Estonia: Blunders and Wonders

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Analysis prepared: *January 2013*

Content overview

This report discusses finances and economy of Estonia, a tiny country on the Baltic Sea, a young and dynamic economy, example case used in the debates over austerity vs. accommodative monetary policies, the major start-up hub in Europe. Unlike usual analyses, it doesn't provide any future forecasts, but presents the key data (including those usually overlooked in the economic models) and explains the story behind by discussing both major blunders and greatest achievements. Based on this information, the reader should be able to see behind the numbers and official country reports. He or she is intended to get a balanced view instead of the biased presentations – hype or detraction, depending on purpose – in blogs, news and debates.

Written in informal and unofficial style, and illustrated by a number of relevant graphs, the report extends over 20 pages and includes the following sections:

- *Others about Estonia – what are analysts and observers from the outside telling about the country?*
- *Background of Estonia, the small and open economy – some background information for those who don't know the country*
- *What Estonia has and hasn't got, incl. the given circumstances and key challenges for the coming years as revealed by the data and facts*
- *Public finances and resources for tackling long-term challenges*
- *Bright spots, incl. Estonia's start-up community and Let's Do It! World movement with relevant links and further references*

Introduction

At the time when the endgame of Ponzi finance is being played out in the many Western economies including but not limited to Japan, US and UK, and competitive devaluations are a fact, also individual investors have a good reason to become interested in more remote areas and possible investment objects that could provide higher returns, yet still at tolerable risk levels. So I was urged to write a piece about my own country, Estonia, which as a member of the euro area classifies as an advanced economy yet in many respects is still a part of the Emerging Europe. Most probably, it's the combination of the perceived safety (at least risks in the euro area are known and widely debated) and assumed but unknown opportunities that looks intriguing.

In early 2000s the boom started with a *"Hurray"* in this part of the world. Europe's new economies were expected to converge with the core and they were roaring, but… After the Baltic Tigers[1] temporarily but painfully stumbled in 2007, a few topics have attracted the attention of observers about Estonia:

- Major economic and financial crash in 2008-2010 (real GDP dropping by ca. 15% in 2009, unemployment rate exceeding 15% and according to some statistics 19% in 2010, real estate prices falling by around 55% from the top to bottom, and so one) followed by almost miraculous recovery thereafter;
- Almost non-existent government debt (less than 10% of the GDP) and the country's A-class credit rating;
- Estonian stock market rising 38.2% in 2012, far above the S&P (13.4%), the Eurostoxx 50 (13.8%) and Nikkei 225 (22.9%);
- Estonian start-up community, arguably the second-largest in the World after Silicon Valley by start-ups per head.

It has been said: *"There are white lies, there are small lies and there are big lies; then there is a lot of empty space, and then finally come statistics."* In other words, by presenting statistics arbitrarily one can illustrate and prove whatever one is willing to. So have the above data given rise to various opinions in the academic, financial and political circles, ranging from one end to another.

My aim as follows is to provide a fair picture, even if as a native I'm bound to have certain home bias. I'm also including links and references for further information from original sources.

But for the starters, here is a snapshot of what others are saying…

Others about Estonia

The in the US well-known financial writer and expert John Mauldin writes in his famous book *"Endgame"* [written in 2010-2011] about the Baltic countries, incl. Estonia as follows[2]:

"The Baltics: How to Destroy Your Economy and Keep Your Peg…

… By fixing their currencies to the euro, it made it a lot easier for foreign banks to start lending to people in the Baltics. The peg eliminated exchange rate risk. Take Swedish banks as an example. … Once the peg came into being, the Swedish banks went into overdrive, lending euros to their [read: Baltic] *subsidiaries,*

[1] "Baltic Tigers" is a term used to refer to the three Baltic states of Estonia, Latvia, and Lithuania during their periods of economic boom, which started after the year 2000 and continued until 2006–2007.
[2] The quote is rather long but I want to retain the story line.

who exchanged them for local currencies at the fixed peg level. The subsidiaries then lent out the local currency to Latvians, Lithuanians, and Estonians, fueling property prices, funding flashy cars, and creating a latterly unheard-of consumer boom.

…The result? As Baltic residents spent like they'd never spent before, current account (trade) deficits reached eye-watering levels…

Wages had risen in Baltic countries as their credit-driven prosperity increased. This made goods and labor from Baltic countries less competitive. When global growth began to seriously slow in the aftermath of the financial crisis, growth in the Baltic States started to take a serious hit.

… As it is, it's the teacher, the pensioner, and the government employee — the little people — who will continue to take the brunt of the adjustment. Instead, the political elites, who would have the most to directly gain from entry to the euro, cling to the peg at all costs. Resentment simmers and threatens to boil over at any time…"

This summary sounds pretty discouraging to say the least – even if we know that it only presents one (the ugly) side of the coin. So far, no disaster has happened either, despite of not everyone in the country being happy. Other way round, by summer 2012 Estonia (together with the other Baltic States) had become a success story to tell for the austerity advocates in Europe and elsewhere. The "hard line" of the Estonian government had resulted not just in its budget surplus, but also in the country's eurozone entry, around 8% economic growth in 2011, steadily declining unemployment figures and so one, all of which looked so vastly different from the struggling West.

Applauses of austerity advocates disturbed the famous economist Mr. Paul Krugman, a proponent of the accommodative monetary policies and the economic stimulus, at least as far as I have understood his views. So he posted in his New York Times blog a simple real GDP graph with a comment that (most probably unintentionally) insulted Estonians: *"So, a terrible — Depression-level — slump, followed by a significant but still incomplete recovery. Better than no recovery at all, obviously — but this is what passes for economic triumph?"* (From Krugman's blog post "Estonian Rhapsody" in Jun 6, 2012)

Meanwhile, IMF, OECD and European Commission have praised Estonia's economic policy. Of course, they have also pointed to the areas of further improvements, but still. Such recognitions however, reflect political considerations rather than anything else – even if nice to hear.

Then there are articles of completely optimistic tone. For example, one piece in the Yahoo! News informed US readers that: *"U.S. Ranks Second in Internet Freedom, Behind Estonia… With a high internet penetration rate and widespread e-commerce and e-government services embedded into the daily lives of individuals and organizations, Estonia has become a model for free internet access as a development engine for society," reads the* [study] *report* [from Freedom House]*."* (By Alex Fitzpatrick, Sep 27, 2012) Such pieces reflect the other (the bright) side of the coin.

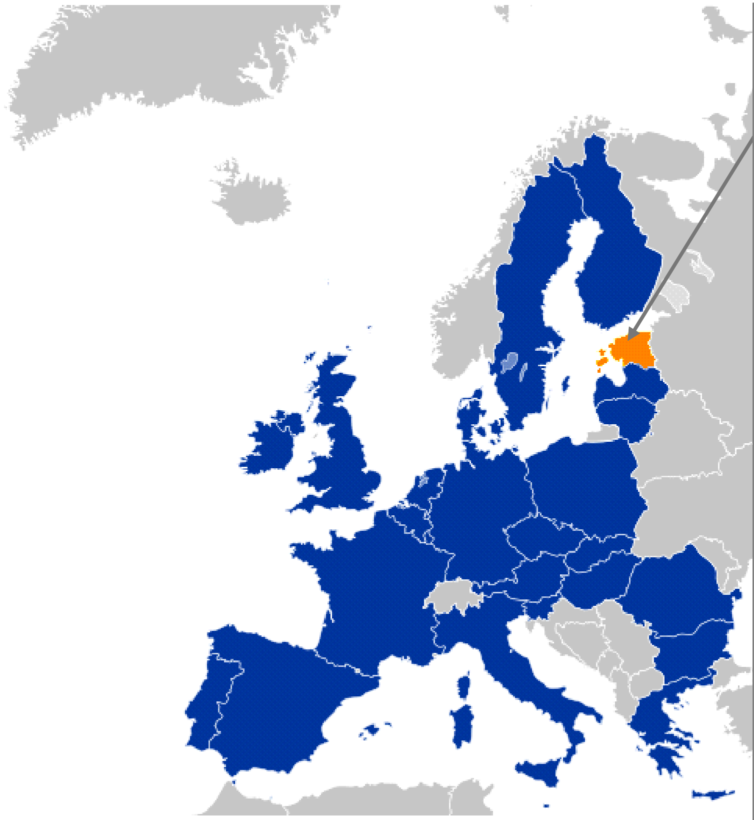
As always, the truth is somewhere in the middle, but where exactly? Before we can discuss it, I think it's necessary to provide some background information for those who don't know much about Estonia. (It's ok, just get introduced now.)

Background of Estonia, the small and open economy

Figure 1 below summarizes a bunch of key data and facts about Estonia.

It doesn't need a further comment that Estonia is small in almost all measured terms as far as absolute size is concerned: in terms of territory, in terms of the number of people and in terms of the size of its economy. But small size does not necessarily mean little potential as the examples of a few other countries are illustrating.

Indeed, over the past 20-25 years, Estonia as a country has a track record of achieving its goals to display. We wanted to regain our independence, and we formally did in 20 August 1991. We wanted to depart from the philosophy and practices of the Soviet Union as far as we possibly could, and we did (Estonia is ranked 16th in the 2012 Index of Economic Freedom, arguably with the freest economy in Eastern Europe and the former Soviet Union); not least importantly, capitalistic society was built up from scratch. We wanted to join the most prominent clubs in our opinion, such as the UN, WTO, NATO and the EU; these goals have been achieved by now. Our dream was to live better, and also in this area we can report overall success. According to the Better Life Index of OECD, *"Estonia has made progress over the last decade in terms of improving the quality of life of its citizens. Until the financial crisis of 2008, the economy had seen record-breaking growth."* When it comes to the life quality however, we still have considerable room for improvement – the more so that some of the progress made earlier was reversed in the latest crisis, and is not yet fully recovered.



Estonia:

- Out of Soviet Union / independent since 20 Aug.1991
- Member of the UN since Sept. 1991; joined WTO in Nov. 1991, member of NATO since 29 Mar. 2004; in the EU since May 2004
- Capital: Tallinn
- Language: Estonian
- Currency: Euro (since Jan. 2011; before that Estonian kroon, fixed first to the Deutsche Mark and then the Euro)

- Area: 45,227 km²
- Population: 1.3m (0.27% of EU total)
- GDP 2012: 17.0 billion euros (0.13% of EU total)

- Living standard: 65-70% of EU average
- Ranking in the Human Development Index (2011): 34 out of 187/194 countries/territories covered, score: 0.835 on scale 0-1 ("1" is best)
- Ranking in Global Competitiveness Index (2012-2013): 34 out of 144 economies covered, score: 4.6 on scale from 1 (worst) to 7 (best)
- Ranking in the ease of doing business index (2013): 21 out of 185 countries/regions covered
- Ranking in the Corruption Perceptions Index (2012): 32 out of 176 countries covered; score: 64 on a scale from 0 (highly corrupt) to 100 (very clean)
- Sovereign rating (Dec. 2012): AA- (S&P), A1 (Moody's), A+ (Fitch)

- Stock index: OMX Tallinn
- Main trading partners (2012): Finland, Sweden, Latvia, Lithuania and Russia
- Banking sector ownership (2012): 83% Swedish, 9% Danish and 8% other

Figure 1.Estonia, a small country in Europe: key data and facts
Sources: Bank of Estonia, Eurostat, Human Development Report, Transparency International (TI), World Economic Forum (WEF), Wikipedia, World Bank, LogicOfFinance.com

Despite of the above recounted success, in light of the eurozone crisis as well as when looking back to the crash of 2008-2010, one might argue that the goals itself haven't been the right ones. Many Estonians find themselves asking: *"Did we really want this kind of Estonia?"* Often it's being asked rhetorically, yet the others are serious. There are people who are making statements like: *"We just got out of one union and now we are rushing to another!"* (That's true – in a way.) No local tax payer is happy about bailing out the richer countries, and the recklessly and in certain cases also illegally behaved banks and governments (but who is in Europe right now?).

