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Working Paper Series

**1/2013**

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ISBN 978-9949-493-14-2  
Eesti Pank. Working Paper Series, ISSN 1406-7161; 1/2013

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Ardo Hansson and Martti Randveer\*

## Abstract

Estonia, Latvia and Lithuania stand out for their rapid economic adjustment after the outbreak of the global financial crisis. The reduction of imbalances and vulnerabilities in the Baltic countries has been much faster than that in the euro area countries most affected by the debt crisis. Our analysis seeks to explain these developments by addressing the following questions. First, what explains the recent cyclical pattern of the Baltic economies? Second, what are the similarities and differences between the economic adjustment in the Baltics and that in the euro area countries most affected by the recent debt crisis? And, finally, how successful has the strategy of adjustment been in the Baltic countries? We argue that the primary driving force of the cyclical developments in the Baltic economies has been the change in capital flows. A comparison of the economic adjustment in the Baltic countries with that in the three euro area countries strongly affected by the debt crisis – Ireland, Greece and Portugal – suggests that the main determinant of the speed of adjustment has been the ability of the countries to mitigate the impact of the sudden stop in private sector capital flows. Looking at the pros and cons of rapid and gradual adjustment, we conclude that in the case of the Baltic countries, the strategy of rapid adjustment has overall been a successful response to a very difficult situation.

JEL Code: E32, G01, P52

Keywords: business cycles, economic adjustment, financial crisis, Baltic economies

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The views expressed are those of the authors and do not necessarily represent the official views of Eesti Pank.

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\* A shorter version of the article will be published in 2013 by Edward Elgar in "Achieving Balanced Growth in the CESEE Countries" (edited by E. Nowotny, P. Mooslechner and D. Ritzberger-Grünwald).

We would like to thank Liina Kulu and Krista Talvis for their excellent research assistance and Karsten Staehr, Märten Ross, Ülo Kaasik, Martin Lindpere, Jaak Tõrs and the participants of the Conference on European Economic Integration 2012 for discussions and helpful comments.

## **Non-technical summary**

Estonia, Latvia and Lithuania experienced several years of strong economic growth before the global financial crisis but the boom was followed by very deep recessions in 2008/2009. However, since the severe recession, the Baltics have witnessed a relatively speedy recovery. As a result the countries have regained a significant part of the initial output losses and have seen a fall in unemployment levels. Furthermore, several pre-existing imbalances and vulnerabilities have been reduced. Overall, in international comparison the Baltic economies stand out for their rapid economic adjustment after the outbreak of the global financial crisis.

Our analysis seeks to explain these developments by addressing the following questions. First, what explains the recent cyclical pattern of the Baltic economies? Second, what are the similarities and differences between the economic adjustment in the Baltics and that in the euro area countries most affected by the recent debt crisis? And, finally, how successful has the strategy of adjustment been in the Baltic countries?

From a qualitative point of view, the macroeconomic developments in the Baltic countries before and after the latest recession fit well with the picture of a typical business cycle in emerging market economies. The economic cycles in the Baltic economies have been characterised by: (1) high volatility of macroeconomic variables, (2) sudden stops in foreign capital flows, (3) consumption volatility in excess of output volatility, (4) counter-cyclical trade balances, and (5) counter-cyclical real interest rates. We argue that the central driving force of these cyclical developments in the Baltic economies has been the change in capital flows. The impact of these flows has been magnified by self-fulfilling expectations, wealth and collateral effects, and the workings of the real interest rate channel.

Comparison of the Baltic countries with Greece, Ireland and Portugal, three euro area countries that have been affected by the debt crisis, reveals several similarities. All of the countries have witnessed severe recessions with exceptionally large cumulative declines in domestic demand and major increases in unemployment. These countries have also seen a marked reduction from the period prior to the crisis in several pre-existing imbalances such as current account and fiscal deficits.

There are also significant differences between the two country groups, the most obvious of which is the speed of adjustment. Judged by almost all macroeconomic variables, the adjustment in the Baltic countries was at least twice as fast as that in the other countries. There are several explanations for

the large difference in the speed of adjustment between the two country groups. In our view, the main reason is the ability of the countries to mitigate the impact of the sudden stop in private sector capital flows, which happened in all six of the economies during 2007–2009. As members of the euro area, Ireland, Greece and Portugal were able to draw on very substantial central bank liquidity support, which offset to a large extent the very high private capital outflows. For the Baltics this option was not available.

Looking at the pros and cons of rapid and gradual adjustment, we argue that the disadvantages of a rapid adjustment include the risk of costly excess volatility, political difficulties and the likelihood of mistakes in economic policy. On the other hand, rapid adjustment helps in avoiding reform fatigue, the build-up of excessive debt and a long period of uncertainty weighing on economic activity. In addition, a rapid adjustment helps to bring about a faster closure of unsustainable activities, making resources available for productive means elsewhere in the economy. In this context we argue that the available evidence on the recovery, the correction of macroeconomic and structural imbalances and the relatively strong growth prospects suggests that the strategy of rapid adjustment has overall been a successful response to a very difficult situation in the Baltic economies.

The recent cyclical pattern of the Baltic economies suggests that under a credible fixed exchange rate arrangement there are several channels that may amplify different shocks affecting the economy. Therefore, there is a need to address the build-up of imbalances and vulnerabilities early and decisively. The need for pre-emptive policy measures is also underscored by the lessons from the euro area debt crisis, which confirm that adjustment afterwards through wages and prices is likely to be protracted and painful.

The current financial and sovereign distress in the euro area also offers proof that a strong external anchor in the form of membership of a currency union cannot be a substitute for policy discipline in other areas. On the contrary, stronger discipline is needed in other economic policies.

