Chapter 8
The Housing Market

- The supply of housing expanded in 2022 as a result of the growth in housing starts during the past two years, which followed a record number of building permits issued. The planning inventory and the marketing of land also continued to grow.
- Home sales declined in 2022 relative to the previous year, as a result of more expensive mortgages, the bringing forward of purchases by investors to 2021, and the renewal of reduced-price lotteries in 2022.
- The decline in home sales continued throughout the year. Nonetheless, relative to the period prior to the pandemic there was a high number of sales in 2022.
- Home prices continued to climb rapidly during the first three quarters of the year. However, in the fourth quarter the upward trend was halted. This was led by the decline in new home prices, which was due to the increased inventory of new homes that are intended for sale. That increase in inventory was a result of the growth in housing starts on the one hand and lower sales of new homes, on the other.
- The demand for rental housing continued to expand, as a result of the high rate of population growth and other factors, including the high proportion of new homes sold with a long period until the end of construction; the fact that some households have given up on the idea of buying a home and remained in the rental market; and the increased scope of urban renewal, which requires the demolition of the old buildings.
- In 2022, the price of land in Israel Land Authority tenders fell and the price increases in inputs for residential construction moderated.
- An analysis of home sales during the 2015–2022 period shows that the Buyer's Price program was beneficial to those eligible, since they were able to purchase a home at a discount of between 26 and 40 percent. Home buyers in high-demand areas benefited from the largest discounts. In addition, the prices of homes in the open market increased more in areas where there was a higher proportion of home sales that were subsidized by the government.

Table 8.1
Selected housing market data, 2006–2021

	2006–2015 average	2016	2017	2018	2019	2020	2021	2022
Factors of demand[a]								
General population (rate of change)[b]	1.9	2.0	2.0	1.9	1.9	1.8	1.6	2.0
Population aged 25–44 (rate of change)[b,c]	1.7	1.3	1.2	1.2	1.2	1.0	0.9	1.3
Average real wage per Israeli employee post (rate of change)[d]	0.7	2.9	2.9	2.7	2.1	3.1	4.9	-1.6
Average net real household income (rate of change)	2.5	2.7	4.6	3.7	2.4	-0.9	0.5	
Unemployment rate[d] among those aged 25–64 (annual average)	6.5	4.1	3.7	3.5	3.4	14.6	9.6	3.3
Weighted real interest rate on new mortgages (annual average)	2.2	1.5	1.9	1.7	1.5	1.1	0.8	1.6
Real per capita GDP (rate of change)	2.1	2.5	2.3	2.1	2.2	-3.6	6.8	4.4
Rate of those planning to buy a home in the next 12 months (annual average)[e]		7.6	7.3	8.4	8.3	7.4	7.8	6.6
Factors of supply								
Building starts (thousands of housing units)	41.0	56.9	55.9	55.4	56.5	56.4	63.7	67.1
of which: Dwellings not for sale under construction (thousands of housing units)	17.6	20.7	19.6	19.4	20.6	16.5	19.3	23.3
of which: Rental dwellings (thousands of housing units)		1.4	1.5	1.7	2.8	2.6	2.9	2.9
Building completions (thousands of housing units)	36.2	46.6	50.1	52.7	53.3	50.2	47.0	51.9
Stock of homes under active construction (end of year, thousands of housing units)	78.0	115.3	120.6	123.6	126.6	133.0	149.9	166.1
Building permits (thousands of housing units)	42.0	54.1	56.5	52.0	57.1	54.1	73.8	77.7
Real investment in residential construction (rate of change)	4.9	6.4	3.4	0.5	3.4	-7.8	13.7	16.6
Housing units approved in the district committees and in the VATMAL (thousands)[f]	47.4	110.9	127.2	151.6	140.6	95.4	108.1	158.0
Land marketed in ILA tenders (thousands of housing units)		35.9	46.3	43.1	38.9	26.3	63.4	80.6
Outcome data								
Housing transactions (thousands)[g]	89.7	98.0	88.0	91.2	101.1	101.5	150.4	113.4
of which: New homes sold (thousands)[g]	21.4	29.7	25.0	23.0	41.1	41.3	57.8	40.5
of which: With government support (thousands)		2.8	5.5	9.7	16.7	13.9	14.6	9.5
Home prices - nominal (rate of change during the year)	7.6	5.7	1.4	-0.8	4.2	4.0	13.1	14.6
Home prices - real (rate of change during the year)[h]	6.2	6.5	1.9	-1.3	4.1	4.8	10.4	9.2
Rents - nominal (rate of change during the year)[i]	3.8	1.4	2.6	1.9	2.8	0.2	3.3	6.3
Rents - real (rate of change during the year)[h,i]	2.5	2.2	3.1	1.4	2.7	1.0	0.8	1.3
Rate of households that do not own a home (annual average)	28.5	27.4	28.2	27.5	29.7	28.9	31.3	
Rate of households that own one home (annual average)	65.6	62.9	61.8	62.4	61.2	61.0	59.5	
Rate of households that own two or more homes (annual average)	5.9	9.7	10.0	10.1	9.1	10.1	9.2	
Rate of households with a head of household aged 25–44 that own one home (annual average)	58.6	59.2	58.6	58.0	57.0	58.2	55.0	
Length of time to sell home (annual average, days)[j]		194	173	221	218	211	199.1	177.5
Percentage of homes purchased by investors as a share of total purchases (annual average)		15.0	13.5	14.0	12.8	14.2	18.1	14.0