One of the most important economic choices of Estonian leaders has been to create an open economy with little or no restrictions to free market activity. As a result, the development and growth of Estonia are largely based on foreign trade and foreign direct investments (FDI). In good times it was a blessing; in challenging times it feels like being pulled and pushed by the global headwinds.

We can't know for sure what had been the right goals and choices at the time when the current ones were agreed; we don't have the experience of any alternative paths for exactly the same situations. For example, we can only speculate what the true cost-return relationship of importing credibility (the main consideration behind several policy decisions) by abandoning our own monetary policy and fixing our currency has been. Obviously, there have been mistakes and blunders. Yet making compromises and "broking things" is not-a-that-pleasant part of moving fast.

Anyway, let's look next what have got here.

What Estonia has and hasn't got

<u>The given circumstances</u>

There are haves and have-nots that a country or nation just is or isn't being blessed with; there are also other things that are inherited and possible yet still very difficult to change. Such given circumstances may prove to be immensely important in designing a country's economic and financial future. Here is a list of highlights for Estonia:

- Despite of people often complaining about the climate in Estonia (which is not that bad, after all), the **favorable geographic location** at the Baltic Sea between the East and West and close to Nordics is rather an asset. This is illustrated by the fact that Estonia has been an important transit centre since the medieval period. What's more: Estonia is sometimes labeled as the safest country in the world because of no records of any fatal floods, droughts, earthquakes or severe storms since 1900 when the respective data is being collected. There are not many this safe places.

- Importantly, we have got a **big neighbor called Russia**. While our collective memory suggests that nothing good comes from the East, this is not exactly true. Among others, aside the above mentioned transit as well as the political risks, there are the not-that-poor shopping tourists from St. Petersburg. Much more importantly though, there are interesting innovations waiting for wide use outside the war industry; Estonians have a chance to benefit from the language skills and the historic ties of the two nations, especially when combined to the newly gained understanding of the Western business practices.

- Although the land offers a large variety of smaller resources such as oil shale and limestone, phosphorite, pitchblende and granite, Estonia is in general **resource-poor**. It's not an option to go out and just mine gold or other precious metals.

- As a significant cultural staple, the so-called Protestant work ethic characterized by the **hard work** is usually being pointed out. Not least importantly, this derives from the history of 700+ years of slavery and occupations which have left several other traces to the Estonian character as well.

- There is an **amazing natural and cultural diversity** for such a small country. The list starts from the presence of four seasons and continues with the landscapes of deserted beaches, deep forests, numerous lakes and countless small islands. It includes historic landmarks and culture treasures in almost every corner of the country, as well as ethnic diversity, and variety of religions and beliefs (even if according to some surveys, Estonia is one of the least religious countries in the world). This diversity is a value that we can't yet rightly value; the question from economic and financial point of view is: *"How to monetize it and in what extent?"*

There are more, but let's leave it with that for now. It goes too far from the topic otherwise.

Key economic and financial data commented

Warning: this section now may look scary or disappointing while discussing a bunch of the most revealing macro data when it comes to the Estonia's blunders. Yet it's simply meant to be disillusioning about the current status before we move on to the bright spots.

First, in *Figure 2* you can see the developments of real GDP and Gross National Income (GNI) in relation to GDP over the years 1995-2012. What it basically shows, is that:
1) the overall economic growth as measured by real GDP looks nice despite of the hard hit in 2009, and
2) the growth has not been that lucrative for the Estonian residents themselves as GNI has improved much more slowly by forming around 95% of GDP, and a cumulative lost 5% over 10-years period already makes quite an amount…

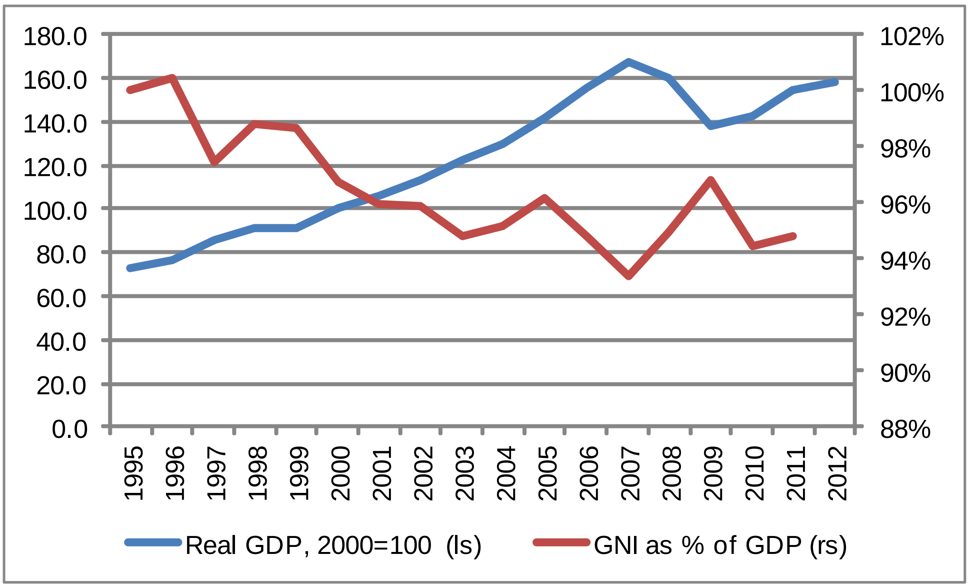


Figure 2.Estonia's real economic growth (left scale) and Gross National Income as percent of GDP (right scale),1995-2012
Sources: Data – Eurostat, Bank of Estonia, Statistics Estonia; Calculations – LogicOfFinance.com

Figure 3 below explains why that is. It illustrates a fact about the Estonia's economy that local professors of international economics feel or should feel ashamed to present to their students: the Net International Investment Position (NIIP) of Estonia. When put bluntly: during the boom years, Estonians borrowed a lot and sold many of their cash generating assets while using the proceedings for consumption rather than for investing. The "good news" is that during the past couple of years the NIIP has improved quite remarkably "thanks to" escaped foreign money (note how statistics can mislead – cause of the seemingly favorable development is not a positive sign at all) as well as recovering GDP.

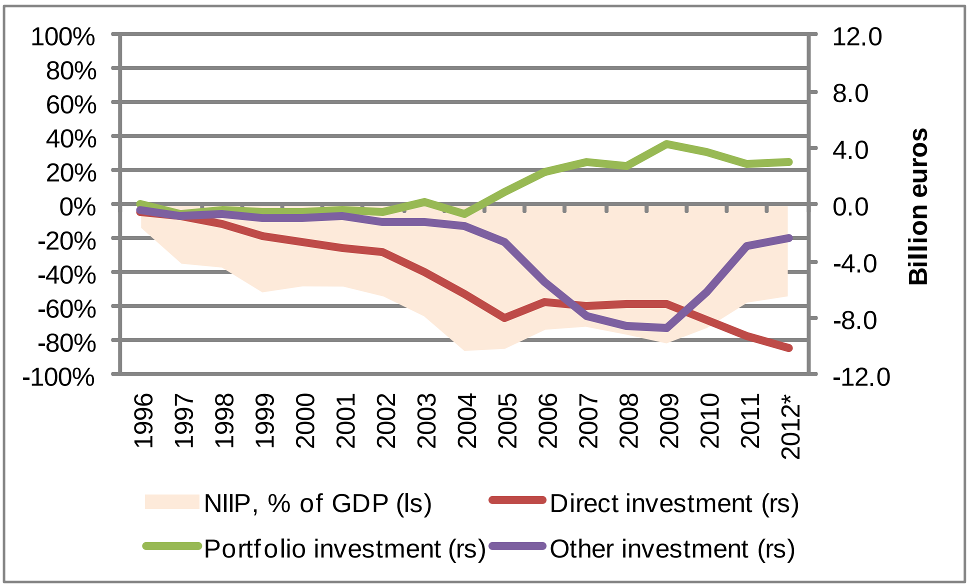


Figure 3.Estonia's Net International Investment Position as % of GDP (left scale) and its key components in billions of euros (right scale),1996-2012
Sources: Data – Eurostat, Bank of Estonia; Calculations – LogicOfFinance.com
Note: 2012 data are as of Q3 2012

Take a closer look to the components of NIIP. It stands out that starting from 2003-2005, Estonia's position in terms of portfolio investments has been positive yet at the same time increasingly negative when it comes to the direct investments. The position of other investments increased in negative direction up until 2009, a trend which clearly reversed thereafter. There are plenty of reasons why. In several cases, changes are being caused by single large transactions such as the takeover of an Estonian company by a Swedish fellow (Hansabank by Swedbank, Estonian Telecom by Telia Sonera, Norma by Autoliv, etc.), or atypical activities such as transfers related to euro adoption. In general, however, we can notice asset sale and highly volatile borrowing/lending activity (later is shown under the other investments). In portfolio investments we can also observe a reflection of little choice on local stock exchange, discussed below.

Mentioning of borrowing/lending activity leads us to the development of loans and deposits (shown in *Figures 4a*), which provides a simplified illustration of the systemic risk that was built up during the boom years, and, once so far, the inevitable correction that followed. It's obvious that loan-to-deposit ratio (black line, right scale) went under control. Was it unexpected? No: borrowers tend to be short-sighted and not to think about disasters that happen somewhere in the undefined future. Furthermore, in boom years such short-sightedness is being enforced by the lenders in their promotions. So in boom years they took the money when it was given at negative real interest rates, i.e. at nominal interest rates lower than the inflation rate (see illustration in *Figure 4b*).

