BANK OF ISRAEL
Office of the Spokesperson and Economic Information

December 4, 2013

Excerpt from the "Recent Economic Developments" to be published soon:

Home purchasing patterns by domestic investors, 2003–12[1]

- **Between 2007 and 2009, there was a marked increase both in the share of domestic investors' transactions out of residential purchase transactions, and in their absolute number. The increase began even earlier in the center of the country, and moved gradually into the periphery.**
- **In 2011 and 2012, measures were taken to reduce the worthwhileness of such purchases for investors. As a result, there was a sharp decline in the volume of their activity: At the end of 2012, the likelihood that an apartment was purchased by an investor was only about 90 percent of what it was before the measures were enacted.**
- **It was found that investors purchase relatively small homes, and this pattern has strengthened over time. They do not prefer homes in neighborhoods with a particular socioeconomic background, and the prices they pay are similar to the prices paid by other purchasers for similar homes.**
- **It was also found that when the yield on renting an apartment increases by one percentage point, the likelihood that a given home will be bought by a domestic investor rather than by another purchaser increases by 22 percent. When the interest rate rises by one percentage point, the likelihood declines by about 8 percent.**

Between the years 2003 and 2012 the share of households owning two or more homes increased from 3.2 percent to 7.9 percent.[2] It appears that most were domestic investors[3] ("investors" below) and their activity in the housing market is important for several reasons. First, close to one-quarter of households live in private rentals[4] (the past decade saw an increase in this number of about two percentage points), and the decisive majority rent homes from investors.[5] Second, investors' demand for homes has a marked effect on real estate prices, since the investors "clear the market": Their activity is motivated—to a greater extent than the

[1] Earlier surveys of the issue appear in: Bank of Israel (2012), *Annual Report 2011*, "The main developments in the market for investment homes in recent years" (Box 2.3); Galit Ben-Naim (2009), *Report of the State Revenue Administration 2008*, "Purchasers of investment apartments—characteristics and trends" (Chapter 19), Ministry of Finance, State Revenue Administration.

[2] Central Bureau of Statistics (2013), "Housing in Israel: Findings from the Household Expenditures Survey 2012", press release issued March 30, 2013. It is likely that some are moving to different accommodations but have not yet sold their first home.

[3] In this survey, "domestic investors" refers to owners of a second or additional home, who are not nonresidents. The group does not include those who are moving to different accommodations but have not yet sold their first home. (Those who end up not selling their first home will retroactively become domestic investors).

[4] More on this appears in Bank of Israel (2011), *Recent Economic Developments, 131, May–August 2011*, "The Private Rental Market in Israel".

[5] Additional landlords include households that own one apartment and rent it out while renting concurrently, as well as public entities (such as housing companies) and businesses.

activity of others—by economic considerations, so that it is relatively volatile. Demand by the public at large, in contrast, is influenced primarily by demographic developments, the level of income, and so forth, and thus is relatively stable. The result is that on the margins, investors make a significant contribution to the development of housing prices. Finally, financial market returns have a significant effect on investors, and their activity may indicate the prevalent estimations in the market concerning future home prices and rental prices.

As such, this survey tracks investors' purchases over the past decade (2003–12) and presents their typical patterns.6 The survey is based for the most part on calculations on the Israel Tax Authority's file of residential home transactions (real estate price file – REPF). The file contains information on the purchase date, type of purchaser, characteristics of the home, its price, and so forth. During 2006 and the beginning of 2007, there was a marked improvement in the coverage of transactions included in the file, and such coverage has since been full.

The share of investors' purchases developed during the period of the study as follows (see Figure 2.1): During 2003, there was an increase, perhaps due to the imposition of a capital gains tax in the capital market.7 From 2004 to 2006, it was more or less stable, at about 26 percent of all transactions.8 Toward the end of 2007, the share of purchases began to climb because the global crisis led to a prolonged decline in the value of financial assets and in interest rates, as well as a strengthening of the estimation that investment in real estate was worthwhile compared to other channels. At the height of the crisis, the absolute number of transactions declined for a short period.

