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Highlights in this issue:

- Rapid financial convergence, reduced interest rates, high wage increases, favourable fiscal provisions, resulted in exceptional growth in house prices
- Inadequacy of initial housing stock and other supply constraints also contributed
- Some policy actions might be advisable to avoid a repetition of the bubble

Estonia: analysis of a housing boom

By Baudouin Lamine*

Summary

Financial market liberalisation and financial convergence after EU accession, extremely low real interest rates as well as fast rising disposable income and wage expectations contributed to rapid lending growth in Estonia from 2000 to 2007. Favourable fiscal provisions further contributed to the phenomenon. The inadequacy of and progressive dissatisfaction with the housing stock inherited from the Soviet period also resulted in greater demand for new housing units. On the supply side, labour migration to neighbouring Finland exacerbated structural weaknesses, such as the initial relative scarcity of private construction companies. This resulted in houses reaching record prices in 2007, up by 400% since 2000. Such prices proved unsustainable. A downward adjustment of house prices has now taken place, reflecting e.g. higher interest rates, tightened lending conditions, as well as the severe economic downturn. Despite a general feeling that the real estate market seems to be nearing the bottom, it can not be expected to regain strength before the whole economy starts recovering. In a longer term perspective, phasing out fiscal incentives and exemptions, as well as strengthening real estate taxation, might become advisable.



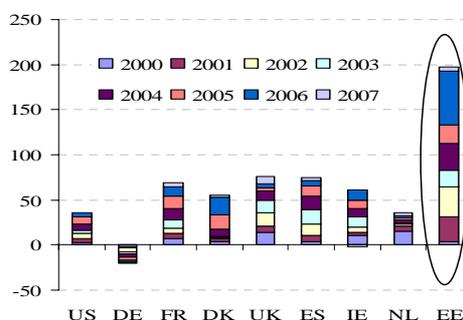
EE house prices multiplied by five between 2000 and 2007..

but prices started falling towards mid-2007.

Introduction

From 2000 to 2007, Estonia registered very strong annual real house price

Chart 1. Real housing price growth in selected countries yoy (%)



Source: OECD - Statistics Estonia

increases, placing Estonia property prices among the fastest-growing among European countries (Chart 1)/ Increases exceeded 500% at the peak of the boom in mid-2007 compared with 2000. Real average house price increases were particularly strong from 2005 and in the main cities of Tallinn, Tartu and Pärnu.¹ These levels, however, proved unsustainable, and faced a sudden reversal by the end of 2007. The number of property

transactions fell sharply during the first half of 2008, and at the end of the third quarter of 2008, average housing prices had already fallen by 20-30% compared to their peak in mid-2007. This *Country Focus* attempts to highlight the most important drivers of EE's housing sector activity since 2000 and suggests areas where attention may still be warranted.

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A multifactor increase in housing demand

Several factors explain the swing in demand over 2000-2007:

A rapid increase in one-person households took place in 2006 and 2007

A key determinant of housing demand was the fast rising disposable income

Soviet-style apartments no longer met the structure of housing demand

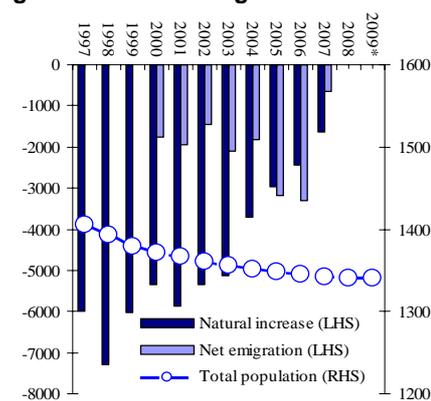
The higher standard of living led to growing demand for more modern buildings

1) First, large socio-demographic effects combined in a way that the number of households increased. Over the 1997-2009 period, the number of residents in Estonia declined: natural population growth in EE was negative, although on a decelerating trend. Net outward migration compounded this phenomenon, with a 1.2% population outflow over the 2000-2007 period (Statistics Estonia, 2009) (Chart 2). However, an ageing population and a rising standard of living resulted in a *rapid increase in one-person households and in a slow decline in the average size of households*. Nevertheless, overall, the number of households' increase (3%) was rather limited, and, alone, could not explain the rapid price increases in the housing sector.