[a] Rates of change are shown as the average of the current year compared with the average of the previous year.
[b] The 2006–2015 average does not include 2009 due to a break in the data series.
[c] The figure for 2022 assumes that the growth of the population aged 25+ continued in accordance with its trend of previous years plus an estimate of the number of immigrants.
[d] A correction due to the COVID-19 crisis in 2020 and 2021: The real wage corrected for the composition of employees, and the broad unemployment rate (including employees temporarily absent for reasons having to do with COVID-19, and nonparticipants who stopped working after being dismissed or because their place of work closed during the
[e] The Central Bureau of Statistics Consumer Confidence Index. The rate of respondents who believe that it is quite likely or very likely that they will buy a home in the next 12 months.
[f] The multiyear average is for the years 2007–2015.
[g] Market transactions. Excluding transfers with no payment, among relatives, etc.
[h] Adjusted for the Consumer Price Index excluding housing.
[i] Rents in new and renewing contracts (the owner-occupied housing services item in the Consumer Price Index).
[j] Duration from the time the dwelling is put up for sale until the sale transaction is signed.
SOURCE: Central Bureau of Statistics, Ministry of Construction and Housing, Israel Tax Authority, Israel Land Authority, and Bank of Israel.

1. MAIN DEVELOPMENTS IN THE HOUSING MARKET IN 2022

a. Sales

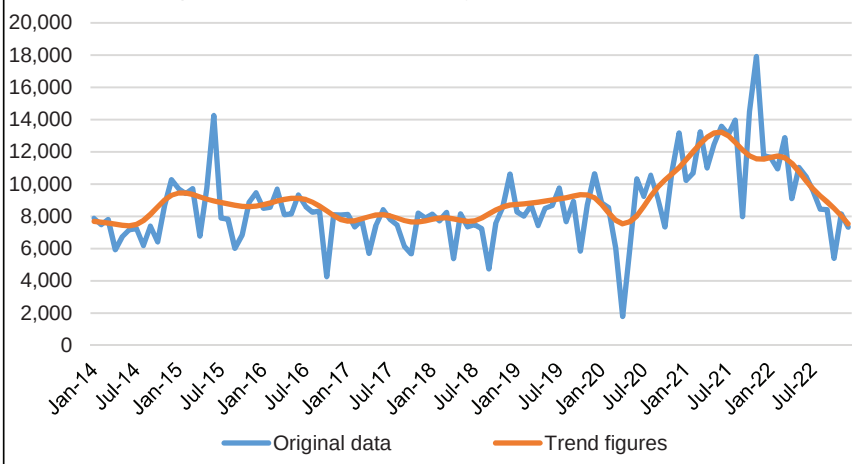
After a record number of home sales in 2021, activity in the housing market declined sharply in 2022, returning to prepandemic levels by the end of the year.

Following a record number of sales in 2021 (Table 8.1), activity in the housing market cooled off rapidly during 2022. By the end of 2022, it had returned to its prepandemic level (Figure 8.1). Nonetheless, on an annual basis, the number of sales in 2022 was higher than in the years prior to 2021.

Two factors in particular were responsible for the exceptional growth in home sales in 2021: a large one-off increase in purchases by investors in November, before the purchase tax on investment homes was increased (which went into

effect on November 28, 2021), and the discontinuation of lotteries that are part of the government-subsidized housing programs. The end of the Buyer's Price program in 2020 led to an increase in purchases by eligible buyers in the open market. The renewal of the lotteries in March 2022 worked in the opposite direction by distancing young couples from the open market and returning them to a waiting status. In 2022, there were four lotteries for the right to purchase more than 26,000 subsidized homes, in which more than 100,000 households participated. This is in contrast to only 2,186 homes that were allocated in lotteries in 2021, almost all of which were continuation lotteries (i.e. homes that were already offered previously but remained "on the shelf"). Another factor on the demand side that worked to restrain home sales in 2022 was the increase in mortgage interest rates during the year.

Figure 8.1
Total Housing Transactions*, January 2014–December 2022



* Market transactions only - excluding inheritances, transfers without payment, and so forth.
SOURCE: Based on Israel Tax Authority.