In 2011 and 2012, tax and credit policy measures came into force, which were intended to reduce demand for investment homes. In February 2011, the purchase tax rate on homes purchased for investment (not necessarily by domestic residents) was increased for 2011 and for 2012: For homes with a value of up to NIS 1 million, the tax rate was raised from 3.5 percent of the home's value to 5.0 percent; for homes with a value between NIS 1 million and NIS 3 million, the rate was raised from 5.0 percent to 6.0 percent; and for more expensive homes, the rate was raised from 5 percent to 7 percent.[9,10] This measure led to many purchases being brought forward toward the end of 2010, once the expected measure was announced.

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[6] The classification of the purchaser is set by the Israel Tax Authority, and is not available to us prior to 2003. The data published by the Ministry of Finance are somewhat different, since they are based on a different source of information. In order to analyze investors' sale patterns—thereby assessing their net demand (meaning purchases minus sales) and their effect on the supply of rental homes and on home prices and rental prices—and in order to analyze the socioeconomic characteristics of the investors, a separate broad discussion is required.

7 Furthermore, since the beginning of 2003, the State of Israel has imposed a tax on Israelis' income from rentals abroad, and it is possible that this diverted investments to homes in Israel. In April 2003, there was a sharp decline in the share of investors' transactions, which is connected with the outbreak of the Second Gulf War.

8 In 2005 and 2006, the exemption from tax on rental income from residential homes (rented out by individuals) was gradually reduced: In 2004, the tax-exempt income ceiling was NIS 7,390, and in 2006 it was NIS 3,830 (in current prices). This measure was supposed to reduce the worthwhileness of investment homes, but it seems that adherence to the law was only partial due to difficulties in enforcement.

9 In 2013, the tax rates remained in place, and for the period from August 2013 to the end of 2014, an additional purchase tax bracket was set, at 10 percent, for investment homes worth more than NIS 15 million.

10 Between 2003 and 2010, the purchase tax burden placed on the owners of two or more homes increased relative to the burden on the owner of a single home, because starting in the middle of the last decade, differential updates were made to the level of the purchase tax brackets and an exemption from purchase tax (up to the ceiling) was given for a single home. The tax on the purchase of a second home or more was 3.5 percent of the price of an average home in the economy throughout the entire period, while in the case of a single home, the rate declined gradually, from about 1 percent in 2003 to 0 from 2007 onwards. Over the same years, the lower boundary of the purchase tax imposed on investors (3.5 percent) was updated based on the Consumer Price Index, while the rate of

In February 2011, an exemption from betterment tax came into effect for those selling a second and third home in 2011 and 2012, even if four years had not yet elapsed from the date on which they bought a home. This measure was supposed to increase the supply of homes and restrain the price increases, thereby minimizing the expected capital gain of those purchasing investment homes. At the end of May, the Minister of Finance announced that the exemption from betterment tax on investment homes would be cancelled at the beginning of 2013. (The tax rate is 20 percent of the real profit.). In August 2011, the Knesset decided to leave the exemption in place, but it extended the holding period required in order to get it from 4 years to 8 years.11

Beginning in November 2012, the Supervisor of Banks at the Bank of Israel limited the loan to value ratio of mortgages: For investors it was limited to 50 percent, for those purchasing a first apartment it was limited to 75 percent, and for other purchasers it was limited to 70 percent.12

In addition, measures were adopted following the social protests of the summer of 2011: The Knesset enacted laws and the government instituted programs intended to increase the supply of homes and lower their prices.

As a result of these policy measures, the number of investors' transactions contracted, as did their share of total transactions. At the end of the reviewed period, the number and rate have not returned to their level prior to the tax increase.

From the second half of 2011 onward, after interest rates in the economy—as well as forward interest rate expectations—began to fall, the number of homes purchased by investors (as well as by others) again increased.

Figure 2.2 is based on the estimations detailed below, and presents the likelihood that an investor—rather than someone else—has purchased a given home in a certain month, and compares that to the likelihood in June 2010, before the decision was made to increase the purchase tax and before the other policy measures were taken. The picture provided by the Figure is in line with the developments described above and with the changes in the rate of investors' transactions out of total transactions[13] (Figure 2.1). In 2011 and 2012, the relative likelihood that an investor had purchased a home was about 90 percent of the likelihood before then, similar to the likelihood between 2003 and 2007.

An analysis of the geographic characteristics of the homes purchased by investors leads to the following findings. The share of purchases in the center of the country (Tel Aviv and central districts) out of total purchases by investors expanded greatly in 2005 and 2006 (Figure 2.3). Starting in 2006, relative activity by investors in the periphery increased, beginning in the south and continuing to the north and Haifa districts. Between 2006 and 2009, the relative prices of

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increase of home prices was much more rapid. Therefore, the tax burden on the purchase of relatively expensive homes increased.

