	5.8	3.6	1.3	3.0	4.1	4.4	6.0	6.9
GDP deflator (year-on-year change in percent)	5.2	3.8	2.3	2.1	6.8	6.1	5.9	4.4
Average monthly wage (year-on-year growth in percent)	13.0	10.9	9.7	7.8	11.4	16.2	15.0	12.0
Unemployment rate (ILO definition, percent)	12.6	10.3	10.0	9.7	7.9	5.7	5.7	5.5
<b>Saving-investment balances (in percent of GDP)</b>								
Domestic saving	22.9	21.7	21.4	23.6	24.8	23.3	20.8	20.8
Private	19.9	17.7	16.7	20.0	20.7	18.6	18.8	17.4
Public	3.1	4.0	4.7	3.7	4.1	4.7	2.1	3.5
Domestic investment	28.1	32.4	33.0	36.2	35.2	38.2	37.5	36.9
Private	25.2	28.9	30.3	33.4	31.8	34.3	33.9	32.5
Public	2.9	3.5	2.7	2.8	3.5	3.9	3.6	4.4
Foreign saving	5.2	10.6	11.6	12.5	10.5	14.8	16.6	16.1
<b>General government (in percent of GDP)</b>								
Revenue and grants	34.1	35.3	36.4	37.4	37.2	38.7	37.9	39.2
Expenditure and net lending	33.7	34.2	33.9	35.7	35.6	35.4	35.7	36.4
Fiscal balance	0.4	1.1	2.5	1.6	1.6	3.3	2.3	2.8
<b>External sector (in percent of GDP)</b>								
Trade balance	-12.5	-15.2	-16.3	-17.4	-13.5	-16.6	-19.4	-19.1
Service balance	10.4	8.1	8.6	9.3	7.3	6.3	6.9	7.0
Current account	-5.2	-10.6	-11.6	-12.5	-10.5	-14.8	-16.6	-16.1
Gross international reserves (euro, millions)	930	958	1098	1317	1647	2128	2491	2706
in months of imports	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6
Relative to gross short-term debt (including trade credits)	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4
Gross external debt/GDP (in percent) 1/	53.7	58.0	66.1	78.5	86.0	96.0	97.7	100.4
Net external debt/GDP (in percent) 2/	4.4	10.5	13.2	17.2	17.7	27.0	35.1	42.0
General government external debt/GDP (in percent)								
Excluding government assets held abroad	2.8	2.8	2.9	2.7	2.3	2.3	1.3	1.1
Including government assets held abroad 3/	-0.6	-2.5	-5.2	-5.2	-5.3	-6.7	-6.5	-5.9
<b>Exchange rate (EEK/US\$ - period average) 4/</b>	17.5	16.6	13.9	12.6	12.6	12.5	...	...
<b>Money and credit (year-on-year growth in percent)</b>								
Domestic credit to nongovernment	22.2	27.8	27.0	31.2	33.4	41.6	...	...
Base money	-9.8	-1.5	14.6	24.0	33.0	30.7	...	...
Broad money	23.0	11.2	10.9	15.8	41.9	28.2	...	...

**Social Indicators** (reference year):

**Population** (2006): 1.345 million; **Per capita GDP** (2005): €9,732; **Life expectancy at birth** (2005): 78.1 (female) and 67.3 (male); **Poverty rate** (share of the population below the established risk-of-poverty line, 2005): 18.0 percent;

**Main exports**: electrical equipment and parts.

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

1/ Includes trade credits.

2/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by Estonian residents.

3/ Includes the Stabilization Reserve Fund (SRF).

4/ The Estonian kroon is pegged at 15.6466 kroons to the euro.

Table 2. Estonia: Summary of General Government Operations, 2001–08<sup>1/</sup>  
(In percent of GDP)