The adjustment in the Baltic countries has provided a more solid foundation for future growth. The external and financial vulnerabilities have been reduced and a significant sectoral reorientation and elimination of unsustainable activities/businesses have been achieved. However, various shocks continue to pose a challenge, so a more active use of fiscal and macro-prudential policy measures is warranted.

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## 1. Introduction

Estonia, Latvia and Lithuania experienced several years of strong economic growth before the global financial crisis but the boom was followed by very deep recessions in 2008/2009. In a historical context, the cumulative output loss in the Baltic countries was almost twice as large as the GDP decline in the hardest-hit countries during the Asian crisis in 1997/1998. Compared to the euro area debt crisis, only the expected output loss in Greece is of the same magnitude as the GDP decline in the Baltics. In the other euro area countries, the recession has been less pronounced in terms of a cumulative decline in output.

After the severe recessions of 2008/2009, the Baltics have witnessed a relatively speedy recovery. As a result the countries have regained a significant part of the initial output losses and have seen a fall in unemployment levels. Swift reversals of several pre-existing imbalances and vulnerabilities were another prominent feature of the adjustment in the Baltics. Large current account deficits have been eliminated, credit growth is on a more sustainable path, and there has been a marked improvement in cost competitiveness. In addition, the Baltic countries have achieved a significant sectoral re-orientation and managed to adjust their economies without a sharp increase in public and private indebtedness. Overall, the economic adjustment in the Baltics has been much faster than in the euro area economies most affected by the debt crisis.

Our analysis seeks to address the following questions. First, what explains the recent cyclical pattern of the Baltic economies? Second, what are the similarities and differences between the economic adjustment in the Baltics and the euro area countries most affected by the recent crisis? And, finally, what are the advantages and disadvantages of rapid and gradual adjustment? In Section 2, we outline the main developments in the Baltic countries in the period from 2000 to 2012. In Section 3, we compare the latest cyclical developments in the Baltic countries with historical business cycle episodes in the OECD countries and some emerging market economies. In addition we compare the adjustment in the Baltic countries with that in Ireland, Greece and Portugal. In Section 4, we discuss the advantages and disadvantages of rapid and gradual economic adjustment. We conclude in Section 5.

## 2. Main developments in the Baltics during 2000–2012

### 2.1. Expansion (2000–2007)

The three Baltic economies experienced strong expansion in the period from 2000 to 2007, when average annual real growth was about 8 per cent (see Table 1)<sup>1</sup>. To a large extent this robust growth was based on a rapid increase in the productive capacity of these economies, and estimates by the European Commission show that the potential output during that period expanded by 6 per cent annually. Cyclical factors, however, also played an important role, especially during the latter part of the expansion. The Baltic countries entered the expansion period with small negative output gaps but at the peak of the cycle all three countries had positive output gaps that exceeded ten percent of their potential output<sup>2</sup>.

The primary driving force of the positive and reinforcing cyclical developments was the exceptionally high capital inflows that were intermediated by the banking sector, which led to a rapid expansion of credit. From the supply side, these inflows were generally supported by optimism about the growth prospects in the region and global factors such as low risk aversion and ample liquidity. A factor specific to the Baltic countries in explaining the very high relative level of these flows is the small size of these economies and their proximity to the Nordic countries, where banks, especially Swedish ones, were among the first in the EU to start an active expansion of their retail banking activities abroad (Riksbank (2007))<sup>3</sup>. In the process, the Nordic banks<sup>4</sup> opted for aggressive business strategies to gain market share and set nominal interest rates and other loan conditions at levels quite similar to those in their home markets<sup>5</sup>.

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<sup>1</sup> A comparative analysis of the Baltic countries prior to and after the onset of the global financial crisis is also given by Bakker and Klingen (2012), Dabušinskas and Randveer (2011), the European Commission (2010), Brixiova, Vartia and Worgötter (2009) and Gardo and Martin (2010).

<sup>2</sup> The revisions to output gap estimates for the Baltic countries were much larger than for the majority of EU countries. For instance, in the autumn of 2007 the available estimates for the output gaps in the Baltics indicated positive output gaps in the range of 1 to 3 per cent of potential output. In the latest estimates, however, the positive output gaps exceeded 10 per cent of potential output.

<sup>3</sup> An additional factor for the high capital inflows intermediated by the banking sector was the initial low level of financial deepening in the Baltic countries. For example, in 2000 the ratio of bank credit to GDP amounted to 20% in the Baltic countries. In the euro area the ratio was 105%.

<sup>4</sup> Nordic banks dominated the banking sector in the Baltic countries. By 2009, the share of Nordic banks as measured by their share of assets in total banking sector assets exceeded 90 per cent in Estonia, 80 per cent in Lithuania and 60 per cent in Latvia (ECB (2010a)).

<sup>5</sup> An important reason for the convergence of nominal interest rates was the entry of the Baltic countries to the EU in 2004 and the expectations of speedy euro adoption, which significantly lowered the country risk premium.

