INTERNATIONAL MONETARY FUND

IMF Country Report No. 15/336

REPUBLIC OF ESTONIA

2015 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND INFORMATIONAL ANNEX

December 2015

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 2015 Article IV consultation with Republic of Estonia, the following documents have been released and are included in this package:

- A **Press Release**
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on a lapse of time basis, following discussions that ended on October 19, 2015, with the officials of Republic of Estonia. Based on information available at the time of these discussions, the staff report was completed on November 30, 2015.
- An **Informational Annex** prepared by the IMF staff.

The documents listed below have been or will be separately released.

Selected Issues

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IMF Executive Board Concludes 2015 Article IV Consultation with Republic of Estonia

On December 14, 2015, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Republic of Estonia, and considered and endorsed the staff appraisal without a meeting.[2]

Following the rebound from the deep recession in 2009, economic growth has slowed. Although Estonia's economic and institutional fundamentals are among the strongest in the region, the economy is expected to expand by only a modest 1.6 percent this year. Growth is primarily driven by private consumption, which benefits from strong wage growth as labor market slack diminishes for demographic reasons. Exports are subdued because of weak economic activity in key trading partners. Nonetheless, prices will likely be flat this year and the current account is expected to record a moderate surplus.

The economy should gather speed going forward. Growth is projected at 2.5 percent for 2016 and should average around 3 percent over the next few years. It is set to benefit from stabilization in the external environment through better exports and higher investment, while support from private consumption growth is likely to continue. But risks are tilted to the downside. Inflation will rise in line with price developments in the euro area, with excise tax increases providing an additional one-time boost to price levels for the next years. In the long run, the current account is projected to move into moderate deficit as investment reverts to its full historical strength.

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[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.

[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.

Executive Board Assessment

In concluding the 2015 Article IV consultation with the Republic of Estonia, Executive Directors endorsed staff's appraisal, as follows:

The economy has been holding up reasonably well in the face of difficult and uncertain external conditions. Growth is likely to decelerate to 1.6 percent this year, reflecting recession in Russia and stagnation in Finland, two important destinations for Estonian exporters. It should pick up to 2.5 percent in 2016 as the external drag diminishes and private consumption remains robust on the back of strong wage growth. Risks are mainly to the downside and relate to the external environment.

Yet, sluggish growth in recent years likely also reflects a decline in potential growth. Since 1995, Estonia has achieved the highest average growth in Central and Eastern Europe, but potential growth is estimated to have averaged only 2.25 percent a year during 2011–14. Going forward, worsening demographics, diminishing options for "easy" productivity gains, and reduced scope for capital accumulation will be additional headwinds. As a result, convergence with living standards in Western Europe could slow markedly.

This makes policies to lift potential growth the primary economic policy imperative. While Estonia clearly faces headwinds, it also has many assets: macroeconomic and institutional fundamentals are very strong; the business climate is amongst the most favorable in the region; educational standards are high; technology and science are being promoted; and Estonia is a leader in e-government. A range of further commendable reforms is under preparation in the context of the new programming period for EU funds, including revamped enterprise support with more emphasis on innovation and entrepreneurship, a new life-long learning strategy, a "work capacity reform" seeking to put more disability pensioners to work, and reforms to streamline local and central governments.

Additional growth-promoting measures could be considered. In the short-run, the focus should be on getting the planned new initiatives off the ground. It will also be critical to now start strengthening the operational policy focus on fostering productivity growth. To that effect, a strong productivity unit in the Prime Minister's office could be established to oversee implementation, evaluate and adjust programs, and keep track of government spending on productivity promotion. Over time, existing programs should be scaled up—active labor market programs, life-long learning, enterprise support, and apprenticeship programs are still rather limited in size. Supporting the upgrading of traditional industries as a second leg of innovation policies should also be considered as these industries account for the bulk of employment and value creation in the economy.

Estonia's public finances are exceptionally strong and fiscal space could be used to support productivity-enhancing programs. With no net public debt and structural fiscal surpluses since

2009, there is room for additional spending to promote productivity growth rather than accumulate more fiscal reserves. But it will be important to ensure that these fiscal resources are truly used for their intended purpose by keeping close tabs on them, for instance in the productivity unit in the Prime Minister's office. Once in place, fiscal space could be accessed while remaining in compliance with Estonia's stringent fiscal rule by producing budgets that are on average in structural balance rather than systematically in surplus. In the longer run, the rule itself could be made more flexible and allow modest structural deficits in line with European requirements while preserving overall prudent fiscal policy.

Estonia's external position is solid, but wage growth far in excess of productivity growth is starting to cloud the outlook for the tradable sector. Company profits have lately been falling and export market share gains have begun to peter out. This further underscores the centrality of raising productivity, but wage growth also needs to come down to a more sustainable pace. In this context, the more moderate wage increases envisaged in the central government's 2016 draft budget send a prudent message. The government should also make clear to social partners that the steep minimum wage increases since 2013 risk becoming counterproductive and cannot set the pace for general wage developments.

Impressive soundness indicators and further upgrades to oversight frameworks underpin financial sector stability. The return to moderate private sector credit growth is a positive development. Risks reside mainly abroad. They could be transmitted to Estonia through the cross-border banks that dominate Estonia's financial system and through trade channels, but domestic and foreign lines of defense are also strong. Nonetheless, close cooperation with home-country authorities remains important and existing Nordic Baltic platforms should be revitalized. Cooperation could also help strengthen the traction of macroprudential instruments should they need to be deployed in the next upswing in the financial cycle.

Republic of Estonia: Selected Economics Indicator, 2011–16						
	2011	2012	2013	2014	2015	2016
					Projections	
National income, prices and wages						
GDP (Euro, billions)	16.7	18.0	19.0	20.0	20.5	21.5
Real GDP growth (year-on-year in percent)	7.6	5.2	1.6	2.9	1.6	2.5
Average HICP (year-on-year in percent)	5.1	4.2	3.2	0.5	0.0	2.0
GDP deflator (year-on-year in percent)	5.3	2.7	4.0	2.0	1.2	2.2
Average monthly wage (year-on-year in percent)	1.6	6.7	6.2	5.9	4.8	4.7
Unemployment rate (ILO definition, percent)	12.3	10.0	8.6	7.4	6.8	6.5
Average nominal ULC (year-on-year in percent)	-0.1	3.1	5.5	3.3	4.6	3.0
Saving-investment balance (in percent of GDP)						
National saving	26.4	27.7	27.7	27.5	26.8	26.2
Private	21.8	21.9	22.7	21.7	21.6	20.3
Public	4.6	5.8	4.9	5.8	5.1	5.9
Domestic investment	25.1	28.1	27.6	28.0	25.2	25.6
Fixed investment	26.2	26.5	27.1	25.2	23.8	24.1
Private	21.3	20.1	21.7	20.0	18.9	18.7
Public	4.9	6.3	5.4	5.2	4.9	5.3
General government (ESA 2010 basis; percent of GDP)						
Revenue	38.4	38.7	38.0	38.7	39.5	40.8
Expenditure	37.4	39.1	38.3	38.0	39.4	40.3
Fiscal balance	1.0	-0.4	-0.3	0.8	0.1	0.5
External sector (in percent of GDP)						
Trade balance	-2.1	-6.6	-4.7	-5.0	-4.1	-4.7
Service balance	7.8	7.5	6.9	8.4	8.3	8.1
Current account	1.3	-2.4	-0.1	1.0	2.2	1.2
Gross external debt/GDP (in percent) 1/	100.3	99.8	91.8	94.7	95.6	94.8
Net external debt/GDP (in percent) 2/	6.0	-0.9	-5.3	-10.7	…	…
General government external debt/GDP (in percent)						
Excluding government assets held abroad	5.9	9.5	9.9	10.4	10.0	9.1
Including government assets held abroad 3/	-5.1	-2.6	-1.5	-1.3	-1.4	-1.8
General government debt/GDP (gross, in percent)	5.9	9.5	9.9	10.4	10.0	9.1
General government debt/GDP (net, in percent)	-5.1	-2.6	-1.5	-1.3	-1.4	-1.8
Exchange rate (Euro/US$- period average)	1.39	1.29	1.33	1.33	…	…

Sources: Estonian authorities; and IMF staff estimates and projections.
1/ Includes trade credits.
2/ Net of portfolio assets (including money market instruments), financial derivatives assets, other investment assets, and reserve assets held by Estonian residents.
3/ Includes the Stabilization Reserve Fund (SRF).

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2015 ARTICLE IV CONSULTATION

November 30, 2015

Estonia's economic fundaments and institutions are strong, but growth has been sluggish in recent years. While this partly reflects unfavorable external conditions, it has also led to concerns about medium-term prospects for income convergence with Western Europe. Growth should pick up from 1.6 percent in 2015 to 2.5 percent next year as the external drag fades and private consumption remains robust.

KEY ISSUES

- Boosting Estonia's growth potential has emerged as the primary economic policy challenge. Important supportive policies are already in place and many new initiatives are under preparation. They should secure potential growth of some 3 percent per year during 2016–20, despite adverse demographics and diminishing scope for "easy" productivity gains. But convergence could be spurred by strengthening the policy focus on raising productivity, scaling-up existing or planned programs, and putting more emphasis on the upgrading of Estonia's traditional industries as a second leg of innovation policies.

- Competitiveness could come under pressure from wage growth, which has outstripped productivity gains in recent years. Alongside policies to boost productivity, there also is a need to cool wage growth, including through moderation in public sector wage policy and ensuring that unsustainably rapid minimum wage growth does not set the pace for general wage developments.

- Public finances are already the strongest in the EU in terms of debt and deficits, and are set to improve further under Estonia's stringent fiscal rule. Rather than overperform relative to that rule through persistent surpluses, resources may be better used at the margin to foster pro-growth policies while aiming instead at overall balance. In the longer term, the fiscal rule could be made more flexible while preserving fiscal prudence.

- Estonia's largely Nordic-owned financial sector boasts impressive soundness indicators and a comprehensive macroprudential toolkit is in place. Nonetheless, close cooperation with home-country authorities remains essential to deal with potential spillovers.

Approved By
P. Gerson and H. Vikram

Discussions on the 2015 Article IV consultation mission were held in Tallinn during October 8–19. The Estonia team met with Prime Minister Rõivas, Finance Minister Sester, Bank of Estonia Governor Hansson, and other senior officials, as well as the Parliamentary Finance Committee, labor and employer organizations, private sector representatives, and non-governmental think tanks. A conference call was held with banking supervisors at the ECB on October 9. The team comprised Mr. Klingen (head), Messrs. Abdoun and Deb (both EUR) and Mr. Choi (ICD). Ms. Anni (OED) participated in the meetings.

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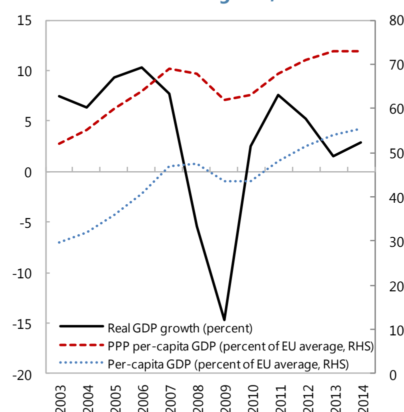
CONTEXT AND OUTLOOK

A. Context and Recent Developments

1. Estonia has been pursuing market-oriented and disciplined economic policies under stable political conditions. A three-party coalition government took office in April 2015 headed by the free-market oriented Reform Party and also comprising the center-left Social Democrats and the center-right Union of Fatherland and Res Publica. Its program seeks to strengthen national security, increase support to families with children, lower labor taxes, reform state and local administrations, and increase support for low-income earners. Increasing labor productivity to 80 percent of the EU average and raising R&D expenditure to 3 percent of GDP are central planks of Estonia's competitiveness strategy, "Estonia 2020."

2. Estonia's economic and institutional fundamentals are strong. The macroeconomic imbalances of Estonia's credit-driven boom-bust cycle are a thing of the past and unlikely to re-emerge amid credit aversion and strengthened macroprudential tools. The current account has been broadly in balance in recent years and unemployment is nearing its structural level. The business environment and government effectiveness earn high marks, the financial system boasts enviable soundness indicators, public finances are the strongest in the EU in terms of debt and deficits, and Estonia is a leader in e-government. In 2014, per-capita income reached 74 percent of the EU average in purchasing-power parity terms.

Estonia: Income Convergence, 2003-14



Sources: Statistics Estonia; and Eurostat.

3. Yet, economic growth has been sluggish in recent years and income convergence has slowed. Following a setback due to the 2008/09 crisis, income convergence has restarted, but at a slower pace. Since mid-2012 the economy has expanded at a moderate annual rate of only 2 percent, a little slower than the Central and Eastern European (CEE) average of 2½ percent over that period and leaving real GDP still slightly below its peak in 2007:Q3. Adverse external conditions are partly responsible, with Estonia being particularly affected because of large exposure to the poorly performing economies of Finland and Russia.

4. Growth came to 2.9 percent last year and 1¼ percent in the first 9 months of 2015. Private consumption was the main driver, as real wages continued to rise at a robust 5 percent and unemployment declined by 2.2 ppts over the past 18 months, falling to 6½ percent. Exports are barely growing and investment, especially for machinery and equipment, is contracting amid weak and uncertain external conditions. Inflation is hovering around zero, but low inflation is unlikely to become entrenched because of brisk wage growth and forthcoming excise tax hikes. The output gap is likely still slightly negative.

5. Estonia's external position has improved and is solid. In 2014 and 2015:H1, the current account started recording surpluses of 1.0 and 1.4 percent of annual GDP, respectively, reflecting low import growth related to weak investment and inventory drawdowns. Over the past two decades, export market shares have generally been on a rising trend, though gains seem to be flattening out more recently. The net international investment position has improved from -80 to -40 percent of GDP since 2009, reflecting capital account surpluses and the GDP rebound, and is now stronger than in most of the region. Gross external debt is still quite high, but often owed to parent companies, net external debt is negative, and net inward FDI explains the net international investment position two times over. The real effective exchange rate is broadly in line with fundamentals (Box 1).

6. Public debt is close to zero in net terms, and the budget has recorded structural surpluses for several years. Gross public debt is around 10 percent of GDP and is broadly matched by general government liquid financial assets. In addition, second-pillar pension funds have set aside over 10 percent of GDP in assets. The budget has been in structural surplus since 2009. In 2014, public finances overperformed, recording a surplus of 0.8 percent of GDP compared to a budgeted deficit of 0.5 percent of GDP as tax administration improved and public investment fell short with the transition between the 2007–13 and 2014–20 Multiannual Financial Frameworks for EU funds.