	2001	2002	2003	2004	2005	2006 Est.	2007 Proj.	2008 Proj.
<b>Revenue and grants</b>	33.9	35.3	36.4	37.4	37.2	38.7	37.9	39.2
<b>Revenue</b>	33.3	34.7	35.3	35.2	34.5	35.8	35.3	35.9
<b>Tax revenue</b>	29.4	30.6	31.1	30.8	30.3	30.6	30.9	31.6
<b>Direct taxes</b>	18.1	18.8	19.3	19.1	17.6	17.7	17.6	17.3
Personal income tax	6.6	6.4	6.6	6.5	5.6	5.7	5.5	5.2
Corporate profits tax	0.7	1.1	1.6	1.7	1.4	1.5	1.6	1.5
Social security tax	6.3	6.4	6.1	5.9	5.7	5.7	5.7	5.7
Medical insurance tax	4.1	4.2	4.2	4.2	4.1	4.2	4.2	4.3
Unemployment insurance tax	...	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Land and property taxes	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3
VAT	8.0	8.4	8.4	7.7	8.5	9.1	9.6	9.7
Excises	3.3	3.2	3.1	3.6	3.8	3.5	3.4	4.2
Other taxes (incl. on intern. trade)	0.0	0.2	0.2	0.3	0.4	0.4	0.4	0.4
Nontax revenue	3.9	4.0	4.2	4.4	4.2	5.2	4.4	4.3
Grants	0.6	0.6	1.1	2.2	2.7	2.9	2.6	3.3
<b>Expenditure</b>	33.6	34.3	33.9	35.7	35.6	35.4	35.7	36.4
<b>Current expenditure</b>	30.7	30.8	31.2	32.9	32.1	31.5	32.1	32.0
<b>Expenditure on goods and services</b>	20.0	20.0	19.9	20.3	20.4	20.1	20.6	20.6
Wages and salaries	6.8	6.9	7.6	7.4	6.9	6.4	6.4	6.4
Other goods and services	13.2	13.1	12.3	13.0	13.5	13.6	14.1	14.1
<b>Current transfers and subsidies</b>	10.4	10.7	11.1	12.4	11.6	11.3	11.4	11.4
Subsidies	0.7	0.9	1.1	1.3	0.7	0.6	0.6	0.5
<b>Transfers to households</b>	9.7	9.7	9.9	10.4	9.9	9.6	9.8	9.8
of which: Pensions	6.1	6.0	6.2	6.2	6.1	6.0	6.2	6.2
Family benefits	1.2	1.1	1.1	1.4	1.3	1.3	1.2	1.2
Sickness benefits	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Unemployment benefits	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
Income maintenance	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1
Disability benefits	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3
Prescription drug benefits	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Other	0.2	0.4	0.5	0.6	0.6	0.6	0.7	0.7
<b>Transfers to the EU budget</b>	...	...	...	0.6	1.0	1.1	1.0	1.0
Interest payments	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Capital expenditure	2.9	3.5	2.7	2.8	3.5	3.9	3.6	4.4
Financial surplus (+) / deficit (-)	0.3	0.9	2.5	1.6	1.6	3.3	2.3	2.8
Net lending	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Overall surplus (+) / deficit (-)	0.4	1.1	2.5	1.6	1.6	3.3	2.3	2.8
Memorandum items:								
Primary fiscal balance (+, surplus)	0.6	1.3	2.8	1.9	1.8	3.4	2.4	2.8
Overall balance, ESA95 basis 2/	-0.3	0.4	2.0	2.3	2.3	3.8	...	...
Total general government debt								
Excluding government assets held abroad	4.8	5.6	5.7	5.2	4.4	4.1	...	...
Including government assets held abroad	1.5	0.3	-2.5	-2.8	-3.1	-5.0	...	...
Nominal GDP (kroons, billion)	108.2	121.4	132.9	146.7	173.1	204.6	236.2	263.6

Sources: Data provided by the Estonian authorities, and Fund staff estimates and projections.

1/ Cash basis.

2/ Source: Estonia's Statistical Office, and authorities' November 2006 Convergence Program; reflects general government data in September 2006 in line with revised national accounts data.