11 More on this appears in Bank of Israel (2011), Recent Economic Developments, 131, May to August 2011, "Analysis of land betterment tax measures taken in 2011 to moderate the increase in home prices".

12 It should be noted that beginning in May 2011 the Supervisor of Banks limited the variable-rate share of a mortgage to one-third of the total loan. This applies to all home buyers.

13 The likelihood is derived from estimates that take into account the characteristics and location of the home purchased, while the share of investors' transactions out of total transactions is a raw number that does not take this into account.

homes in the center increased greatly and generated capital gains, with a similar phenomenon taking place in the periphery in the period following. Furthermore, yields on renting out homes declined throughout the country, although they remained relatively high in the north even during the second half of the last decade. On this basis, we can assume that investors expanded their activity in the periphery, inter alia because they identified opportunities there to earn capital gains and an adequate yield from rentals, at least in the north of the country.

Throughout the entire reviewed period, the share of investors' purchases in the Tel Aviv district out of total purchases in the district (about 29 percent) was much higher than the shares in the rest of the country, apparently due to strong demand for residential rentals. This also applies to a certain extent to the Haifa district. In contrast, the rate is relatively low in Jerusalem—where there is a high representation of purchases by foreign residents—and in the central district (20 percent), where there is lively activity by those purchasing a first home or those upgrading their housing. Between 2007 and 2010, there was an increase in the rate of investors' purchases throughout Israel, but mainly in the periphery, and after the policy measures mentioned above were adopted, the trend reversed.

As Figure 2.4a indicates, investors are highly represented among those purchasing apartments in Tel Aviv–Jaffa and the rest of the Gush Dan area (brown columns), and in a number of peripheral communities (green columns). Figure 2.4b shows that between 2003 and 2012, the share of investors out of total purchasers in a community increased in the periphery and declined in communities in the center of the country.

Relative to all purchasers, investors tend to purchase smaller homes, with 1.5 to 3 rooms, and this tendency has increased since the middle of the last decade (Figure 2.5). Over the reviewed period, home prices increased at a similar rate in all home size groups, but the yield on the rental of small homes declined at a more moderate rate than the yield on the rental of 3.5 to 4 room homes. For example, during the first half of 2003, the yield in these two groups was slightly more than 5 percent, while by the second half of 2012 it had declined by about 1 percentage point for small homes, and by 1.5 percentage points for 3.5 to 4 room homes.[14]

In order to assess the factors affecting the likelihood that an investor—rather than another purchaser[15]—has purchased a given home, we carry out logit estimations. The results are presented in Table 2.1. Investors tend to purchase homes that are smaller than the typical 3.5 to 4 room home, assuming all else remains the same (see also Figure 2.5 above): The likelihood that an investor will purchase a 1.5 to 2 room home is 2.59 times higher than the likelihood that others will purchase such a home (see Model 1). They have no preference regarding the age of the home, and they also do not prefer a first-hand home over a second-hand home (not shown). Investors have a strong tendency to purchase homes in the Haifa and Tel Aviv districts, a less-strong tendency to purchase in the periphery, and a relatively weak tendency to purchase in the central and Jerusalem districts. (A similar ranking also exists in the Central Bureau of Statistics' definition of area—see Model 2.) They prefer to purchase homes in large Jewish communities.

[14] Bank of Israel calculations on data series from the Central Bureau of Statistics: Average owner-occupied home prices (or free rents), by residential area and home size.

15 As opposed to an assessment of the factors influencing the chance that a person owning a single home will purchase an additional home, thereby becoming an investor.

With regard to the socioeconomic background of the neighborhood in which the home is located, we found that investors' preference is similar to that of other purchasers. It is worth noting that among other purchasers, the picture is different (in the large cities): Those purchasing a first home naturally tend to purchase homes in relatively low-ranked neighborhoods, since these homes are less expensive. Those upgrading their residence purchase as expected in relatively well-established neighborhoods, and foreign residents purchase for the most part in neighborhoods with intermediate socioeconomic rankings, but it is possible that this reflects the purchase of expensive homes in the city centers (for instance in Tel Aviv-Jaffa) that are usually of intermediate rank.