7. Indicators of financial soundness are exceptionally strong in Estonia, especially in the large Nordic-owned banks that account for the bulk of the banking system. The capital adequacy ratio averages 27 percent, the liquidity coverage ratio stands at 250 percent, and the non-performing loan ratio has declined to below 2 percent. Strong deposit growth has reduced loan-to-deposit ratios to just below 100 percent and parent bank funding to a historically low 16 percent of bank liabilities. The three banks covered by the ECB's comprehensive assessment and EBA's stress tests passed comfortably.

8. Estonia is continuing to emerge from the bottom of the financial cycle. Credit growth firmly moved into positive territory in mid-2014 and loans of credit institutions to non-financial companies and households are now expanding at a rate of 3¾ percent annually. This reflects improved balance sheets of banks, non-financial companies, and households, along with the low-interest environment and recovering house prices. Following a drop by over 50 percent, they are currently growing by 10 percent and are closing in on the 2008 peak in nominal terms, but in real terms or relative to wages they remain 30 and 40 percent lower, respectively.

B. Outlook and Risks

9. Growth should reach 1.6 percent in 2015, pick up to 2.5 percent in 2016, and average 2.8 percent during 2015–20. Robust consumption growth should continue, residential construction is already picking up in response to rising house prices, and investment should benefit from strengthening credit growth and increased availability of EU funds. Russia's export demand should bottom out after declining sharply, thereby reducing the drag on growth. Medium-term prospects are predicated on potential growth being lifted by the implementation of the government's pro-growth policies. Inflation should rise with euro-area wide inflation, retain a small premium typical of

catching-up economies, and be boosted by between ½ and 1 ppt each year during 2016–19 on account of excise tax hikes. The current account is likely to move into moderate deficit as investment recovers and unusually low imports in 2015:H1 dissipate.

10. Risks to the outlook are predominantly to the downside. A slower recovery in the euro area or unanticipated further declines in the Russian economy would both pose risks to Estonia's exports. Direct effects from global financial turmoil would likely be limited considering the absence of marketable public debt, Estonia's small financial markets, and euro area membership. But potential spillovers through the Nordic banks that account for much of Estonia's financial sector could curtail credit supply. On the domestic front, strongly rising wages could dent competitiveness. If the government's pro-growth policies are not fully implemented or fail to have the expected effects, medium-term growth could be lower and undermine income convergence.

11. The authorities broadly agreed with the outlook and saw risks mainly in external conditions and strong wage growth. Macroeconomic growth projections by the Ministry of Finance for budget purposes are close to those of staff, while the summer forecast of the Bank of Estonia was somewhat more optimistic. There was agreement that private consumption would remain the main engine of growth and that the external drag would diminish. The external environment remains a risk and export diversification to offset losses in Russia will take time. The authorities saw wage growth in excess of productivity as a risk to competitiveness if it were to continue for much longer. However, the authorities underscored that wage developments were largely outside the government's control and were also influenced by the much higher pay in Finland, which is only a short commute away. They were not overly concerned about direct financial spillovers through Nordic banks, but stressed that a house price or financial shock to the Nordic economies would simultaneously hit Estonian exporters and their financial standing. Developments in the domestic housing market are also on the authorities' radar screen.

Box 1. Estonia: External Stability Assessment

The EBA-lite methodology concludes that Estonia should normally run a current account deficit rather than the surplus that is projected for this year. However, the gap between the actual current account balance and its norm can be largely explained by a number of special and transitory factors. The special factors make the gap appear larger than it really is. Temporary factors should automatically wash out over time and diminish the gap without significant exchange rate adjustment.

- Policies contribute little to the gap, though there is some room to relax fiscal policy.
- Three main factors overstate the strength of the actual current account:
  - As a specific feature of Estonia related to the corporate income tax regime, profit remittance of foreign firms often takes the form of discrete "superdividend" payments every few years. This year, they amounted to 2 percent of GDP. Unlike regular profit remittances, they are classified as negative FDI rather than a debit in the current account. Its balance hence appears better than it really is.
  - The current account balance in 2015 likely benefitted from a drawdown of inventories that satisfied buoyant private consumption in lieu of imports. This is not sustainable and therefore improves the current account balance only temporarily.
  - Eventually, EU funds will decline and support the current account by less. Estonia receives about 2¼ percent of GDP in EU funds in the 2014–20 programming period per year on average, but the available amount could be significantly smaller under the next Multiannual Financial Framework.
- Two main factors understate the cyclically-adjusted current account norm:
  - Important legacies of Estonia's boom-bust cycle are not picked up by the cyclical correction in the EBA-lite exercise. Very high investment in the boom phase is offset by unusually low investment currently —the investment ratio in 2015 is some 4½ percent of GDP below its historical average. With domestic absorption and imports of machinery and equipment lower, the current account balance is better until these legacies run their course.
  - In the case of Estonia, the EBA-lite current account norm may not accurately capture demographic effects. High dependency ratios are usually associated with low savings, but in former transition economies the old may not have much savings to draw on. And low future replacement rates under Estonia's public pension system may induce higher savings by the currently young than elsewhere. Limited dissaving by the old and high saving by the young imply a better current account than in other countries with similar demographics. An alternative approach to reflecting demographics in the current account norm would raise it by 1.6 percent of GDP to -2.2 percent of GDP.*

Exchange Rate Assessment using EBA-lite methodology

Summary Table			
CA-Actual	2.2%	CA-Fitted	-2.9%
CA-Norm	-4.1%	Residual	5.1%
CA-Gap	**6.3%**	Policy gap	1.1%
		Cyclical Contributions	-0.2%
Elasticity	-0.52	Cyclically adjusted CA Norm	-3.9%
Real Exchange Rate Gap (adjusted for demgraphics)	**-8.5%**	**CA Norm adjusted for demographics**	**-2.2%**

- **Exchange rate assessments based on different methodologies also conclude that the real effective exchange rate is broadly in line with fundamentals.** Models based on medium-term equilibrium current account balance point to a small undervaluation, while direct assessment of the equilibrium real exchange rate suggests an overvaluation.

*Demographic parameters (dependency ratio and aging speed) contribute -2.3 percent of GDP to the EBA-lite current account norm. Models taking into account population growth and the interaction between dependency and aging calculate a much lower contribution of -0.6 percent of GDP.

Republic of Estonia: Risk Assessment Matrix[1]

Source of Risks	Relative Likelihood	Impact on Estonia
Tighter or more volatile global financial conditions: **Sharp asset price adjustment and decompression of credit spreads** as investors reassess underlying risk and respond to unanticipated changes in growth prospects, Fed policy rate path, and increases in U.S. term premia, with poor market liquidity amplifying the effect on volatility.	**High**	**Medium** Nordic cross-border banks are exposed to a number of risks that could spill over to Estonia through credit supply and trade channels. But strong lines of defense for parent banks, reduced reliance on parent bank funding, and strong domestic deposit growth would be important mitigating factors. Existing platforms for cooperation between home and host country authorities are another asset.
Structurally weak growth in key advanced and emerging economies (the "new mediocre"): **Euro area**: Weak demand and persistently low inflation in euro area/Japan leading to low medium-term growth and accumulation of financial imbalances.	**High**	**Medium** Estonia would be affected through trade, confidence, and FDI channels. Economic growth and employment would suffer.
Political fragmentation erodes the globalization process and fosters inefficiency: **Russia/Ukraine**: the mounting conflict depresses business confidence and heightens risk aversion, amid disturbances in global financial, trade, and commodity markets.	**Medium**	**Medium** Estonia would be affected through trade and confidence effects from direct exposure to Russia and indirect exposure through third countries. In the medium run, effects could be mitigated by trade reorientation.
Risks to competitiveness from a further tightening of the labor market: Wage growth continues to significantly outstrip productivity growth for an extended period. External competitiveness is adversely affected.	**Medium**	**Medium/High** The external sector, critical for Estonia's small open economy, would suffer. Lower exports, less FDI, and slower productivity growth would damage income convergence prospects and worsen the current account.
Weakening of medium-term growth: Policies to foster innovation and productivity growth are not fully implemented or prove less effective than envisaged.	**Medium**	**Medium** Convergence to EU average living standards would slow with annual real GDP growth some ½ percent lower than in the baseline.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

POLICY DISCUSSIONS

With recently sluggish growth and a challenging demographic outlook, the consultation focused on the economy's medium growth potential and policies—including potentially fiscal ones—to lift it. The implications for competitiveness of a tight labor market also featured prominently. The main financial sector issues related to spillover risks from cross-border banking and the effectiveness of the macroprudential tool kit.

A. Securing Strong Growth Potential[2]

12. Estonia's long-term growth record is impressive, but the main growth engines are losing steam. Growth since 1995 averaged 4.4 percent per year—together with Lithuania the highest rate in CEE. But growth has come down sharply in recent years and, while external adversities played a role, potential growth is estimated to have fallen to 2¼ percent annually during 2011–14. Total factor productivity (TFP) growth declined to 0.8 percent annually, as relatively "easy" productivity gains from sectoral reallocation, imitation, and upgrading in the nontradable sector have been increasingly exhausted. With capital-output ratios higher and investment ratios lower, capital formation also contributed less than in the past.

13. Considerable effort will be needed to secure strong and sustainable growth for the long haul. One challenge is to cope with demographic headwinds and make the most of a working-age population whose rate of decline will triple to almost 1 percent a year. Raising TFP growth requires structural transformation of an economy that still relies heavily on low-to-medium technology industries with limited absorptive capacity of spillovers from the frontier. More fully restoring Estonia's traditionally high investment and ensuring its efficient use will also be important. Three scenarios illustrate possible quantitative outcomes for potential growth over the next two decades.

- **The central scenario** puts potential growth at 2.9 percent during 2015–20 and 2.7 percent over the longer horizon. It assumes that government's pro-growth policies will lift TFP growth slightly above the 2001–14 average, enhance the labor force, and boost investment. Income convergence with Western Europe will continue, but at only about half its historical pace.

- **A pessimistic scenario** with growth averaging just 2.4 percent during 2015–20 and 2.2 percent over the longer horizon, reflecting a more modest pickup in TFP growth and investment, which could arise for example if the planned measures are less effective than expected or are not implemented as comprehensively as envisioned.

[2] See Selected Issues Paper "Estonia: Income Convergence and Medium-term Growth Potential."

- **A stretch scenario** that would require a combination of higher TFP growth and investment and rapid convergence toward the labor force participation rates of Sweden—the highest in the EU—to secure growth of 3.7 percent over the longer horizon.

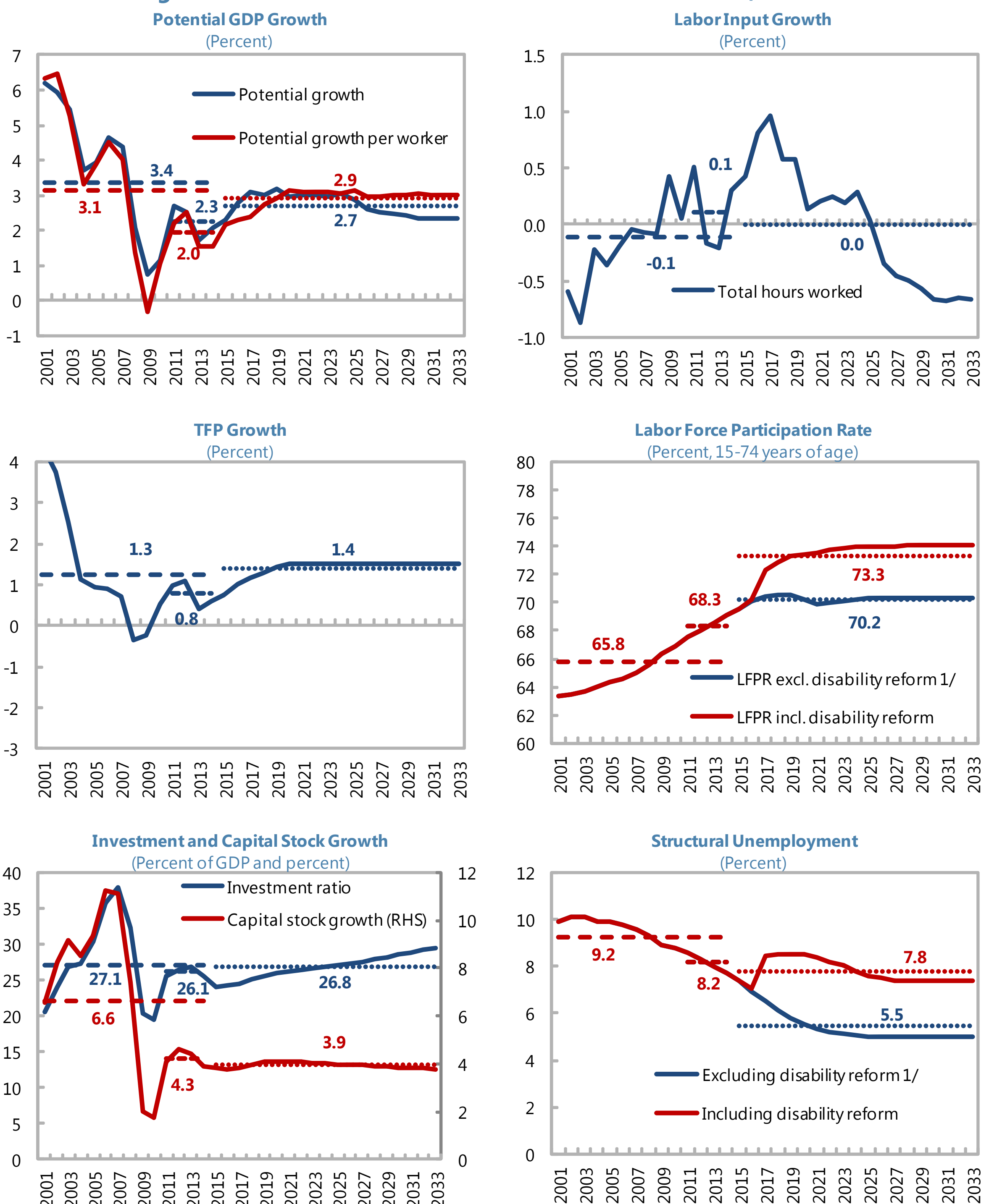
14. Estonia's current policy setting is conducive to growth and additional supporting programs are planned. They should go a long way toward mitigating the forces that weigh on future growth, thereby underpinning the central scenario.

