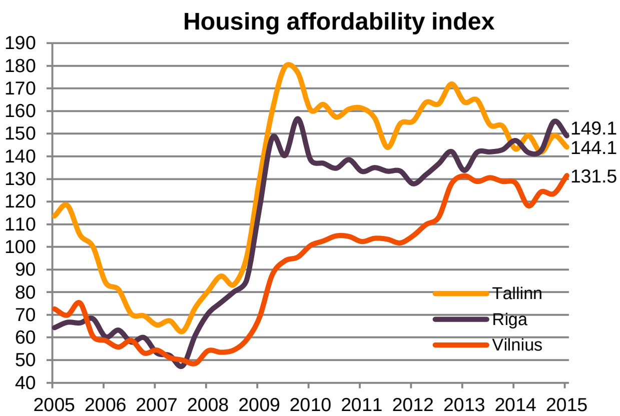
Baltic Housing Affordability Index

The housing affordability index (HAI) increased to 131.5 in Vilnius, 149.1 in Riga, and 144.1 in Tallinn

- In Tallinn, affordability rose marginally by 0.9 point in the first quarter this year compared with the same period in 2014, due to a 36-basis-point-decrease in interest rates.
- In Riga, the HAI increased by 2.1 points because wage growth outpaced apartment price growth.
- In Vilnius, the HAI rose by 3.3 points because of a 54-basis -point-decrease in interest rates.
- The time needed to save for a down payment increased over the past year by one month and one week in Tallinn, to 30.6 months, and by one month and almost three weeks in Vilnius, to 35.9 months. It decreased in Riga by three-and-a half -weeks, to 26.3 months.

The housing affordability index (HAI) is calculated for a family whose income is equal to 1.5 of average net wages with an average-sized apartment of 55 square meters. The HAI is 100 when households use 30% of their net wages for mortgage costs. When the HAI is at least 100, households can afford their housing, according to the established norm. The higher the number, the greater the affordability.



Sources: National central banks, ECB, National statistical departments, Lithuanian Centre of Registers, Latvian State Land Service and National Real Estate Cadastre, Estonian Land Board and Swedbank.

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Components of HAI: apartment prices, interest rates, and wages

Apartment prices and real estate market developments

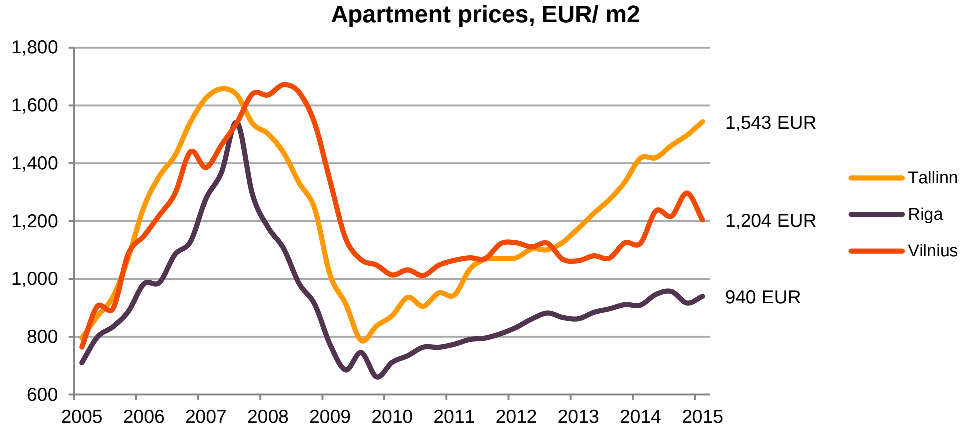
Apartment price growth eased in Tallinn and in Vilnius; in Riga it started growing somewhat faster, but it still was increasing slower than wages.