Table 3. Estonia: Summary Balance of Payments, 2001–12

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Projection											
	(In millions of euro)											
Current Account	-361	-825	-985	-1,173	-1,159	-1,940	-2,513	-2,706	-2,640	-2,531	-2,416	-2,263
Primary Current Account 1/	-48	-480	-514	-665	-601	-1,342	-1,771	-1,898	-1,840	-1,721	-1,530	-1,311
Trade Balance	-866	-1,180	-1,385	-1,630	-1,489	-2,169	-2,924	-3,214	-3,295	-3,296	-3,235	-3,137
Exports	3,758	3,704	4,055	4,806	6,273	7,665	8,653	9,472	10,268	11,179	12,194	13,301
Of which : goods for processing	1,422	1,146	1,204	804	641	1,231	1,389	1,521	1,649	1,795	1,958	2,135
Imports	-4,623	-4,883	-5,440	-6,436	-7,762	-9,834	-11,577	-12,686	-13,564	-14,475	-15,429	-16,438
Of which : goods for processing	-1,141	-964	-962	-674	-582	-1,141	-1,343	-1,472	-1,573	-1,679	-1,790	-1,907
Services Balance	722	632	733	868	807	819	1,042	1,180	1,276	1,380	1,492	1,613
Receipts	1,798	1,800	1,960	2,279	2,546	2,771	3,189	3,513	3,798	4,107	4,440	4,801
of which: travel and tourism	569	585	592	717	765	820	944	1,040	1,124	1,215	1,314	1,421
Payments	-1,076	-1,168	-1,228	-1,412	-1,739	-1,953	-2,147	-2,333	-2,522	-2,727	-2,949	-3,188
Income	-313	-345	-471	-508	-558	-598	-742	-808	-800	-810	-886	-952
Current Transfers	96	67	138	97	80	9	112	136	180	196	213	213
Capital and Financial Account	321	834	1,167	1,376	1,485	2,483	2,876	2,921	2,909	2,678	2,628	2,433
Capital Transfers	16	41	44	73	113	327	568	625	726	764	804	804
Financial Account	305	794	1,123	1,303	1,372	2,156	2,308	2,296	2,183	1,915	1,823	1,629
Direct Investment 2/	377	167	685	559	1,855	459	461	449	528	579	616	676
From abroad	603	307	822	776	2,349	1,282	1,101	1,156	1,247	1,345	1,413	1,484
Outward (by Estonians)	-225	-140	-137	-217	-494	-823	-640	-707	-719	-766	-797	-808
Net equity investment 2/	51	59	32	-44	-1,344	26	64	64	64	64	64	64
Loans and other investments 3/	-124	568	407	788	861	1,671	1,783	1,783	1,591	1,272	1,144	888
of which:												
Banks	-104	340	697	897	581	1,496	651	651	651	651	651	651
Government	-133	-194	-211	-45	-93	-284	-192	-128	-64	0	0	0
Monetary Authorities	-13	38	37	11	-44	24	9	9	9	9	9	9
Errors and Omissions	-7	50	-34	16	-14	-62	0	0	0	0	0	0
Overall balance	-47	59	148	219	312	481	363	215	269	147	211	170
Memorandum Items:												
EEK/EURO exchange rate (period average)	15.6	15.6	15.6	15.6	15.6	...	...	...	...	...	...	...
Gross International Reserves (EURO millions) 4/	930	958	1,098	1,317	1,647	2,128	2,491	2,706	2,975	3,122	3,333	3,503
In months of imports	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	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	0.4	0.4	0.4	0.4
	(In percent of GDP)											
Trade Balance	-12.5	-15.2	-16.3	-17.4	-13.5	-16.6	-19.4	-19.1	-17.9	-16.4	-14.8	-13.1
Goods and Non-factor Services balance	-2.1	-7.1	-7.7	-8.1	-6.2	-10.3	-12.5	-12.1	-11.0	-9.5	-8.0	-6.4
Current Account	-5.2	-10.6	-11.6	-12.5	-10.5	-14.8	-16.6	-16.1	-14.4	-12.6	-11.0	-9.5
Primary Current Account 1/	-0.7	-6.2	-6.0	-7.1	-5.4	-10.3	-11.7	-11.3	-10.0	-8.6	-7.0	-5.5
Services	10.4	8.1	8.6	9.3	7.3	6.3	6.9	7.0	6.9	6.9	6.8	6.7
Income	-4.5	-4.4	-5.5	-5.4	-5.0	-4.6	-4.9	-4.8	-4.4	-4.0	-4.0	-4.0
of which:												
Compensation of employees, net	0.1	0.2	0.3	1.1	1.5	1.9	2.3	2.5	2.5	2.4	2.4	2.3
Reinvested earnings, net	-3.3	-2.2	-4.3	-4.8	-4.5	-4.5	-4.1	-3.8	-3.7	-3.5	-3.4	-3.3
Total external debt 8/												
Gross	53.7	58.0	66.1	78.5	86.0	96.0	97.7	100.4	102.3	101.7	99.9	96.7
Net 9/	4.4	10.5	13.2	17.2	17.7	27.0	35.1	42.0	47.0	49.3	50.3	49.7
NIIP	-48.7	-54.3	-67.6	-88.5	-96.7	-95.7	-102.4	-109.2	-115.3	-118.3	-119.7	-119.2
General government external debt 10/												
Excluding Govt. assets held abroad	2.8	2.8	2.9	2.7	2.3	2.3	1.3	1.1	1.0	1.0	0.9	0.8
Including Govt. assets held abroad	-0.6	-2.5	-5.2	-5.2	-5.3	-6.7	-6.5	-5.9	-5.4	-4.9	-4.5	-4.1
Debt Service/Exports of GNFS (in percent)	8.0	9.8	11.2	12.5	12.9	14.4	14.9	15.6	16.1	17.4	17.1	17.9

Sources: Bank of Estonia and Fund staff estimates.

1/ Excluding interest payments, reinvested earnings and compensation of employees.

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 the Swedish parent owner of the bank.

3/ Including 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/ External debt is defined to include money market instruments and financial derivatives.

9/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by Estonian residents.

10/ Includes government guaranteed debt.