2) Second, a major determinant in the increase in housing demand since the early 2000s was *household income*. Disposable income rose fast (80% over 2000-2007) (Chart 3), as a result of the rapidly increasing wages, but also the progressive reduction in income tax rates played a role. Estonia's housing demand elasticity with respect to income was high at around 2 (Egert and Mihaljek, 2007), similarly to any fast catching up transition economy (see also Kolbre and Kallakmaa-Kapsta, 2006 and Brixiova, Vartia & Wörgötter, 2009). But, as real house prices increased by more than twice between 2000 and 2007, income growth alone is again insufficient to explain the observed housing price growth since the end-90ies.

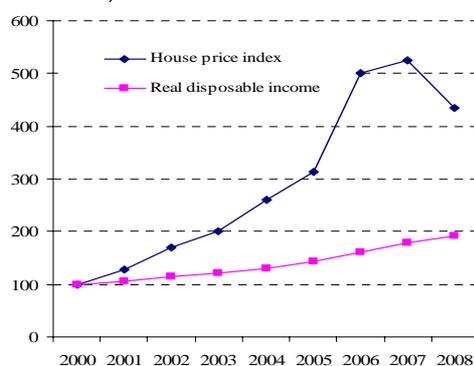
3) There has been an *increasing demand for dwellings built using the latest construction methods and materials (in particular insulating materials)*: in 2006, around 50% of the housing stock dated back from before 1970, while the stock of low-quality Soviet era apartment blocks, built during 1971-1989², accounted for some 44% of the total housing stock. Around 20% of them were of very low quality. Dwellings of less than 15 years age accounted for only 6%. As a *large share of total transaction was accounted for by modern buildings*, the rapid growth in housing prices partly reflected a *composition effect*.

Chart 2. EE annual population growth: contributing factors



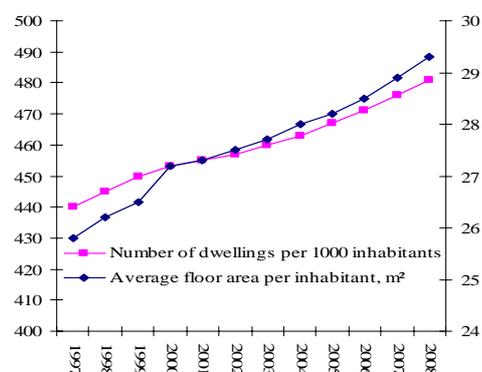
Source: Statistics Estonia – Bank of Estonia

Chart 3. Real disposable annual income per household and real EE average house price, (CPI deflated) (Index, 2000=100)



Source: Statistics Estonia – Author's calculations

Chart 4. Number of dwellings per 1000 inhabitants (LHS) – Average floor area per inhabitant (m²) (RHS)



Source: Statistics Estonia

4) At the same time, improving living standards pushed up the *average floor area of new dwellings* progressively from 26m² per inhabitant in 1997 to 29.5m² in 2008³ (Chart 4). The housing stock inherited from the Soviet period and based on small apartments in large blocks no longer met the structure of housing demand

(Lattemae & Touart, 2006). A new trend developed, clearly towards larger dwellings, detached houses and smaller apartment blocks.

Growing interest for property in Estonia

5) Finally, there has been a *growing external interest for property in Estonia*, in particular from retiring citizens of Nordic Europe, from CEE residents working abroad and from global real estate companies, giving the sector the characteristic of a traded good. FDIs into the real-estate sector in Estonia were particularly high in 2003, 2004 and 2007. This external demand spilled over to house prices for local residents.⁴ It is also likely that Estonians have increasingly acquired a second residence. All this explains why the number of dwellings per inhabitant rose by 5% in only seven years (Chart 4).