Annual growth, 1st quarter, %

Tallinn: 8.9

Riga: 3.3

Vilnius: 7.2



In the first quarter of 2015, the growth of apartment prices in **Tallinn** slowed to 8.9%, year on year. In the previous quarter, prices were around 7% lower than during their peak in the second quarter of 2007, when the average price of a square meter of an apartment sold in Tallinn was 2.5 times higher than the average net wage level in the capital (in the first quarter of 2015, the ratio was much smaller, 1.7). The number of deals increased, but modestly, compared with the beginning of last year. Activity on the loan market remained strong in the first quarter – housing loan stock grew by 3.2% and loan turnover by 23.8%, year on year. Interest rates on mortgages remain very low. Preliminary data for April and May show that the average price of apartments per one square meter remained around 10% higher than last year. Due to the completion of several development projects, the real estate market has been very active in the second quarter. In April and May, the number of deals was around 30% higher than during the same period last year. To minimise the probability of a housing loan boom, the central bank introduced three housing loan restrictions as of March 1. These limits – a loan-to-value ratio of 85%, a debt service-to-income ratio of 50%, and a maximum maturity of loans of 30 years - are in line with the existing conditions in the commercial banks and will not have a significant impact on the volume of housing loans issued. To soften the impact of the new restrictions, an exception is also being made that 15% of new housing loans issued do not need to meet the new criteria.

In Riga, activity in residential real estate market in the first quarter of 2015 was weak, with the number of transactions down by 24% annually. The number of nonresident transactions was twice as low as a year ago, due to substantially weaker demand. Nonresident demand, of which citizens of Russia account for a large proportion, was partly hindered by a sharp deterioration in purchasing power (e.g., the weaker ruble and recession in Russia) and to some extent also by legislative changes in Latvia enforced on September 1 of last year that make it more costly for foreign investors to obtain temporary residence permits to buy real estate. The nonresident transactions were mostly concentrated in one segment: the more expensive new projects in the city centre.

The number of resident transactions in the first quarter of 2015 was also lower than a year ago, though some recovery was observed in February-March. Resident demand was hampered by legal framework changes introducing nonrecourse mortgage loans, which resulted in a sharp increase in the required down payment and, thus, impaired the ability of households to obtain mortgage loans; these changes might also have increased uncertainty for potential buyers. Yet on March 1 the nonrecourse clause was made optional, making the level of down payment of loans without the nonrecourse loans similar to the level before the initial legal framework changes. This improvement in the sentiment of potential buyers and their ability to take a credit and should thus result in more vigorous activity going forward.

Real estate price growth was a moderate 3.3% in the first quarter. Prices of new projects in the suburbs declined by 4.8%, this decline mostly explained by somewhat cheaper apartments coming to the market from one specific large project; meanwhile, the price level in the other projects remained largely the same. Prices of Soviet-era apartments in the suburbs, which form the majority of the supply of the apartments in Riga, grew by a modest 2.1% annually.

In **Vilnius**, the decrease in activity in the real estate sector continued accelerating, and in January-April the number of apartment deals decreased by 25.8% compared with the same period a year ago. Annual price growth slowed quite significantly to 5.2% during the same period. Prices on an annual basis even decreased in April, but only due to declining prices of old apartments (two-three years and older); meanwhile, prices of new apartments continued increasing, although at a considerably slower pace than before. Activity decrease was rapid in both segments – old apartments and new ones. This was due to a base effect as activity growth was very rapid at the beginning of last year. The fall in activity should subside during the rest of the year as the base will not be that high anymore. Consumer sentiment is close to the highest level since the beginning of 2008, and wage growth should not subside and interest rates should remain low for at least a couple of years; this will have a positive effect on demand. On the other hand, at the beginning of last year activity increased significantly due to some one-off factors – including euro introduction, which encouraged, before the introduction, the purchase of real estate because of the fear of higher prices and the spending of cash from shadow activities. Emigrants might have contributed as well. Buyers were in a rush, and this was one of the reasons for the rapid price growth. The number of finished apartments in Vilnius in the first quarter still increased by 22.7% compared with the same period a year ago; the number for apartments for which building permits were granted also continued increasing and was higher by 14.1%. Therefore, the high supply of new apartments and disappearance of one-off factors, which increased demand last year, will most likely result in lower prices this year.