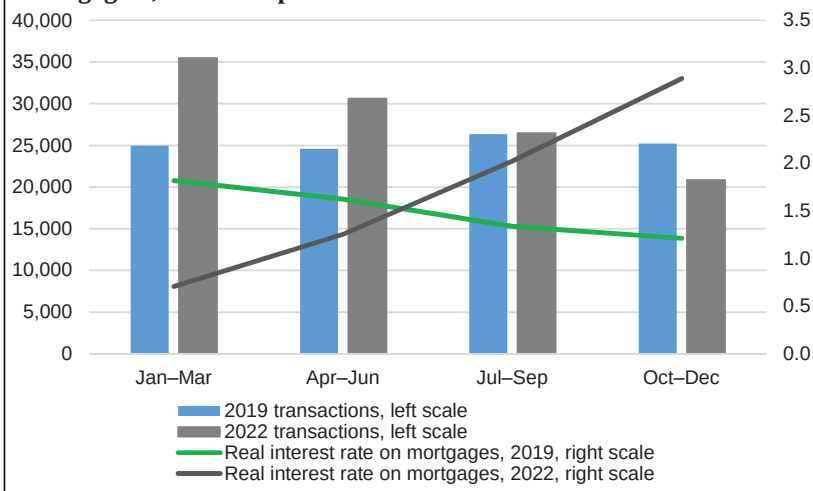
The years 2020 and 2021 were not conventional years in the housing market, due to the effect of the COVID-19 crisis. As such, Figure 8.2 presents a comparison of 2022 to 2019. Total sales in 2022 were 12.1 percent higher than in 2019. During this period, the 25–44 age group, which is the main source of net demand for homes (in contrast to repeat buyers, who are returning their previous home to the market when they buy a new one) grew by about 3.2 percent (Table 8.1). In 2019, the real interest rate on mortgages showed a modest downward trend and was historically low, while in 2022 it rose continuously. The Figure shows a somewhat negative correlation between the interest rate and home sales.

The factors leading to the moderation in sales in 2022 were the renewal of the lotteries for government-subsidized housing, purchases by investors being brought forward to 2021, and the increase in mortgage interest rates.

In 2022, the trends were similar in all buyer categories: first-time buyers, repeat buyers, and domestic investors (Figure 8.3). However, the decline

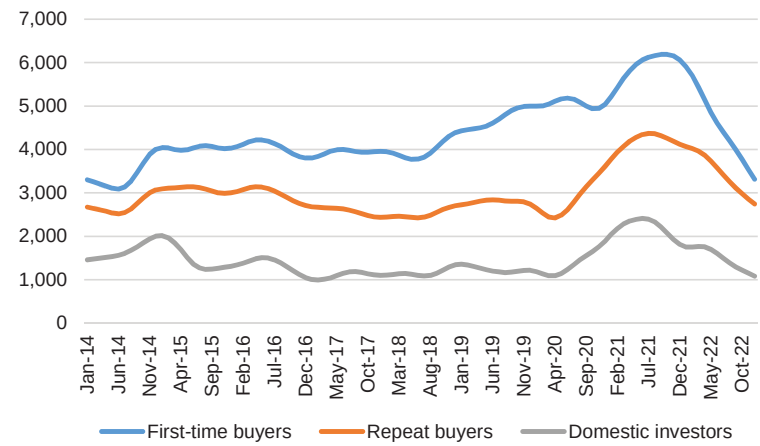
among first-time buyers was steeper, which was due to the lower number of government-subsidized homes sold in that year (Table 8.1) and the restarting of the lotteries, which kept first-time buyers out of the open market. The decrease among investors was the result of bringing purchases forward to November 2021, before the purchase tax was raised.[1]

Figure 8.2
Housing Transactions and Weighted Average Interest Rate on Mortgages*, 2022 Compared with 2019



* The weighted average interest rate is calculated assuming inflation of 2 percent.
SOURCE: Based on Israel Tax Authority and banks' reports to the Banking Supervision Department.

Figure 8.3
Housing Transactions by Groups of Purchasers, January 2014–December 2022 (trend data)



SOURCE: Based on Israel Tax Authority.

[1] Net purchases by investors, that is, purchases minus sales, were negative in 2022, with a decline of about 2,900, compared to an increase of about 5,200 in the previous year.

b. Prices

Home prices continued to increase rapidly during the first three quarters of the year. However, during the fourth quarter the trend began to level off.

Despite the rise in interest rates and the continuing increase in housing starts, housing prices rose rapidly during the first three quarters of the year. However, in the fourth quarter the trend began to moderate and prices in fact fell in the Southern, the Northern, and Tel Aviv districts (as well as in the Jerusalem and Haifa districts in December). The rate of increase in the 12-month Index of Home Prices was 14.6 percent in December 2022, compared to 20 percent in September 2022. The 12-month Index of New Home Prices also rose (by 17 percent), although since August it recorded a cumulative decline of about 1.5 percent.[2] What pulled the index downward was the decline in the prices of new homes in the open market. A Central Bureau of Statistics examination shows that the Index of New Home Prices excluding government-subsidized sales fell more sharply than the Index of New Home Prices. The decline in new home prices in the open market toward the end of 2022 is apparently the result of an accumulation of unsold homes by developers following the increase in housing starts[3] and the rising cost of holding an inventory of unsold homes as interest rates rise. Moreover, developers are experiencing increasing difficulties because of cash flow problems due to the low level of sales and because the sale of units in new projects is essential in order to receive bank financing.

The reaction of prices in the economy to the increase in interest rates appears to be slow. However, the housing market, which is characterized by a high level of inertia, needs time in order to adjust to changes. Although the Bank of Israel interest rate (which affects the cost of credit for developers) began to rise as early as April, its rate of increase was moderate. However, during the second half of the year it accelerated faster than earlier expectations.[4] The mortgage interest rate began to rise earlier (in February–March 2022) due to the rise in yields on the banks' bonds, which accelerated during the year. The interest rates on the various tracks rose cumulatively by 0.92 to 3.31 percentage points between January and December.[5] Unique factors may have delayed the response of new home prices to increasing interest rates and

[2] The share of new homes within total sales varies from year to year. It has grown in recent years thanks to the increase in housing starts and reached an average of 39.9 percent between 2019 and 2021. In 2022, it fell to 35.7 percent. The two indices, namely the Index of New Home Prices and the general Index of Home Prices, are each calculated in a different manner, with the former relating to all sales equally while the latter weights each sale by its share of the inventory of existing homes.