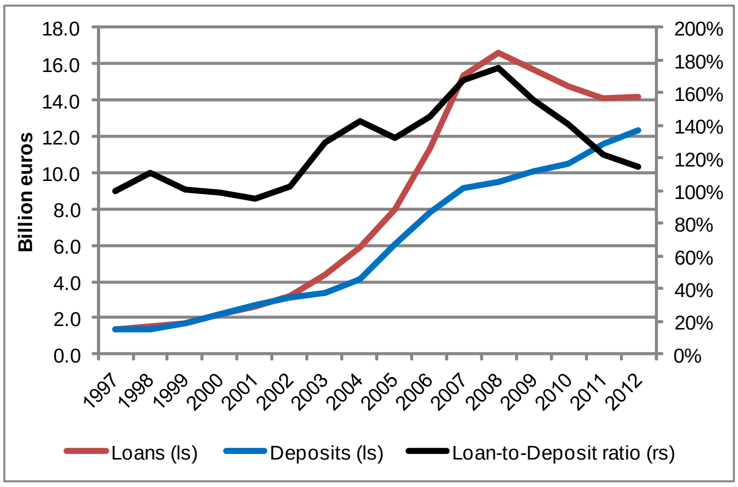


Figure 4a.Development of loans and deposits in Estonia, 1997-2012
Sources: Data – Bank of Estonia; Calculations – LogicOfFinance.com
Note: 2012 data are as of Nov. 2012

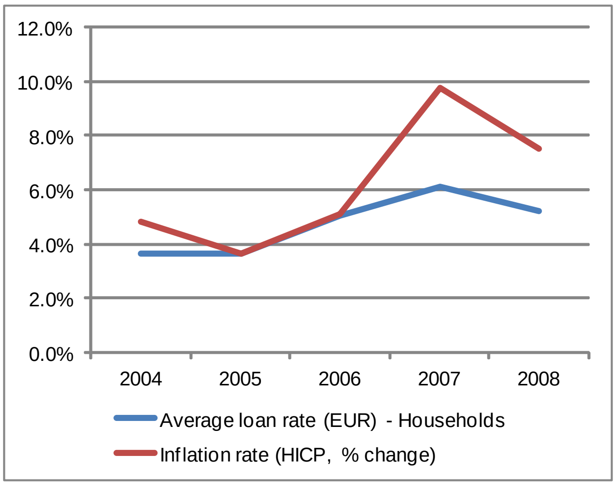


Figure 4b.Period of zero or negative real interest rates, 2004-2008

Banks still made healthy profits thanks to the even cheaper money from Sweden and elsewhere. What developed was a very classical real estate bubble (see *Figure 5* for the real estate prices). When global financial system started to unravel, lenders cut back their lending and borrowers cut back their borrowing which led to the increasing saving ratios and deposits on one hand and to the huge unexpected jump in loan losses (loan loss ratio increased by more than 10 times within two years, from 0.3% to 3.2%) and write-offs on the other. Increased savings, for a while frozen lending activity and extensive write-offs are how the remarkable improvement in the loan-to-deposit ratio was achieved thereafter.

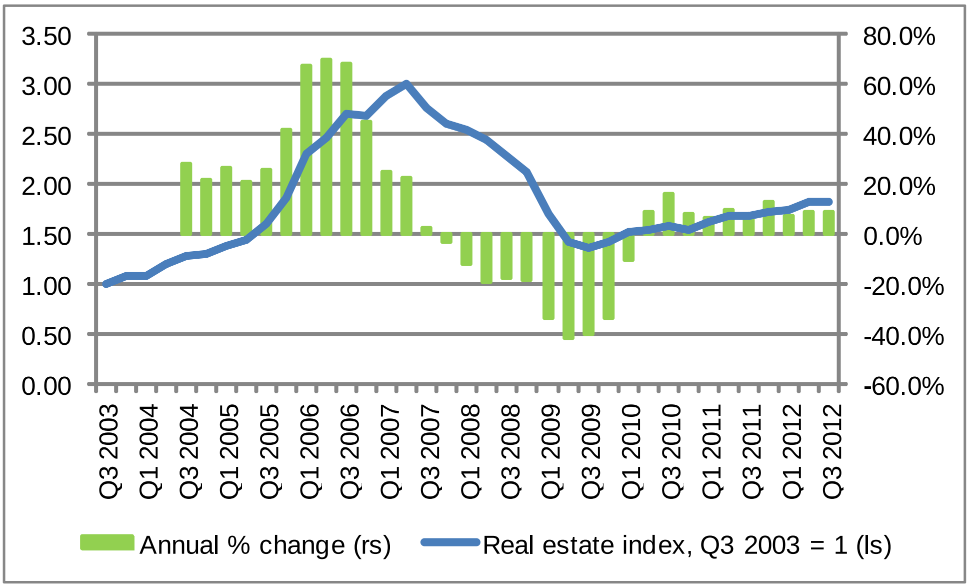


Figure 5.Real estate price development in Estonia, Q3 2003 - Q3 2012
Source: Estonian Land Board

Concerning loan losses (depicted on *Figure 6* below) during 2008-2010, a few aspects should be pointed out:

- The recorded losses were not as bad as they might have been given the depth of the economic slump. Banks prevented worse from happening by extensively restructuring troubled loans. Furthermore, Swedish banks more-less defined the floor for the real estate prices in Baltics, incl. Estonia, by setting up their own real estate companies for acquiring, managing and selling real estate.[3]

- Banking sector did not collapse because of the substantial losses, although went “under water” for a while; even no small bank went bust in Estonia. In addition to the above efforts by the banks, part of the credit for maintained financial stability belongs to the local financial regulators: they had been prudent enough for requiring higher capital ratios when compared to the global standard, and not allowing every sort of fancy (securitization) schemes. We should also thank European and perhaps particularly Swedish policymakers for not allowing Nordic banks (more than 90% of the local banking sector by loans) to disorderly withdraw from Baltics; it was of course in their own interest as well, but anyway.

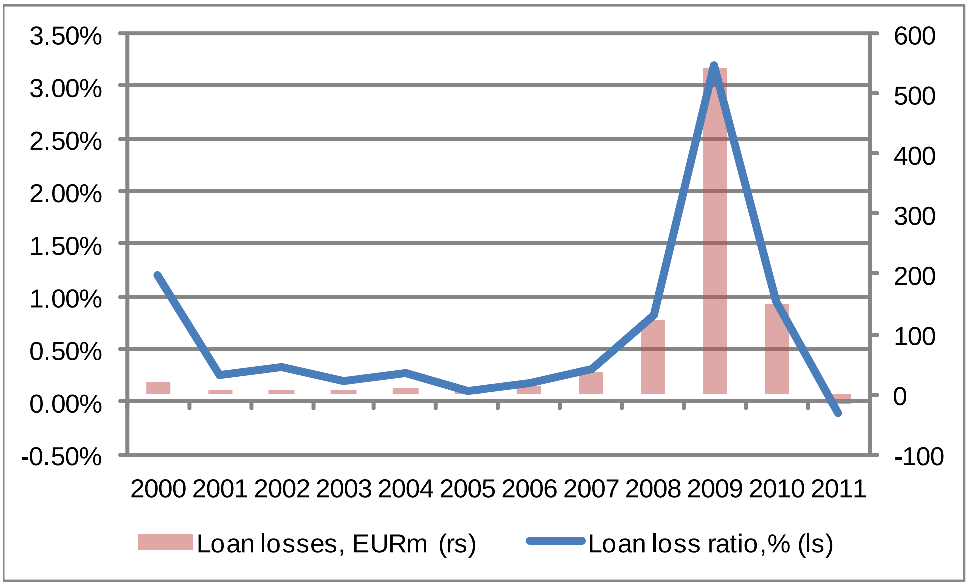


Figure 6.Loan losses in Estonian banking sector, 2000-2011
Sources: Data – Bank of Estonia; Calculations – LogicOfFinance.com
Notes: 1. Calculations are somewhat approximate given data availability
2. Negtive figure in 2011 indicates recoveries from earlier losses

When it comes to the overall debt burden of the Estonia’s non-financial sector then the good news is that following the major correction, differently from the eurozone as a whole and the most of the developed countries in the world (incl. UK, US, and Japan just to name a few of those heavily over indebted), there is still some room for additional debt in Estonia before it becomes a drag on economic growth. (*Figures 7a* and *7b* provide a comparison of Estonia *vs* eurozone total in 2012)

Why this is important? Well, Estonia is not forced to deleverage at the time when the others are (assuming that they do not choose high level of inflation at once); so we have a bit more “playing room” for improving our relative competitiveness. One complication by this good plan is that the sector of non-financial companies is over indebted already, and those who can borrow (households and public sector), by design tend to use the obtained funds for consumption rather than for investing. The other issue is that despite of the lower debt burden, Estonian households actually are able to bear less debt than those in the “more advanced” eurozone economies; among others, incomes and social safety nets simply are not comparable.

[3] The same scheme was implemented in Sweden during the Swedish financial crisis in the early 1990s.

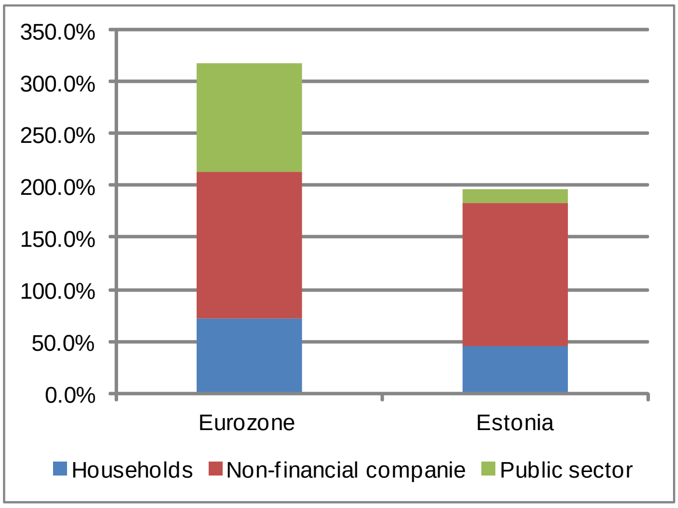


Figure 7a. Debt burden of non-financial sector as % of GDP in 2012: Estonia vs. Eurozone

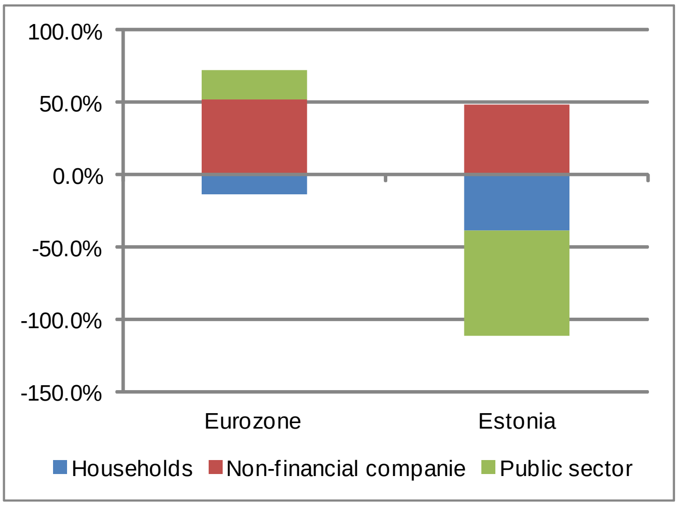


Figure 7b. Excess debt of non-financial sector as % of GDP in 2012: Estonia vs. Eurozone

Sources: Data – Eurostat (GDP for 2012), and ECB (Financial Accounts, Q2 2012); Calculations – LogicOfFinance.com

Note: Debt burden and the excess debt are calculated based on the BIS Working Papers no. 352, "The real effects of debt" by Stephen G Cecchetti, M. S. Mohanty and Fabrizio Zampolli (2011). Positive excess debt indicates that debt of a given sub-sector has become a drag on economy; negative excess debt indicates how much there is still room for increasing debt burden as % of GDP before it becomes a drag.

For increasing people's social safety sustainably enough there is no way but to improve Estonia's international competitiveness. It's not that our competitiveness rank (34th out of 144 economies based on Global Competitiveness Index) is remarkably bad. It's that in the capitalistic world where Estonia now belongs, it's all too much about money. And Estonia, while in eurozone, cannot just "print" money; it has to get it from the outside. As indicated earlier, before the crisis of 2008-2010 in addition to the asset sale, money was flowing into Estonia via the lending channel of Swedish banks. But no more: their new policy is that local loans have to be funded by local deposits.