Interest rates on mortgages

Mortgage interest rates decreased on an annual basis in Lithuania and Estonia, but rose slightly in Latvia. The six-month euro interbank offered rate (Euribor), which is most commonly used for mortgage interest rates in Estonia and Lithuania, decreased from 0.40% in the first quarter of 2014 to 0.12% in the first quarter this year. The three-month Euribor (most commonly used for mortgage interest rates in Latvia) also decreased, by 25 basis points, during the same period.

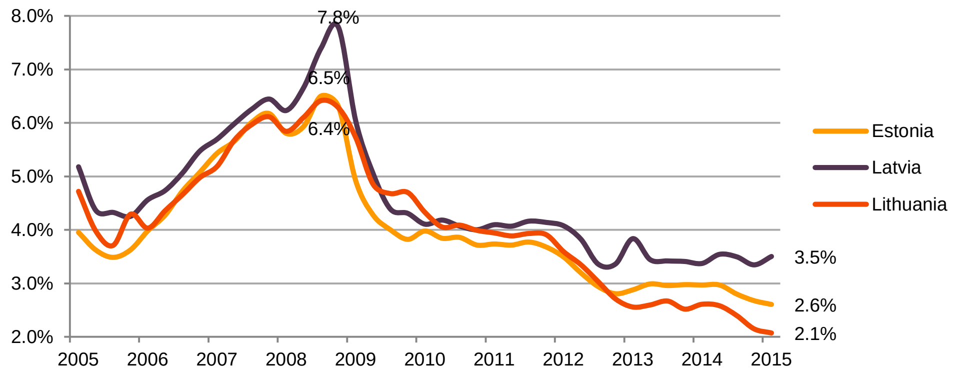
Annual growth, 1st quarter, basis points

Estonia: -36

Latvia: 13

Lithuania: -54

Annual percentage rate of charge for new mortgages to households



Average net wages

Annual wage growth slowed in all three capitals, but remained the highest in Riga.

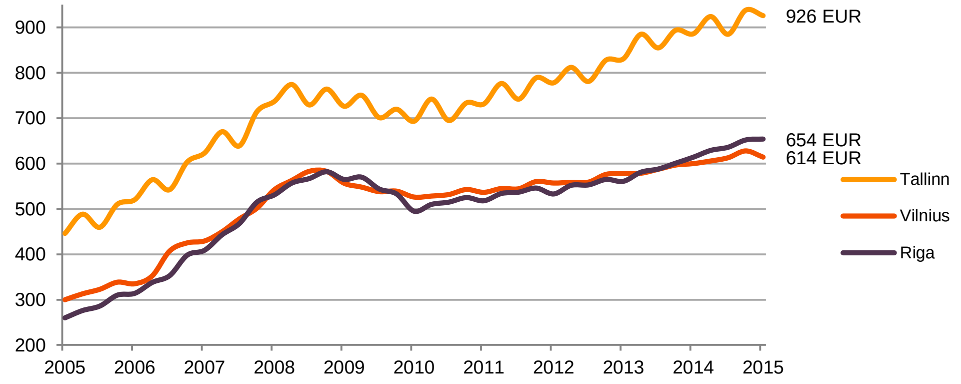
Annual growth, 1st quarter, %

Tallinn: 4.5

Riga: 6.5

Vilnius: 2.4

Average net wage, EUR



Sources: National statistical departments.

The HAI value of 144.1 in Tallinn means that household net wages in this city are 44.1% higher than required to afford an apartment, according to our norm (mortgage costs account for 30% of net wages of a household that earns 1.5 of the average net wage). In Riga, meanwhile, household net wages are 49.1% higher – and, in Vilnius, 31.5% higher - than required to fulfil this norm.

Months to save for the down payment

Over the past year, the number of months needed to save for a down payment, which equals 15% of an apartment price, increased by one month and a week in Tallinn, and by one month and almost 3 weeks in Vilnius. Due to wages rising faster than housing prices, the number decreased by three-and-a-half weeks in Riga.