Financial conditions exacerbated the propensity to buy new property:

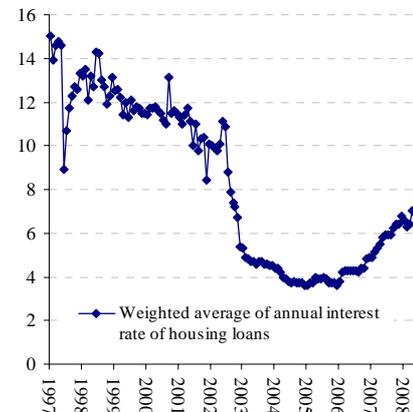
Estonian households reacted in a particularly sensitive way to rapidly declining interest rates

1) *Mortgage interest rates* declined slowly in Estonia from 1999 to 2002. The fall became dramatic in 2003, and mortgage rates stayed at very low level for three years (Chart 5). Moreover, as a result of the higher inflation (above 4% from 2005), real interest rates became at times negative, so that the real burden of mortgage borrowing became very low. This was in particular the case for variable and euro denominated interest rates, which became very common (70% on an increasing trend). As a result of low real interest rates and increasing income, housing loans expanded by almost 60% per year between 2000 and 2006. The elasticity of house prices to a decline in interest rates (up to -0.07) appears to be 3.5 times higher in fast catching up transition economies than in OECD countries. And, as interest rates comparatively declined far more in Estonia than in OECD countries, prices grew largely faster (Egert & Mihaljek, 2007). Increasing house prices boosted households' wealth and confidence, and served as collateral of increasing value, allowing higher borrowing and consumption levels and pushing house prices further upwards (OECD, 2009).

Credit market liberalisation played a major role in the massive credit growth from outside

2) The 2000-2005 period was also a period of *credit market liberalisation*. The Estonian financial market opened to the foreign owned banks (mostly Nordic banks) with strong retail banking expertise and a strong competitive approach. This allowed a rapid and massive financial convergence (Lamine, 2008), and aggressive and seducing proposals for loan mortgages (Kask, Klettenberg & Olev, 2009). The maximum maturity of housing loans was extended, and the average maturity lengthened beyond 30 years for a significant part of the loans extended. The maximum LTV ratio increased considerably from 75% to 95-100%. The requirements for down payments were reduced, in particular for subprime borrowers⁵ and for loans obtained through a state-provided guarantee. As a result, the total indebtedness of households and companies neared 100% of GDP in 2007. Loans were predominantly denominated in euros and at variable interest rates, implying therefore a vulnerability to possible future interest rate increases outside Estonia, but also higher housing price growth and volatility (Brixiova, Vartia & Wörgötter, 2009). Finally, reforms in legislation and judiciary practices made it easier for creditors to seize real estate collateral, removing thereby a key obstacle to buying and selling real estate. Countries implementing greater and faster reforms tended to experience faster housing price increases (Egert & Mihaljek, 2007).

Chart 5. Weighted average of annual interest rate of housing loans (nominal)



Source: Statistics Estonia – Eesti Pank

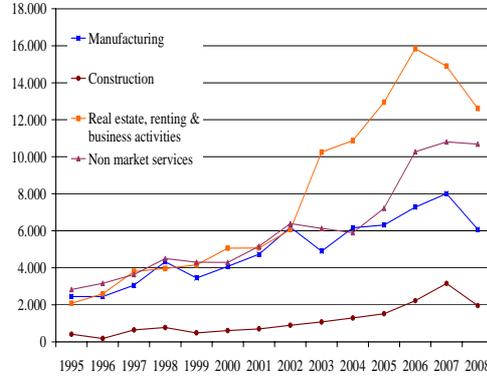
Mortgages also became available to foreign buyers and to those who wished to buy more than one house. Moreover, the construction period in Estonia was generally relatively long (more than a year). This gave an investor plenty of time to secure the financing of his purchase and to resell it with a substantial capital gain and profit upon completion.⁶