Given the characteristics of the home and the environment, investors purchase homes at prices similar to those paid by other players in the market, a finding which may show a competitive market (see Models 3–5). The more the surplus yield from renting out an home—meaning the spread between the yield on renting out a home (by area and home size) and the yield on an alternative investment track such as the interest on CPI-indexed deposits for ten years or more—increases, the more the likelihood that an investor (rather than another purchaser) has purchased a given apartment will increase. Every increase of one percentage point in the surplus yield increases the likelihood by 22 percent.

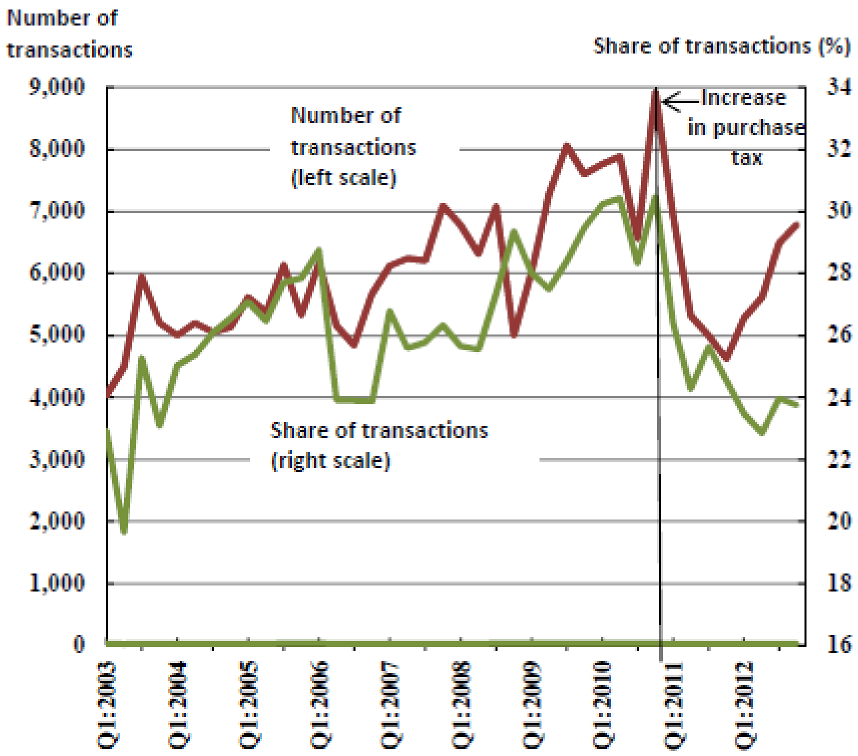
Finally, we assess how the interest rate expectations for one year forward (derived from the Telbor rate) influence the likelihood that an investor (rather than another purchaser) has purchased a give home (Model 5). It turns out that every 1 percentage point increase in the interest rate reduced the likelihood ratio by about 8 percent, assuming all else remains the same (including the yield from renting out a home). It seems that investors respond more strongly than others to changes in the expected interest rate since they are more motivated by economic considerations, first and foremost by the desire to achieve the maximum yield on their asset portfolios. During the period following the adoption of the measures, the effect of the interest rate was reduced by one-third.

The estimate of the dummy variable for 2011 and 2012 shows that the likelihood that investors—rather than others—have purchased a home was an average of about 86 percent of the likelihood in 2003–10. This is in line with Figure 2.2.

Increasing the purchase tax burden on investors was differential, as stated, based on the value of the home. It was therefore more significant among those purchasing homes valued at more than NIS 3 million. (These homes constituted less than 4 percent of total homes purchased by investors prior to the change in legislation.) It is therefore reasonable to estimate that in purchases of such homes, the relative decline was larger. However, estimations that tested this hypothesis16 did not support it. It is possible that in the case of these apartments, the price elasticity of demand is lower because for the most part, these are unique homes, and the considerations toward purchasing them are not necessarily economic. (Most are apparently also not rented out.)