Table 4. Estonia: Macroeconomic Framework, 2001–12  
(In percent of GDP, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Projection											
GDP real growth (year-on-year, percent)	7.7	8.0	7.1	8.1	10.5	11.4	9.1	6.9	6.0	6.0	6.0	6.0
Domestic demand, real growth (year-on-year, percent)	7.3	12.2	7.3	9.5	7.4	15.1	11.7	6.9	5.9	5.9	5.9	5.9
Domestic saving	22.9	21.7	21.4	23.6	24.8	23.3	20.8	20.8	22.8	24.8	26.6	28.5
Private	19.9	17.7	16.7	20.0	20.7	18.6	18.8	17.6	20.4	22.5	24.7	26.3
Public	3.1	4.0	4.7	3.7	4.1	4.7	2.1	3.2	2.4	2.3	1.9	2.2
Investment	28.1	32.4	33.0	36.2	35.2	38.2	37.5	36.9	37.1	37.4	37.7	37.9
Private	25.2	28.9	30.3	33.4	31.8	34.3	33.9	32.5	32.8	32.7	33.0	33.3
Public	2.9	3.5	2.7	2.8	3.5	3.9	3.6	4.4	4.3	4.7	4.7	4.6
Foreign saving	5.2	10.6	11.6	12.5	10.5	14.8	16.6	16.1	14.4	12.6	11.0	9.5
<i>Memorandum items:</i>												
Fiscal balance 1/	0.4	1.1	2.5	1.6	1.6	3.3	2.3	2.5	2.0	1.4	0.9	0.9
Revenues and grants	34.1	35.3	36.4	37.4	37.2	38.7	37.9	39.0	38.3	38.1	37.6	37.5
Expenditure and net lending	33.7	34.2	33.9	35.7	35.6	35.4	35.7	36.4	36.4	36.7	36.7	36.6
Net non-debt creating capital inflows ("+" inflow)	7.1	4.4	9.0	6.3	5.6	6.2	7.2	6.8	7.2	7.0	6.8	6.5
Capital transfers 2/	0.2	0.5	0.5	0.8	1.0	2.5	3.8	3.7	3.9	3.8	3.7	3.4
Net equity investment	0.8	0.9	0.4	-0.5	-12.2	0.2	0.4	0.4	0.3	0.3	0.3	0.3
Net foreign direct investment	6.0	2.9	8.1	6.0	16.8	3.5	3.1	2.7	2.9	2.9	2.8	2.8
CPI inflation (average, year-on-year in percent)	5.8	3.6	1.3	3.0	4.1	4.4	6.0	6.9	3.5	2.8	2.8	2.8
CPI inflation (end-period, in percent)	4.2	2.7	1.1	5.0	3.6	5.1	6.8	5.6	2.8	2.8	2.8	2.7
Employment growth (average, year-on-year in percent)	0.9	1.4	1.5	0.2	2.0	6.4	1.9	0.3	0.2	0.2	0.2	0.2
Unemployment rate (percent)	12.6	10.3	10.0	9.7	7.9	5.7	5.7	5.5	5.5	5.4	5.4	5.3
Average wage growth (percent)	13.0	10.9	9.7	7.8	11.4	16.2	15.0	12.0	9.0	8.0	8.0	8.0
GDP (billions of kroons)	108.2	121.4	132.9	146.7	173.1	204.6	236.2	263.6	287.8	314.2	342.8	374.0

Sources: Estonian authorities, and Fund staff estimates.

1/ Public savings minus public investment differs from the fiscal balance by the amount of capital transfers received from abroad.

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

Table 5. Estonia: Financial Soundness Indicators of the Banking Sector, 1999-07  
(In units as indicated)