[3] According to CBS estimates, the inventory of new homes that remained for sale totaled about 53,500 at the end of 2022. This figure reflects an increase in unsold housing inventory of about 5,900 since the end of 2021.

[4] The Research Department's interest rate forecast was revised upward during the year. For further details, see the Bank of Israel's *Monetary Policy Report*.

[5] The main mortgage interest rate tracks are indexed fixed interest, unindexed fixed interest, indexed variable interest, and unindexed variable interest. In addition, there are foreign-currency-indexed interest rate tracks, although the share of those tracks within total new mortgages is negligible.

the contraction in sales. First, at the beginning of July 2022 a law went into effect that reduced the rate of indexation of new home prices to the Residential Construction Inputs Price Index to only 40 percent of the price of a house. It is reasonable to assume that developers who expected that the index would continue to rise increased prices in order to compensate. However, it was not possible to isolate the effect of the Index of New Home Prices. Nonetheless, an examination of the monthly change in the index shows that in July it in fact rose substantially (by 4.2 percent), compared to an increase of only 1.8 percent in the general Index of Home Prices. Second, the decline in the sales of new homes apparently led developers to first offer nonprice benefits, such as favorable payment arrangements, loans on convenient terms, payment of rent for a limited period, cancelation of indexation for the balance of payments, discounts on the price list for upgrades, etc. Only later did they offer price discounts, which were reflected in the recent index readings.

Historically, the last episode in which interest rates rose rapidly—though at a more gradual pace—was during the 2009–2011 period. During that period, the Bank of Israel interest rate was raised from 0.5 percent to 3.3 percent (between September 2009 and August 2011). The real weighted interest rate on mortgages rose during that same period from about 1 percent to the vicinity of 3 percent. The Housing Price Index continued to rise during that period, and only between August and December 2022 was there a decline in prices. However, it can be assumed that the decrease in the index during the second half of 2011 was primarily the result of the social protest, which began in the summer and led to a cooling off of the housing market. The continuing rise in prices despite the rise in interest rates was at that time the result of a significant housing shortage, particularly in high-demand areas, which was alleviated to a great extent in 2019 as a result of the growth in housing starts.[6]

A new study, which consists of a meta-analysis of 31 studies in 45 countries[7], shows that monetary policy has a relatively weak effect on home prices. The average reaction of home prices to a one percentage point rise in the monetary interest rate reaches a maximum decline of only 0.7 percent after two years. In other words, a 4 percentage point increase in the monetary interest rate is expected to lower home prices by only about 2.8 percent. Furthermore, the reaction of home prices to interest rate changes is not immediate. Thus, an increase in the interest rate is not felt at all in the subsequent quarter. In other countries as well, the rise in home prices continues despite the increase in interest rates. There are only a few countries that experienced a decline in nominal home prices (Denmark, New Zealand, Sweden, Canada, Germany,

[6] For further details, see Y. Yakhin and Y. Gamrasni (2021), "An Analysis of the Housing Market in Israel: Long-Term Connections and Short-Term Dynamics" [Hebrew] and the chapter on the housing market in the Bank of Israel *Annual Report* for 2021.

[7] See D. Ehrenbergerova, J. Bajzik, and T. Havranek (2021), "When Does Monetary Policy Sway House Prices? A Meta-Analysis", CEPR.

Italy and Finland) or price stability (the US and Norway) in the third quarter of 2022, although the rate of increase in prices did slow in most of the OECD countries.

c. The demand side

Israel's population grew at a relatively high rate in 2022 due to the increase in immigration, which came in addition to its high rate of natural increase. According to Central Bureau of Statistics (CBS) estimates, about 73,000 immigrants arrived in 2022, in contrast to only 33,200 in 2019.[8] Among those, Israel absorbed about 58,000 immigrants from Russia and Ukraine who left both because of the war and because of the political and economic situation in Russia.

The demand for rentals grew this year. This was reflected in an increase in rents, although at a slower pace than the increase in home prices.

The demand for rentals also increased as a result of a number of factors: 1) a high rate of new homes sold "on paper"[9], which means that buyers are forced to rent for several years; 2) some households chose to continue renting rather than purchase a home, in view of the high home prices, the decline in the value of the public's savings following losses on financial assets (which reduced their ability to finance the downpayment), and an increase in mortgage interest rates, which increased monthly payments; and 3) the increase in urban renewal projects, primarily in high-demand areas, which usually involves the prior demolition of an existing building (as part of the "vacate and build" programs and National Outline Plan Tama 38/2). According to CBS estimates, about 9,000 housing units were demolished during the last three years as part of urban renewal programs and the residents of those units entered the rental market. The increased demand for rentals was reflected in a rise in rents, although it was much less than the rise in home prices (Table 8.1).