- Among the **current attractions**, Estonia already has one of the most business friendly environments according to the World Bank's Doing Business Report or the World Economic Forum's Competitiveness Ranking and highest public investment ratios in the region. Its educational standards are also high. Government policies put an emphasis on promoting R&D and ICT. Almost all classrooms were connected to the internet as far back as 1998. Estonia is a leader in providing integrated electronic government services and is home to a number of prominent IT startups. Private companies can draw on the expertise of government-supported "competence centers" for advice in six scientific areas.

- A number of **new initiatives** are under preparation, mostly in the context of the new programming period for EU funds. Enterprise support is to be revamped to put more emphasis on innovation and entrepreneurship, increasingly backed by financial instruments rather than grants. Life-long learning is set for an upgrade under a new strategy. Already adopted legislation on "work capacity reform" seeks to put more disability pensioners to work, who currently make up 10 percent of Estonia's working age population. Further state reforms are also on the agenda, to consolidate the large number of local governments, merge central government agencies, enhance e-government to reap efficiency gains, and reduce government employment in line with the shrinking working age population.

15. Yet, Estonia has room to further enhance pro-growth policies. This would help bring potential growth closer to the rates in the stretch scenario. In the short run, the government should concentrate on getting the planned new initiatives off the ground and making them a success. But to support implementation, which exhibited some deficiencies in the past, and boost the effectiveness of existing and new programs, it will also be critical to now start strengthening the operational policy focus on fostering productivity growth. Boosting productivity should be articulated as the overarching economic policy objective. A strong unit in the Prime Minister's office should be mandated with overseeing implementation through line ministries; evaluating the relative merits of programs in terms of their contribution to productivity growth; scaling back ineffective programs, boosting successful ones, and initiating promising new initiatives; and keeping track of government spending on productivity support.

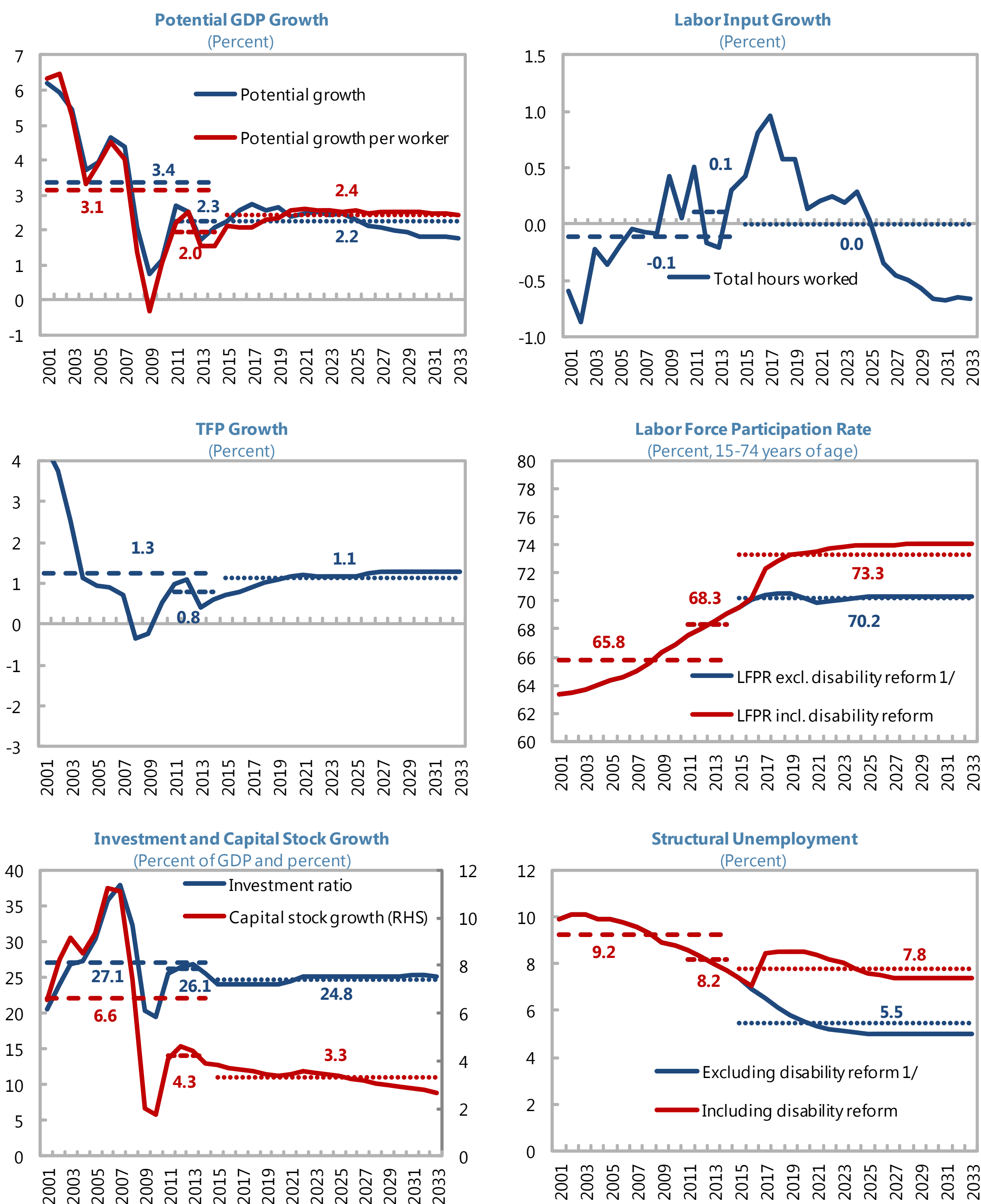
Figure 1. Estonia: Central Scenario for Potential Growth, 2001–33



1/ The disability reform is expected to add significantly more people to the labor force, but the effect on employment will be limited as many will likely be unable to find a matching job, which will push up the structural unemployment rate. The evolution of labor force participation and structural unemployment rates is shown only to ease comparability with historical data and is not factored into labor input or potential growth calculations.

Source: IMF staff calculations.

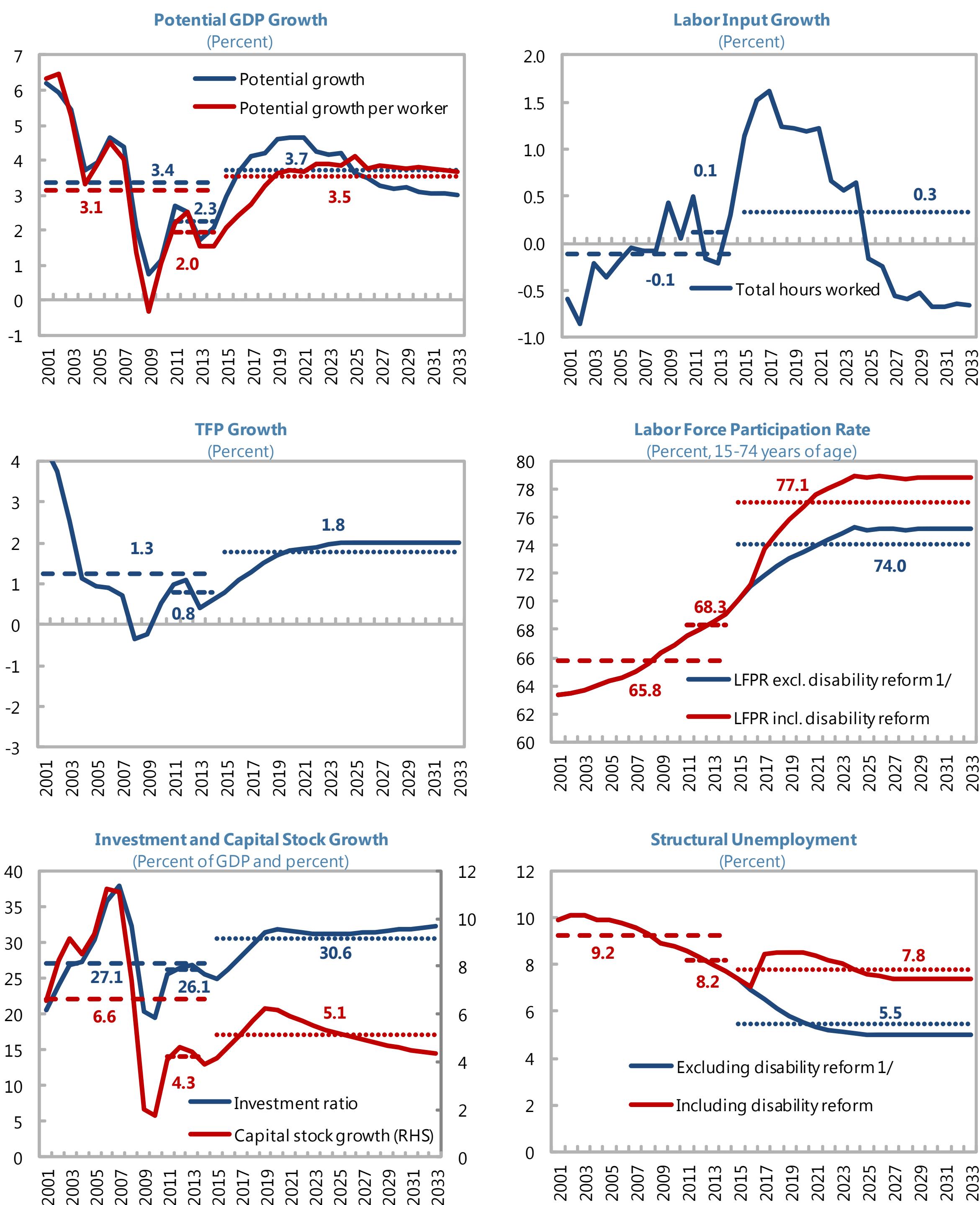
Figure 2. Estonia: Pessimistic Scenario for Potential Growth, 2001–33



1/ The disability reform is expected to add significantly more people to the labor force, but the effect on employment will be limited as many will likely be unable to find a matching job, which will push up the structural unemployment rate. The evolution of labor force participation and structural unemployment rates is shown only to ease comparability with historical data and is not factored into labor input or potential growth calculations.

Source: IMF staff calculations.

Figure 3. Estonia: Stretch Scenario for Potential Growth, 2001–33



1/ The disability reform is expected to add significantly more people to the labor force, but the effect on employment will be limited as many will likely be unable to find a matching job, which will push up the structural unemployment rate. The evolution of labor force participation and structural unemployment rates is shown only to ease comparability with historical data and is not factored into labor input or potential growth calculations.

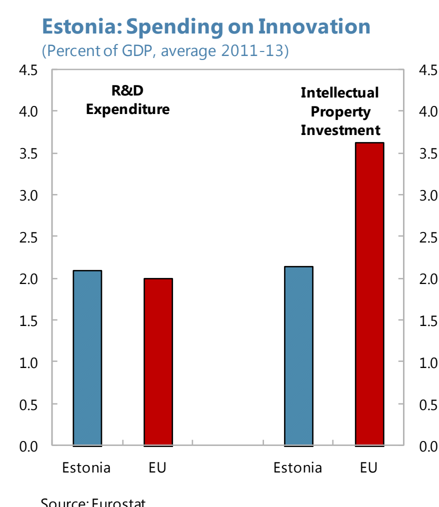
Source: IMF staff calculations.

16. A number of programs could be scaled up and expanded in scope.

- In the area of **human resources**, more resources could be devoted to life-long learning, to address deficiencies in adult skills and help raise the effective retirement age. Spending has been very small in the past and will remain below 0.3 percent of GDP even under the new strategy. Spending on active labor market programs currently stands at just 0.4 percent of GDP and planned increases will go predominantly toward implementation of the work capacity reform. The envisaged strengthening of apprenticeship programs to around 800 participants could go further. It would also be important to raise the statutory retirement age further once the ongoing increase to 65 years is fully phased in by 2026, to bring female labor force participation rates closer to those of Europe's best performers, including by improving child care provision, and to consider increased reliance on foreign labor.

- In the area of **innovation support**, the planned new Company Development Program will cover only up to 300-400 out of the over 60,000 companies currently operating in Estonia. More generally, Estonia's RDI polices follow very much a science-based approach, which risks leaving behind the more traditional sectors that still make up the bulk of employment and value-added creation in the economy. Supporting the upgrading of traditional industries as a second leg of innovation policies should be considered. Also, RDI programs are currently almost fully financed from EU funds. Mobilizing more own funds is imperative for long-term sustainability and would increase flexibility, for example in terms of maximum support for projects and international initiatives, such as cross-border clusters, which are well suited for a small country like Estonia.

- In the area of **capital formation**, high investment has served Estonia well. It should be maintained, including in the government sector, considering that Estonia's capital stock per worker is still much lower than in Western Europe. In this context, the Rail Baltica project, further upgrading of the road network, and efforts to improve the intermodality in the transport sector are welcome. R&D expenditure is on par with the EU average, but it is a concern that investment in intellectual property rights, which covers R&D expenditure and also technology imports, is relatively low.



17. The authorities agreed that securing robust convergence with Western European living standards was the main economic policy challenge. Growth potential seems to have indeed slowed materially in recent years and the high growth rates of the boom years are in any case not a valid reference point for the period ahead. But the authorities noted that adverse external conditions were likely also partly responsible for the recent spell of low growth. Moreover, potential growth calculations are complicated by uncertainties in the measurement of capital accumulation, with measured investment in Estonia curiously much higher than in neighboring countries without seemingly delivering materially better growth. With investment potentially overstated, productivity growth could have been better, implying brighter prospects for the future. Overall, the authorities estimate long-term potential growth to be in the range of 3 to 4 percent per year.

18. Growth-supporting policies are important, with the authorities confident that the existing and planned measures broadly covered all the bases and would deliver important gains. They saw compensating for adverse demographics and moving to a more sophisticated output mix as the main challenges. The environment is generally conducive and the new initiatives will fill most of the remaining gaps, in their view, which they saw as underscoring the importance of implementation. They agreed that domestic resources would need to mitigate the eventual decline of EU funds. They are considering broadening the training mandate of the Unemployment Insurance Fund beyond those unemployed or at imminent risk of losing their jobs. Improving child care support will also need attention in order to boost female labor supply. While the authorities agreed that the upgrading of Estonia's traditional industries was central, some counterparts were doubtful whether this was a task for the government. But they stressed that universities are important conduits of innovation and that the government should ensure the appropriate availability of financial instruments for the private sector.