3) Finally, a number of *Estonia's tax provisions were favourable* to home ownership. Real estate activity was encouraged by several fiscal measures: tax deductibility of mortgage interest payments⁷⁻⁸, non-taxation of capital gains from selling certain residential property (homes and summer houses), absence of cadastral rental

Favourable fiscal provisions supported the rising demand for housing and real estate

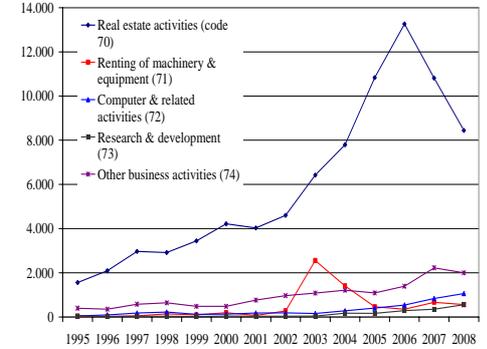
income for buildings, property tax limited to land, while the last update of the land asset value on which the land tax was levied dated back to 2001. Another advantage was the housing loan guarantees provided by the Credit and export Guarantee Fund (Kredex) under the Support of Enterprise and State Loan

Chart 6. Gross fixed capital formation by sector (at constant prices – in bln kroons)



Source: Statistics Estonia

Chart 7. Gross fixed capital formation in real estate, renting and business activities – details (at constant prices – in bln kroons)



Source: Statistics Estonia

Guarantees Act subsidizing home ownership.⁹ Finally, the absence of corporate tax on reinvested profits (as in many countries) fostered investment also in real estate, as capital gains and renting profits were not taxed as long as the receiver was an incorporated Estonian firm (OECD, 2009). The huge increase in real estate investment in the 2004-2007 period indicates that firms were partly created on purpose and overinvested in real estate, as a mean to escape corporate profit tax, contributing thereby to the real-estate boom¹⁰ (Charts 6 & 7) (Lamine, 2008). The real estate sector also benefited from the lowest "round trip" transactions costs in Europe, i.e. very low notary fees, even lower stamp duties and registration fees, as well as limited realtor fees in comparison with other countries (Global Property Guide, 2009).

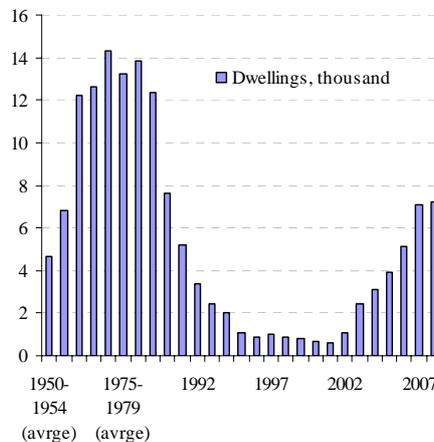
Overall, the property buying legal process appeared well established, straightforward and inexpensive. Estonia at the same time benefited from one of the best private property rights framework and the highest degree of law enforcement by the authorities, granting the highest degree of confidence to real estate investors.

Housing supply constraints

In the nineties, the development of the housing market had been limited by the embryonic banking system, the high inflation rate and the big difference existing

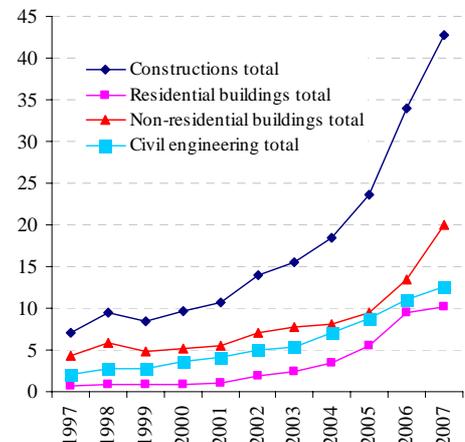
Construction activities peaked up at around 7000 dwellings in 2007