In other words, we have to think about other ways of funding. I only see a rather small number of alternatives:
1) export more goods and services than we are importing (Estonia is this small that on principle, it actually can export itself out of the debts while it's not a solution for everyone),
2) "export" Estonian talents overseas for doing highly paid jobs and sending money back home (not a that good idea from a nation's perspective, except for shorter periods for learning, gaining experiences, building connections etc.),
3) sell investments abroad (crappy stuff might be sold but would one really want to sell good income generating assets?), and
4) build new assets and sell them (which is a double-edged sword as we have experienced: first, at the point of sale, this strategy brings money in, and then swiftly directs it out as investment income for the foreign investors).
On temporary basis, of course, Estonia's capital account has also been significantly supported by the EU transfers, but that can be considered neither as a primary nor as a granted source. In any case, Estonians have to become more competitive as well as capable for building assets. Let me add a few illustrations.

I begin with the illustration of Estonia's external funding sources as far as financial accounts are concerned – as this underlines the importance of Estonia becoming more competitive even if one could make more optimistic observations based on the graphs that follow. I touched this point earlier when discussing the Net International Investment Position; however, *Figures 8a* and *8b* make it clearer when it comes to the issue of the geographical concentrations. Indeed, as shown in the first graph, Estonia's funding sources have been way too heavily concentrated to Sweden and Finland which together formed more than 45% of the "cake" as of at the end of 2011 (and, even if precise data is not available for 2012 as of writing, the observation would not be much different based on it); furthermore, only just slightly more than 20% of external funding is coming outside the struggling EU. The data on *Figure 8b* stresses that indeed, the biggest headache for Estonians since the start of the crisis has been Swedish financiers drawing their money out of the country; financiers from the other EU outside the eurozone also stay into the negative territory.

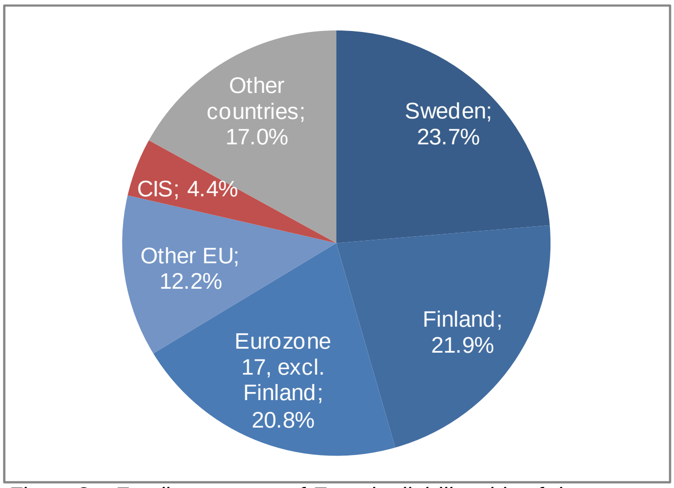


Figure 8a. Funding sources of Estonia: liability side of the Estonian International Investment Position by funding countries and regions, 31 Dec. 2011

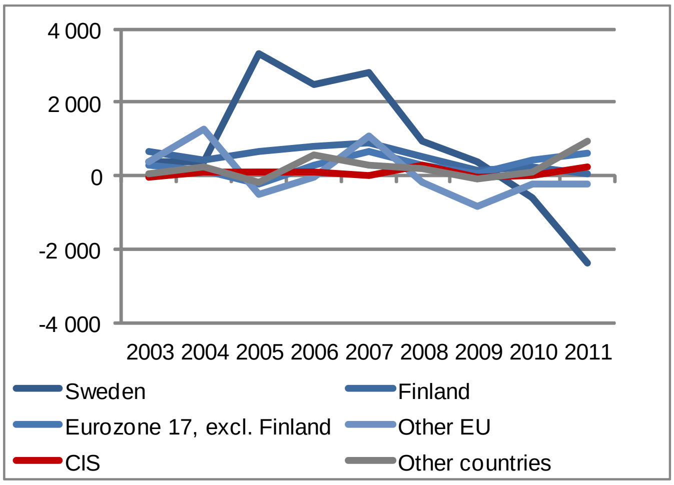


Figure 8b. Funding sources of Estonia: inflows from foreign financiers in millions of Euros as shown in the financial account of the Balance of Payments, 2003-2011

Sources: Bank of Estonia; Calculations – LogicOfFinance.com

Now going straight to the topic, *Figures 9a* and *9b* provide quite a few interesting insights about the **competitiveness of Estonia's labor market** the advantage of which is still there but having a (even desired) declining trend.

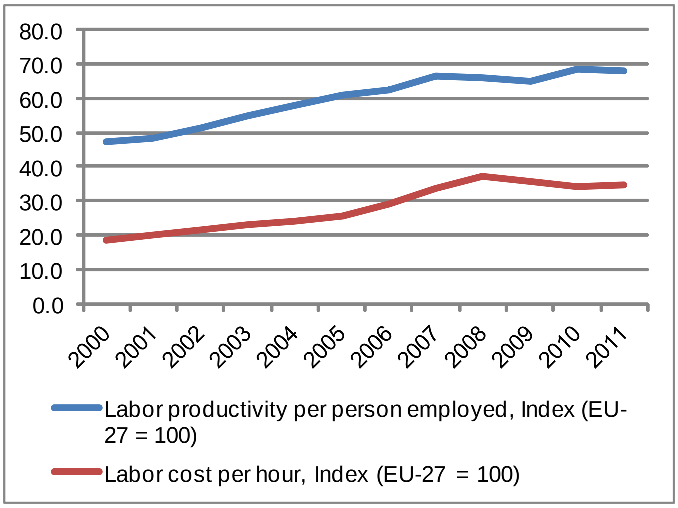


Figure 9a. Estonia's labor costs and productivity when compared to EU-27, from 2000-2011

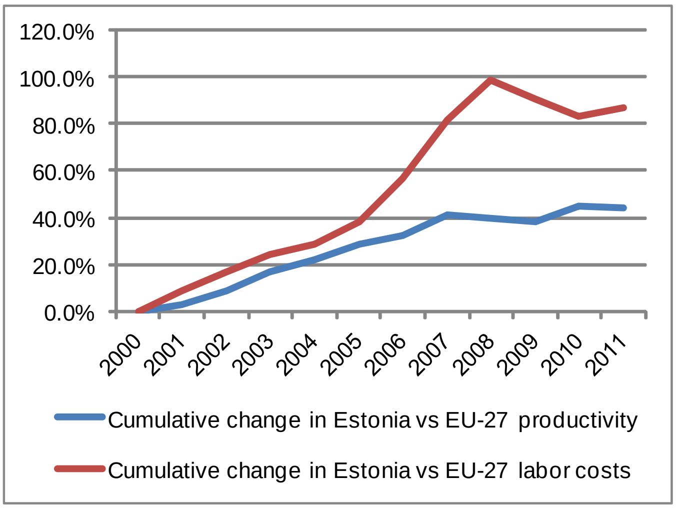


Figure 9b. Labor market developments in Estonia vs. EU-27, productivity and labor costs, from 2000-2011

Sources: Eurostat; Calculations – LogicOfFinance.com

Note: GDP per person employed is intended to give an overall impression of the productivity of national economies expressed in relation to the European Union (EU-27) average.

From *Figure 9a* we see that despite of Estonians being generally recognized as a hard-working nation (or ironically, maybe just because of that) their performance in terms of productivity is not that impressive at all; Estonia's productivity only forms ca. 68% of the EU average. Yet labor cost, while just 35% of the EU average, is even lower. So it has come that Estonians are way too often occupied with the labor intensive but low value adding activities.[4] *Figure 9b* reveals that gradually the current competitive advantage of Estonia as a country of relatively cheap labor is decreasing: labor costs, when compared to the EU average, are picking up much faster than productivity. While this development might be good from the perspective of improving local life standard, it also implies that Estonians have no other choice but to move upwards in the global production chain. Indeed, otherwise we are losing our current advantage of labor market competitiveness rather soon despite of the certain improvement that took place as a result of the internal devaluation and declining wages during the crisis of 2008-2010. Furthermore, a small nation consisting of just 1.29 million people cannot possibly compete with countries like China and India as a destination for cheap outsourcing.

The next group of graphs illustrates **competitiveness and structure of Estonia's exports:**

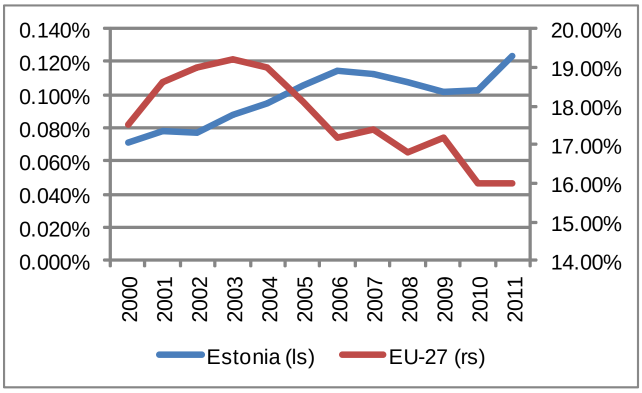


Figure 10a. Share of Estonia's (left scale) and EU-27 (right scale) exports in world exports (%), 2000-2011

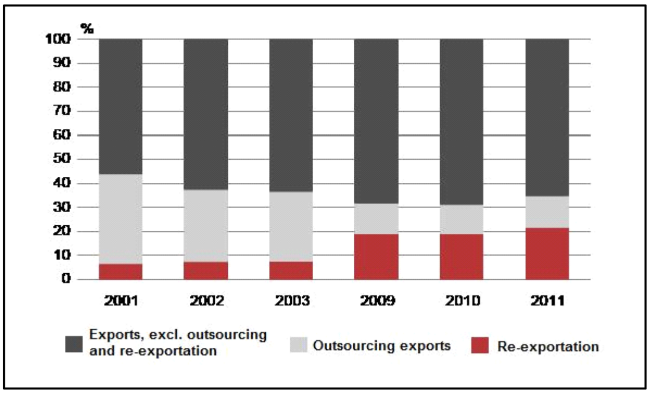


Figure 10b. Structure of Estonia's exports by source, 2001-2011

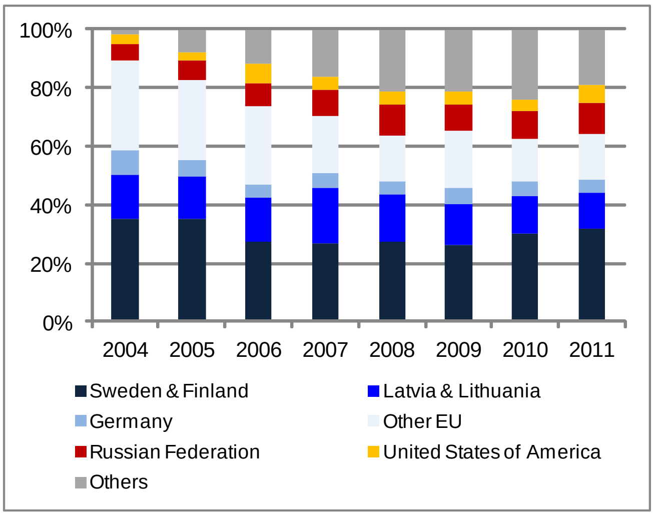


Figure 10c. Structure of Estonia's exports by export destination, 2004-2011

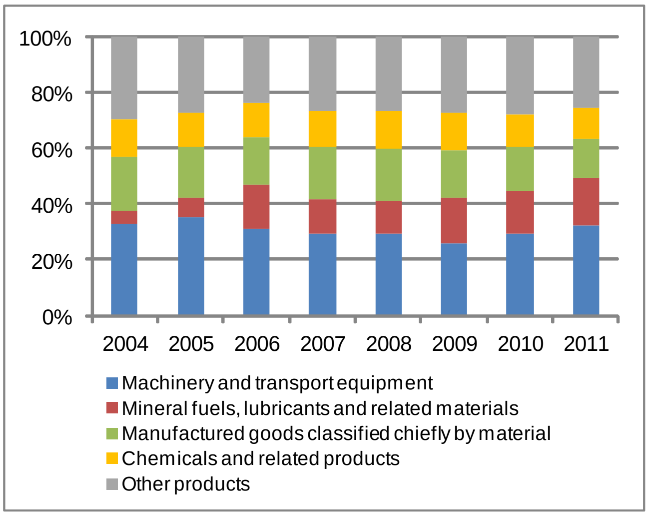


Figure 10d. Structure of Estonia's exports by product groups, 2004-2011

Sources: Eurostat and Statistics Estonia; Calculations – LogicOfFinance.com

Note: Exports of goods include exports of goods produced domestically and also the re-exportation of goods after processing or warehousing, but exclude transit.