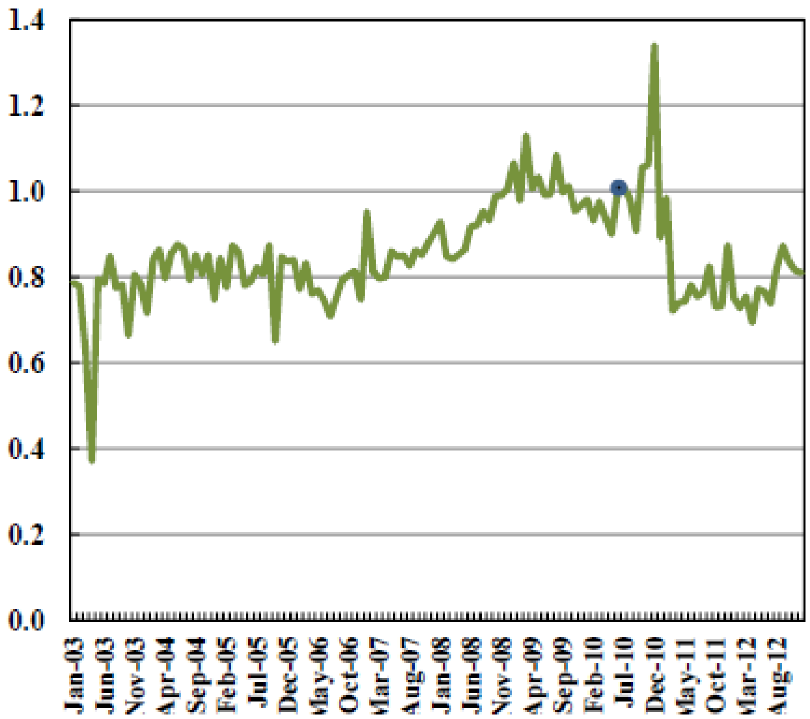
16 Multinominal and order logit estimates were made of the likelihood that a home purchased by an investor would belong to one of the price groups setting the tax brackets, given the home characteristics that appear in Table 1 (Model 4).

Figure 2.1
Home purchases by investors, 2003—12 (Quartrly)



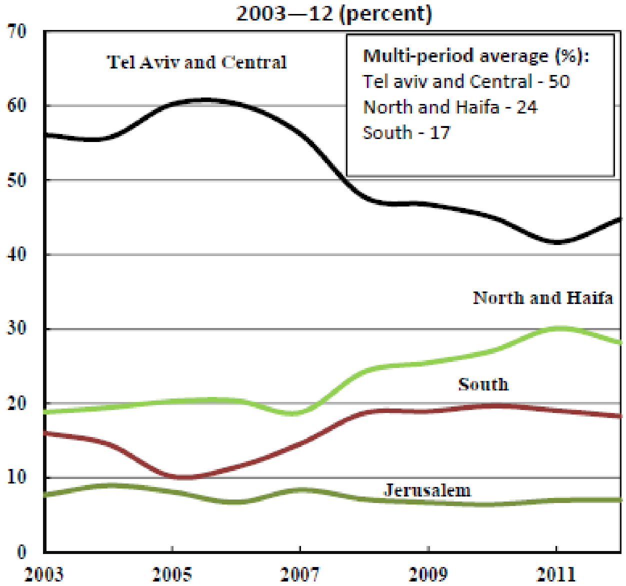
SOURCE: Ministry of Finance.

Figure 2.2
The likelihood that a home was purchased by an investor compared to the likelihood in June 2010[a], 2003—12



SOURCE: Israel Tax Authority and Bank of Israel Calculations.
a) Based on the month-year coefficients in Model 1 Table 1 below.

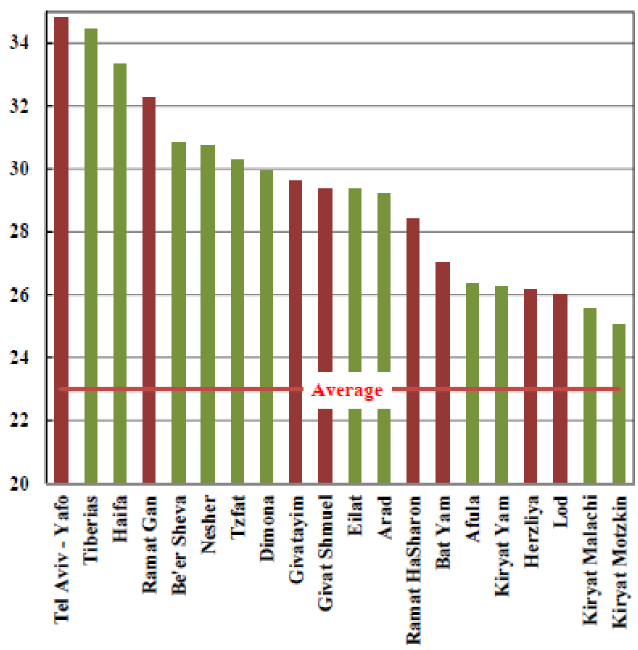
Figure 2.3
The distribution of investors' home purchases by district, 2003—12 (percent)