Table 1: Selected macroeconomic variables of the Baltic countries in 2000–2012

|  | 2000–<br>2003 | 2004–<br>2007 | 2008  | 2009  | 2010  | 2011  | 2012 |
|--|---------------|---------------|-------|-------|-------|-------|------|
| Real GDP growth (y-o-y, %)                         | 7.4           | 8.8           | -1.3  | -15.6 | 1.1   | 6.3   | 3.2  |
| contribution of private consumption (pp)           | 4.6           | 7.4           | -1.9  | -12.6 | -0.5  | 2.6   |      |
| contribution of government consumption (pp)        | 0.4           | 0.6           | 0.4   | -0.7  | -0.4  | 0.2   |      |
| contribution of investments (pp)                   | 3.4           | 4.7           | -5.8  | -15.8 | 1.7   | 5.3   |      |
| contribution of net exports (pp)                   | -1.0          | -4.0          | 5.9   | 13.5  | 0.3   | -1.7  |      |
| share of manufacturing (% of GDP, constant prices) | 16.1          | 16.3          | 15.5  | 14.3  | 16.3  | 17.5  |      |
| share of construction (% of GDP, constant prices)  | 6.2           | 8.2           | 9.5   | 7.0   | 5.9   | 6.5   |      |
| Output gap (% of potential GDP)                    | -1.0          | 7.3           | 6.8   | -10.1 | -8.2  | -2.2  | -1.0 |
| Inflation (y-o-y, %)                               | 2.2           | 5.1           | 12.3  | 2.4   | 1.0   | 4.5   | 3.3  |
| Unemployment rate (%)                              | 13.0          | 7.5           | 6.3   | 14.8  | 17.9  | 14.7  | 13.0 |
| Fiscal balance (% of GDP)                          | -1.4          | 0.3           | -4.4  | -6.4  | -4.7  | -2.6  | -2.2 |
| Cyclically adjusted fiscal balance (% of GDP)      | -1.1          | -2.0          | -5.5  | -4.1  | -2.6  | -1.9  | -1.7 |
| General government gross debt (% of GDP)           | 13.8          | 11.2          | 12.4  | 23.1  | 28.2  | 27.4  | 28.5 |
| Current account balance (% of GDP)                 | -6.9          | -13.6         | -11.9 | 5.6   | 2.5   | -0.2  | -0.7 |
| Domestic investment (% of GDP)                     | 25.3          | 32.7          | 29.5  | 16.6  | 18.6  | 23.0  | 23.8 |
| National saving (% of GDP)                         | 18.5          | 19.2          | 17.7  | 22.2  | 21.1  | 22.8  | 23.1 |
| Share of world exports, 5 year change              | 26.7          | 44.8          | 34.6  | 21.3  | 8.9   | 20.0  |      |
| CPI-based REER (y-o-y, %)                          | 1.3           | 1.4           | 7.6   | 4.6   | -5.6  | 0.8   |      |
| Real unit labour costs (y-o-y, %)                  | -2.0          | 1.7           | 5.4   | -0.6  | -8.3  | -4.1  | -0.2 |
| nominal ULC-based REER (y-o-y, %)                  | 0.7           | 8.0           | 10.1  | -3.8  | -8.8  | 0.0   |      |
| Private sector debt (% of GDP)                     | 56.1          | 100.1         | 126.1 | 136.8 | 123.1 | 109.4 |      |
| Private sector credit flow (% of GDP)              | 11.2          | 26.9          | 12.2  | -5.0  | -6.2  | 1.2   |      |
| Gross external debt (% of GDP)                     | 56.3          | 85.7          | 106.0 | 122.8 | 122.4 | 108.0 |      |
| Net international investment position (% of GDP)   | -42.0         | -63.0         | -69.1 | -74.0 | -69.5 | -61.2 |      |
| Real long-term interest rates (%)                  | 4.8           | -0.8          | -4.3  | 9.0   | 6.6   | 1.0   |      |
| Residential property prices (y-o-y, %)             | 20.6          | 34.8          | -3.8  | -36.9 | -5.6  | 12.9  |      |

Note: CPI = index of consumer prices; REER = real exchange rate; ULC = unit labour costs.

Source: IMF (WEO database, October 2012), Eurostat, European Commission (AMECO database), Eesti Pank calculations.

The impact of these capital inflows in the pre-crisis period was magnified through several well-known channels. First, *self-fulfilling expectations* mattered. The relatively long period of high growth led to a gradual but quite significant rise in the estimates for the growth of potential output and long-run growth projections. Similarly the observed growth rates in several key economic and financial variables such as wages and property prices were often extrapolated into the future. All of this had a clear impact on investment and consumption decisions and thereby on economic activity, resulting in a strong self-reinforcing interaction between expectations and growth.

Second, *collateral and wealth effects* played an important role. Rapidly increasing lending volumes increased the value and liquidity of collateral. This lowered the perceived credit risk of the borrowers, which in turn enabled banks to continue extending credit. The positive financial loop between increasing collateral prices, loan volumes and economic activity was further magnified by the wealth effects from soaring asset prices.<sup>6</sup>

Third, the credit boom and economic expansion were amplified by the workings of *the real interest rate channel*. The credibility of the Baltic exchange rate regimes<sup>7</sup> and very optimistic credit risk assessments led to low nominal interest rates. This in turn accelerated output growth and inflation. As nominal interest rate dynamics were not affected by higher inflation, a strong positive feedback loop between decreasing real interest rates and accelerating growth and inflation took hold.

In addition to these channels, the fiscal stance was slightly accommodative. Although the headline fiscal balances were quite close to zero in Latvia and Lithuania and in surplus in Estonia, the cyclically adjusted budget balances were slightly negative. The change in the fiscal stance was the largest between 2004 and 2007, when the cyclically adjusted budget balance deteriorated by 2 percentage points of GDP<sup>8</sup>. In hindsight we can see that the fiscal policy did indeed act in a pro-cyclical fashion. It is, however, hard to argue that a fiscal impulse of this size could have been a primary driver of the boom<sup>9</sup>.

All of these factors – large capital inflows intermediated by the financial sector, the feedback loops between the financial sector and the real economy,

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<sup>6</sup> The cumulative nominal house price growth in 2001–2007 was 310 per cent in Estonia, 335 per cent in Lithuania and 655 per cent in Latvia (ECB (2010b), ECB (2012)).

<sup>7</sup> During this period, Estonia and Lithuania operated under a currency board arrangement (CBA). In Latvia a fixed exchange rate regime quite similar to a CBA was used.

<sup>8</sup> See footnote 2 about the *ex post* revisions in output gaps in the Baltic countries.