Chart 8. Construction of new residential buildings



Source: Statistics Estonia

Chart 9. Construction output (at current prices) by type of construction (bln kroons)



Source: Statistics Estonia

between the price of old buildings, which were privatized through vouchers, and new buildings. Fewer than 1000 dwellings were added annually from 1996 to 2001. Construction activities accelerated to 5100 units in 2005 and more than 7000 in 2007. This level was closer to, but still lower, than the ones prevailing from 1970 to 1990 when massive immigration from Russia took place (Chart 8). For decades, the public sector had been the dominant supplier, benefiting in particular from the large means and workforce of the former Soviet Union.

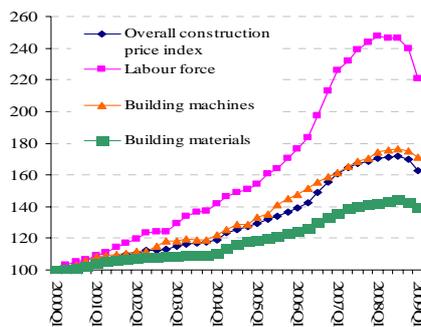
The construction of new dwellings did not compensate for the amortisation of the old dwelling stock, ... while construction growth in non-residential buildings was high.

The public sector withdrew from housing construction in the early nineties. *Private construction companies were however slow to fill the void.* The number of zone for housing approved by municipalities was inadequate. As a result, *the construction of new dwellings did not compensate for the loss of the old dwelling stock* (Kask, Klettenberg & Olev, 2005). A large number of Soviet-style apartment blocks, partly left empty by the fall in ethnic Russian population in the early nineties, progressively became unfit for habitation, prompting further demand for new housing. Housing supply could not keep up with demand, also because of the significant growth of construction output in non-residential buildings and in civil engineering (Chart 9).

Construction activities clearly expanded in both 2006 and 2007. The sector's workforce increased by nearly 30% each year, raising wages as well as the level of early school leavers. At the same time, EU accession fostered labour mobility and a number of construction workers migrated to neighbouring Finland, where wages

were still significantly higher. *Labour market constraints progressively appeared, with a lack of qualified labour in certain sectors of the construction industry.* This resulted in lengthened construction periods and higher labour costs (Chart 10). Construction activity was also affected by higher land, machine and material costs. However, the profitability of construction companies was only partly affected, as additional costs were passed on to the investor through the higher construction prices. The elasticity of housing prices to a change in labour force and unemployment appeared to be high (respectively 8 and -0.9, versus 1 and -0.2 in OECD countries) in fast catching up transition economies (Egert &

Chart 10. Construction prices index and its components: labour, machines and materials (2000Q1=100)



As construction activities expanded, labour market constraints appeared

Source: Statistics Estonia Mihaljek, 2007).

Was the price right and is it now?

Prices increased significantly over the 2000-2007 period. However, were they really unrealistic?

House prices did not appear to be extremely overvalued, given the strong economic fundamentals of the country. More precisely, from late 2005 to early 2007, house price increases appeared to have risen only 10% above fundamentals (OECD, 2009). Two other indications seem to point to the same direction: while rents in Estonia remained relatively low in comparison with other countries of continental Europe, 23 years of rent were needed to buy a 120 sqm property in early 2009, which corresponds to the EU average. Moreover, the square metre price (€ 2840) was lower than the EU average (€ 4648), even though higher than the one of Germany (€ 2330), whose GDP per capita was twice higher (Global Property Guide, 2009). Nevertheless, in early 2009, the ratio of the square metre price on disposable income per capita for Estonia was still around 35% higher than the one of the EU, pointing to a house price bubble.