It is assumed that a household saves 30% of its net wages every month for a down payment.

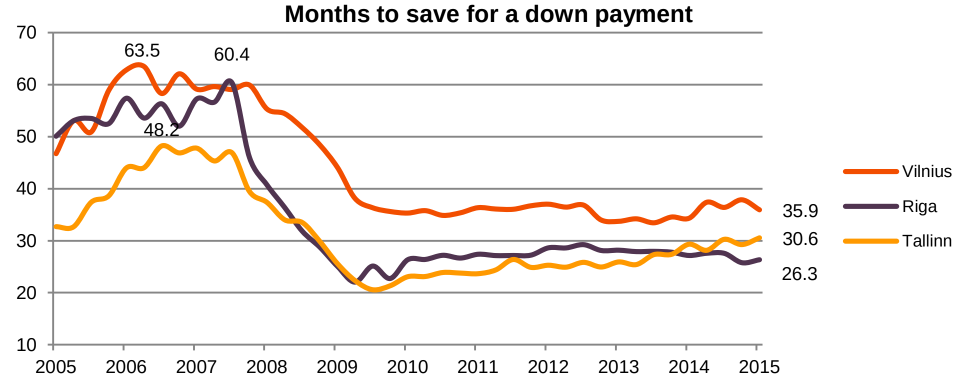
Annual growth, 1st quarter, months

Tallinn: 1.2

Riga: -0.8

Vilnius: 1.6

Months to save for a down payment



Sources: National statistical departments, Lithuanian Centre of Registers, Latvian State Land Service and National Real Estate Cadastre, Estonian Land Board and Swedbank.

Sensitivity analysis

Sensitivity analysis shows that, if apartment prices were to rise by 20%, apartments would remain affordable in all three cities. The affordability margin would narrow by 21.9 points in Vilnius, by 24.9 points in Riga, and by 24.0 points in Tallinn, to 109.6, 124.2, and 120.1, respectively.

The margins would disappear in each of the three Baltic capitals if apartment prices were to increase by more than 31.5% in Vilnius, by 49.1% in Riga, and by 44.1% in Tallinn – i.e., by the amount of the current margins. Households would no longer be able to afford apartments if interest rates were to increase by more than 2.2 percentage points in Vilnius, more than 3.6 percentage points in Riga, and more than 3.1 percentage points in Tallinn, if other variables remained unchanged.

Housing affordability index: method

Purpose

Measure changes in household buying power, primarily as this relates to apartment purchases but also act as an indicator for existing housing.

Norm

Household mortgage costs, according to our definition, should not exceed 30% of net wages of a household.

Definition of housing affordability index

Actual income in relation to income required to meet the “norm,” where mortgage costs account for 30% of net wages of a household. If the index = 100, households are using 30% of their net wages. If the index > 100, household buying power exceeds the norm. And if the index < 100, household buying power is below the norm. The index is calculated according to the following formula:

$$HAI = \frac{AverageINC}{NINC} * 100$$

where

$$NINC = \frac{PMT}{30\%}$$

HAI – housing affordability index
AverageINC – 1.5 of average monthly net wages
NINC – net wages that would satisfy the “norm”
PMT – monthly mortgage payment

Variables

- Three-month average prices of apartments of average size (55 sq. m.) in capital cities.
- Average net wages of a household, equal to 1.5 of average monthly net wages in capital cities.
- Three-month average interest rates and other related charges (or annual percentage rate of charge - a rate that comprises an interest component and a component of other charges) for new housing loans to households issued in euros -- produce the monthly mortgage cost, assuming a 15% down payment and 30-year term.

Limits

The housing affordability index includes mortgage costs but excludes taxes and subsidies, including property tax and interest deductions. The index provides an indication of the situation for households composed of one or two working people who, combined, earn one-and-a-half times the average monthly wage; however, it does not reflect conditions for individual households. The index does not provide any direct guidance for business decisions, including lending and interest rate decisions. It reflects household buying power, based on apartment purchases that have been made, but says nothing about opportunities for apartment sales.