B. Aiming for Stability and Growth Support in Public Finances

19. The 2015 budget is headed for another surplus. Thanks to a revenue-friendly composition of growth and further improvements in tax administration, a small surplus of 0.1 percent of GDP is likely, compared to a budgeted deficit of 0.7 percent of GDP. Corporate income tax collection received an unanticipated boost worth ½ percent of GDP from a superdividend distribution by Swedbank, but the effect on the budget balance will effectively be moved into 2016 because of an offsetting postponement of dividend payments by state-owned enterprises. Investment is lagging behind plan because of delays in unlocking EU funds, but with a strong effort in the remainder of the year it could still come close to last year's level and reach 4.9 percent of GDP. The structural surplus should decline somewhat to 0.8 percent of GDP, exerting a timely fiscal stimulus.

20. The 2016 draft budget envisages labor tax cuts and more generous family benefits financed by excise tax hikes, as well as higher investment. These measures are part of a multi-year plan to lighten the labor tax burden, especially for low-income earners, and provide relief to families with children, all paid for by higher excises on energy, alcohol, and tobacco. They provide a welcome reduction of the labor tax wedge. Investment would climb to 5.3 percent of GDP next year as the new Multiannual Financial Framework for EU funds comes fully on stream. The budget surplus should increase to 0.5 percent of GDP. But, due to the one-off nature of revenues related to the superdividend, the structural surplus is projected to decline to 0.5 percent of GDP—which would provide a useful moderate fiscal stimulus as insurance against the downside risks in the growth forecast.

21. Estonia's public finances are guided by a strict fiscal rule. The State Budget Act mandates the budget to be at least in structural balance annually. However, in practice the rule generates surpluses because of an asymmetric correction mechanism—deficits need to be compensated by subsequent surpluses while surpluses generate no "credit" that can be spent later on—and because uncertainties in budget execution and structural balance calculations prompt policy makers to build

in safety margins and target ex-ante surpluses. Indeed, Estonia's latest Stability Programme envisages structural budget surpluses through the medium term.

22. Estonia should consider deploying fiscal space to finance additional measures in support of productivity growth while preserving fiscal prudence. With Estonia's public finances already exceptionally strong, promoting productivity growth should at the margin be the higher priority than strengthening the fiscal position further.

- **In the shorter run, room under the existing fiscal rule should be utilized.** This could be achieved by implementing the fiscal rule so that budgets are close to structural balance each year and on average in structural balance over a multi-year period, rather than systematically in structural surplus. For 2016, the focus should be on fully executing the budget, especially regarding investment and the planned pro-growth measures. The government should not hesitate to pre-finance these outlays from domestic sources if it takes longer than expected to access EU-funds that are envisaged to finance them, thereby running down the projected structural surplus.
- **In the longer term, a moderate relaxation of the fiscal rule could be considered**, to unlock additional resources for the promotion of productivity growth or to compensate for declining EU funds. The rule could be aligned with European rules that allow for medium-term objectives of up to a deficit of 1 percent of GDP for countries with strong public finances, such as Estonia.

For both the shorter and the longer run, it will be important to ensure that fiscal resources are indeed used for the intended purpose. It is therefore crucial that the accounting and monitoring of productivity promoting programs is strengthened first, for example in the context of the establishment of the strong dedicated productivity unit in the Prime Minister's office.

23. The authorities stated that Estonia's fiscal framework should not be changed anytime soon and maintained that a structural balance should remain a target for fiscal policy. They had a somewhat more conservative take on likely near-term fiscal developments, projecting a balanced budget for this year and a deficit of 0.1 percent of GDP for 2016. Regarding the fiscal rule, they underscored that strong fiscal discipline has been a feature of Estonia's fiscal policy that long predated European fiscal rules. Fiscal reserves were instrumental in successfully steering Estonia through the crisis of 2008/09. Reopening the debate on the fiscal rule that was only introduced in 2014 was considered premature. With regard to increasing productivity-promoting spending, the authorities noted that they prioritize spending that increases productivity, highlighting that Estonia's public investment has been one of the highest in the EU. They argued that productivity-promoting spending can be increased further, even without changing the current fiscal rule. Furthermore, EU funds are already being re-directed toward innovation in the new programming period. They argued against weakening of the fiscal rule, which they considered too risky given the high volatility of growth and fiscal revenues. However, some counterparts conceded that the surplus bias in the fiscal rule was unintended and that there may be a case to revisit the fiscal rule once EU funds decline, but this is many years away and does not warrant opening a discussion at this juncture.

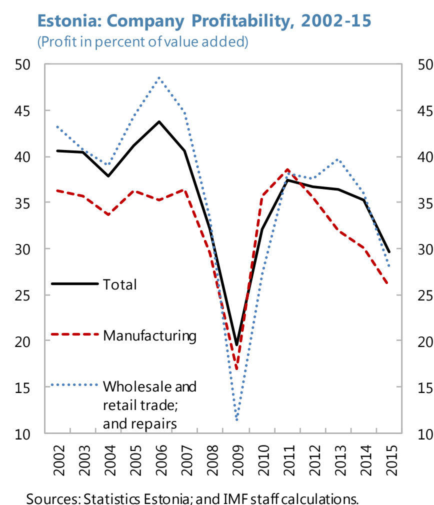
C. Remaining Competitive As Labor Markets Tighten

24. The labor market is tightening. Labor market entries are declining with the population aged 20–29 years shrinking by over 2 percent a year since 2012. Wage convergence with neighboring Finland also contributes to pressures. Over the last 36 months the unemployment rate has fallen by 4 ppts and real wages increased by 4.6 percent per year on average. Increases pervade all sectors of the economy.

25. The current pace of wage increases is unsustainable. While current real wage growth is not materially higher than the average since 2002, GDP and productivity growth are now lower. Minimum wage hikes are steep—40 percent over the past three years and 10 percent each for 2016 and 2017 already agreed. The minimum wage will reach 42 percent of the average wage by then and could increasingly weigh on formal-sector employment prospects of the low-skilled, in less developed regions, or labor-intensive industries. Minimum wages are negotiated between unions and employer associations, but government representatives attend the negotiations, the union-employer agreement is extended to the whole economy by government decree, and minimum wage issues feature prominently in political discourse, with the current coalition agreement proposing that social partners raise it to at least 45 percent of the average wage over four years. Public sector wages have also increased disproportionately in recent years and now command an unusually high premium over average wages, although their growth may moderate next year, with the central government granting wage increases only to selected groups of employees. In this context, it will be important to guard against minimum wage hikes unduly spilling over and pushing broader wage growth ahead of productivity growth.

26. Currently Estonia's external position is solid and the exchange rate broadly in line with fundamentals, but there is a risk for prospects in the tradable sector to become clouded and the exchange rate overvalued unless wage growth and productivity developments align better going forward. Enterprise profitability is declining, including in the manufacturing sector. Profits currently account for a smaller share of value added not only compared to the boom years, but also compared to 2002, when the economy had not yet overheated. Gains in export market shares have also started to peter out, although the downturn of trade with Russia is also partly responsible. This underscores the importance of boosting productivity growth and achieving the structural transformation and the upgrading of human capital that can sustainably support robust real wage growth. But it will also be important for wage growth to cool until the various measures to this effect come to fruition.

Estonia: Company Profitability, 2002-15
(Profit in percent of value added)



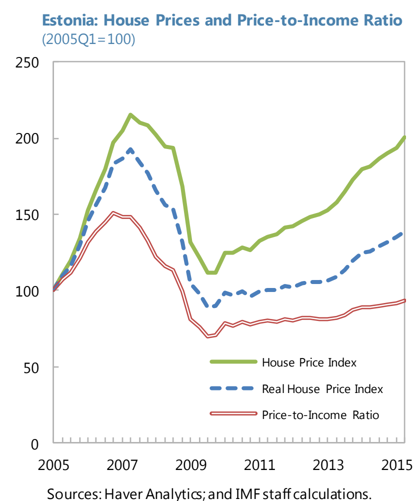
Sources: Statistics Estonia; and IMF staff calculations.

27. The authorities agreed that the current wedge between wage and productivity growth was unsustainable. Wage developments of recent years were supporting household incomes, but

were also eroding companies' buffers and could soon start denting competitiveness. Nonetheless, the authorities project that wage growth will come down only very gradually going forward because labor supply shortages will persist. Wage developments may induce companies to invest in labor-saving technologies and gradually move out of labor-intensive industries. In this spirit the government's planned state reforms seek to economize on labor and reduce public employment, which should help alleviate the squeeze on the private sector. The authorities explained that large hikes in the minimum wage were motivated by their low levels coming out of the crisis and the perceived need to bring them closer to average wages. In their view, minimum wage developments are largely outside the government's control, with government essentially only endorsing what social partners negotiate.

D. Tailoring Financial Sector Policies to Estonia's Needs

28. Financial risks are primarily external and are mitigated by strong domestic and foreign lines of defense. Nordic cross-border banks dominate the financial sector and are exposed to a range of risks, especially in their home property markets and in wholesale funding markets, but they also have strong lines of defense. Estonian affiliates have large capital and liquidity buffers. Reduced parent-bank funding further adds to their resilience. Nonetheless, potential shocks could adversely affect credit supply in Estonia and simultaneously lead to a deterioration of the quality of loans taken out by Estonian exporters operating in the Nordic region. It will therefore be important to remain vigilant and continue close cooperation with home-country authorities. The Nordic-Baltic Financial Stability Group should be revitalized and secure appropriate involvement of the ECB, which directly supervises the two largest Estonian banks. Joint stress tests could be considered. Risks from the domestic housing market are not acute, considering that recent price increases are not credit driven and price-to-income ratios remain much below previous peaks. Estonia's small domestic banks pursue riskier business models, but are closely supervised to monitor their soundness.



Sources: Haver Analytics; and IMF staff calculations.

29. Estonia's framework for financial sector oversight has undergone important upgrades. The Bank Recovery and Resolution Directive has been transposed, with the Financial Supervision Authority as the designated resolution authority. Recovery and resolution plans for the large banks have not yet been drafted, pending the transposition of the directive in Sweden. The government has approved a new deposit insurance law based on the Deposit Guarantee Scheme Directive. The liquidity coverage ratio and the capital conservation buffer have been implemented, bringing total capital requirements to 12.5 percent of risk-weighted assets. The countercyclical capital buffer is currently set to zero, but a framework for assessment, coordination with the ECB, and communication is in place. A comprehensive set of macroprudential tools is operational—maximum loan-to-value and debt-service-to-income ratios have already been set, though at currently barely

binding levels. These tools also apply to foreign branches. Oversight of consumer lending companies is being strengthened through a licensing requirement from March 2016.

30. Traction of macroprudential tools can also benefit from close cooperation with home-country authorities. Deployment of macroprudential tools at more aggressive levels is not currently called for, but their traction in the next credit upswing may be complicated by banks' overcapitalization and the dominance of foreign-owned affiliates. Mortgage lending appears well covered, unless mortgages were booked at headquarters abroad rather than locally. Controlling corporate loans could be more challenging, considering capital requirements that are far from binding and the possibility to book them abroad. Support from home-country authorities in the form of moral suasion and reciprocity of capital requirements beyond the provisions in the Capital Requirement Directive IV may be helpful.

31. The authorities broadly shared this risk assessment and intend to continue with the close Nordic-Baltic cooperation. Financial soundness is bolstered by high capitalization, ample liquidity, and low non-performing loan ratios. Small banks with riskier business models are closely monitored and supervisors report they are financially sound. The authorities view the current pace of credit expansion at close to nominal GDP growth as near optimal. Supervisors agreed that there were spillover risks from Nordic banks, but were not overly concerned and thought that the trade channel might be more important than the credit supply channel. They were also keeping a close eye on housing prices, but agreed that mortgage lending is not behind recent price increases. They recognized that there has indeed been a hiatus in the activities of the Nordic-Baltic Financial Stability Group, but argued that this reflects disruptions from the establishment of the banking union and that activities would resume. ECB supervisors may choose to be represented indirectly through the national competent authorities, they added. The authorities took note of potential leakages of macroprudential tools, but thought that they should be minimal in the case of mortgages.

STAFF APPRAISAL

32. The economy has been holding up reasonably well in the face of difficult and uncertain external conditions. Growth is likely to decelerate to 1.6 percent this year, reflecting recession in Russia and stagnation in Finland, two important destinations for Estonian exporters. It should pick up to 2.5 percent in 2016 as the external drag diminishes and private consumption remains robust on the back of strong wage growth. Risks are mainly to the downside and relate to the external environment.

33. Yet, sluggish growth in recent years likely also reflects a decline in potential growth. Since 1995, Estonia has achieved the highest average growth in Central and Eastern Europe, but potential growth is estimated to have averaged only 2¼ percent a year during 2011–14. Going forward, worsening demographics, diminishing options for "easy" productivity gains, and reduced scope for capital accumulation will be additional headwinds. As a result, convergence with living standards in Western Europe could slow markedly.

34. This makes policies to lift potential growth the primary economic policy imperative. While Estonia clearly faces headwinds, it also has many assets: macroeconomic and institutional fundamentals are very strong; the business climate is amongst the most favorable in the region; educational standards are high; technology and science are being promoted; and Estonia is a leader in e-government. A range of further commendable reforms is under preparation in the context of the new programming period for EU funds, including revamped enterprise support with more emphasis on innovation and entrepreneurship, a new life-long learning strategy, a "work capacity reform" seeking to put more disability pensioners to work, and reforms to streamline local and central governments.

35. Additional growth-promoting measures could be considered. In the short-run, the focus should be on getting the planned new initiatives off the ground. It will also be critical to now start strengthening the operational policy focus on fostering productivity growth. To that effect, a strong productivity unit in the Prime Minister's office could be established to oversee implementation, evaluate and adjust programs, and keep track of government spending on productivity promotion. Over time, existing programs should be scaled up—active labor market programs, life-long learning, enterprise support, and apprenticeship programs are still rather limited in size. Supporting the upgrading of traditional industries as a second leg of innovation policies should also be considered as these industries account for the bulk of employment and value creation in the economy.