Econometric estimates and cross country comparisons confirm some degree of overvaluation

The significant growth of Estonia's house prices partly reflected an initial undershooting. Housing prices in the early nineties had been exceptionally low, *distorted by socialism and by the voucher privatisation at very low non-market prices.* The discrepancy between old and new dwellings was initially very high, discouraging people from purchasing new houses. Moreover, the homogeneity of the large stock of Soviet-style dwellings (mostly apartments) removed any interest to

Initial house prices had been distorted by socialism and privatisation at low non-market prices ...but overshooting followed, fuelled up by abnormally strong fundamentals

move from one dwelling to another (Egert & Mihaljek, 2007). However, the initial undershooting was followed by a subsequent overshooting in 2005-2007. Fundamentals were abnormally high (double-digit GDP growth) or abnormally low (negative real interest rates at times) in those years, witnessing a largely overheated economy under massive credit flows from abroad.

From 2006, interest rates started rising, and peaked in late 2008. In the meantime, prudential rules set by the central bank were made more severe for the banking sector, e.g. raising the risk weighting of mortgage loans from 50% to 100%. Moreover, Nordic banks reassessed their risks in light of the growing internal and external imbalances as well as their growing exposure and tightened their lending conditions. Together with higher property prices and the completion of a substantial property stock, this progressively reduced the prevailing discrepancy in the supply/demand ratio and halted the housing boom. This resulted in a cooling of activity in Estonia's real estate and construction sectors. Price increases started decelerating and the period necessary for selling an apartment increased. From mid-2007, housing prices started falling, prompting buyers to wait, as further falls could be expected.

What next?

Prices continued falling rapidly for the whole of 2008. After a further fall in 2009Q1, there is a general feeling that the housing market seems to be nearing its bottom. However, the sector can hardly be expected to grow before the whole economy starts recovering, possibly in 2010. On the upside, nominal interest rates in euro have fallen significantly since late 2008. Banks appear relatively well capitalised.¹¹ Households' balance sheets have remained relatively sound in recent months, despite the crisis, while economic sentiment indicators seem to be recovering. However, on the downside, gross wages are still expected to decline and unemployment to grow in 2009. Moreover, housing crises seem to be associated with long lasting recessions (Brixiova, Vartia & Wörgötter, 2009).

In a medium term perspective, massive credit flows from abroad, which appear as a transition and transitory phenomenon, are unlikely to resume to an equivalent extent. Moreover, elements supporting speculative behaviour (loose lending conditions, but also rising wages, labour market constraints) do not seem to prevail on the market any longer. Therefore, a housing price bubble comparable to the one experienced is not expected to reappear any time soon.

Nevertheless, action to avoid the emergence of a new real-estate related bubble might be warranted. As soon as general economic recovery establishes, it might become advisable for Estonia to progressively phase out fiscal incentives (tax deductibility of mortgage interest payments – 1% of GDP in 2008) as well as housing loan guarantees, which may have amplified the previous cycle. This measure would also have the beneficial effect of making budget revenues less cyclical.

In a medium-term perspective and with a similar objective, consideration could also be given to *strengthening real-estate taxation and registration fees*. In 2007, real estate-related taxes in Estonia brought about revenues amounting to 0.2% of GDP. In other countries, this ratio was as high as 1.4% of GDP.¹² Two policy actions could be considered: introducing a cadastral (stable and taxable) fictive income for all buildings and raising registration fees on transactions. Introducing a property tax on buildings would be facilitated by the electronically advanced level of property registration in Estonia, reducing thereby the administrative cost of introducing such a tax. An increase in registration fees would inevitably have some negative impact on geographical labour mobility as well as a dampening effect on transactions. However, the latter would help avoid the highly artificial market conditions similar to those registered in the past overheating period.

Phasing out fiscal incentives and exemptions would be advisable

Strengthening real estate taxation could be considered

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¹ Estonia-wide prices are not available. However, Tallinn, Tartu and Pärnu prices increases give some indication.