The housing affordability index is of an informative nature and reflects macroeconomic developments, rather than banks' decisions and lending policies or possible decisions made by individual households.

Periodicity

Quarterly

Geography

Vilnius, Riga, Tallinn

Appendix 1

	Housing affordability index			Months to save for the down payment		
	Tallinn	**Riga**	**Vilnius**	**Tallinn**	**Riga**	**Vilnius**
2005 Q1	113.7	64.3	72.6	32.7	50.1	46.7
2005 Q2	118.4	66.7	69.8	32.7	53.1	53.1
2005 Q3	105.2	66.4	75.2	37.4	53.5	50.9
2005 Q4	100.1	68.3	60.5	38.6	52.5	58.9
2006 Q1	84.2	60.2	58.6	44.0	57.4	62.8
2006 Q2	81.2	63.2	55.8	44.0	53.6	63.5
2006 Q3	70.4	57.9	58.6	48.2	56.3	58.3
2006 Q4	69.5	59.9	53.1	46.9	52.0	62.1
2007 Q1	65.5	53.1	54.4	47.8	57.3	59.1
2007 Q2	67.4	52.0	51.1	45.3	56.6	59.6
2007 Q3	62.6	47.4	50.0	46.9	60.4	59.1
2007 Q4	73.2	61.1	48.5	39.5	46.0	59.9
2008 Q1	80.5	70.6	54.1	37.3	40.7	55.3
2008 Q2	87.1	75.5	53.5	34.0	36.4	54.4
2008 Q3	83.3	80.1	54.4	33.5	31.8	51.7
2008 Q4	95.4	85.3	59.0	29.8	28.8	48.4
2009 Q1	129.6	116.8	68.8	25.6	25.1	44.1
2009 Q2	160.0	148.2	87.7	22.3	22.0	38.1
2009 Q3	179.5	140.4	93.9	20.6	25.1	36.3
2009 Q4	176.9	156.6	95.5	21.3	22.7	35.6
2010 Q1	160.5	138.5	100.6	23.1	26.4	35.3
2010 Q2	162.9	136.9	102.7	23.1	26.4	35.8
2010 Q3	157.3	134.8	104.9	23.9	27.2	34.9
2010 Q4	160.9	138.5	104.6	23.8	26.7	35.4
2011 Q1	161.3	133.3	102.4	23.7	27.4	36.4
2011 Q2	156.9	135.0	103.8	24.4	27.1	36.1
2011 Q3	144.0	133.4	103.4	26.4	27.2	36.0
2011 Q4	154.5	133.5	101.8	24.9	27.2	36.7
2012 Q1	155.5	127.9	104.9	25.3	28.6	37.0
2012 Q2	163.8	131.9	109.8	24.9	28.6	36.5
2012 Q3	163.2	136.8	113.2	25.8	29.2	36.8
2012 Q4	172.0	142.1	127.9	24.9	28.1	34.0
2013 Q1	164.0	133.8	131.4	25.9	28.2	33.7
2013 Q2	164.9	141.8	128.9	25.4	27.9	34.2
2013 Q3	153.9	142.0	130.6	27.3	28.0	33.4
2013 Q4	153.3	143.0	128.9	27.4	27.8	34.6
2014 Q1	143.2	147.0	128.2	29.3	27.2	34.3
2014 Q2	149.2	141.7	118.1	28.2	27.6	37.4
2014 Q3	141.9	142.6	124.3	30.3	27.6	36.4
2014 Q4	149.2	155.4	123.6	29.3	25.8	37.9
2015 Q1	144.1	149.1	131.5	30.6	26.3	35.9
High	179.5	156.6	131.5	48.2	60.4	63.5
Low	62.6	47.4	48.5	20.6	22.0	33.4
Average	128.8	110.1	90.3	31.1	35.6	44.1

Sources: National central banks, National statistical departments, Lithuanian Centre of Registers, Latvian State Land Service and National Real Estate Cadastre, Estonian Land Board, Swedbank

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