36. Estonia's public finances are exceptionally strong and fiscal space could be used to support productivity-enhancing programs. With no net public debt and structural fiscal surpluses since 2009, there is room for additional spending to promote productivity growth rather than accumulate more fiscal reserves. But it will be important to ensure that these fiscal resources are truly used for their intended purpose by keeping close tabs on them, for instance in the productivity unit in the Prime Minister's office. Once in place, fiscal space could be accessed while remaining in compliance with Estonia's stringent fiscal rule by producing budgets that are on average in structural balance rather than systematically in surplus. In the longer run, the rule itself could be made more flexible and allow modest structural deficits in line with European requirements while preserving overall prudent fiscal policy.

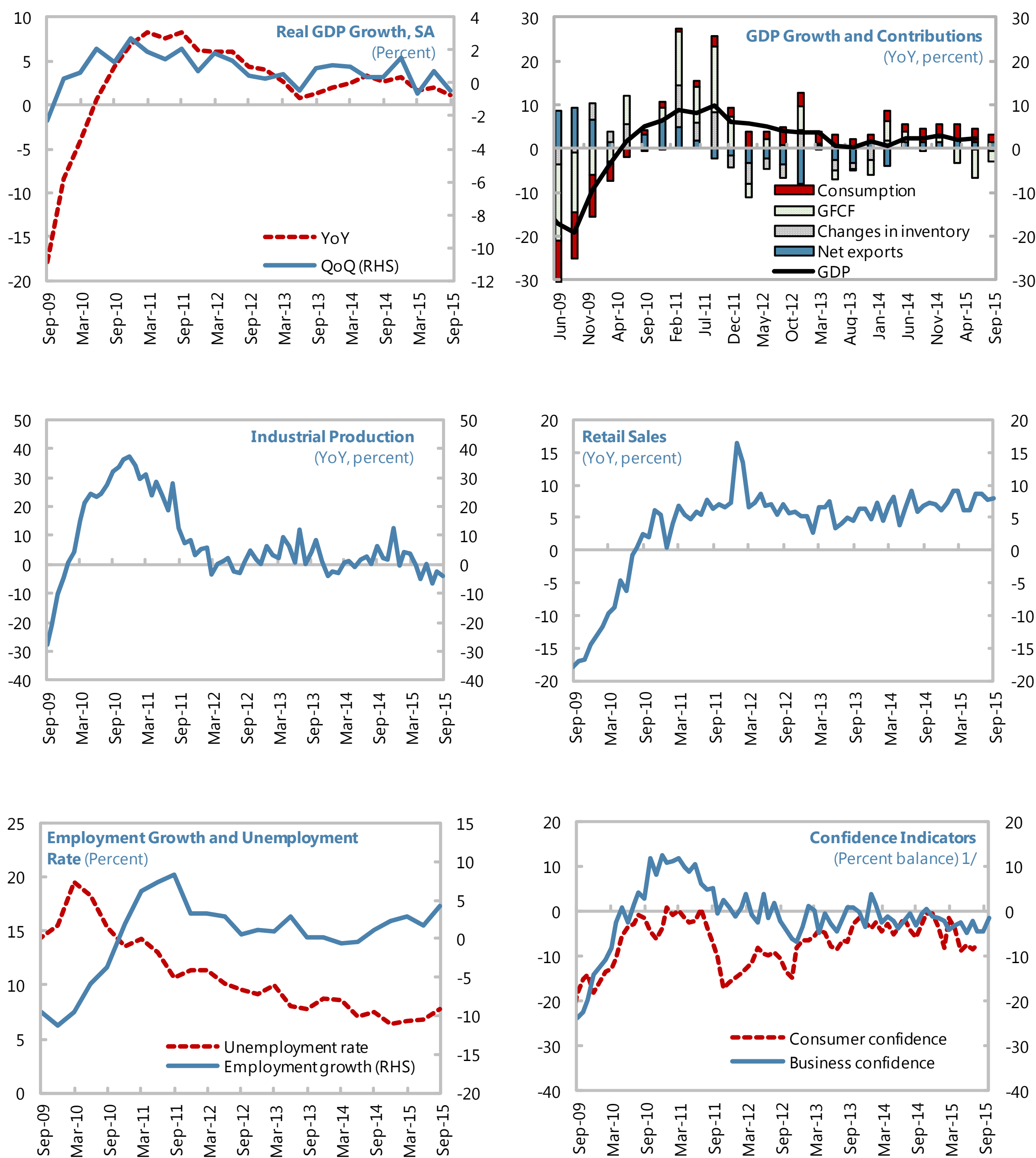
37. Estonia's external position is solid, but wage growth far in excess of productivity growth is starting to cloud the outlook for the tradable sector. Company profits have lately been falling and export market share gains have begun to peter out. This further underscores the centrality of raising productivity, but wage growth also needs to come down to a more sustainable pace. In this context, the more moderate wage increases envisaged in the central government's 2016 draft budget send a prudent message. The government should also make clear to social partners that the steep minimum wage increases since 2013 risk becoming counterproductive and cannot set the pace for general wage developments.

38. Impressive soundness indicators and further upgrades to oversight frameworks underpin financial sector stability. The return to moderate private sector credit growth is a positive development. Risks reside mainly abroad. They could be transmitted to Estonia through the cross-

border banks that dominate Estonia's financial system and through trade channels, but domestic and foreign lines of defense are also strong. Nonetheless, close cooperation with home-country authorities remains important and existing Nordic Baltic platforms should be revitalized. Cooperation could also help strengthen the traction of macroprudential instruments should they need to be deployed in the next upswing in the financial cycle.

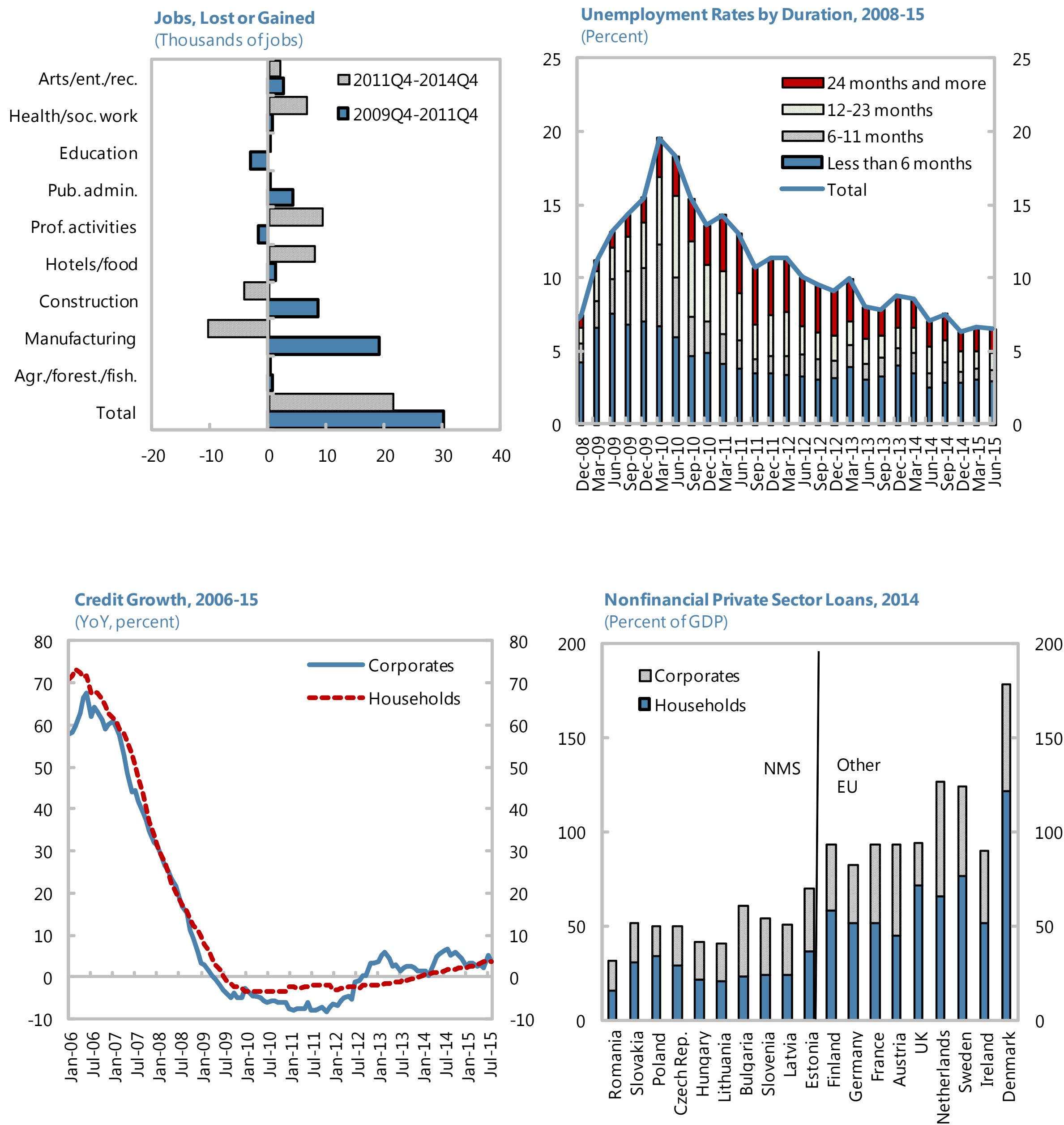
39. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Figure 4. Estonia: Real Sector Developments, 2009–15



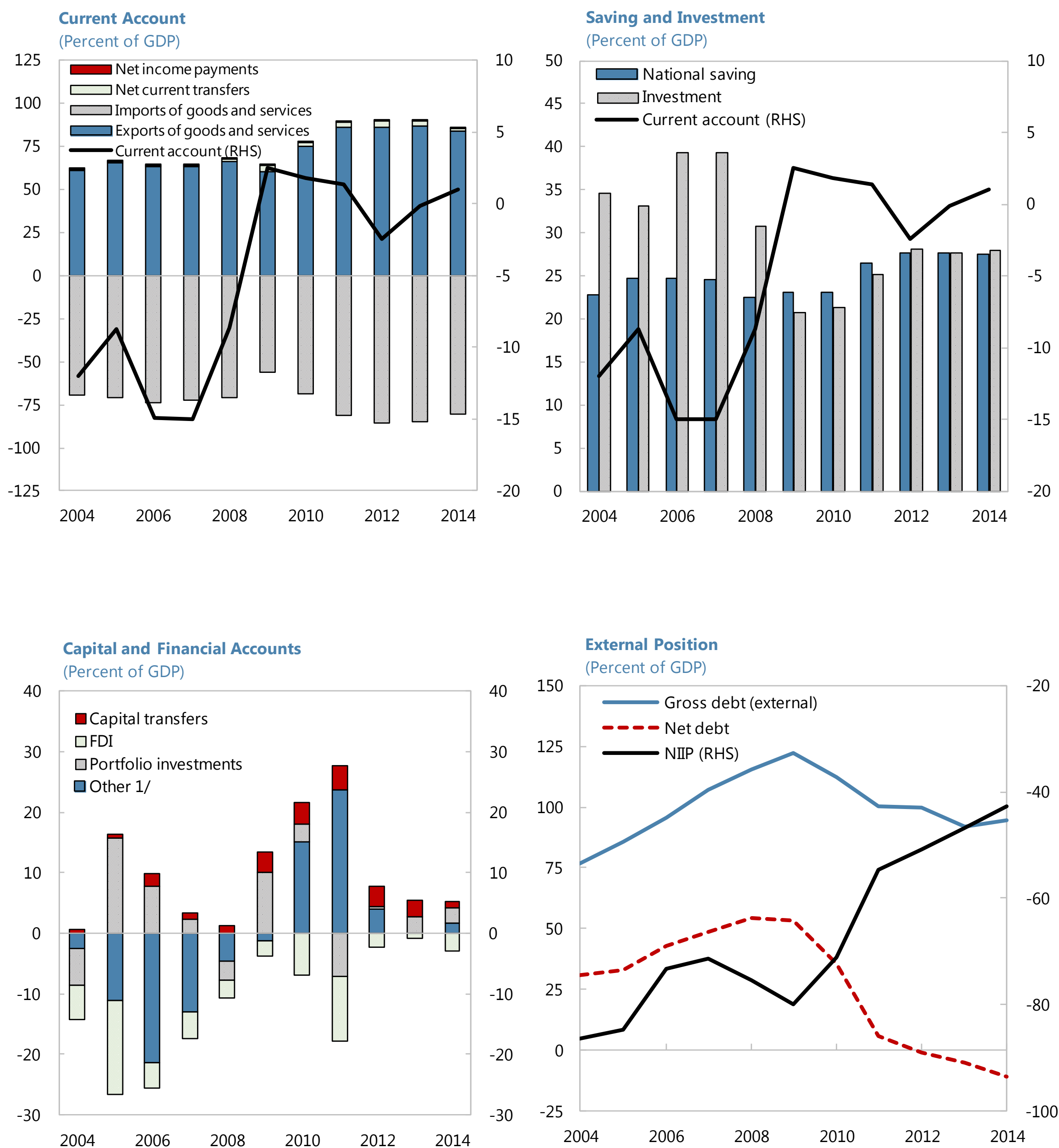
Sources: Haver; and national authorities.
1/ Balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Figure 5. Estonia: Working Off Legacies from the Boom Bust Cycle



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

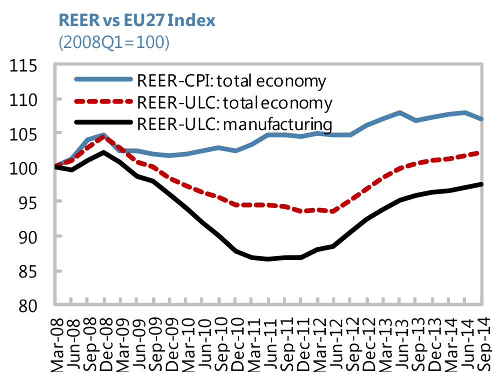
Figure 6. Estonia: External Developments, 2004–14



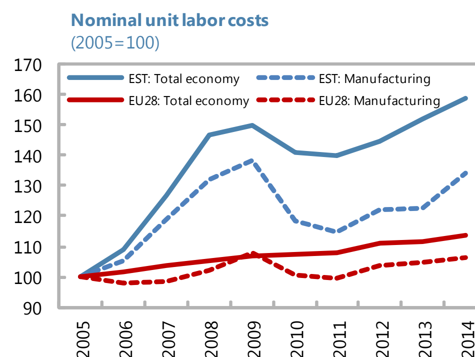
Sources: Haver; Statistics Estonia; and IMF staff calculations.
1/ Other is defined as the sum of financial derivatives and other investments.