	1999	2000	2001	2002	2003	2004	2005	2006	2007Q1
<i>Capital adequacy</i>									
Regulatory capital as percent of risk-weighted assets	16.05	13.17	14.39	15.26	14.51	13.37	11.72	13.16	13.69
Regulatory Tier I capital to risk-weighted assets, in percent	15.92	14.42	14.44	13.57	13.44	12.92	11.71	10.04	9.86
Capital as percent of assets	15.47	12.60	13.27	12.14	11.30	9.81	8.64	8.41	8.43
<i>Asset composition and quality</i>									
<i>Sectoral distribution of bank credit to the private sector (as percent of total credit to private sector) 1/</i>									
Agriculture/Food Industry	4.77	3.41	3.05	2.87	2.48	2.14	2.58	2.96	2.84
Real estate/Construction and Development loans	16.11	13.24	13.72	12.30	11.15	12.50	14.31	19.09	18.92
Consumer loans	6.53	1.32	1.94	2.25	2.02	2.63	3.27	4.46	4.61
energy resources and fuel loans	0.84	2.23	0.95	0.84	0.79	0.71	1.06	1.09	1.08
Loans to Banks	1.31	3.68	10.03	8.28	9.56	12.28	9.27	6.65	6.50
Industrial/Commercial loans	15.23	12.42	10.54	10.03	6.93	5.66	8.54	9.83	9.90
Transportation and Road Construction Loans	4.03	3.17	3.03	3.18	3.28	4.13	4.58	4.16	4.00
Other loans	28.58	30.12	28.53	30.72	31.27	32.81	41.67	46.62	47.13
Other financial intermediaries	22.60	30.41	28.22	29.52	32.52	27.16	14.72	5.14	5.02
<i>Sectoral distribution of bank credit to corporations (as percent of total loan exposure)</i>									
Construction	1.48	1.27	0.91	0.80	0.74	0.60	1.04	1.42	1.49
Real estate	14.34	11.66	12.38	11.00	10.02	11.56	12.98	17.38	17.17
Industry	14.95	12.12	10.21	9.62	6.68	5.50	5.33	5.17	5.03
Transport & tourism	6.71	5.07	4.40	4.51	4.56	5.15	5.55	5.53	5.29
Energy and utilities	0.83	2.17	0.92	0.81	0.77	0.69	1.04	1.07	1.06
Other	16.41	12.59	10.53	9.00	7.85	7.55	12.40	13.66	14.10
Financial enterprises (including credit institutions, insurance companies)	23.47	33.26	37.06	36.28	40.58	38.38	23.49	11.62	11.37
<i>Asset quality</i>									
Non-performing loans (NPL) as percent of gross loans	1.73	1.05	1.33	0.80	0.37	0.26	0.20	0.18	0.21
NPL net of provisions as percent of tier I capital	...	5.01	5.16	3.26	2.32	2.03	1.22	1.56	1.83
Large exposures as percent of tier I capital	23.95	24.38	16.44	10.43	8.20	15.77	28.38	8.65	9.60
<i>Earnings and profitability</i>									
Gross profits as percent of average assets (ROAA)	1.52	1.18	2.66	1.55	1.70	2.13	1.96	1.70	1.28
Gross profits as percent of average equity capital (ROAE)	9.43	8.04	20.71	14.69	14.15	20.04	21.04	19.77	21.15
Net interest margin (net interest income as percent of interest bearing assets)	4.20	4.26	3.89	3.59	2.91	2.39	2.04	2.22	1.65
Gross income as percent of average assets	6.20	5.21	6.08	4.90	4.61	4.67	4.13	3.78	1.10
Net interest income as percent of gross income	63.39	71.18	56.70	65.15	55.73	46.03	45.90	56.18	56.37
Non-interest income as percent of gross income	36.61	28.82	43.30	34.85	44.27	53.97	54.10	43.82	43.63
Trading income as a percent of gross income	18.72	27.81	17.94	28.35	23.72	18.16	18.51	18.57	24.59
Non-interest expenses as percent of gross income	62.86	65.64	53.54	62.86	56.39	49.57	50.94	51.91	48.30
Personnel expenses as percent of non-interest expenses	77.32	77.08	76.85	76.86	76.47	77.90	76.11	76.91	76.83
Spread between reference loan and deposit rates, in percent	3.96	4.05	3.69	3.44	2.78	2.30	1.95	2.11	1.57
<i>Liquidity</i>									
Liquid assets as percent of total assets	26.63	25.43	24.30	21.20	19.46	22.30	24.93	19.19	17.61
Liquid assets as percent of short-term liabilities	45.56	40.33	37.30	32.24	30.10	39.17	39.46	31.98	29.93
Foreign currency loans as percent of total loans	76.1	77.9	78.7	82.6	81.5	80.4	79.9	78.1	79.2
Foreign currency liabilities as percent of total liabilities	48.02	49.98	45.61	46.95	51.43	57.8	59.9	59.8	62.9
Foreign currency liabilities+capital as percent of total liabilities+capital	40.6	43.7	39.6	41.2	45.7	52.1	54.7	54.7	57.6
Deposits as percent of assets	56.1	60.1	62.4	59.7	54.1	48.5	51.3	51.2	61.2
Loans as percent of deposits	101.0	98.5	95.4	102.5	129.5	142.9	132.1	144.8	132.6
<i>Sensitivity to market risk</i>									
Off-balance sheet operations as percent of assets	46.1	47.9	38.0	29.9	38.1	35.9	50.1	55.5	74.3
Gross asset position in derivatives as a percentage of tier I capital	...	...	...	...	...	3.68	2.37	2.78	3.87
Gross liability position in derivatives as a percentage of tier I capital	...	...	...	...	...	2.69	1.30	3.39	4.24
Net open position in foreign exchange as a percentage of tier I capital	3.27	2.30	3.74	31.83	12.46	18.36	7.81	21.70	25.42
Net open position in equities as a percentage of tier I capital	...	...	...	...	...	49.83	58.77	51.97	60.46

Source: Bank of Estonia.