Against the background of rapidly rising home prices, there was an increase in the demand for cheaper homes. Thus, in 2022, there were a record number of households (about 112,000) who were approved as being eligible to participate in the lotteries, in contrast to an annual average of about 41,000 during the 2016–2021 period. (There has not been any change in the conditions for eligibility.) The number of households who registered for each of the four lotteries held in 2022 was much larger than the number of homes offered.[10]

[8] As a result of the pandemic, Israel placed restrictions on the flow of international migration starting in March 2020. As a result, the number of immigrants arriving in Israel during 2020 and 2021 fell considerably to 19,700 and 25,500, respectively.

[9] A home sold "on paper" is defined as a new home that will be delivered more than two years after its purchase. More than 60 percent of homes the construction of which began in 2022 were sold "on paper", as opposed to about one-third during the 2010–2019 period.

[10] The four lotteries of subsidized homes took place in March (10,000 units, 120,000 participants), July (6,300 units, 113,000 participants), October (3,300 units, 57,000 participants), and late December (6,500 units, 90,000 participants).

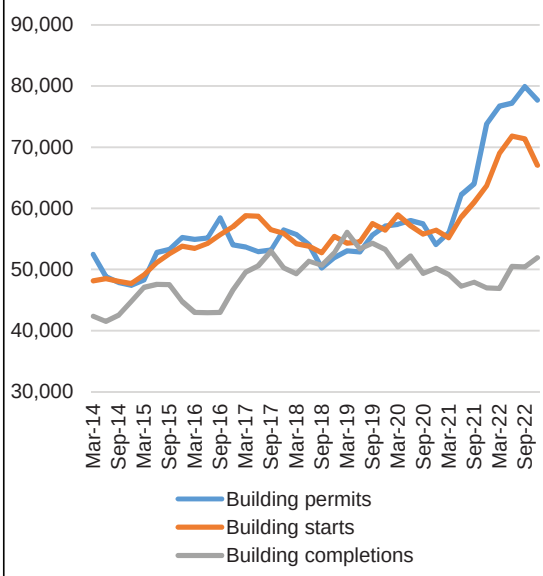
d. The supply side

1.Activity in the residential construction industry

Investment in residential construction continued to expand rapidly this year, which was reflected in a high level of housing starts and some increase in housing completions.

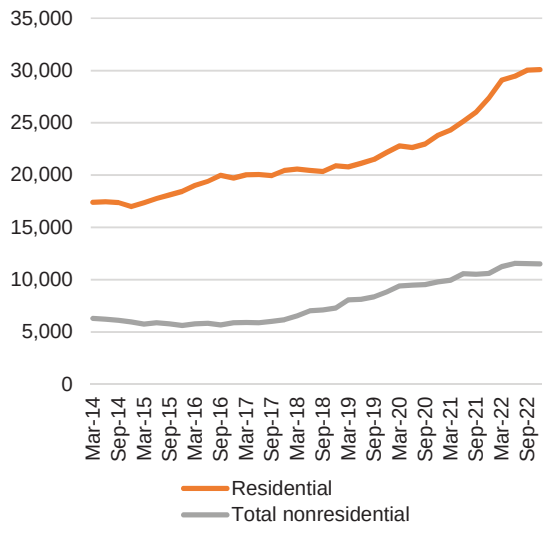
Investment in residential construction continued to expand this year at a rapid pace of 16.6 percent compared to 13.7 percent in the previous year. This growth was reflected in a high level of housing starts and in some increase in housing completions, although the gap between starts and completions remained high (Figure 8.4). The CBS explains the gap based on construction time.[11] Thus, according to CBS figures, average construction time reached 27 months in 2022 and construction time weighted according to number of apartments in the building reached 33.1 months, although the number of residential building completions was not in line with the number of housing starts three years earlier (Table 8.1).[12] An econometric analysis shows that the gap between the predicted number of housing completions and their actual number, which is a result of longer construction time, developed during the second half of 2020 and expanded in 2021. The result was a shortage of about 5,000 completed

Figure 8.4
Building Starts, Completions, and Permits, 2014:Q1–2022:Q4 (annual pace)



SOURCE: Based on Central Bureau of Statistics.

Figure 8.5
Building Area Under Active Construction, Residential and Nonresidential, 2009:Q1–2022:Q2 (thousands of sq.m, original data)



SOURCE: Central Bureau of Statistics.

[11] See the explanations in the press release "Building Starts and Completions Between July 2021 and June 2022", September 20, 2022 on the CBS site. [Hebrew]

[12] Average construction time is reported by the CBS based on data for the projects that have been completed, which do not include projects whose completion has been delayed. There have been recent indications of growth in the number of requests for renewal of building permits that have expired after a period of three years.

homes. It may be that the gap was the result of the pandemic and the war in Ukraine, which delayed the construction process primarily due to disruptions in the supply chain for construction inputs. (A discussion of the supply constraints appears below in this section.) The increase in residential construction did not come at the expense of nonresidential construction, which also continued to expand in 2022 (by 9.3 percent; Figure 8.5).

The National Economic Council's Strategic Plan for Housing for the Period 2017–2040 estimated the annual housing needs of the economy to be about 52,000 housing units during the years 2017–2020 and about 55,000 during the years 2021–2025, and those levels are expected to continue growing up to 2040.[13] An interim report published in 2021[14] stated that annual national demand for housing units was about 4,000 units higher than the estimate in the plan, although it appears that housing starts during those years were in line with the revised demand. However, building completions were far from meeting housing needs.