² Residential construction picked up between 1960 and 1989, with an annual average of 13000 new dwellings as a result of a massive Russian immigration (population increased from 1.35 million in 1970 to 1.57 million in 1990). After Estonia had regained its independence, Russian population left and total population declined from 1.57 million to 1.34 million in 2009. From 2005, the average number of new dwellings was above 4,000, therefore exceeding the 1919-1945 figure of 3,300.

³ This number is to be multiplied by 2.3-2.4 (average size of a household) to obtain the average size of a dwelling. In the older EU member States, the average size of a dwelling was around 90-100 m². However, in Estonia, the average indicators of new dwellings were 89-90 m² and four rooms, pointing to a gradual increase in the living standards. (Lattermae & Touart, 2006).

⁴ In reaction to the communist era, a preference amongst EE households for owner-occupation, as opposed to renting, also established itself. Owner-occupancy rates rose from 85% in 2002 to 96% in 2004. This compares with an average owner-occupancy rate in the EU15 of 62% in 2004. Moreover, monthly rents did not differ much from monthly loan repayment, giving preference for home purchase against renting (Kask, Klettenberg & Olev, 2005). Despite the fact that stable rents together with rapidly increasing houses prices lowered rental yields, there was no strong substitutability between rented and owner-occupied housing. This also pushed housing prices further up.

⁵ The required minimum net monthly income level for borrowing was about the average net salary level. But, in low salary categories, a maximum of 30% of the borrower's monthly average net income is allowed to be spent on monthly loan/leasing payments and interests.

⁶ The "speculative real estate-related loans", as reflected by second and third mortgages (other mortgages), accounted for 20% of the total loan stock at end-2006 (9% in 2000), while the share of first mortgages was at 54% (16% in 2000).

⁷ With a ceiling of 50000 kroons (3195 euros) for the deductible amount. In 2008, deductions were worth around 1% of GDP.

⁸ By owning properties through a company, which can be set up relatively easily, an investor can deduct expenses from any taxation liability and defer income tax payment until profit is distributed. Even then, the tax rate is currently only 21%.

⁹ In 2003, the estimated share of Kredex backed housing loans was 18.5%. The trend was however declining.

¹⁰ While the number of real estate companies increased by 266 units on average each year from 2000 to 2004, it increased by 721 on average over the 2005-2007 period, with figures of respectively 823 and 867 in 2006 and 2007. The majority of the new real estate companies created were in fact managing their own real estate property, suggesting that a large part of them might have been created with a purely fiscal objective.

¹¹ In May 2009, the average capital adequacy ratio of Estonian banks was at 22% of all (risk-weighted) assets, while the ratio of non-performing loans (by more than 60 days) was 5.2% of the total loan portfolio. The reserve requirement was also exceptionally high at 15%, constituting additional buffers. Finally, increases in lending rates and larger spreads offset the impact of non-performing loans on earnings, while larger provisions are already being constituted.

¹² Under ESA code D29a Taxes on the ownership or use of land, buildings, etc.: in 2007, France 2.6% of GDP - UK 1.4% - Estonia 0.2% - non-weighted EU average 0.6%. Under other forms of real estate taxation, i.e. codes D214c (tax on capital transactions), D59a (current taxes on capital) and D91a (capital transfers), values for Estonia were also very low or nonexistent. With respect to real estate taxation under code D51 (household and corporate income), renting profits and capital gains are taxed at the common flat rate of 21%. However, there is no cadastral income to be added to the income, mortgage loan interests paid to acquire a home are deductible and capital gains from selling certain residential property are not taxed. More importantly, non-distributed (or when distributed by way of a bonus issue) corporate profits are not taxed. As a result, the corporate income tax as a whole was equivalent to 1.7% of GDP only in 2007 (see also footnotes 7 and 8).

The *ECFIN Country Focus* provides concise analysis of a policy-relevant economic question for one or more of the EU Member States. It appears fortnightly.

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