<sup>9</sup> Some specific fiscal policy measures such as a reduction in the tax deductibility of the interest payments of mortgages were introduced. However, along with measures in prudential regulation that focused mostly on strengthening the capital base of the banks and increases in the reserve requirement, they did not have a clear impact on overheating.

self-fulfilling expectations and an accommodative fiscal stance – contributed to a picture typical of foreign-financed credit booms. Economic growth was increasingly based on the expansion of domestic demand; the current account deficit reached very high levels and high credit growth led to a rapid rise in private-sector indebtedness. By the end of the expansion, in 2006/2007, inflation accelerated and cost competitiveness indicators worsened. In addition to the build-up of financial and external imbalances, structural imbalances appeared. The most visible structural imbalance was a rapid increase in the share of employment and value added in the construction and real estate sector.

The developments in the competitiveness and export performance of the Baltic economies were not so clear-cut. The rapid expansion of the economy did lead to a clear increase in unit labour costs during the second half of the boom and to an increase in the consumer price-based real exchange rate by the end of the expansion. However, the worsening of the price/cost competitiveness indicators did not have a visible impact on exports, which continued to expand strongly until the end of 2008, when foreign trade collapsed globally. This is also evident in the dynamics of the share of the countries in world exports, which continued to grow throughout the expansionary phase.

## **2.2. Recession (2007/2008–2009)**

Recession did not hit the Baltic countries simultaneously. Both Estonia and Latvia, which had witnessed a stronger credit boom, had already entered the contractionary phase in the second half of 2007. In Lithuania, where rapid foreign-financed credit growth had started later, the expansion continued for longer and the economy started to shrink only in the third quarter of 2008.

In Estonia and Latvia, the recession can be divided into two distinct phases: (1) from the second half of 2007 to the intensification of the global financial crisis in the autumn of 2008 and (2) from the autumn of 2008 until the end of the recession by the end of 2009. In Lithuania, the period from second half of 2007 to the intensification of the global financial crisis in autumn 2008 could better be described as an economic slowdown. However, the next phase (autumn 2008 until end of 2009) was qualitatively quite similar in all of the Baltic countries.

The first phase of the recession in Estonia and Latvia was relatively mild and can be characterised as a domestic-demand-led adjustment that was primarily related to a deceleration of credit growth. By this stage the dependence of domestic demand on credit growth was such that even a relatively modest upward revision of the credit risk of the Baltic economies by the

Nordic banks had a significant impact. As a result domestic demand started to contract, mainly driven by a decline in investment. The recession was most visible in the real estate sector, where prices fell and liquidity decreased. There was also an improvement in the current account balances. Still, the momentum of the expansion had been so strong that the impact of the correction in domestic demand did not have a clear impact on inflation and labour market developments. A stronger downturn was also avoided due to export growth, which continued until autumn 2008.

The second phase of the recession started with the deepening of the global financial crisis in September 2008 and was much more severe. Almost immediately there was a sharp reversal of foreign capital flows and a steep fall in exports.

The reversal was strongest for the capital flows via the domestic financial sector, reflecting both external and internal factors. With regard to external factors, rising global risk aversion and a drying up of interbank markets caused significant liquidity and funding problems for the Nordic parent banks, which had used these markets heavily to finance their activities in the Baltics. As a result, they were forced to retrench. Indeed, there is evidence that the Nordic banks that were more exposed to the interbank market were forced to deleverage more strongly in the Baltic countries (Dabušinskas and Randveer (2011)).

In addition, the reversal of capital flows reflected a sharp deterioration in the risk assessment of the Baltic economies. The global financial crisis exposed the large external and financial vulnerabilities of these economies, increased the probability of the realisation of tail risks such as a sharp devaluation and systemic financial crisis, and created a strong incentive for outside investors to reduce rapidly their exposure to these countries. A good example is the rapid outflow of non-resident deposits from Latvia and the inability of several domestically owned Baltic banks to refinance their external liabilities (Bakker and Klingens (2012)). The severe liquidity and funding problems in a large domestically-owned Latvian bank and the subsequent request by the Latvian authorities for international financial assistance confirmed the seriousness of these risks.

In addition to the sudden stop and the subsequent outflow of capital, the small and open Baltic economies were greatly affected by the very large negative shock to world trade. The impact of the negative shock was stronger than average given that the Baltic economies trade intensively with each other and with Finland, Sweden and Russia, all of which recorded relatively large falls in their foreign demand. As a result the exports of goods and services in the Baltic economies fell by more than 15 per cent in 2009 from their levels of the previous year.

The reversal in capital flows and the fall in exports resulted in a sharp and severe contraction in domestic demand. The brunt of the adjustment fell on investment, especially in the real estate and construction sector, which halved from 2008 to 2009, and on private consumption, which declined by one-fifth. The adjustment was amplified by and large through the same channels that operated during the expansion. Now the real interest channel operated in the opposite direction. The negative financial loop between falling asset prices, contracting loan volumes and economic activity further dampened demand through collateral and wealth effects. Finally, the self-fulfilling nature of expectations magnified the severity of the recession. As a result, the output gap turned strongly negative and the current account balance turned positive in 2009.

During the recession, the impact of fiscal policies on economic activity was moderate. There was a clear element of counter-cyclicality in 2008, when the cyclically adjusted budget balance deteriorated by 3.5 percentage points of GDP. However, by the end of the 2008 the headline fiscal balances were at a clear risk of becoming too high, especially given that access to international financial markets was limited for the Baltic countries. There were important country-specific factors as well: fiscal policy in Estonia was much influenced by the aim of fulfilling the Maastricht convergence criteria, and a strengthening of fiscal discipline was one of the main conditions of international assistance to Latvia. As a result, the fiscal impulse in 2009 was negative in Estonia and Latvia.