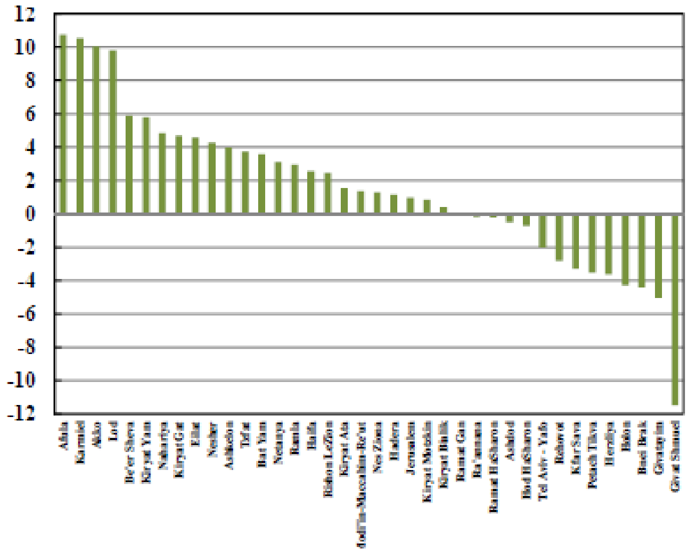
SOURCE: Israel Tax Authority and Bank of Israel Calculations.

Figure 2.4
Share of investors' home purchases out of total purchases in selected communities

A. Average 2003—12[a] (percent)

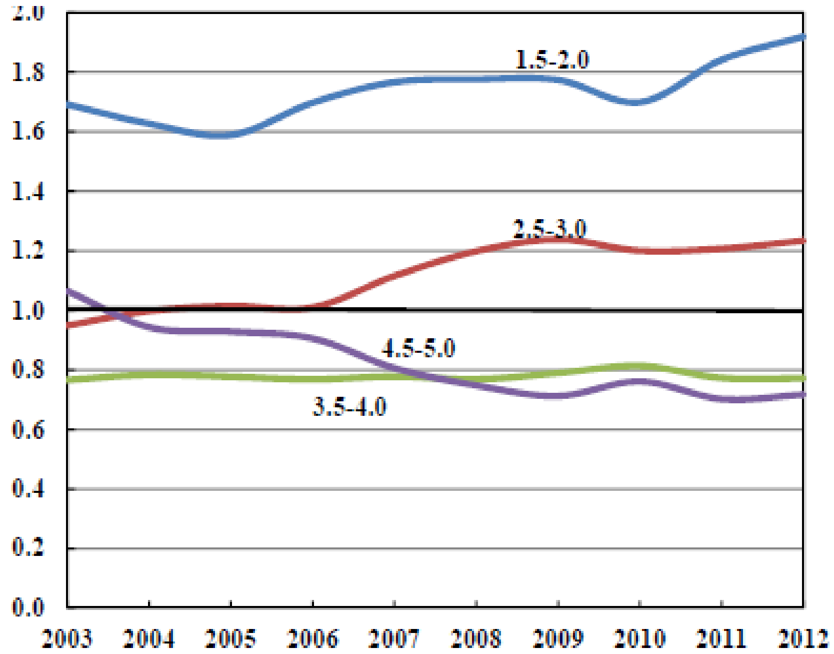


B. 2012 compared to 2003[b] (percentage points)



SOURCE: Israel Tax Authority and Bank of Israel Calculations.
a) The 20 communities with the highest rate (in communities where there were at least 50 transactions during the period).
b) Communities where there were at least 50 transactions in each of the years between 2003 and 2012.

Figure 2.5
Home size specific share[a] of investors' purchases , 2003–12



SOURCE: Israel Tax Authority and Bank of Israel Calculations.
a) The home size specific share is calculated as follows: [total homes of a given size purchased by investors, divided by total homes purchased by investors] divided by the parallel quotient among all home purchasers.