Figure 7. Estonia: External Competitiveness, 2008–15

Estonia's competitiveness is gradually coming under pressure...

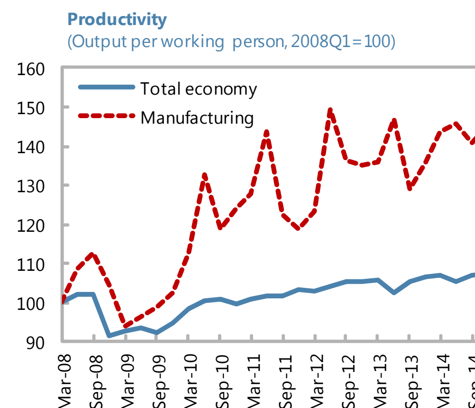


... as labor costs have been climbing up ...

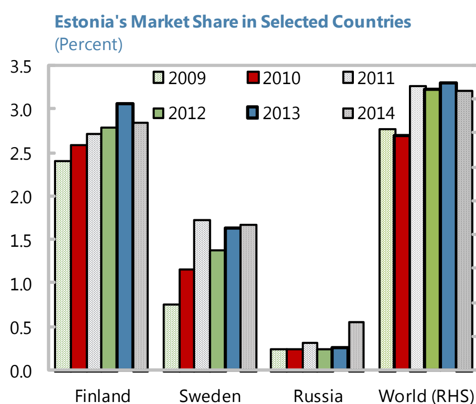


... driven by real wage increases ...

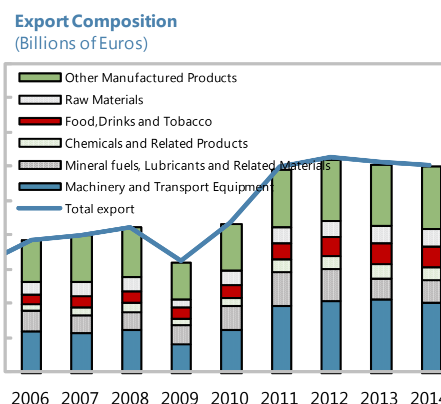
... that have outpaced gains in productivity.



Market shares gains are leveling off...

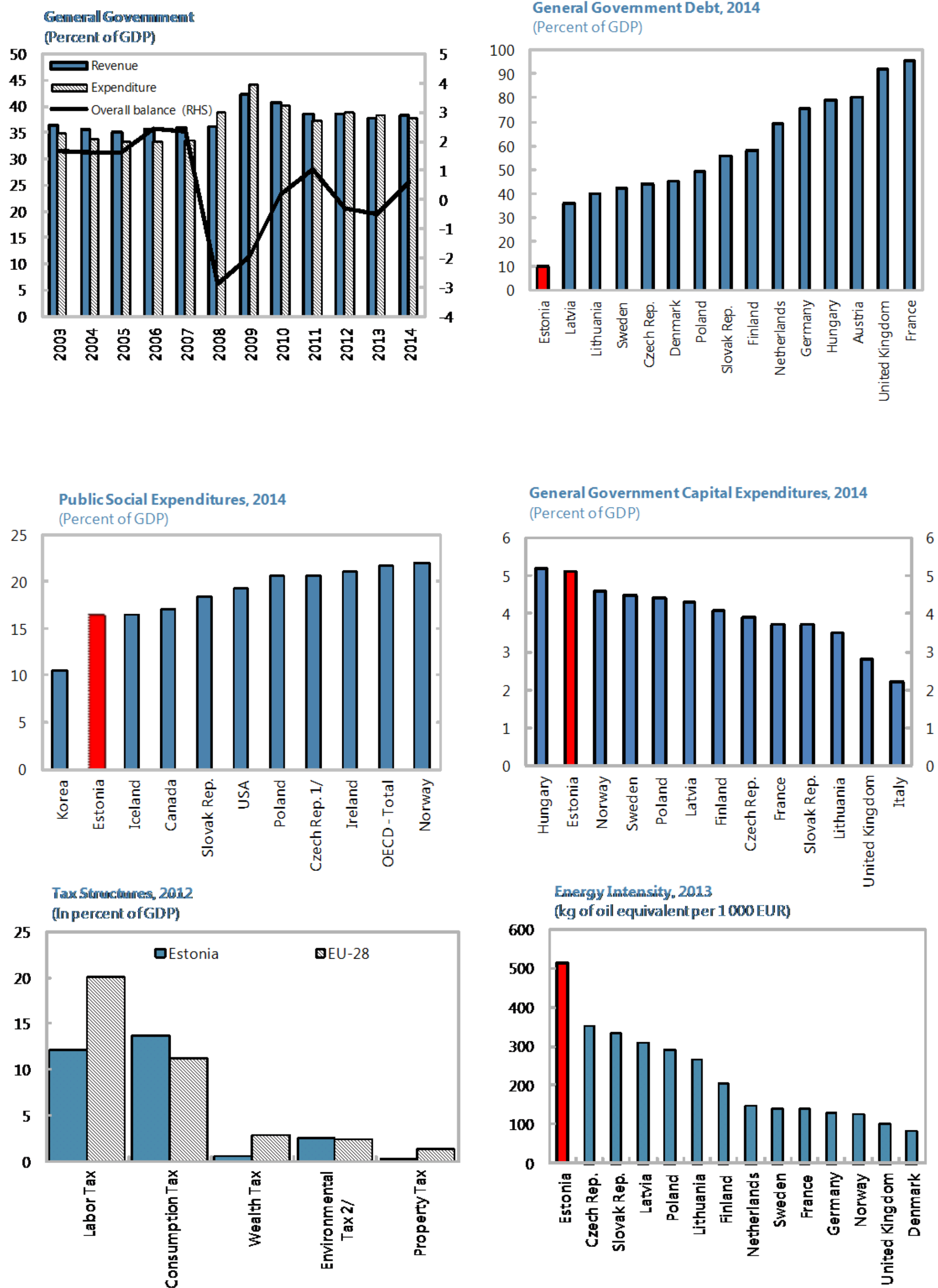


... and exports are moving sideways.



Sources: Statistics Estonia; Haver Analytics; DOTS; WEO; EU Commission and IMF staff calculations.
1/ Proxied by simple average of public administration, defense, and compulsory social security; education; and human health and social work activities.

Figure 8. Estonia: Fiscal Developments and Structure



Sources: WEO; Eurostat; and OECD.
1/ Data for Czech Rep. are for 2013.
2/ Data is for 2013.

Figure 9. Estonia: Financial Sector Developments

Sources: Haver; national authorities; and IMF staff calculations.
1/ In Lithuania, NPLs include impaired loans and 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 10. Estonia: Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

(in percent of GDP unless otherwise indicated)

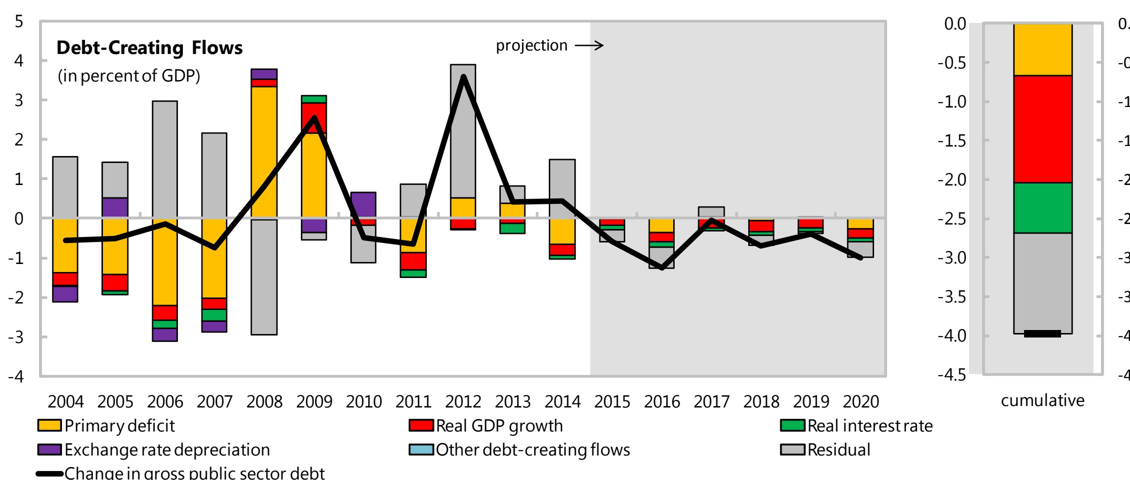
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2004-2012 [2/]	2013	2014	2015	2016	2017	2018	2019	2020
Nominal gross public debt	5.7	9.9	10.4	9.8	8.5	8.5	7.8	7.4	6.4
Public gross financing needs	0.7	2.5	1.3	-0.3	1.0	1.7	1.4	1.4	0.8
Real GDP growth (in percent)	3.2	1.6	2.9	1.6	2.5	3.0	3.2	3.3	3.4
Inflation (GDP deflator, in percent)	5.4	4.0	2.0	1.2	2.2	2.4	2.7	2.7	2.8
Nominal GDP growth (in percent)	8.9	5.6	5.0	2.8	4.8	5.4	6.0	6.1	6.3
Effective interest rate (in percent) [4/]	3.8	1.2	1.1	0.0	0.8	1.4	1.4	1.5	1.6

As of August 31, 2015		
Sovereign Spreads		
EMBIG (bp) 3/		0
5Y CDS (bp)		65
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	AA-	AA-
Fitch	A+	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2004-2012	2013	2014	2015	2016	2017	2018	2019	2020	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	0.4	0.4	0.4	-0.6	-1.3	0.0	-0.7	-0.4	-1.0	-4.0	
Identified debt-creating flows	-0.4	0.0	-1.0	-0.3	-0.7	-0.3	-0.4	-0.3	-0.6	-2.7	
Primary deficit	-0.2	0.4	-0.7	0.0	-0.4	0.0	-0.1	0.0	-0.3	-0.7	-0.3
Primary (noninterest) revenue and grants	37.2	37.8	38.6	39.3	40.6	40.4	40.7	40.6	40.4	242.0	
Primary (noninterest) expenditure	37.0	38.1	37.9	39.3	40.2	40.4	40.6	40.6	40.2	241.3	
Automatic debt dynamics [5/]	-0.2	-0.4	-0.4	-0.3	-0.4	-0.3	-0.4	-0.3	-0.3	-2.0	
Interest rate/growth differential [6/]	-0.2	-0.4	-0.4	-0.3	-0.4	-0.3	-0.4	-0.3	-0.3	-2.0	
Of which: real interest rate	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.6	
Of which: real GDP growth	-0.1	-0.1	-0.3	-0.2	-0.2	-0.2	-0.3	-0.2	-0.2	-1.4	
Exchange rate depreciation [7/]	0.0	0.0	0.0	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	0.9	0.4	1.5	-0.3	-0.5	0.3	-0.3	-0.1	-0.4	-1.3	



Source: IMF staff calculations.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over German bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.

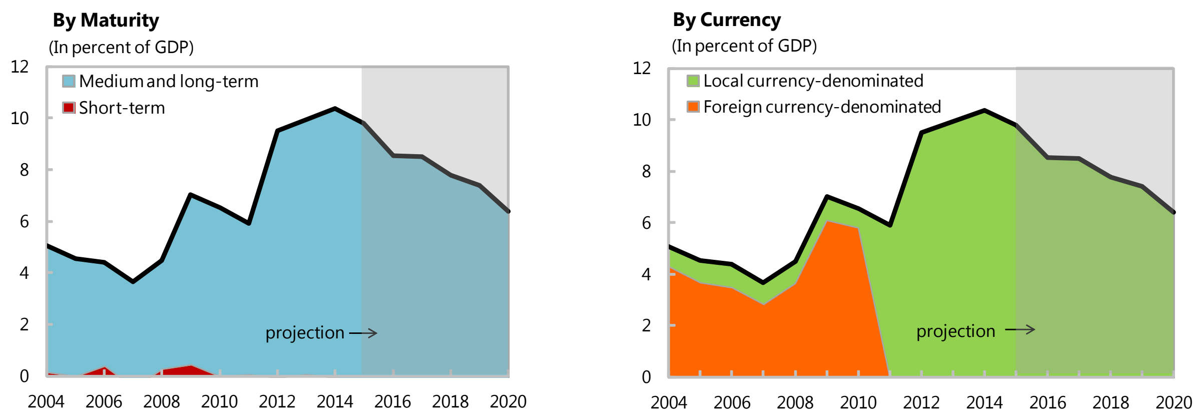
7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

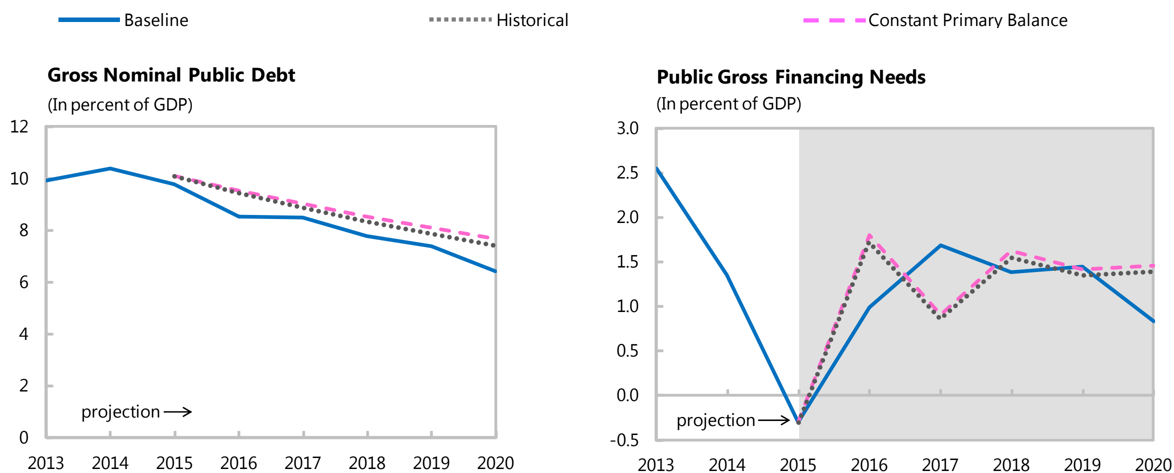
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 11. Estonia: Public DSA - Composition of Public Debt and Alternative Scenarios

Composition of Public Debt



Alternative Scenarios



Underlying Assumptions

(In percent)

Baseline Scenario	2015	2016	2017	2018	2019	2020
Real GDP growth	1.6	2.5	3.0	3.2	3.3	3.4
Inflation	1.2	2.2	2.4	2.7	2.7	2.8
Primary Balance	0.0	0.4	0.0	0.1	0.0	0.3
Effective interest rate	0.0	0.8	1.4	1.4	1.5	1.6
Constant Primary Balance Scenario						
Real GDP growth	1.6	2.5	3.0	3.2	3.3	3.4
Inflation	1.2	2.2	2.4	2.7	2.7	2.8
Primary Balance	0.0	0.0	0.0	0.0	0.0	0.0
Effective interest rate	0.0	0.8	1.7	2.1	2.5	3.0

Historical Scenario	2015	2016	2017	2018	2019	2020
Real GDP growth	1.6	2.7	2.7	2.7	2.7	2.7
Inflation	1.2	2.2	2.4	2.7	2.7	2.8
Primary Balance	0.0	0.1	0.1	0.1	0.1	0.1
Effective interest rate	0.0	0.8	1.6	1.9	2.3	2.7

Source: IMF staff calculations.

Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2010–16

(Units as indicated)

	2010	2011	2012	2013	2014	2015	2016
						Projections	
National income, prices, and wages							
GDP (billions of Euro)	14.7	16.7	18.0	19.0	20.0	20.5	21.5
Real GDP growth (year-on-year in percent)	2.5	7.6	5.2	1.6	2.9	1.6	2.5
Average HICP (year-on-year change in percent)	2.7	5.1	4.2	3.2	0.5	0.0	2.0
GDP deflator (year-on-year change in percent)	1.5	5.3	2.7	4.0	2.0	1.2	2.2
Average monthly wage (year-on-year growth in percent)	2.5	1.6	6.7	6.2	5.9	4.8	4.7
Unemployment rate (ILO definition, percent, pa)	16.7	12.3	10.0	8.6	7.4	6.8	6.5
Average nominal ULC (year-on-year growth in percent)	-4.8	-0.1	3.1	5.5	3.3	4.6	3.0
Saving-investment balances (percent of GDP) 1/							
National saving	23.1	26.4	27.7	27.7	27.5	26.8	26.2
Private	19.5	21.8	21.9	22.7	21.7	21.7	20.4
General government	3.5	4.6	5.8	4.9	5.8	5.0	5.8
Domestic investment	21.3	25.1	28.1	27.6	28.0	25.2	25.6
O/w: Fixed investment	21.2	26.2	26.5	27.1	25.2	23.8	24.1
Private	16.4	21.3	20.1	21.7	20.0	18.9	18.7
General government	4.9	4.9	6.3	5.4	5.2	4.9	5.3
Foreign saving 1/	-1.8	-1.3	0.4	-0.1	0.4	-1.6	-0.6
General government (ESA10 basis; percent of GDP)							
Revenue	40.6	38.4	38.7	38.0	38.7	39.5	40.8
Expenditure	40.4	37.4	39.1	38.3	38.0	39.4	40.3
Financial surplus (+) / deficit (-)	0.2	1.0	-0.4	-0.3	0.8	0.1	0.5
Structural balance	1.8	1.2	1.2	0.7	1.1	0.8	0.5
Total general government debt	6.5	5.9	9.5	9.9	10.4	10.1	9.6
External sector (percent of GDP)							
Trade balance	-2.8	-2.1	-6.6	-4.7	-5.0	-4.1	-4.7
Service balance	9.1	7.8	7.5	6.9	8.4	8.3	8.1
Income balance	-5.3	-5.1	-4.0	-2.4	-2.5	-2.2	-2.4
Current account	1.8	1.3	-2.4	-0.1	1.0	2.2	1.2
Gross external debt/GDP (percent) 2/	112.0	100.3	99.8	91.8	94.7	95.6	94.8
Net external debt/GDP (percent) 3/	35.8	6.0	-0.9	-5.3	-10.7	...	...
General government external debt/GDP (percent)							
Excluding government assets held abroad	6.5	5.9	9.5	9.9	10.4	10.1	9.6
Including government assets held abroad 4/	-6.9	-5.1	-2.6	-1.5	-1.3	-1.3	-1.2
Exchange rate (Euro/US$ - period averages) 5/	11.8	1.39	1.29	1.33	1.33	...	...
Real effective exchange rate (annual changes in percent)	-1.9	1.3	-0.5	2.7	0.1	...	...
Nominal effective exchange rate (annual changes in percent)	-3.0	-0.3	-2.0	1.6	1.6	...	...
Money and credit (year-on-year growth in percent)							
Credit to the economy 6/	-5.0	-3.7	-0.4	2.0	5.5	...	...
Broad money 7/	2.8	30.9	5.7	6.3	10.7	...	...

Social Indicators (reference year):

Population (2014, pa): 1.32 million; Per capita GDP (2014): $20,126; Life expectancy at birth (2013): 81.1 (female) and 71.2 (male);

Poverty rate (share of the population below the established risk-of-poverty line, 2013): 21.7 percent; Main exports: machinery and appliances.

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

1/ The difference with the current account reflects differences in factor income data between the national accounts (Statistical Office) and the BOP (Central Bank).

2/ Includes trade credits.

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

4/ Includes the Stabilization Reserve Fund (SRF).

5/ For 2015, end-July 2015.

6/ Domestic credit to nongovernment euro area resident sectors beginninhg in 2011.

7/ Beginning in 2011 data are for contributions to euro area M2 aggregate.

Table 2. Estonia: Summary of General Government Operations, 2010–16

(In percent of GDP)

	2010	2011	2012	2013	2014	2015	2016
						Projections	
Revenue and Grants	40.6	38.4	38.7	38.0	38.7	39.5	40.8
Revenue	37.8	35.5	35.6	35.4	36.7	37.3	38.6
Tax revenue	20.3	19.6	20.2	20.3	21.2	22.2	22.6
Direct taxes	6.6	6.3	6.6	7.1	7.4	8.0	7.7
Personal income tax	5.3	5.1	5.2	5.4	5.7	5.9	5.9
Corporate profits tax	1.3	1.2	1.4	1.7	1.7	2.1	1.8
Indirect taxes	13.7	13.3	13.6	13.2	13.8	14.2	14.9
VAT	8.5	8.2	8.4	8.2	8.6	9.0	9.1
Excises	4.2	4.3	4.4	4.2	4.2	4.3	4.9
Other taxes (incl. land tax)	0.9	0.9	0.8	0.8	0.9	0.9	0.9
Social contributions	12.9	11.8	11.3	11.1	11.1	11.4	11.6
Pension insurance (net)	6.8	6.0	5.6	5.6	5.5	5.7	5.8
Health insurance	4.6	4.3	4.3	4.3	4.4	4.6	4.6
Unemployment insurance tax	1.2	1.2	1.2	0.9	0.9	0.9	0.9
Other (incl. self employed)	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nontax revenue	4.6	4.1	4.2	4.1	4.3	3.7	4.4
O/w: Interest income	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Grants	2.8	3.0	3.1	2.5	2.1	2.2	2.1
O/w: EU	2.4	2.6	2.7	2.2	1.7	1.5	1.6
Expenditure	40.4	37.4	39.1	38.3	38.0	39.4	40.3
Expense (current expenditure)	37.0	33.8	32.9	33.0	32.9	34.4	35.0
Compensation of employees	11.6	10.6	10.2	10.6	10.8	11.2	11.2
Wages and salaries	8.1	7.4	7.1	7.4	7.6	7.8	7.9
Employers' social contributions	3.6	3.2	3.1	3.1	3.2	3.3	3.3
Other goods and services	6.9	6.6	6.6	6.6	6.7	6.8	6.9
Transfers and subsidies	18.5	16.6	16.0	15.9	15.4	16.5	16.9
Subsidies	1.1	1.1	0.9	0.7	0.5	0.5	0.5
Transfers to households	14.5	12.8	12.4	12.3	12.4	13.4	13.6
Social benefits	12.7	11.2	10.7	10.6	10.6	11.5	11.7
Social transfers in kind	1.8	1.7	1.7	1.7	1.7	1.9	1.9
Other transfers	3.0	2.7	2.7	2.9	2.6	2.7	2.8
Property income	0.1	0.1	0.1	0.1	0.1	0.1	0.1
O/w: Interest	0.1	0.1	0.1	0.1	0.1	0.1	0.1
International cooperatioon	1.8	1.7	1.8	1.9	1.7	1.9	2.0
Capital transfers	1.0	0.8	0.8	0.9	0.8	0.8	0.8
Net acquisition of NFA (capital expenditure)	3.4	3.6	6.2	5.2	5.1	4.9	5.3
Acquisition	4.9	4.9	6.3	5.4	5.2	…	…
Disposal	-1.5	-1.4	-0.1	-0.2	-0.1	…	…
Financial surplus (+) / deficit (-)	0.2	1.0	-0.4	-0.3	0.8	0.1	0.5
Financing (accrual basis)	-0.3	-0.9	0.3	0.5	-0.8	-0.1	-0.5
Net incurrence of liabilities	0.3	-1.2	4.3	0.9	1.0	-0.1	-0.5
Net acquisition of financial assets	0.7	-0.2	4.0	0.4	1.8	0.0	0.0
Errors and Omissions	-0.1	0.1	-0.1	0.2	0.0	0.0	0.0

Sources: Estonian authorities; and IMF staff projections.

Table 3. Estonia: General Government Financial Assets and Liabilities, 2010–2015:H1

(In millions of Euros)

	2010	2011	2012	2013	2014	2015 June
Total Assets	**6,915**	**7,138**	**7,957**	**8,471**	**8,820**	**8,691**
Fiscal reserves	2,134	1,994	2,176	2,166	2,334	2,291
Currency and deposits	855	953	1,076	1,254	1,262	1,189
Securities other than shares, excl. financial derivatives	1,109	862	912	738	879	908
Short-term securities, excl. financial derivatives	565	352	492	501	552	474
Long-term securities, excl. financial derivatives	544	510	421	236	327	433
Financial derivatives	0	0	0	0	0	0
Other	169	180	187	175	193	194
Loans	250	299	597	728	708	668
Short-term	9	50	10	7	6	3
Long-term	241	249	588	722	703	665
Equity	3,853	4,124	4,433	4,875	5,003	4,953
Other	678	721	750	702	774	778
Total Liabilities 1/	**1,758**	**1,567**	**2,330**	**2,540**	**2,728**	**2,737**
Securities other than shares, excl. financial derivatives	241	254	247	279	271	239
O/w: Long-term securities, excl. financial derivatives	241	254	247	279	271	239
Loans	726	736	1,470	1,612	1,802	1,768
Short-term	7	9	10	10	6	6
Long-term	719	727	1,460	1,602	1,797	1,762
Other accounts receivable/payable	780	567	604	641	645	723

Source: Eesti Pank.

1/ Including commitments under the European Financial Stability Fund.

Table 4. Estonia: Summary Balance of Payments, 2010–16

	2010	2011	2012	2013	2014	2015	2016
						Projections	
				(Millions of Euro)			
Current Account	265	223	-438	-20	205	444	251
Primary Current Account 1/	1,889	2,083	1,288	1,579	1,771	1,815	1,676
Trade Balance	-406	-351	-1,179	-898	-999	-838	-1,019
Exports of goods	7,482	10,384	11,104	11,624	11,430	11,419	11,889
Imports of goods	7,887	10,735	12,283	12,522	12,429	12,257	12,909
Services Balance	1,341	1,306	1,356	1,319	1,680	1,696	1,737
Exports of services	3,567	4,040	4,486	4,876	5,320	5,353	5,573
Imports of services	2,226	2,734	3,131	3,556	3,640	3,657	3,835
Primary Income	-779	-850	-721	-451	-495	-454	-509
Receipts	845	1,011	1,005	1,148	1,071	917	916
Payments	1,624	1,861	1,726	1,599	1,566	1,371	1,425
Secondary Income	108	118	107	9	19	40	42
O/w: General government	43	67	0	-75	0	19	22
Capital Account	512	677	612	525	218	370	383
Non-produced non-financial assets	135	189	20	-86	-113	0	0
Capital transfers	377	487	592	611	332	0	0
Of which: General Government	198	227	327	276	201	0	0
Net lending (+) / borrowing (-) balance	777	899	173	505	423	814	634
Financial Account	831	1,008	508	467	311	888	634
Direct investment	-1,012	-1,769	-398	-86	-555	140	-171
Assets	923	-951	996	578	617	-153	471
Liabilities	1,936	818	1,394	664	1,172	-293	642
Portfolio investment	431	-1,190	100	501	496	-255	-269
Financial derivatives	-33	48	-62	-98	-75	-149	-159
Loans and other investments (net) 2/	2,276	3,907	796	142	325	...	...
SDRs	0	0	1	0	0	0	0
Change in reserves	-831	13	70	8	120	33	73
Errors and Omissions	54	109	334	-39	-112	73	0
				(In percent of GDP, unless otherwise specified)			
Current Account	1.8	1.3	-2.4	-0.1	1.0	2.2	1.2
Trade balance	-2.8	-2.1	-6.6	-4.7	-5.0	-4.1	-4.7
Service balance	9.1	7.8	7.5	6.9	8.4	8.3	8.1
Primary income balance	-5.3	-5.1	-4.0	-2.4	-2.5	-2.2	-2.4
Seconadry income balance	0.7	0.7	0.6	0.0	0.1	0.2	0.2
Net lending (+) / borrowing (-) balance	5.3	5.4	1.0	2.7	2.1	4.0	2.9
Exports of goods and services (growth in percent)	28.5	30.5	8.1	5.8	1.5	0.1	4.1
Imports of goods and services (growth in percent)	28.0	33.2	14.4	4.3	-0.1	-1.0	5.2
Net FDI from abroad	6.9	10.6	2.2	0.5	2.8	-0.7	0.8
Total external debt 3/							
Gross	112.0	100.3	99.8	91.8	94.7	95.6	94.8
Net 4/	35.8	6.0	-0.9	-5.3	-10.7	...	...
NIIP	-71.2	-54.8	-51.1	-46.9	-42.7	-37.2	-32.5
General government external debt 5/							
Excluding Govt. assets held abroad	6.5	5.9	9.5	9.9	10.4	10.1	9.6
Including Govt. assets held abroad	-6.9	-5.1	-2.6	-1.5	-1.3	-1.3	-1.2
Debt Service/Exports of GNFS (percent)	77.0	62.6	65.6	63.3	64.1	68.0	67.9

Sources: Bank of Estonia; and IMF staff estimates and projections.