[4] Low value adding in the terms of money and leverage; one might strongly disagree from other points of view. (Think about it: is doing the real work in agriculture really "a low value adding job"?! After all, you and me, we were in real trouble without farmers.)

The good news is that at the time when the share of the EU exports in world exports is declining, the trend in the same figure for Estonia is clearly upwards (*Figure 10a*). Yet when digging deeper, we see that there is no reason for complacency, though. Other way round: focusing on more expensive goods and further diversification are absolute necessities for exports.

For the introduction, about one third of Estonia's exports consist of goods that are not our own but re-exports and the so-called outsourcing exports, i.e. exports that are resulting from working for companies in the other countries (see *Figure 10b*). During the past couple of years, re-exports have increased much faster than the total exports; the same is true for the outsourcing exports which however declined sharply when the global crisis hit in the end of 2008 / beginning of 2009. The later is an indication of the vulnerability of Estonia's economy to global headwinds, especially if you think that the amount of exports forms 75-90% of Estonia's GDP, depending on which stats we are looking at. Still, exports of domestic goods have picked up too – with the expense of worsened terms of trade (i.e. over the past 10+ years, price of exports has declined relative to price of imports) and still in labor intense sectors.

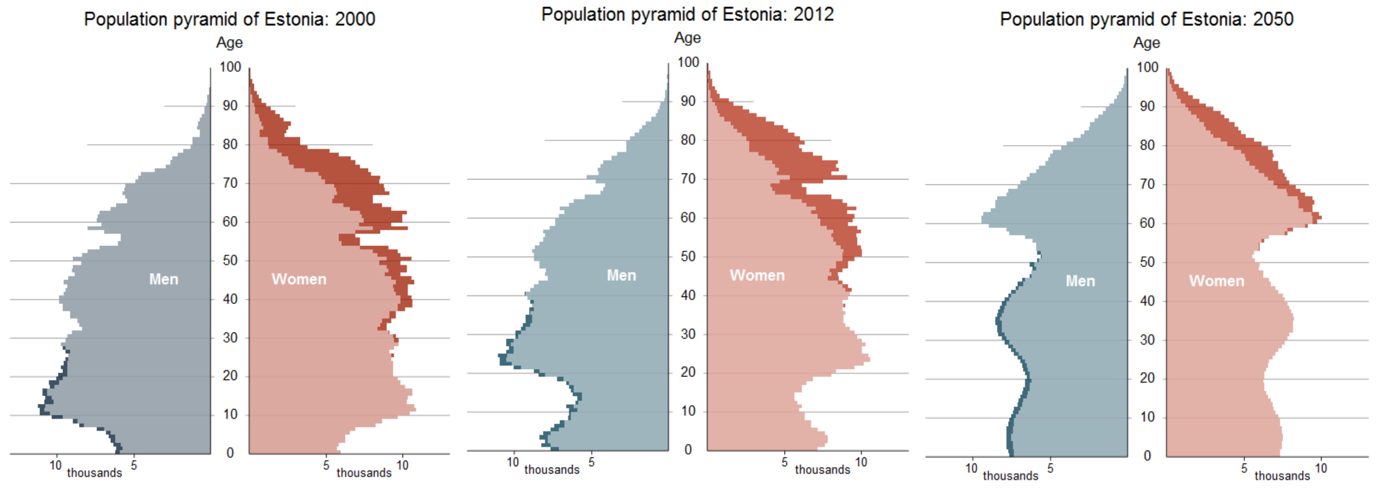
As with the funding sources in financial accounts, concentration is an issue also in case of exports. However, superficial look to a few graphs may easily create a false sense of confidence and an impression of good diversification. *Figure 10c* which is depicting Estonia's main export partners, for example, looks pretty colorful. However, the destination of more than 60% of exports is the EU (which is financially more and more becoming all the same pot, except UK and perhaps a few countries that may decide to keep distance) with the heavy concentration to Nordics. Even if almost one third of exports going to Sweden and Finland may seem not that much, we should remind us that this number is coupled with the heavy concentration of funding being originated from these two very same countries. In the same way, distribution of export articles may look pretty ok (see *Figure 10d*) even if in reality it heavily depends on a few goods and a small number of big exporters.

The key resource that enables a country like Estonia to move upwards in the global production chain is a healthy, highly educated and entrepreneurial **population**. First of all, there have to be people who are making things happening.

Figure 11 below depicts the Estonia's population pyramids for the years 2000 and 2012, and forecast for 2050.[5] Basically, demographers believe that even if the number of people during the coming 30-40 years will decline and the graphs don't look that nice (in fact, the figures for 2000 and 2012 look pretty scaring), no demographic disaster is to be expected. Retirement age probably needs to be lifted from the 63 years today to 70 years or so for maintaining the current dependency ratio; however, this isn't all that bad given higher share of people below 20 in 2050 as well. After all, I don't think that many people in my age (which is 29) and younger will ever be able to retire anyway because of the fundamental problems in our financial system; so better we take our life's journey as the reward and enjoy it on the way.

The coming 10 years for Estonia will definitely be challenging as there are just 78 persons entering the workforce per each 100 persons leaving. This demographic issue besides other factors such as emigration (even if nothing dramatic) resulting from the search for higher income elsewhere, as well as lack of qualified specialists in certain areas will apparently have upward pressure on salaries. For the case if you are wondering about the little number of children in the graph for 2000: this is reflecting the times of uncertainty in the beginning of 90s when Estonia had just restored its independence; this hole will impact the population pyramid for the long years to come.

[5] Dynamic graph can be found from the website of Statistics Estonia (bottom left you can select English as language): http://www.stat.ee/public/rahvastikupyramiid/

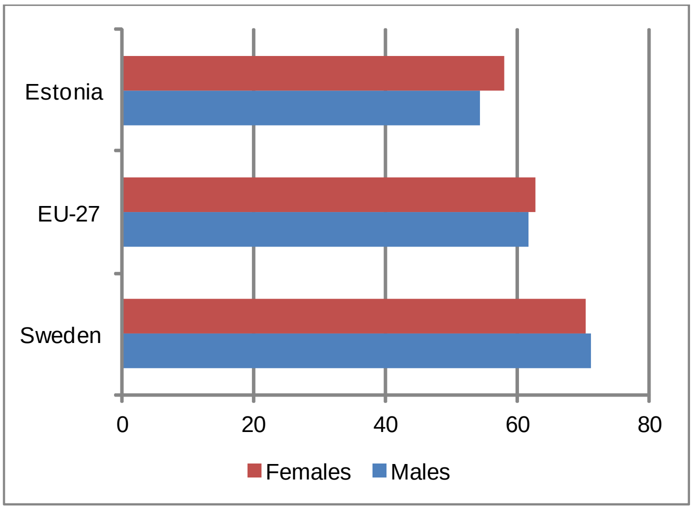


Age groups (number of people and % of total population respectively)

<20	20–64	65+	Total	<20	20–64	65+	Total	<20	20–64	65+	Total
353 900	812 800	205 700	1 372 400	274 500	814 300	229 200	1 318 000	287 400	664 700	298 000	1 250 100
25.8%	59.2%	15.0%	100.0%	20.8%	61.8%	17.4%	100.0%	23.0%	53.2%	23.8%	100.0%

Figure 11. Population pyramid of Estonia: 2000, 2012 and 2050
Source: Statistics Estonia
Note: Surplus of men / women is highlighted.

So much about the quantity of the population; as quality is not less important for an aspiring knowledge-based economy, indicators of health and education of the Estonian people are depicted on *Figures 12a* and *12b*.



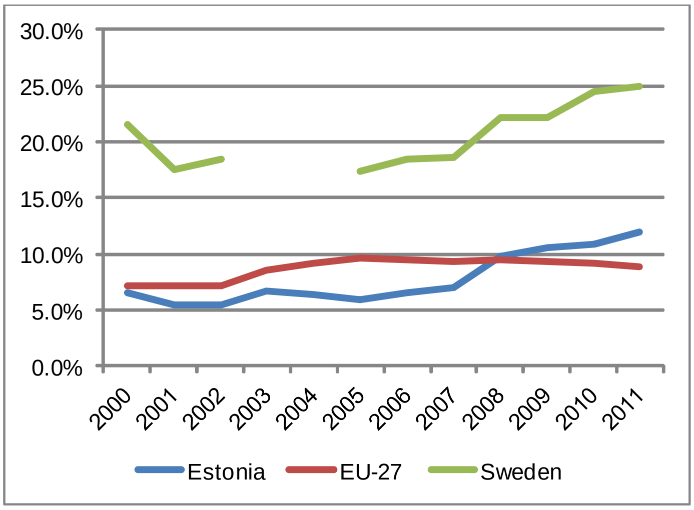


Figure 12a. Healthy life years in absolute value at birth: Estonia vs. EU-27 and Sweden (2011, EU data: 2010)

Figure 12b. Participation in education and training, ages 25-64 : Estonia vs. EU-27 and Sweden (2000-2011)

Sources: Eurostat and Statistics Estonia; Calculations – LogicOfFinance.com

Sure, if being presented with the first graph above and nothing else, one would clearly prefer being born as a man in Sweden to being born as a man in Estonia (i.e. having 71 years life in full health rather than just 54). Somewhat mitigating factor of the harsh reality revealing itself in the numbers of healthy life years is the fact that the median age of an Estonian man is lower too (i.e. Estonians are younger): according to CIA World Factbook, 37 years for men in Estonia vs. 41 years for men in Sweden. But that's not this much… I think the most important cause behind the obvious problem (and all the diseases and other immediate causes of death) is much less balanced and often unhealthy lifestyle, both because of objective and subjective reasons.