The growth in the planning inventory in recent years and the massive marketing of land during the last two years (Table 8.1) made it possible for developers to significantly increase the number of housing starts during 2021–2022. The level of housing starts shot up to a historic record in 2021, and it even exceeded that level in 2022. An econometric analysis shows a strong connection between the number of housing starts and the number of permits issued in the same quarter and in the previous one, a result that is consistent with the time limit on a building permit.[15] According to that same analysis, the number of housing starts during the second half of 2022 was over 8,000 units less than expected based on the econometric model. It may be that following the sharp decline in the sales of new homes (Table 8.1), some of the developers postponed construction even in projects that already have a building permit. In order to obtain bank financing to carry out a project, the developer has to sell a certain percentage of the apartments. This percentage is not uniform or fixed, and in a period of uncertainty and a possible reversal in the business cycle banks tend to demand a higher percentage of sold apartments. This is apparently the reason for the increase in the proportion of early home sales "on paper". In 2022, this percentage averaged 66 percent, as opposed to 55 percent in the previous year.

As a result of the sharp decline in new home sales, some builders may have delayed starting construction.

With respect to constraints on the expansion of activity in the industry (Figure 8.6), the drop in demand for housing is still not reflected in the construction companies' evaluations, despite the decline in new home sales. With respect to

[13] A. Raz-Dror and N. Coste, "The Strategic Plan for Housing for 2017–2040", National Economic Council, May 2017. [Hebrew]

[14] N. Brill, D. Schwartz, and A. Zofnik, "Monitoring of the Strategic Plan for Housing for 2017–2040", National Economic Council, June 2021. [Hebrew]

[15] A building permit is valid for three years and is conditioned on the developer starting to build not later than one year from its date of issue. Otherwise, he must again request a building permit.

In 2022, the constraints due to the shortage in equipment, raw materials, and available land became less severe and there were fewer delays in receiving approvals and permits.

manpower, the shortage of professional workers in "wet" works (including the skeleton of the building and the preparation of infrastructure for the building's systems) has worsened somewhat, which may explain the delay in housing starts. The shortage in equipment and raw materials, which reached a peak in the first half of 2022 as a result of the pandemic and the war in Ukraine, became less severe during the second half of the year. Accordingly, the rise in the Residential Construction Inputs Price Index slowed. Thus, the index rose by about 4.8 percent in 2022, which followed an increase of about 5.6 percent in 2021. Following a prolonged increase, the index leveled off starting in September.[16]

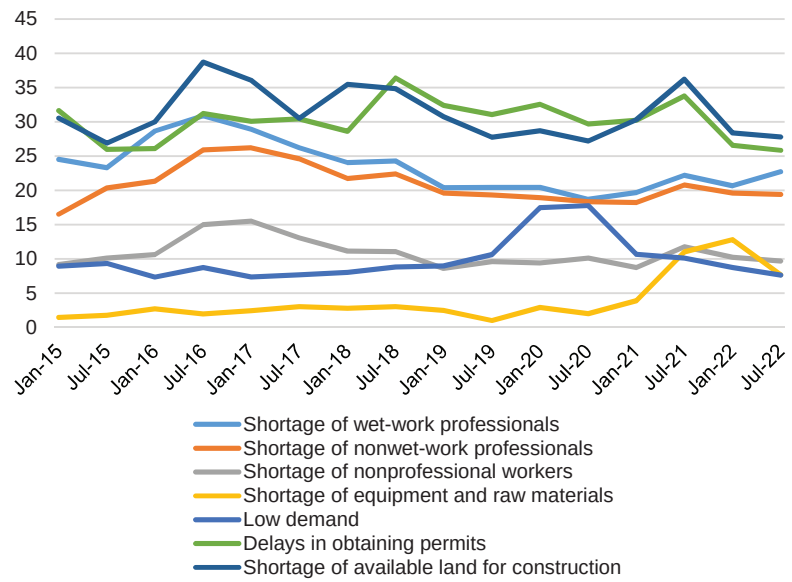
The scarcity of available land for construction became less severe in 2022, apparently as a result of the increased level of marketing during the previous two years. Furthermore, the constraint due to delays in receiving permits and approvals also became less severe. The Israel Land Authority (ILA) reported that it marketed land for the construction of about 63,000 housing units in 2021 and about 80,000 in 2022 (including rental housing, sheltered housing, student dorms, hotel rooms, etc.), by means of public tenders and exemptions from tender. Furthermore, the number of housing units approved by the planning committees and the National Planning and Building Committee for Priority Housing Areas (VATMAL), the stage prior to the marketing of land, continued to increase (Table 8.1). With respect to bureaucracy, there were two changes that are meant to streamline the planning and registration processes and to reduce the time to "produce" housing. First, the Planning Authority cancelled construction leniencies, including the addition of housing units (referred to as the "Sheves exemption"), the addition of building meterage and the addition of floors[17] (because the process of approving exemptions lengthens the time until the receipt of the permit). Second, the National Planning and Building Council approved a reform according to which two stages will be consolidated, namely the approval of the program by the planning committee and the receipt of a building permit, which as mentioned will significantly shorten the time

[16] However, the index rose by 1.2 percent in January 2023 as a result of a steep rise in the prices of materials and intermediate products, led by the prices of imported cement, mortar, finished products from wood and other materials, concrete elevators and blocks, "Ytong" (autoclaved aerated concrete) blocks, and plaster.