1/ Excluding interest payments and reinvested earnings.
2/ Includes operations in debt securities.
3/ Starting in 2000, the definition of external debt was widened to include money market instruments and financial derivatives.
4/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets, other investment assets, and reserve assets held by Estonian residents.
5/ Includes government guaranteed debt.

Table 5. Estonia: Macroeconomic Framework, 2010–20

(Percent of GDP, unless otherwise indicated)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
								Projections			
Real GDP growth (percent)	2.5	7.6	5.2	1.6	2.9	1.6	2.5	3.0	3.2	3.3	3.4
Domestic demand real growth (percent)	0.5	8.7	8.0	2.0	4.1	-0.7	3.3	3.6	3.9	4.0	4.2
Final consumption real growth (percent)	-1.3	3.0	4.2	3.2	3.4	3.4	3.2	3.2	3.2	3.2	3.2
Capital formation real growth (percent)	7.0	28.2	18.5	-0.7	5.8	-10.9	3.6	4.9	5.8	6.3	6.7
Fixed capital formation real growth (percent)	-2.6	34.3	6.7	3.2	-3.1	-6.2	3.6	5.0	6.0	6.5	6.9
Net exports contribution to real GDP (ppts)	2.8	-0.6	-4.1	0.2	0.3	1.6	-0.5	-0.5	-0.5	-0.6	-0.6
Exports real growth (percent)	24.0	24.2	6.2	4.7	1.7	1.7	3.1	3.5	3.8	3.9	4.0
Imports real growth (percent)	21.2	27.2	11.7	4.5	1.4	-0.2	4.0	4.3	4.5	4.7	4.9
Statistical discrepancy contribution to real GDP (ppts)	-0.6	0.0	1.7	-0.6	-1.4	0.7	0.0	0.0	0.0	0.0	0.0
Gross saving	23.1	26.4	27.7	27.7	27.5	26.8	26.2	25.8	25.6	25.4	25.4
Private	19.5	21.8	21.9	22.7	21.7	21.7	20.4	20.2	19.6	19.2	18.6
Public	3.5	4.6	5.8	4.9	5.8	5.0	5.8	5.6	6.0	6.2	6.8
Investment	21.3	25.1	28.1	27.6	28.0	25.2	25.6	26.0	26.6	27.3	28.0
O/w: Fixed investment	21.2	26.2	26.5	27.1	25.2	23.8	24.1	24.5	25.1	25.8	26.6
Private	16.4	21.3	20.1	21.7	20.0	18.9	18.7	18.9	19.2	19.6	20.0
Public	4.9	4.9	6.3	5.4	5.2	4.9	5.3	5.6	5.9	6.2	6.5
Foreign saving	-1.8	-1.3	0.4	-0.1	0.4	-1.6	-0.6	0.2	1.0	1.8	2.6
Memorandum items:											
Fiscal balance 1/	0.2	1.0	-0.4	-0.3	0.8	0.1	0.5	0.0	0.1	0.0	0.3
Revenues	40.6	38.4	38.7	38.0	38.7	39.5	40.8	40.6	40.8	40.7	40.6
Expenditure	40.4	37.4	39.1	38.3	38.0	39.4	40.3	40.6	40.7	40.7	40.3
Structural balance	1.8	1.2	1.2	0.7	1.1	0.8	0.5	0.4	0.1	0.0	0.3
Total general government debt	6.5	5.9	9.5	9.9	10.4	10.1	9.6	9.1	8.6	8.1	7.6
Net non-debt creating capital inflows ("+" inflow)	19.6	1.8	11.7	8.9	9.5	-0.9	3.5	3.9	4.3	4.5	5.0
Capital transfers 2/	3.5	4.1	3.4	2.8	1.1	1.8	1.8	1.7	1.7	1.7	1.6
Portfolio investment (net)	2.9	-7.1	0.6	2.6	2.5	-1.2	-1.3	-1.2	-1.3	-1.4	-1.4
FDI liabilities	13.2	4.9	7.7	3.5	5.9	-1.4	3.0	3.4	3.8	4.2	4.8
HICP inflation (average, in percent)	2.7	5.1	4.2	3.2	0.5	0.0	2.0	2.9	2.8	2.7	2.7
Unemployment rate (percent)	16.7	12.3	10.0	8.6	7.4	6.8	6.5	5.5	5.3	5.2	5.1
Average wage growth (percent)	2.5	1.6	6.7	6.2	5.9	4.8	4.7	4.7	4.5	4.5	4.5
Labor compensation share of GDP	47.3	44.7	44.9	45.4	46.2	46.8	47.3	47.6	47.8	48.0	48.2
Output gap (in percent of potential output)	-10.7	-5.2	-2.1	-2.3	-0.4	-0.5	-0.4	-0.1	0.0	0.0	0.0
Growth rate of potential output (in percent)	3.1	1.4	1.8	1.8	0.9	2.1	2.7	2.6	3.1	3.3	3.4

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

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 6. Estonia: Indicators of External Vulnerability, 2010–14

(Percent of GDP, unless otherwise indicated)

	2010	2011	2012	2013	2014
Financial Indicators					
Public sector external debt 1/	6.5	5.9	9.5	9.9	10.4
Private sector credit (year-on-year, percent) 2/	-5.0	-3.7	-0.4	2.0	5.5
External Indicators					
Exports of goods and services (year-on-year, percent)	28.5	30.5	8.1	5.8	1.5
Imports of goods and services (year-on-year, percent)	28.0	33.2	14.4	4.3	-0.1
Current account balance	1.8	1.3	-2.4	-0.1	1.0
Capital and financial account balance	5.3	5.4	1.0	2.7	2.1
Total external debt 3/	112.0	100.3	99.8	91.8	94.7
of which: Public sector debt 1/	6.5	5.9	9.5	9.9	10.4
Net external debt 4/	35.8	6.0	-0.9	-5.3	-10.7
Debt service to exports of GNFS	77.0	62.6	65.6	63.3	64.1
External interest payments to exports of GNFS (percent)	3.4	2.9	2.4	1.9	1.9
External amortization payments to exports of GNFS (percent)	73.7	59.6	63.2	61.4	62.2
Exchange rate (per US$, period average) 5/	11.8	1.39	1.29	1.33	1.33
Financial Market Indicators					
Stock market index 6/	698	531	734	818	876
Foreign currency debt rating 7/	A	AA-	AA-	AA-	AA-

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/ External debt includes money market instruments and financial derivatives.
4/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by residents.
5/ For 2008-10, EEKs per US$; starting in 2011, Euros per US$.
6/ Tallinn stock exchange index (OMX Tallinn), end of period.
7/ Standard & Poor's long-term foreign exchange sovereign rating.

Table 7. Estonia: Households, Financial Assets and Liabilities, 2008–14
(In millions of Euros)

	2008	2009	2010	2011	2012	2013	2014
Total Assets	**16,316**	**16,588**	**14,349**	**16,426**	**19,446**	**20,620**	**22,494**
Currency and deposits	3,656	4,195	3,940	4,886	5,305	5,664	6,197
Securities other than shares	127	166	30	26	26	28	28
Shares and other equity	10,693	10,032	8,166	9,113	11,015	11,526	12,334
Insurance technical reserves	1,063	1,465	1,669	1,697	2,005	2,329	2,821
Other	776	729	545	705	1,095	1,073	1,113
Total Liabilities	**9,304**	**8,940**	**8,142**	**7,950**	**8,006**	**7,881**	**8,127**
Loans	8,043	7,767	7,586	7,317	7,324	7,301	7,497
Short-term	142	138	141	117	128	148	160
Long-term	7,901	7,629	7,445	7,200	7,197	7,153	7,338
Shares and other equity	702	597	0	0	0	0	0
Other	558	576	556	633	681	580	629
Net Financial Assets	**7,012**	**7,648**	**6,208**	**8,476**	**11,440**	**12,739**	**14,367**
Memorandum item							
Total liabilities as a ratio of total gross wages and salaries	150.4	169.8	158.0	143.3	133.0	122.4	118.5

Source: Statistics Estonia.

Table 8. Estonia: Financial Soundness Indicators, 2009–14

(Percent)

	2009	2010	2011	2012	2013	2014
Capital adequacy						
Regulatory capital to risk-weighted assets	22.3	22.1	18.6	19.3	20.0	35.7
Regulatory Tier I capital to risk-weighted assets	16.1	16.5	17.8	19.3	21.0	35.2
NPLs net of provisions to capital	28.1	25.6	22.4	14.5	8.3	7.0
Capital adequacy ratio	22.2	22.1	18.6	19.3	20.0	…
Asset composition and quality						
NPLs to gross loans (non-financial sector)	5.2	5.4	4.0	2.6	1.5	1.4
Sectoral distribution of loans to non-financial sector:						
Loans to households	42.0	42.4	40.2	41.4	40.9	42.3
Loans to non-financial corporations	45.4	47.0	47.3	46.1	44.8	46.1
Earnings and profitability						
Return on assets	-2.8	0.3	3.5	1.9	2.4	1.7
Return on equity	-24.6	2.1	33.3	14.2	17.1	11.6
Interest margin to gross income	42.3	54.5	55.0	57.8	41.2	55.5
Noninterest expenses to gross income	63.1	55.1	47.8	53.2	50.0	59.3
Liquidity						
Liquid assets to total short-term liabilities	24.9	25.2	25.7	25.8	21.6	28.7
Loans to deposits	168.4	149.3	132.5	121.4	117.4	102.0

Sources: Eesti Pank; and Financial Supervisory Authority.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2015 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

November 30, 2015

Prepared By European Department

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FUND RELATIONS

(As of October 31, 2015)

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

General Resources Account

	SDR Million	Percent Quota
Quota	93.9	100.00
Fund holdings of currency	79.71	84.89
Reserve Tranche Position	14.20	15.12

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	61.97	100.00
Holdings	62.05	100.13

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 CCR 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 multiple currency practices and 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 May 5, 2014. The Executive Board assessment is available at: http://www.imf.org/external/country/EST/index.htm

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.

Anti-Money Laundering (AML) and Combating Financing of Terrorism (CFT): MONEYVAL's report on the 4th round assessment of Estonia adopted in September 2014, which is a follow-up round on the 2003 Financial Action Task Force (FATF) standard, highlighted the authorities' progress in strengthening the AML/CFT legal and supervisory frameworks, specifically development of a risk-based approach to determine priorities for AML/CFT activities, amendments to the financing of terrorism offence, and the establishment of the Economic Crime Bureau. The report notes some remaining deficiencies, in particular with respect to the sanctioning regime for AML/CFT breaches and the transparency of legal persons. The authorities are addressing these issues and also working on ensuring compatibility of the widespread use of information technology, including in the context of their "e-Residency" initiative, and AML/CFT requirements. The FATF standard and methodology have been revised in 2012 and 2013 respectively, placing a greater emphasis on the implementation of a risk-based approach and on assessing the effectiveness of the AML/CFT regime. Estonia is tentatively scheduled to undergo an assessment against the prevailing standard in 2020.

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

Republic of Estonia: Technical Assistance from the Fund, 2000–15

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	Revenue Administration	Technical Assistance	December 2013	Ministry of Finance

STATISTICAL ISSUES

General: Estonia's data provision to the Fund is 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 2010 (ESA 2010). Quarterly GDP estimates at current and at constant prices are compiled using the production, income and expenditure approaches. The annual and the quarterly national accounts are compiled at previous year prices and chain-linked to 2010, using double deflation. As of September 2011, data are compiled on the basis of the new version of classification of activities EMTAK 2008. However, often large statistical discrepancies between headline GDP and its expenditure components and significant GDP data revisions (especially those effected in 2014) complicate economic analysis.

Republic of Estonia: Discrepancies in National Account Statistics, 2011–14

	2011	2012	2013	2014
GDP (growth in percent)	7.6	5.2	1.6	2.9
Statistical Discrepancy (growth contribution in ppts)	0.0	1.7	-0.6	-1.4
Change in inventories* (growth contribution in ppts)	-1.3	2.9	-1.0	2.4

Sources: Statistics Estonia; and IMF staff calculations.
* The change in inventories is derived as a residual from domestic demand (difference between domestic demand and the sum of consumption and fixed investment).

Republic of Estonia: Revisions of GDP Growth, 2014
(Percent, year-on-year)

	Flash Estimate	First Release	Final
2014:Q1	-1.9	0.3	2.5
2014:Q2	2.2	2.4	2.9
2014:Q3	2.1	2.2	2.7
2014:Q4	2.7	3.0	2.1
2014:Full Year	…	2.1	2.9

Source: Statistics Estonia.

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. This data provides detailed revenue breakdown, but expenditure breakdown is not available. 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 compiled according to the ESA2010 methodology. They are also 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* sixth edition (BMP6). 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.fin.ee/?lang=ee) 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).

Republic of Estonia: Table of Common Indicators Required for Surveillance

As of November 30, 2015

	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[8]
Exchange Rates	November 26, 2015	November 27, 2015	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	October 2015	November 2015	M	M	M		
Reserve/Base Money	October 2015	November 2015	M	M	M	O, LO, LO, LO	O, O, O, NA
Broad Money	October 2015	November 2015	M	M	M		
Central Bank Balance Sheet	October 2015	November 2015	M	M	M		
Consolidated Balance Sheet of the Banking System	October 2015	November 2015	M	M	M		
Interest Rates[2]	October 2015	November 2015	M	M	M		
Consumer Price Index	October 2015	November 2015	M	M	M	O, O, O, O	LO, LO, O, LO
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	Q2/2015	October 2015	Q	Q	Q	LO, LO, O, O	LO, LO, O, NO
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	September 2015	October 2015	M	M	M		
Stocks of Central Government and Centarl Government-Guaranteed Debt[5]	Q2/2015	October 2015	Q	Q	Q		
External Current Account Balance	Q2/2015	September 2015	Q	Q	Q	O, O, LO, O	O, O, O, O, O
Exports and Imports of Goods and Services	October 2015	November 2015	M	M	M		
GDP/GNP	Q2/2015	September 2015	Q	Q	Q	O, O, O, LO	LO, LO, LO, LNO
Gross External Debt	Q2/2015	September 2015	Q	Q	Q		
International Investment Position[9]	Q2/2015	September 2015	Q	Q	Q		

[1] Any reserve assets that are pledged of 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.