Table 6. Estonia: Indicators of External Vulnerability, 2001–06  
(In percent of GDP, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006
<b>Financial indicators</b>						
Public sector debt 1/	2.8	2.8	2.9	2.7	2.3	2.3
Broad money (year-on-year, in percent)	23.0	11.2	10.9	15.8	41.9	28.2
Base Money (year-on-year, in percent)	-9.8	-1.5	14.6	24.0	33.0	30.7
Private sector credit (year-on-year, in percent) 2/	23.7	25.9	29.5	31.6	53.0	53.0
<b>External Indicators</b>						
Exports (percent change, annual average, in euro)	4.1	-1.4	9.5	18.5	30.5	22.2
Imports (percent change, annual average, in euro)	4.3	5.6	11.4	18.3	20.6	26.7
Current account balance	-5.2	-10.6	-11.6	-12.5	-10.5	-14.8
Capital and financial account balance	4.6	10.8	13.7	14.7	13.4	19.0
of which: Inward portfolio investment (debt securities etc.)	1.3	4.6	5.9	9.5	-9.6	0.1
Other investment (loans, trade credits etc.)	-0.4	6.1	3.3	1.7	11.5	20.4
Inward foreign direct investment	8.7	4.0	9.7	8.3	21.2	9.8
in the form of debt or loans	1.8	0.5	0.8	-0.3	-1.0	2.2
Gross official reserves (in euro millions)	930	958	1,098	1,317	1,647	2,128
NFA of the consolidated banking system (in euro millions)	785	496	-68	-730	-667	-1,597
Central Bank short-term foreign liabilities (in euro millions)	1.0	6.4	30.7	32.2	2.8	26.6
Short term foreign assets of the financial sector (in euro millions) 3/	630	935	1,605	2,073	3,146	4,016
Short term foreign liabilities of the financial sector (in euro millions)	979	1,399	1,733	2,806	2,613	3,715
Foreign currency exposure of the financial sector (in euro millions)	1,064	1,576	2,007	2,174	633	506
Official reserves in months of imports (excluding imports of goods for processing)	3.2	2.9	2.9	2.7	2.8	2.9
Broad money to reserves (ratio)	2.8	3.0	2.9	2.8	3.2	3.2
Total short term external debt to reserves 4/	1.4	1.6	1.6	1.9	2.1	2.4
Total external debt 5/	53.7	58.0	66.1	78.5	86.0	96.0
of which: Public sector debt 1/	2.8	2.8	2.9	2.7	2.3	2.3
Net external debt 6/	4.4	10.5	13.2	17.2	17.7	27.0
Debt service to exports of GNFS	8.0	9.8	11.2	12.5	12.9	14.4
External interest payments to exports of GNFS	-2.8	-2.7	-2.3	-2.3	-2.4	-2.8
External amortization payments to exports of GNFS, in percent	5.2	7.1	8.9	10.2	10.6	11.7
Exchange rate (per US\$, period average)	17.5	16.6	13.9	12.6	12.6	12.5
REER, eop, appreciation (+)	3.2	3.0	2.9	3.7	-0.6	3.4
<b>Financial Market Indicators</b>						
Stock market index 7/	144.7	212.5	285.7	448.8	664.1	856.27
Foreign currency debt rating 8/	A-	A-	A-	A	A	A
Money market spread 9/	0.72	0.04	0.23	0.16	0.02	-0.05

Sources: Country authorities, Bloomberg, Standard & Poor's, and Fund 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 Estonian residents.

7/ Tallinn stock exchange index (TALSE), 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-Alternative Scenario: Macroeconomic Framework, 2001–12  
(in percent of GDP, unless otherwise indicated)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Projection											
GDP real growth (year-on-year, percent)	7.7	8.0	7.1	8.1	10.5	11.4	9.1	3.4	-1.9	-0.2	1.8	1.8
Domestic demand, real growth (year-on-year, percent)	7.3	12.2	7.3	9.5	7.4	15.1	15.0	4.3	-5.6	-0.2	1.5	1.5
Domestic saving	22.9	21.7	21.4	23.6	24.8	23.3	18.6	19.7	23.6	24.7	24.6	24.6
Private	19.9	17.5	16.4	20.0	20.7	18.6	15.6	16.6	23.2	24.1	24.6	24.5
Public	3.1	4.3	4.9	3.7	4.1	4.7	3.0	3.1	0.4	0.6	0.0	0.1
Investment	28.1	32.4	33.0	36.2	35.2	38.2	38.1	36.0	34.1	34.3	34.1	33.8
Private	25.2	28.9	30.3	33.4	31.8	34.3	34.5	31.6	29.4	28.9	28.4	27.9
Public	2.9	3.5	2.7	2.8	3.5	3.9	3.6	4.4	4.7	5.4	5.7	5.9
Foreign saving	5.2	10.6	11.6	12.5	10.5	14.8	19.5	16.3	10.5	9.6	9.4	9.2
<i>Memorandum items:</i>												
Fiscal balance 1/	0.4	1.3	2.8	1.6	1.6	3.3	3.2	2.4	0.0	-0.5	-1.2	-1.5
Revenues and grants	34.1	35.5	36.5	37.4	37.2	38.7	38.8	39.1	38.5	39.4	39.3	39.7
Expenditure and net lending	33.7	34.2	33.7	35.7	35.6	35.4	35.6	36.7	38.5	39.9	40.5	41.2
Net non-debt creating capital inflows ("+" inflow)	7.1	4.4	9.0	6.3	5.6	6.2	6.8	3.8	3.6	3.5	3.9	3.4
Capital transfers 2/	0.2	0.5	0.5	0.8	1.0	2.5	3.7	3.7	4.2	4.4	4.4	4.3
Net equity investment	0.8	0.9	0.4	-0.5	-12.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Net foreign direct investment	6.0	2.9	8.1	6.0	16.8	3.5	3.0	0.1	-0.7	-0.9	-0.6	-0.8
CPI inflation (average, year-on-year in percent)	5.8	3.6	1.3	3.0	4.1	4.4	6.2	7.9	3.2	2.0	2.2	2.2
CPI inflation (end-period, in percent)	4.2	2.7	1.1	5.0	3.6	5.1	7.6	6.4	1.5	2.2	2.2	2.2
Employment growth (average, year-on-year in percent)	0.9	1.4	1.5	0.2	2.0	6.4	1.9	-0.5	-4.6	0.3	0.2	0.3
Unemployment rate (percent)	12.6	10.3	10.0	9.7	7.9	5.7	5.7	6.3	10.7	10.5	10.4	10.2
Average wage growth (percent)	13.0	10.9	9.7	7.8	11.4	16.2	18.0	10.0	7.0	3.0	3.0	3.0
GDP (billions of kroons)	108.2	121.4	132.9	146.7	173.1	204.6	237.0	264.3	267.5	272.3	283.2	294.6