Despite the severity of the cumulative output losses ranging from 16 per cent in Lithuania to 25 per cent in Latvia, the Baltic economies proved relatively resilient. Although banks had contributed to the build-up of imbalances, disorderly deleveraging and bank failures were mostly avoided, showing the importance of adequate capital buffers in the banking sector and of recourse to liquidity via parent banks. The flexibility of the Baltic economies also facilitated the necessary structural and macroeconomic adjustments.

### **2.3. Recovery (2009/2010–)**

The economic recovery of the Baltic countries started in the second half of 2009 and real annual growth averaged slightly above 3.5 per cent during 2010–2012. Initially the pick-up in economic activity was driven mostly by strong export growth. The decline in export volumes in 2009 was mostly reversed in 2010 and by 2011 exports were markedly above their pre-crisis levels. The contribution of domestic demand, especially investment, has gradually increased as well (see Table 1).

The reduction in various imbalances that took place during the recession has continued during the recovery. The progress has been clear with respect to external and financial vulnerabilities. A significant improvement has been achieved with regard to the current accounts, which were close to balance in 2012. During the recovery there has also been a significant deleveraging in the private sector, and this, together with the increases in nominal incomes, has led to a notable reduction in both domestic and external indebtedness.

In 2010 there were solid improvements in cost competitiveness indicators, and these gains were maintained in the following two years. Both CPI-based and unit labour cost-based real effective exchange rates have depreciated noticeably. The improvement in relative cost/price levels has also been accompanied by a sectoral re-orientation from the construction and real estate sectors to manufacturing. In addition there has been also been progress in fiscal consolidation.

### **3. Comparison of the adjustment in the Baltic countries with that in other countries**

In this section we explore the similarities and differences between the economic adjustments in the Baltic countries and in other countries. First, we look at a wide set of countries, including several emerging and OECD countries. Second, we narrow our focus to the recent adjustment in the relatively small euro area countries – Ireland, Greece and Portugal – that, like the Baltics, have witnessed deep recessions and major adjustments.

#### **3.1. Comparison with economic adjustments in the OECD and selected emerging markets<sup>10</sup>**

In order to identify and date business cycles, we use a method developed by Bry and Boschan (1971) and refined in Harding and Pagan (2002). The method is used to determine cyclical turning points. The cycle starts with a peak and ends with the next peak. It consists of two phases: (1) a contraction (from peak to trough) and an expansion (from trough to peak). A peak is reached in quarterly time series at time  $t$  if real GDP, denoted  $y$ , satisfies the conditions:

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<sup>10</sup> The analysis in this subsection is based on Dabušinskas and Randveer (2011), where the adjustment in the Baltic countries was compared to the economic adjustment in other countries during 1960–2007. Here we have expanded the time period by four years (1960–2011) to take in the macroeconomic developments in other countries during the global financial crisis.

$$\{(y_t - y_{t-2}) > 0, (y_t - y_{t-1}) > 0\} \text{ and } \{(y_{t+2} - y_t) < 0, (y_{t+1} - y_t) < 0\}$$

A trough is reached at time  $t$  if:

$$\{(y_t - y_{t-2}) < 0, (y_t - y_{t-1}) < 0\} \text{ and } \{(y_{t+2} - y_t) > 0, (y_{t+1} - y_t) > 0\}$$

The minimum duration of the full cycle is assumed to be five quarters. The expansionary phase and the contractionary phase each last at least two quarters.

Our sample consists of 41 OECD and emerging market countries<sup>11</sup>. The data are from the IMF's *International Financial Statistics* database with quarterly frequency for the period 1960–2011. Although we have analysed a wider set of variables, we compare the dynamics of only four indicators in this paper: (1) real GDP, (2) net foreign capital inflows, (3) real interest rates and (4) consumer-price-based real effective exchange rates. Real GDP and net foreign capital inflows are seasonally adjusted. Real interest rates are calculated by deflating the nominal interest rates of government bonds by the GDP deflator. Altogether we identify 188 recessions in the sample.

Figure 1 shows the changes in the selected four variables in the four years before and three years after the quarter, denoted by  $t$ , in which the level of output reached its cyclical peak. To show the overall variation in the data, we report the 5<sup>th</sup> and 95<sup>th</sup> percentiles for the whole sample.

A comparison of the Baltic experience with the adjustment in other countries highlights the following similarities and differences.

From a qualitative point of view, the macroeconomic developments in the Baltic countries before and after the latest recession fit well with the picture of a typical business cycle in *emerging market economies*. According to Neumeyer and Perry (2005) and Aquiar and Gopinath (2007), the characteristic features of the business cycle in the emerging market economies include: (1) high volatility of macroeconomic variables, (2) sudden stops in foreign capital flows, (3) consumption volatility exceeding output volatility, (4) counter-cyclical trade balances, and (5) counter-cyclical real interest rates that lead the cycle. With the exception of real interest rates leading the cycle, all of these features were also evident in the Baltic countries, suggesting that the driving forces and amplification mechanisms of the cycle in the Baltic countries and the emerging market economies were rather similar.

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<sup>11</sup> Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States, Argentina, Brazil, Chile, Colombia, Indonesia, Jordan, Malaysia, Philippines, Russia, South Africa and Thailand.