The comparison with the "significant others" looks much better when it comes to education and training. Indeed, according to the OECD data, Estonia ranks higher than many of the so-called advanced economies as long as the percentage of population that has attained tertiary education is concerned; reportedly, in 2012 35% of the people aged between 25-64 years had done it (which compares to 34% in Sweden and 31% as OECD average). *Figure 12b* above also indicates pick-up in the life-long learning, even if there is still long way to go when we'd benchmark us against our Nordic peers. There is a reason for that: since approximately two thirds of the Estonia's current 10%+ unemployment is structural and the economy is being restructured as well, updating one's skills has become an absolute must. For example, when browsing the Estonia's largest job portal, it appears that there are more job offerings in information technology than in any other area; on the other side there are unemployed people who clearly do not have the necessary skill set for that kind of jobs.

Education alone is not enough; it's also how people are using it and how much they are able to leverage their personal and professional qualities. One point of view is that of the so many debates in the US and Europe: creating new jobs, which continues to be an issue in Estonia too. New jobs are mainly created by the SME-s[6] and start-up companies (the "big boys" are presently letting go more people than they are hiring). No matter in which way we are approaching the issue, entrepreneurship is perhaps the most important indicator to look at for a country's economic success (or failure) in the years to come.

When we consider the number of enterprises per 1,000 people, Estonia ranks somewhat below the EU-27 average (according to Eurostat, the numbers, while excluding financial and insurance activities, are 39 and 43 respectively); based on this indicator Europe in turn is nowhere close to the US, which, as a result of different general perception towards success and failure, has been at least twice more entrepreneurial.

Figure 13a (see the next page) provides a bit different presentation: have people ever taken or are they currently taking steps for entering business? To this question, slightly more Estonians are answering "yes" than on average in EU-27 (24% *vs.* 23%). *Figure 13b* reveals a changing trend: AngelList entries underline that even if absolute numbers are small, Estonia is holding the second place based on the number of start-ups per capita (or one million people to make the graph more intuitive). The later fact has to be taken with certain reservation, however: being in AngelList is 100% voluntary and therefore not everyone is there; also, quantity doesn't tell very much about quality.

Technically, starting a business in Estonia is fairly simple. If an Estonian doesn't have special wishes concerning shareholders' agreement and the related legal matters, all what he or she needs for getting started, are 15 minutes, an ID card and a computer for registering a private limited company. Legal stuff, taxation system etc. are not too complicated either (sure, in the US dealing with these issues is much-much more expensive, time-consuming etc.). Apart the concern of changing but still there unfavorable general public perceptions towards entrepreneurship, what's the reason for the many Estonians of not really considering becoming entrepreneurs? You guessed it: money. According to the Eurobarometer Survey on Entrepreneurship, the number one obstacle highlighted is "not enough capital / financial resources".

[6] Just for the case if you are not familiar with this terminology: SME stands for small- and medium sized companies.

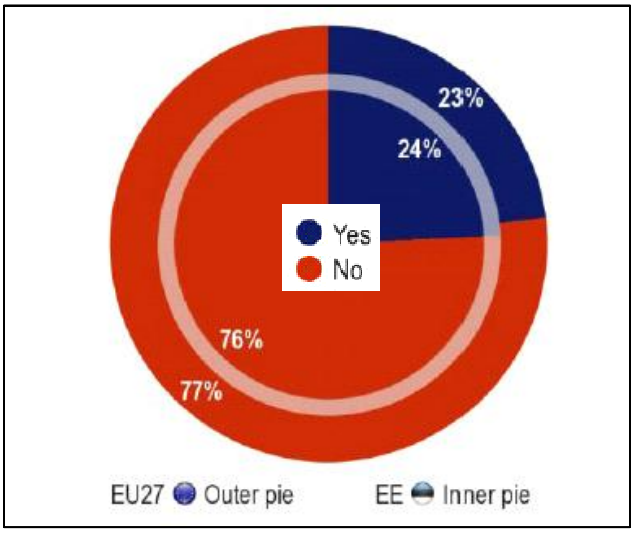


Figure 13a. Estonia (EE) and EU-27: Distribution of answers to the Eurobarometer 2012 question: "Have you ever started a business, taken over one or are you taking steps to start one?"

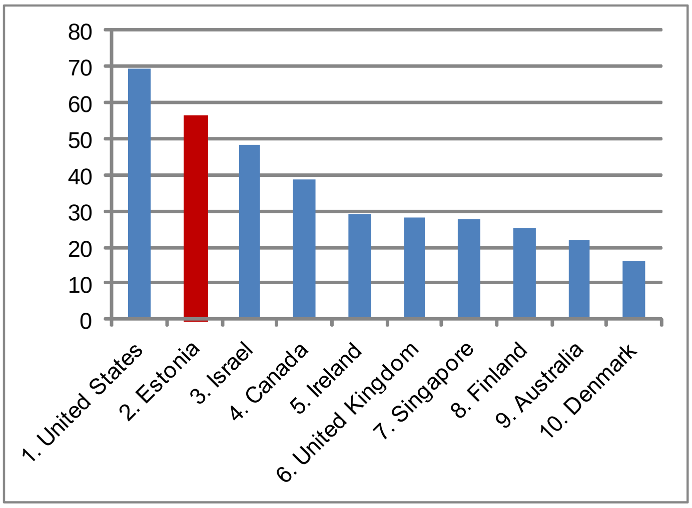


Figure 13b. Estonia among the Top 10 countries by start-ups per capita (AngelList entries per 1 million people; January 2013)

Note: Small countries with less than 50 start-ups have been excluded because of the sample not being representative.

Sources: Eurobarometer Survey on Entrepreneurship 2012, AngelList, various sources of population data via Wikipedia; Calculations – LogicOfFinance.com

While setting up a consultancy business or developing a simple web app may not require much money in theory (which may be true but more than often is not in practice; without a lot of dedication the vast majority of such starts fail anyway, after all), the so-called *FFF* resources (i.e. money from friends, family and fools / enthusiasts) are often virtually non-existent. Put yourself into the role: it's not that the family is supporting you while you are building your business and looking for your very first customers; it's that you have to work without complaining in order to support your family (and lucky you if you have a good enough job). This is illustrated on the two graphs about incomes and financial wealth of households, see *Figures 14a* and *14b.* (Expected reaction of an Estonian employee: *"Oh gosh, even people in bankrupted Greece are earning this much more!"* Rightly so: the picture would not look that much different if purchasing power parity were taken into account.)

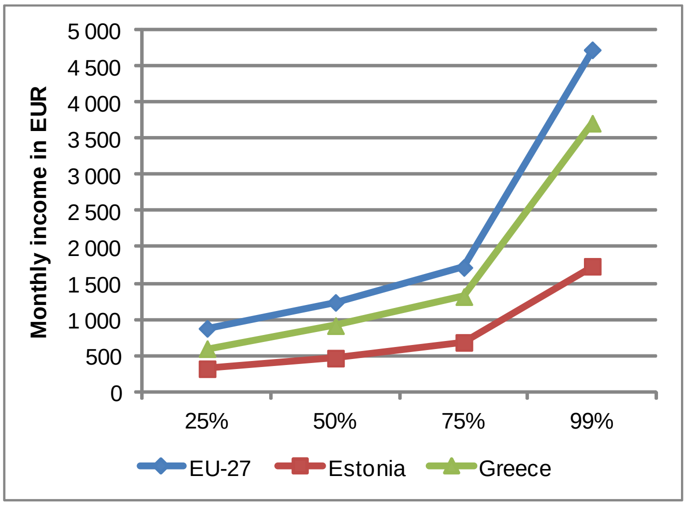


Figure 14a. Distribution of monthly income by quantiles: Estonia compared to EU-27 and Greece (2011)

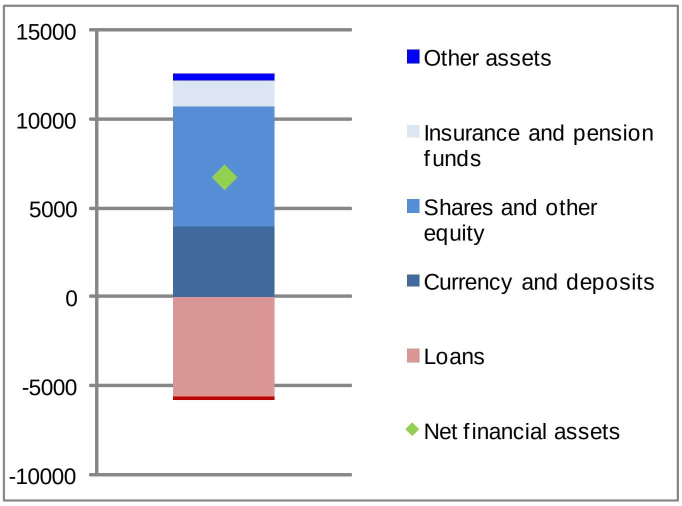


Figure 14b. Per capita household financial assets (blue tones) and liabilities (red tones) in Estonia (Q3 2012, in EUR)

Sources: Eurostat and Bank of Estonia; Calculations – LogicOfFinance.com

Half of the adult population in Estonia is earning just enough for a normal life – or less; less than 1% of adults are earning enough to seriously consider investing into more risky businesses. Total financial assets per capita amount to only 12.5 thousand euros, and this includes people's retirement savings! Net financial assets per person are well below seven thousand euros; when we'd exclude *de facto* not usable pension savings, this number would be just about five thousands. Based on these stats, there is almost no way that a rationally thinking person with a median monthly income of EUR 500 and accessible savings of EUR 5,000 would ever consider risky pets. Good or bad, humans usually are not rational by nature... depends on the viewpoint. Again, who is willing very much, can find ways...