[17] This is part of Amendment 134 of the Planning and Construction Law: the revision of paragraphs 147(a) and 151 limits the power of the local committee to approve exemptions, except in cases that are defined in the regulations as not constituting a major deviation from the plan. The change will apply to all plans whose submission is decided on starting from January 1st, 2023. With regard to plans approved and submitted and those whose submission was decided on prior to that date, it will be possible to request an exemption according to the old regulations for a period of two years (i.e. until January 1st, 2025) with an option to extend for another two years at the discretion of the Minister of the Interior.

between the submitting of a plan and the start of construction.[18] The reform will be implemented in the first stage only in the case of urban renewal projects, but after an 18-month trial period it will be possible to extend it to other types of projects.

Figure 8.6
Rate of Those Reporting Serious Constraints in the Construction Industry, 2014:H1–2022:H2 (percent, semiannual averages)



SOURCE: Based on Central Bureau of Statistics.

2. Urban renewal

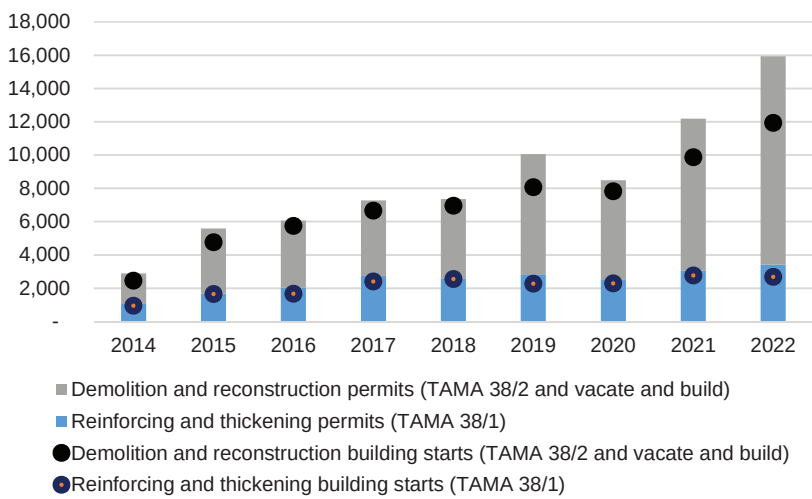
Urban renewal projects are advantageous for developers during a period of high or rising interest rates, since they do not require large amounts of credit to purchase the land.

The quantity of housing starts as part of the urban renewal programs ("vacate and build" and Tama 38) has grown over the years (Figure 8.7). Their share of housing starts reached 17.7 percent in 2022, and is likely to continue growing in years to come. Urban renewal projects are advantageous for developers during periods in which interest rates are high or rising, since the developers do not need a large amount of credit. This is because they do not need to purchase the land, and they incur the building costs and payments to the building rights holders during a period in which they can already sell the additional apartments. The growing scope of urban renewal is welcome since it increases the usage of land, which is in short supply in areas of high demand, and also because it

[18] This will consolidate several processes that take place in the local planning committees: examination of the plan, discussion of opposition and discussion of a permit request; and approval of the plan will essentially also constitute the building permit. The reform requires the approval of the Minister of the Interior.

improves the quality and safety of the existing housing stock. Nonetheless, the continued expansion of the program is accompanied by side effects that are less desirable. First, the residents of the old apartments, who must find alternative housing for several years, create additional demand in the rental market. The fact that the urban renewal projects are concentrated in high-demand areas leads to an increase in rents in those areas. Second, the large number of urban renewal projects is creating pressure on the bodies that provide approvals, which lengthens the process to obtain building permits. According to a report by the Urban Renewal Authority, the process of obtaining a permit, which took an average of about a year at the beginning of the previous decade, took three years in 2021 in the case of demolish-and-rebuild projects and even four years for projects involving reinforcement and thickening.[19] In 2022, the district planning committees and the National Planning and Building Committee approved a record 77,000 housing units in urban renewal projects. However, in order to start building, temporary housing solutions must be found for the residents of the apartments to be demolished, an investment must be made in the improvement of infrastructure, and the local planning committees, whose duties include issuing building permits, need to be expanded.

Figure 8.7
Urban Renewal Building Permits and Starts, 2014–2022



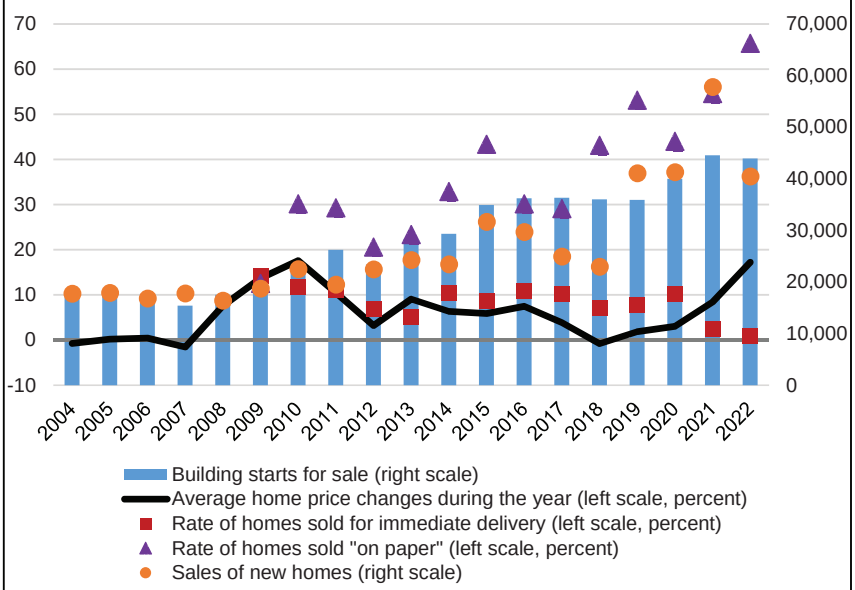
SOURCE: Central Bureau of Statistics.