Sources: Estonian authorities, and Fund staff estimates.

1/ Public savings minus public investment differs from the fiscal balance by the amount of capital transfers received from abroad.

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

Table 8. Estonia: External Debt Sustainability Framework, 2002-2012  
(In percent of GDP, unless otherwise indicated)

	Actual										Projections				Debt-stabilizing non-interest current account 6
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2012	2012	2012	
<b>1 Baseline: External debt</b>	58.0	66.1	78.5	86.0	96.0	97.7	100.4	102.3	101.7	99.9	96.7	96.7	96.7	96.7	-7.5
2 Change in external debt	4.3	8.2	12.4	7.5	10.0	1.6	2.7	2.0	-0.7	-1.7	-3.2	-3.2	-3.2	-3.2	
3 Identified external debt-creating flows (4+8+9)	0.7	-9.6	-6.0	-8.8	1.2	8.9	9.4	7.6	5.4	3.7	2.0	2.0	2.0	2.0	
4 Current account deficit, excluding interest payments	8.7	10.0	10.8	8.6	12.6	14.1	12.7	10.9	9.1	7.5	6.0	6.0	6.0	6.0	
5 Deficit in balance of goods and services	7.1	7.7	8.1	6.2	10.3	12.5	12.1	11.0	9.5	8.0	6.4	6.4	6.4	6.4	
6 Exports	70.9	70.8	75.6	79.7	79.8	78.4	77.1	76.5	76.1	75.9	75.7	75.7	75.7	75.7	
7 Imports	78.0	78.5	83.7	85.9	90.2	90.9	89.1	87.5	85.7	83.9	82.1	82.1	82.1	82.1	
8 Net non-debt creating capital inflows (negative)	-1.8	-7.4	-6.8	-7.2	0.3	-0.5	-0.6	-1.2	-1.6	-1.8	-2.0	-2.0	-2.0	-2.0	
9 Automatic debt dynamics 1/	-6.3	-12.2	-10.0	-10.1	-11.7	-4.7	-2.6	-2.1	-2.1	-2.0	-1.9	-1.9	-1.9	-1.9	
10 Contribution from nominal interest rate	1.9	1.6	1.7	1.9	2.2	2.6	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.5	
11 Contribution from real GDP growth	-3.6	-3.1	-4.4	-7.0	-8.2	-7.3	-6.0	-5.5	-5.6	-5.5	-5.4	-5.4	-5.4	-5.4	
12 Contribution from price and exchange rate changes 2/	-4.5	-10.7	-7.3	-5.1	-5.7	...	...	...	...	...	...	...	...	...	
13 Residual, incl. change in gross foreign assets (2-3) 3/	3.6	17.7	18.3	16.3	8.8	-7.2	-6.7	-5.6	-6.0	-5.5	-5.3	-5.3	-5.3	-5.3	
External debt-to-exports ratio (in percent)	81.7	93.4	103.9	107.9	120.3	124.5	130.2	133.8	133.6	131.6	127.7	127.7	127.7	127.7	
<b>Gross external financing need (in billions of US dollars) 4/</b>	2.3	2.9	3.4	3.7	6.0	7.3	7.8	8.1	8.5	8.8	9.2	9.2	9.2	9.2	
in percent of GDP	31.4	30.4	29.1	27.1	36.7	36.9	35.3	33.5	32.3	30.1	28.7	28.7	28.7	28.7	
<b>Scenario with key variables at their historical averages 5/</b>						97.7	89.6	82.3	75.5	70.1	65.4	65.4	65.4	65.4	-10.6
<b>Key Macroeconomic Assumptions Underlying Baseline</b>															
Real GDP growth (in percent)	8.0	7.1	8.1	10.5	11.4	9.1	6.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
GDP deflator in US dollars (change in percent)	9.2	22.6	12.4	6.9	7.1	9.7	4.9	3.3	3.5	3.8	3.9	3.9	3.9	3.9	
Nominal external interest rate (in percent)	4.2	3.6	3.2	2.9	3.1	3.2	3.8	3.7	3.8	3.8	3.9	3.9	3.9	3.9	
Growth of exports (US dollar terms, in percent)	4.2	31.0	29.6	24.6	19.5	17.6	10.1	8.7	9.3	9.7	9.8	9.8	9.8	9.8	
Growth of imports (US dollar terms, in percent)	11.7	32.1	29.5	21.2	25.2	20.7	9.9	7.5	7.6	7.7	7.7	7.7	7.7	7.7	
Current account balance, excluding interest payments	-8.7	-10.0	-10.8	-8.6	-12.6	-14.1	-12.7	-10.9	-9.1	-7.5	-6.0	-6.0	-6.0	-6.0	
Net non-debt creating capital inflows	1.8	7.4	6.8	7.2	-0.3	0.5	0.6	1.2	1.6	1.8	2.0	2.0	2.0	2.0	