Anyway, it is a fact that money for investing, incl. private equity, venture capital, angel money and the like are not readily available in Estonia. The two charts below (see *Figures 15a* and *Figures 15b*) are self-explanatory in this respect. Partly it is the case of rather low incomes and lack of money supply; the other issue is the limited experience of investing when it comes to this small percentage of people who might but are not yet doing it. One could argue for the use of local funds that are "sitting" on deposit accounts (in *Figure 4a* above we saw that deposits of Estonians have been increasing steadily) by "pooling" them into one "pot" called investment fund or a venture capital fund. The reality is that more than often available investments do not match with the current profiles of savers, i.e. potential investors. Developing investor skills is again something that requires time and effort; I don't think that simply "importing" a few qualified fund managers would be a good idea.[7]

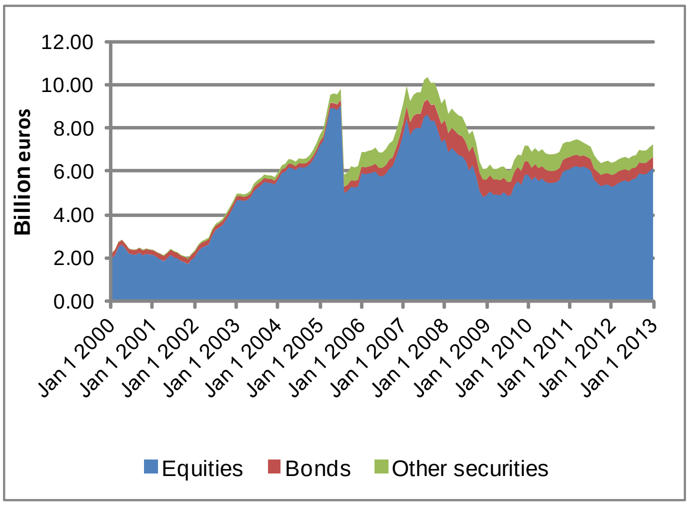


Figure 15a. Estonia's total market capitalization, incl. listed and unlisted securities(Jan 2000 - Jan 2013)

Sources: Estonian Central Register of Securities is Estonian CSD; Calculations – LogicOfFinance.com

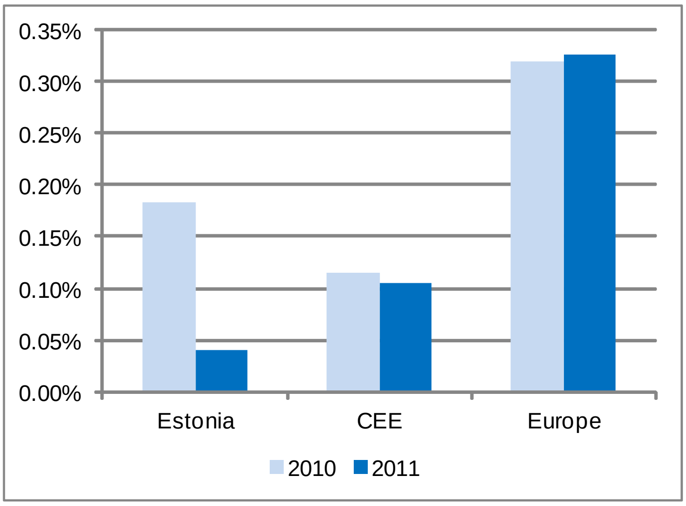


Figure 15a. Private equity investments as a percentage of GDP: Estonia vs CEE region and Europe (2010 and 2011)

Sources: European Private Equity & Venture Capital Association (Aug 2012); Graph – LogicOfFinance.com

Note: Stats for Estonia are volatile due to small number of observations; however, the figure is clearly below Europe's average.

Estonia's stock market has been a subject of discussions on its own. On *Figure 15a* above it appeared that the total market capitalization of equities is just around six billion euros, and this includes both: listed and unlisted securities. Market capitalization of public companies listed on Tallinn Stock Exchange (which is the only regulated exchange in Estonia and one of the OMX Exchanges that in turn are part of the NASDAQ OMX Group) is below two billion euros (data as of January 2013 from NASDAQ OMX Baltic website). The number of companies is... well... not large; 13 in the Main List and three in the Secondary List, to be precise.

[7] If the investors don't know what they are doing and are not understanding the fund's portfolio, an investment fund is way too often a tool for the fund managers to make money on them.

As illustrated in *Figure 16a*, daily trading volumes are quite a joke: less than 200 transactions with a total turnover fairly below 0.5 million euros. There have been periods of 4-5 times that activity, mainly when investors hurried to leave in the expectation of stock market crash in 2007 (which inevitably happened as a result of general market panic, see *Figure 16b*.), or a locally attractive company was expected to be de-listed as a result of takeover (notably, Hansabank in 2005, and the Estonian Telecom in the end of 2009 / beginning of 2010, to name the two cases of largest impact).

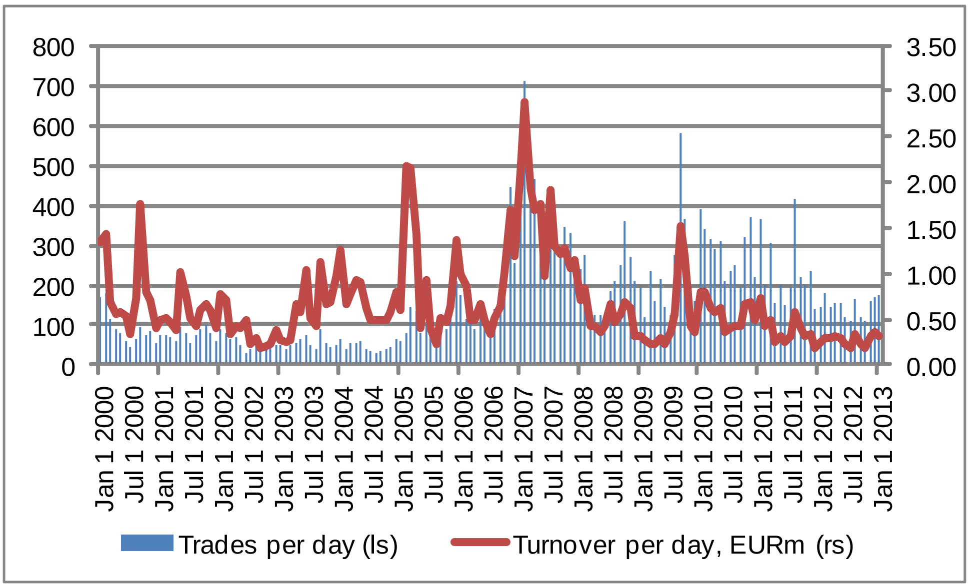


Figure 16a. Average daily turnover (millions of euros, right scale) and number of trades (left scale) on Tallinn Stock Exchange, Jan 2000 - Jan 2013

Sources: Data – Estonian Central Register of Securities; Calculations – LogicOfFinance.com

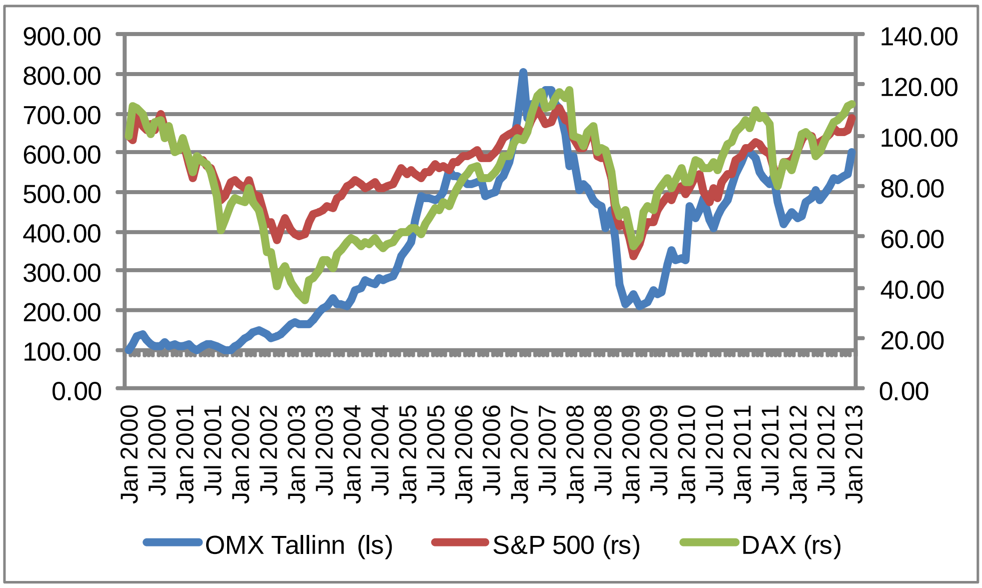


Figure 16b. Stock market performance: OMX Tallinn (Estonia, left scale), and S&P 500 and DAX (right scale), Jan 2000 - Jan 2013; Jan 2000=100

Sources: Data – NASDAQ OMX Baltic and Yahoo! Finance; Calculations – LogicOfFinance.com

In order to revive the Estonia's stock market, FinanceEstonia[8] and some others are pushing hard for going public with a few state-owned companies, the largest of which is Eesti Energia AS[9] with an annual revenue of 858 million euros (2011). It is highly likely that something in this direction will be done in not too distant future.

Just to point this out: as obvious from *Figure 16b*, the race from top to bottom from 2007 to 2008 / early 2009 in OMX Tallinn (Estonia's stock index; from top to bottom: -74.0%) was definitely wilder when compared to S&P 500 and DAX (from top to bottom: -52.6% and -52.4% respectively). While the other two indexes have recovered, the Estonian one has still way to go, as you can see.

Long-term challenges that Estonia has got – now in short

These are the challenges and issues that Estonia has got and needs to tackle:

- Small population being mostly busy with the low value adding activities in terms of money and leverage;
- High structural unemployment and need to re-educate people so that their qualifications would conform to the employers' needs;
- Demographic and health issues such as slowly but steadily declining population and limited number of healthy life years;
- Limited entrepreneurial culture and rather discouraging attitude towards entrepreneurship outside the start-up community and people directly related to it;
- Heavy concentration of funding sources (both, via financial account and via current account) to Nordics, specifically Sweden and Finland;
- Underdeveloped financial market and financial system that way too heavily relies on foreign banks; very limited availability of angel financing; general lack of the respective skills.

This list is just to summarize quickly the main concerns.[10]

Of course, we wanted everything fixed at once. There is a lot what private sector can do. However, certain crucial developments are unlikely to happen without government taking the lead (because the decisions that are optimal from an individual's point of view may not be optimal when common interest is concerned, a paradox known as "prisoner's dilemma"). The question then is: what resources does the government have to meet these challenges. The answer depends on several internal and external factors: current public debt, government's revenues and expenditures, willingness and possibility to borrow, distribution and re-distribution of the European money, and so one. As we shall see next, also in Estonia government budget is a subject of constant struggles, and compromises need to be made almost all the time.

[8] The Public-Private cluster initiative formed in July 2011 with the mission of establishing Estonia as a vibrant and innovative location for financial services.

[9] In Estonia, Latvia, Lithuania, Finland and Jordan the company operates under the name Eesti Energia, yet it uses the brand name Enefit for global operations.

[10] We are assuming that the society will not be able and/or willing to abandon money any time in the foreseeable future (in this context it even doesn't matter whether we are keeping in mind the so-called fiat money or gold), and that capitalism (even if having certain major built-in flaws) will continue to be the dominant economic system.

Public finances and resources for tackling long-term challenges

Public finances

Estonia has made headlines by reporting the lowest public debt and being the only nation to record budget surplus for the government in the EU in 2010.

Indeed, the balance sheet of Estonia's government continues to look good as of 31 Dec 2012 (debt stats as of 30 Sep 2012)[11]: 1.45 billion euros in reserves (incl. 1.10 in liquidity fund and 0.34 in stabilization fund) and 1.60 billion euros in debt. The consolidated dept which forms c.a. 9.6% of GDP compares to the Maastricht criterion of 60% and current EU-27 average of around 82.5%. However, there is a "blank check" concerning the EFSF/ESM[12]. Given the current size of EFSF/ESM, Estonia's share in the total guarantee is about 2.0 billion euros which is more than the outstanding debt altogether yet still manageable.

Uncertainty remains of how much tax payers' money will ultimately be needed for resolving the European banking system and over indebted governments. I'd expect this to be rather a large number (i.e. measured in trillions of euros). On the other hand, I'd not assume any "killer decisions". Most probably private sector is going to be forced for "voluntarily" taking the vast majority of further losses, and/or European banking system is going to be resolved all together via restructurings and "orderly bankruptcies" combined with the more-less tolerable capital injections (or eurozone as such will not have many chances anyway in which case ESM guarantees would be undone in one or another way).