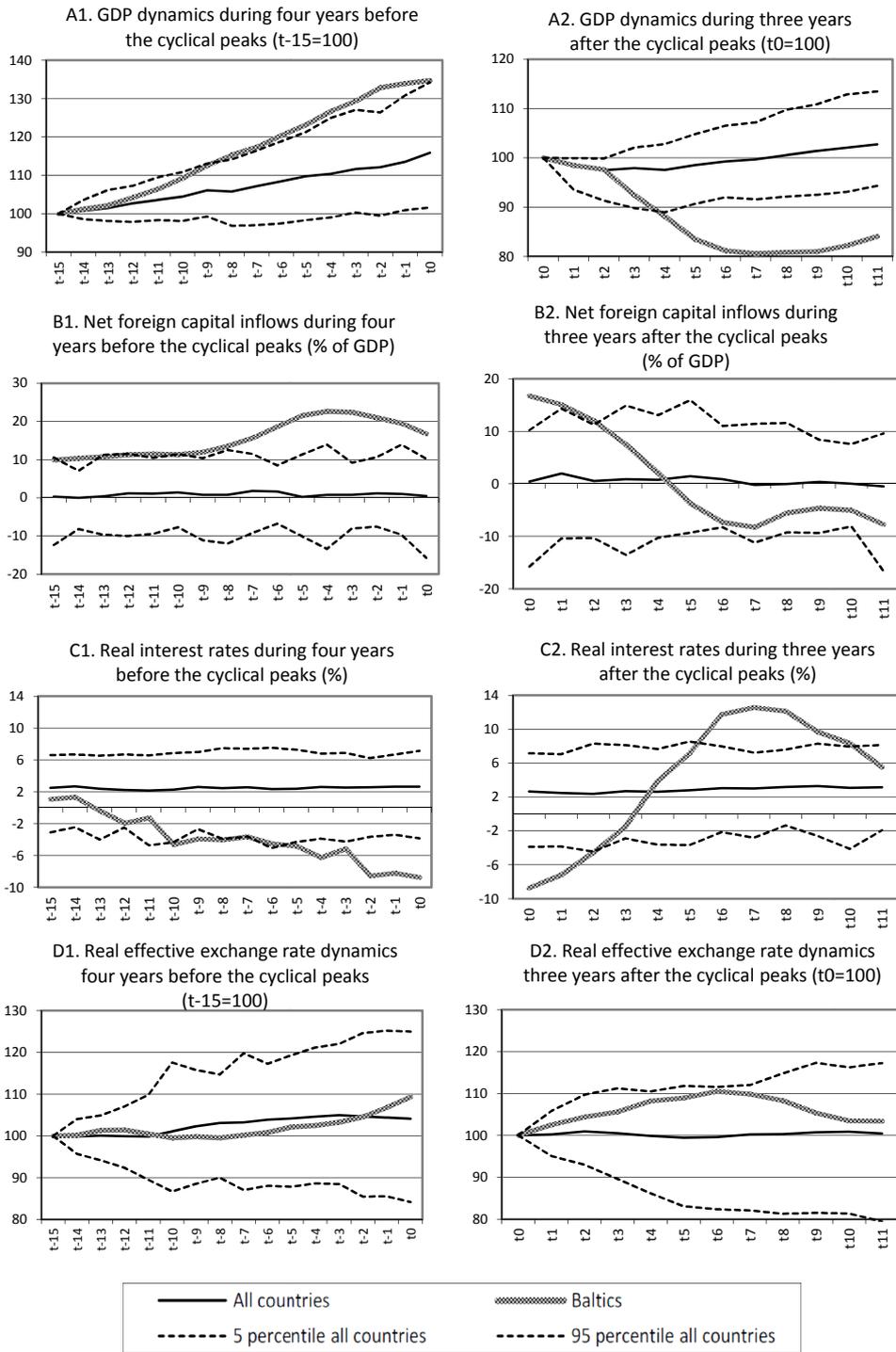


Figure 1: A comparison of the 2007–2009 recession in the Baltic countries with previous cycles in other countries: (a) real GDP; (b) net foreign capital inflows; (c) real interest rates and (d) CPI-based REER.

When compared to the experience in our sample of OECD and emerging market economies, one of the main distinguishing features was the exceptionally high volatility of macroeconomic variables in the Baltic countries (see Figure 1). For instance, the changes in real GDP growth, net foreign capital inflows and real interest rates far exceeded the average changes in the comparison countries.

However, there were also some exceptions in the overall picture of high cyclical volatility. First, during the expansion, the appreciation of the consumer-price-based real exchange rate was most of the time smaller than the sample average. Second, the growth in government consumption prior to the recession was also close to the sample average. Third, although the Baltic countries witnessed some of the fastest credit growth during the growth phase, the reduction in loan volumes after the peak of the cycle did not differ from the sample average. These differences highlight the characteristics of the Baltic experience that were outlined earlier: (1) the strong economic expansion until 2007/2008 did not cause a significant deterioration in price competitiveness; (2) fiscal policy did not play a primary role in amplifying the cycle during the expansion, and (3) disorderly deleveraging in the banking sector was avoided during the recession.

### **3.2. Comparison with the adjustment in Ireland, Greece and Portugal**

A comparison of the adjustment in the Baltic countries with that in Ireland, Greece and Portugal after the cyclical peak in 2007/2008 is valuable as there are many similarities between these country groups. First, an obvious advantage is that we are analysing the same time period, so the countries were subject to the same international economic environment. Second, both country groups showed significant vulnerabilities and imbalances prior to the crisis. Third, from a country perspective all of the countries were unable (Ireland, Greece and Portugal) or unwilling (the Baltic countries) to adjust via changes in the nominal exchange rates.

From a qualitative point of view, there are many similarities in the economic adjustment of the two country groups. All of the countries have witnessed severe recessions that have been characterised by exceptionally large cumulative declines in domestic demand and major increases in unemployment (see Table 2 and Figure 2). After an initial substantial deterioration in fiscal balances, all six countries embarked on a process of fiscal consolidation, which has resulted in a marked improvement in fiscal balances. Compared to the period prior to the crisis, current account balances and several cost competitiveness indicators have improved.