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

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

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

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

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

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



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## **IMF Executive Board Concludes 2007 Article IV Consultation with the Republic of Estonia**

On [July 20, 2007], the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with the Republic of Estonia.<sup>6</sup>

### **Background**

Estonia's commitment to prudent macroeconomic policies and regional integration has resulted in the fastest convergence among new European Union (EU) member states and an impressive rise in living standards. After more than a decade of remarkable growth, the economy is now overheating and facing increased regional uncertainties.

Rising incomes, the favorable investment climate, and low-interest financing have fueled an investment and consumption boom that has generated double-digit real GDP growth, widened the external current account deficit, and driven inflation into the 5–6 percent range, well above the Maastricht threshold for euro adoption. Domestic growth and employment opportunities in the EU have tightened the labor market—the unemployment rate has fallen sharply in the past two years to a post-transition low of less than 6 percent—and increased labor costs. Real wage increases have overtaken productivity growth in the past year, pushing up real unit labor costs and threatening external competitiveness.

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<sup>6</sup> 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.

The external environment has turned less benign as pressures on the Latvian currency earlier this year put a spotlight on financial vulnerabilities in the region. To date, Estonia's track record of sound macroeconomic and prudential policies has helped it brush off contagion effects of these developments. But the intensified scrutiny from market observers has increased the cost of policy slippage.

There are some signs of an incipient moderation of demand growth. The housing market has cooled—prices are already unaffordable for many households and interest rates are rising. The flow of credit has slowed—the major banks have reassessed risks and tightened lending conditions. And, more broadly, market sentiment has shifted in apparent recognition that the recent pace of income growth is not sustainable.

Estonia's long-standing commitment to fiscal prudence—a track record of surpluses and the near-elimination of government debt—was underscored in 2006 by a large fiscal surplus and an associated negative fiscal impulse. Looking ahead, the government is committed to keeping fiscal policy tight and is targeting budget surpluses of 0.7 percent of GDP in 2007 and 0.5 percent of GDP in 2008–11.

The banking sector is strong: banks are well capitalized, profitability is high, and non-performing loans are negligible. Given that all major Estonian banks are affiliates of much larger foreign institutions, the financial supervisor and central bank are strengthening cross-border cooperation in supervising banks and developing crisis management procedures.

## Executive Board Assessment

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**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.

## Republic of Estonia: Selected Economic Indicators

	2002	2003	2004	2005	2006
<hr/>					
<b>Real Economy</b>	<i>In units as indicated</i>				
Real GDP growth, in percent	8.0	7.1	8.1	10.5	11.4
Average CPI inflation, in percent	3.6	1.3	3.0	4.1	4.4
Unemployment rate (ILO definition), in percent	10.3	10.0	9.7	7.9	5.7
Domestic saving, in percent of GDP	21.7	21.4	23.6	24.8	23.3
Domestic investment, in percent of GDP	32.4	33.0	36.2	35.2	38.2
<b>Public Finance</b>	<i>In percent of GDP</i>				
General government balance	1.1	2.5	1.6	1.6	3.3
General government debt					
Excluding government assets held abroad	5.6	5.7	5.2	4.4	4.1
Including government assets held abroad	0.3	-2.5	-2.8	-3.1	-5.0
<b>Money and Credit</b>	<i>Changes in percent</i>				
Base money	-1.5	14.6	24.0	33.0	30.7
Broad money	11.2	10.9	15.8	41.9	28.2
Domestic credit to nongovernment	27.8	27.0	31.2	33.4	41.6
<b>Balance of Payments</b>	<i>In percent of GDP</i>				
Goods and non-factor services balance	-7.1	-7.7	-8.1	-6.2	-10.3
Current account	-10.6	-11.6	-12.5	-10.5	-14.8
Gross international reserves (euro, millions)	958	1098	1317	1647	2128
<b>Exchange Rate</b>	<i>Currency Board Arrangement</i>				
Exchange rate regime	EEK15.6466=€1				
Exchange rate parity					
Real effective exchange rate, end of period, 2000=100 1/	106.8	109.9	113.9	113.3	117.2

Sources: Estonian authorities, and Fund staff estimates.

1/ From INS, export-share weighted CPI real exchange rate against 15 major trading partners.