Coming back to Estonia, we might say that Estonia's government does have a few hundred millions of euros available for investing into some ventures and/or activities in priority areas that possibly have high returns – even if these are not quite an "A" in the language of rating agencies. The more so that right now it is possible to borrow with rates below the expected economic growth, i.e. pay less in interests than the pace at which the real value of debt is being eroded for us. When borrowing, the effects of future interest rate hikes have to be considered, however.

When we look into the "magic" of (read: struggle behind) the government's more-less balanced budget during the past few years, we see that even if there appear to be certain funds available and/or accessible for investments, there is not much room for stupid decisions, especially given bumpy road ahead in global finance and economy. For the illustration, I have depicted the revenues and expenditure of Estonia's government since 2000 in *Figures 17a* and *17b* respectively. As can be seen, life was easy and fun up to 2007: both figures grew exponentially. This trend came to an abrupt end in 2008: tax income contracted, social contributions slowed down, and the relative importance of proprietary income (mainly received interests and dividends) as well as current and capital transfers (incl. EU funds) increased notably; on the other hand, social transfers to the vulnerable groups of the society increased and have remained high ever since. Part of the money in the stabilization reserve was needed to cope with the situation despite of the various cost-cutting measures such as stopping the in the promised state contributions to the so-called Pillar 2 pension funds and putting state-owned land plots into sale for fairly good prices from a purchaser's point of view. Lesson learned: you want to be liquid and have reserves for not being among the first dominos that fall when global finance is unraveling.

[11] The data discussed in this paragraph are taken from the websites of Eurostat, Statistics Estonia and Ministry of Finance of the Republic of Estonia as of writing this analysis in January 2013.
[12] EFSF – the European Financial Stability Facility; ESM – the European Stability Mechanism

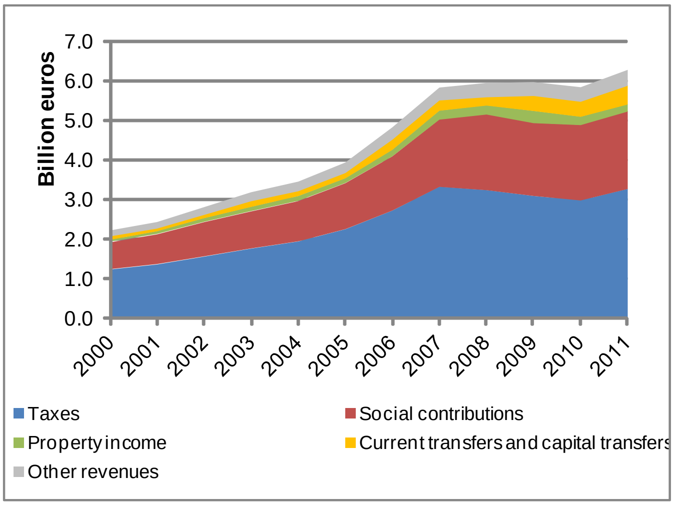


Figure 17a. Estonia's general government revenue sources, in billions of euros (2000-2011)

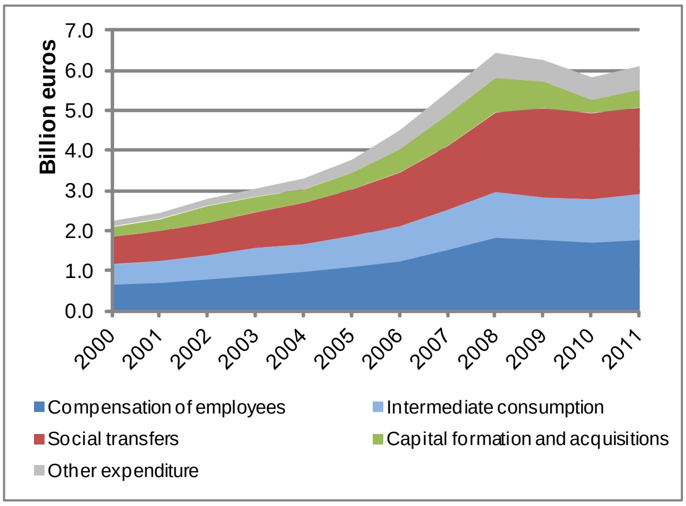


Figure 17b. Estonia's general government expenditure by category, in billions of euros (2000-2011)

Sources: Statistics Estonia; Calculations – LogicOfFinance.com

Note: General government consists of central government, social security funds and local governments.

Compromises have to be made. It is pretty sure that certain specialist jobs in the public sector entities, while being currently underpaid, will cost more going forward; the numerous strikes during the past few months as well as agreements reached give enough reason to assume this. On the other hand, major increases in the revenue side are rather unlikely. Among others, Estonia is competing with its neighbors for attracting outside investments and keeping talents with a more favorable tax regime. Remember that in the EU there are not many restrictions for the main production resources, capital and labor, for moving from one country to another.

One more concern is that the funds available and/or possible to borrow for tackling long-term challenges, are being invested into the existing state-owned companies instead. For example, in June 2012, the share capital of the abovementioned Eesti Energia was increased by EUR 150m (for investments), which added to government debt and caused a not too warm welcome and questioning from the public. Another example is Estonian Air, the flag carrier airline of Estonia. As many other airlines, Estonian Air is in trouble too, is undergoing a major restructuring process and may need an injection of 50-70 million euros, most probably from the government. It's not clear whether and when such investments and loans will come back.

European Union Structural Assistance to Estonia

A not insignificant part of the funds for meeting the long-terms challenges is coming in the form of EU Structural Assistance to Estonia. For the period of 2007-2013 Estonia was allocated more than 3.40 billion euros from the structural assistance out of which 2.0 billion euros has been paid so far, see *Figure 18*.[13] The money is being channeled to the: energy economies, entrepreneurship, administrative capability, education, information society, environment protection, regional and local development, research and development activities, healthcare and welfare, transportation and labor market. I assume funding of the many important activities in these areas would be postponed into the undefined future without the EU money.

[13] Source: http://www.struktuurifondid.ee/en/

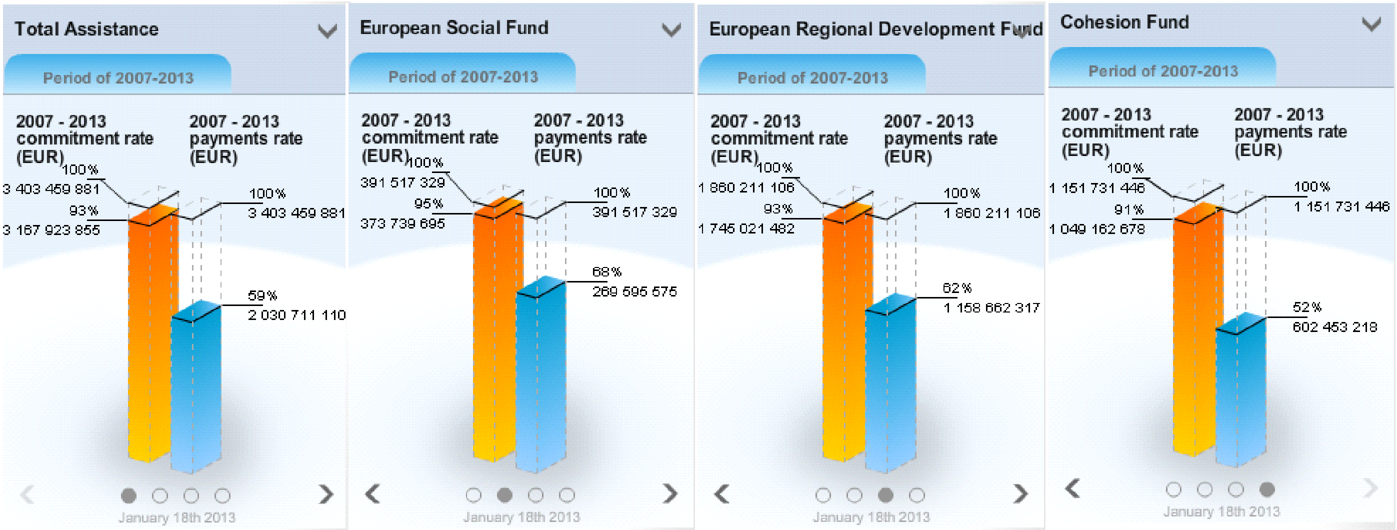


Figure 18. European Union Structural Assistance to Estonia, 2007-2013
Sources: http://www.struktuurifondid.ee/en/; Calculations – LogicOfFinance.com

The uncertainty concerning the EU funds relates to the beginning of the new budgeting period and to the questions of how much and for which activities will be re-distributed from the "big European pot" in the coming years. On one hand, we have the persistent economic and financial troubles in the EU; on the other hand there are good reasons for richer countries to continue investing into the economies like Estonia especially if imbalances within the eurozone are to be reduced.

Bright spots

There are several bright spots and star performers in various walks of life among Estonians: in business and in politics, in education and in science, in music and in sport… you name it. In the current context, I'm however not keeping in mind single persons or acts but movements that have recently started from Estonia (of course, these have are also started and led by the people who have names) and are quickly going global.

I'd highlight two of such bright spots:

- Estonia's (tech) start-up community
- Let's do it! World

While the first one consists of profit aiming ventures and the second one is activating people on non-profit basis, they both have potential to tremendously leverage the value that Estonians have to offer to the world.

Estonia's (tech) start-up community

Startup Estonia in Facebook: https://www.facebook.com/startupestonia

Ben Rooney from the Wall Street Journal has written about it so I'll not repeat. One good article can be found from here: http://online.wsj.com/article/SB10001424052702303734204577464343888754210.html

I'll only add a list of further information sources for those interested:

- http://www.arengufond.ee/eng/VC/portfolio/ – investment portfolio of the Estonian Development Fund; a nice collection of Estonian start-up companies;

- http://www.tehnopol.ee/en – the website of Tallinn Science Park Tehnopol, a business environment with more than 150 technology based companies;
- http://www.start-smart.me/en/startup-database – collection of start-up companies in Estonia (as well as in Finland);
- http://startupwiseguys.com/ and http://www.gamefounders.com/ – the two start-up accelerators in Estonia;
- http://hub.garage48.org/ – a co-working space of start-up entrepreneurs in Estonia; here you can meet them and ask everything about the Estonian start-up community;
- http://www.estvca.ee/en – Estonian Venture Capital Association.

Further contacts and information can be found from the referred websites.

Find Estonian start-ups also from AngelList: https://angel.co/estonia
“Estonian Mafia” is in Silicon Valley too: http://www.slideshare.net/AndrusViirg1/estonianmafiasilicon-valley

Let's do it! World

Website: http://www.letsdoitworld.org/
Facebook: https://www.facebook.com/letsdoitworld

“One day - clean country. One year - clean planet.” It’s one of the fastest-expanding civic movements in the history, an example of doing big things without money as motivation. You may compare it with a huge non-profit start-up or with the plan “B” just for the case if the world of finance should collapse all together. Find out more here: http://www.letsdoitworld.org/about

[...]

I think, bright spots like these, when taking into account all the related positive energy, innovation and empowering of people that they are involving, should make one optimistically look into the future.

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Kristi Rohtsalu has the following connections and economic interests in relation to the analysis subject:

- She is Estonian and currently living in Estonia.
- She is actively involved in the local start-up community by being the founder of an early stage start-up company.
- She is long in some companies on the Tallinn Stock Exchange.

She does not receive any compensation for writing this report.

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