Table 2: Changes in real GDP since 2007 in the Baltics and Ireland, Greece and Portugal

|               | Change in GDP from cyclical peak to trough during 2007–2009 crisis (%) | Change in GDP from cyclical peak in 2007/08 to current GDP level (2012 Q2)(%) | GDP level in 2012 Q2 (2000=100) |
|---------------|--|---|---------------------------------|
| Latvia        | -24.6  | -15.1   | 156.9                           |
| Estonia       | -19.5  | -6.3  | 157.5                           |
| Lithuania     | -15.9  | -6.4  | 166.9                           |
| Ireland       | -10.7  | -8.4  | 132.3                           |
| Portugal      | -4.1   | -6.4  | 102.0                           |
| Greece        | ...  | -18.3   | 110.9                           |
| EU-27 average | -8.4   | -3.6  | 130.2                           |

Source: Eurostat, Eesti Pank calculations.

There are also significant differences between the two country groups. The most obvious is the speed of adjustment. Judged by almost all macroeconomic variables, the adjustment in the Baltic countries was at least twice as fast. An important example is the correction in current account balances. The sharp reversal of capital inflows into the Baltics brought about a rapid improvement in current account balances. In Ireland, Greece and Portugal the adjustment has been much more protracted. As a flipside, the sharp improvement in the current account balances in the Baltics has enabled these economies to avoid a significant increase in indebtedness, while Ireland, Greece and Portugal have all witnessed a sharp increase in their public and private sector debts.

There are several explanations for the large difference in the speed of adjustment between the two country groups. In our view, one of the main reason is the ability of the countries to mitigate the impact of the sudden stop in private sector capital flows, which took place in all of the six economies during 2007–2009. As members of the euro area Ireland, Greece and Portugal were able to draw on a very substantial central bank liquidity support, which to a large extent offset the very high private capital outflows. For the Baltics this option was not available<sup>12</sup>.

<sup>12</sup> Recourse to liquidity in the Baltic economies was mostly offered by the Nordic parent banks. The significance of this support is underscored by the fact that it was indeed the liquidity problem in the large domestically owned bank in Latvia that was one of the main triggers for the application for the international financial programme. However, the help from the Nordic banks was more akin to a liquidity backstop, and the Nordic banks have visibly reduced their exposure in their Baltic subsidiaries, thereby contributing to capital outflows.

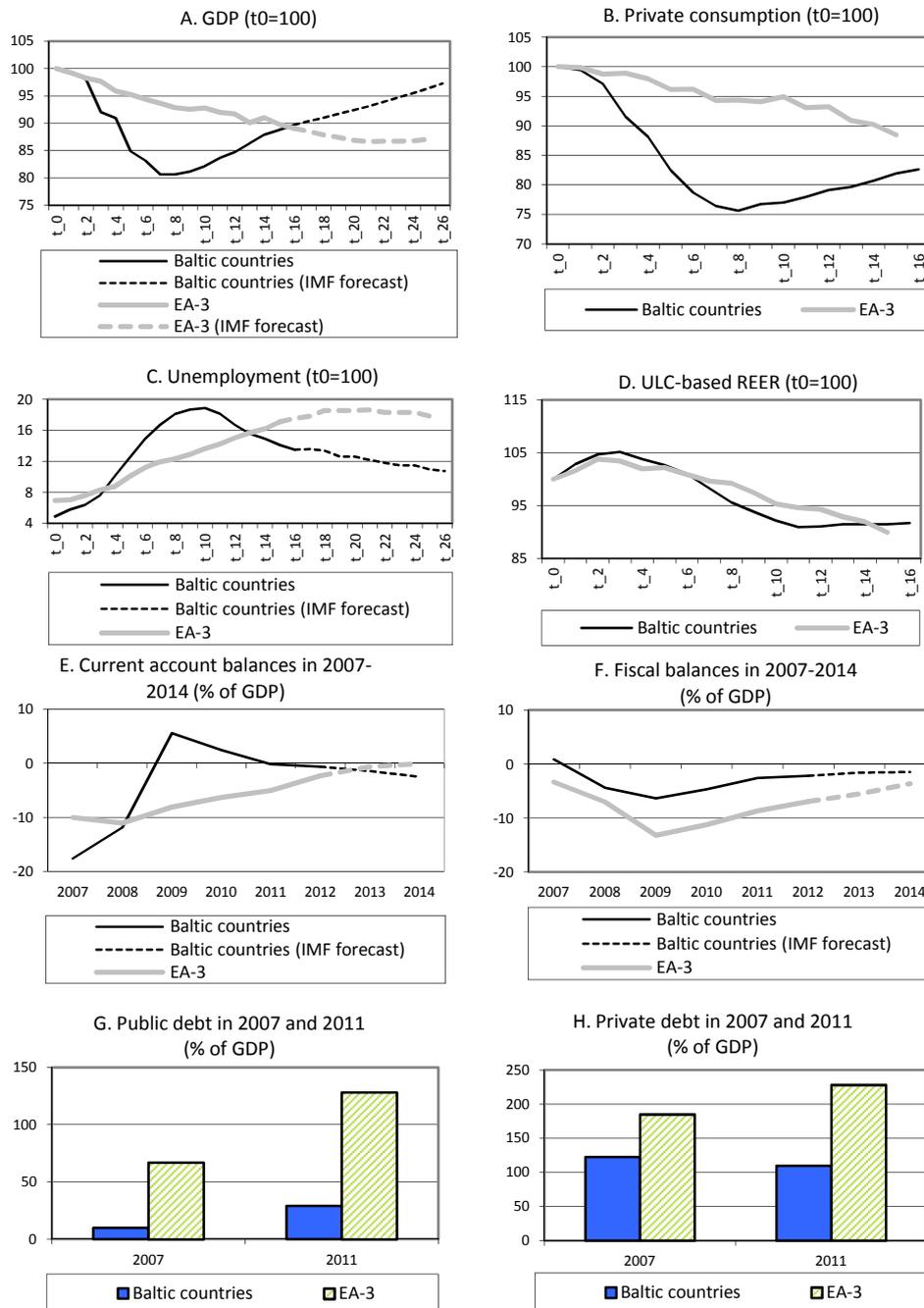


Figure 2: Macroeconomic variables for the Baltics and Greece, Ireland and Portugal compared: (a) *GDP*, (b) *private consumption*, (c) *unemployment*, (d) *ULC-based REER*, (e) *current account balances*, (f) *fiscal balances*, (g) *public debt*, (h) *private debt*.

Note: Dotted lines are IMF forecasts until end-2014. EA-3 = Greece, Ireland and Portugal; REER = real exchange rate; ULC = unit labour costs.

Source: IMF (WEO database, October 2012), Eurostat, Eesti Pank calculations.

The variation in the speed of adjustment can also be explained by the differences in the conduct of fiscal policy, especially in the first phase of the cycle. The deepening of the financial crisis in autumn 2008 clearly had a weaker impact on Greece and Portugal than it did on the Baltics, meaning these economies were initially able to postpone fiscal consolidation. Later on, international financial assistance programmes enabled the three euro area countries to avoid a sharper fiscal consolidation. Among the Baltic countries, only Latvia applied for the EU/IMF financial assistance programme.

#### **4. The advantages and disadvantages of rapid or gradual adjustment**

The two country groups offer two noticeably different experiences of adjustment. What can we learn about the advantages and disadvantages of “fast” versus “slow” adjustment from these episodes?

The disadvantages of a fast adjustment include: (1) the risk of costly excess volatility, (2) political difficulties and (3) the likelihood of mistakes in economic policy.

A sharp economic adjustment might result in excess volatility in certain variables. For instance, a relevant example for the Baltic countries would be the dynamics of the current account balance, which fluctuated from a deficit of 18% of GDP in 2007 to a surplus of close to 6 per cent of GDP in 2009 and back again to a small deficit in 2011. A sharp tightening of financing conditions and large capital outflows might create severe liquidity problems for otherwise viable firms. If these firms were to be forced out of business, it might lead to losses in both physical and human capital. Policy makers seeking to avoid such an outcome might seek to achieve a more gradual adjustment.

A rapid economic adjustment may create strong public resistance and make it politically difficult to sustain the momentum of adjustment. This may be particularly relevant if the electorate does not see the need for adjustment and is generally reluctant to accept changes. Under these circumstances, policy makers may opt for a more gradual adjustment.

Moreover, as the quality of economic policy measures is crucial during the crisis, a very rapid adjustment might leave too little time for the authorities to devise appropriate policy responses. Therefore, a very rapid adjustment could lead to avoidable policy mistakes.

At the same time, there are also numerous clear advantages to a faster adjustment.

First, experience has shown that the successful implementation of the necessary measures, including fiscal consolidation and structural reforms, rests on avoiding reform fatigue. In this respect the rapid adjustment in the Baltics has been quite successful.

Second, the comparison between the two country groups has shown that the rapid adjustment in the current account and fiscal balances in the Baltic countries has helped to avoid a significant increase in public and private sector indebtedness. As a result the starting position for the recovery has been much more favourable for the Baltic countries, as shown by the differences in growth performance and outlook.

Third, adjustment usually also entails correction of *structural* imbalances. A familiar example is the need to shift labour and capital from the non-tradable to the tradable sector. In this respect a sharper adjustment helps to bring about a faster closure of clearly unsustainable firms, making resources available for productive means elsewhere in these economies.

Lastly, an adjustment is likely to create a great deal of uncertainty about the growth prospects for the economy, which is going to affect aggregate demand, especially investment decisions, negatively. Again, if faster adjustment achieves an early return of confidence, this will have a positive effect on growth prospects.

Although we can list the pros and cons of rapid versus gradual correction, there is often not much of a choice about the speed of adjustment. For instance, the sharp adjustment in the Baltics was to a large extent inevitable. The Baltic economies had limited policy space when they were hit by a sharp reversal of capital flows and a very strong negative trade shock.

However, the impact of these shocks and the potential negative effects of the rapid adjustment were mitigated by two factors. As discussed earlier, the Baltic economies were quite resilient despite the sharp downturn. They continued to have good long-run growth potential, and the banking sectors were well capitalised and largely owned by strong foreign banks with good access to central bank liquidity assistance in their home markets. The rapid adjustment was also facilitated by relatively flexible labour markets and large tradable sectors. In addition, the rapid adjustment was made possible by reasonably high public acceptance of the necessary changes. There was an understanding that a part of the earlier growth, especially in the real estate and construction sector, was unsustainable. The good performance prior to the crisis and the possibility of emigration also mattered.

We argue that the available evidence on the recovery, the correction of macroeconomic and structural imbalances and the relatively strong growth

prospects suggest that the strategy of rapid adjustment has overall been a successful response to a very difficult situation in the Baltic economies.

## **5. Concluding remarks**

The recent cyclical pattern of the Baltic economies suggests that under a credible fixed exchange rate arrangement there are several channels that may amplify different shocks affecting the economy. Therefore, there is a need to address the build-up of imbalances and vulnerabilities early and decisively. The necessity of pre-emptive policy measures is also underscored by the lessons from the euro area debt crisis, which confirm that adjustment afterwards via wages and prices is likely to be protracted and painful.

The experience of the Baltic and euro area countries shows that a strong external anchor in the form of a membership in a currency union or a credible fixed exchange rate regime may lead to policy complacency. The current financial and sovereign distress in the euro area offers good proof example that such an anchor cannot be a substitute for policy discipline in other areas. On the contrary, there is a need for stronger discipline in other economic policies.

The adjustment in the Baltic countries has provided a more solid foundation for future growth. The external and financial vulnerabilities have been reduced and a significant sectoral reorientation and elimination of unsustainable activities/businesses have been achieved. However, various shocks continue to pose a challenge, so a more active use of fiscal and macro-prudential policy measures is warranted. It is also important for the resilience of the economies to be maintained.

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