[19] There is heterogeneity across cities: in most of the outlying cities, the time it takes to obtain a building permit is shorter than in the Center. The shortest time was recorded in Kiryat Ata (1.7 years) while the longest was reported in Ra'anana and Kiryat Ono (6.2 years).

3. Home sales vs housing starts

In 2021 new home sales significantly outpaced housing starts for sale only[20] (Figure 8.8). This was made possible because developers had an inventory of homes intended for sale that had been built in previous years. In contrast, the number of new homes sold in 2022 was smaller than the number of housing starts, and there was an increase in the inventory of new homes that remained for sale. A possible reason for the high rate of new homes sold "on paper" in 2022 is that developers did not have large inventories of homes intended for sale in advanced stages of construction, which meant that very few homes were sold for immediate delivery. In years in which the number of new homes sold was smaller than the number up for sale, home prices tended to rise more moderately or even to decline, while during periods in which the number of new homes sold was similar to or higher than that of homes up for sale, home prices tended to rise at a faster rate.

Figure 8.8
Building Starts Excluding Dwellings Not For Sale, Sale of New Dwellings, Rate of Increase in Home Prices, and Rate of New Homes Sold for Immediate Delivery and "On Paper", 2004–2022



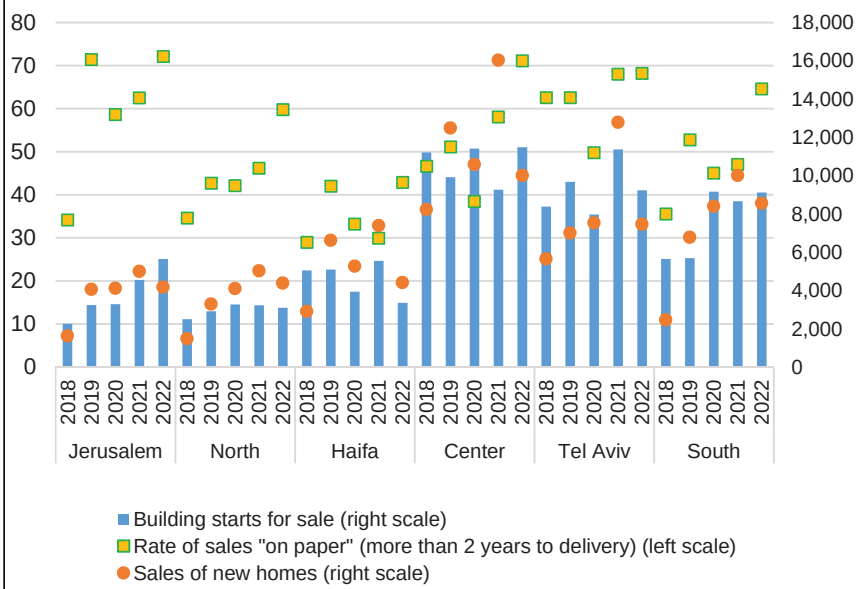
SOURCE: Based on Central Bureau of Statistics and Israel Tax Authority.

[20] The number of housing starts reported by the CBS includes all housing units for which construction has begun, some of which are not intended for sale (Table 8.1). This includes self-building, building for purchase groups, building for rental and a portion of the homes built as part of urban renewal projects (which are payment-in-kind for the building rights holders). Therefore, the potential sales of new homes is less than total housing starts.

In 2022, housing starts of homes for sale in the high-demand areas were higher than sales.

An analysis of new home sales on the national level does not provide a full picture due to the variance in demand across regions. A similar analysis on the regional level (Figure 8.9) shows that in 2021 the number of new homes sold was greater than the number of housing starts in all regions, such that the rate of sales "on paper" increased. In 2022, housing starts of homes intended for sale in high-demand districts (Central, Tel Aviv, and Jerusalem) were higher than sales, such that many new homes remained for sale in those areas.

Figure 8.9
Building Starts Excluding Dwellings Not For Sale, Sale of New Dwellings, and Rate of New Homes Sold "On Paper", by District, 2018–2022



SOURCE: Based on Central Bureau of Statistics.

4. Marketing of land

In 2022, ILA land tenders had lower success rates and land prices declined.

The boom in the housing market in 2021 was also reflected in the results of the ILA's land tenders. In the past, these tenders typically had relatively low rates of success (about 60 percent). However, in 2021–2022, most of the land that was offered was successfully sold.[21] Table 8.2 summarizes the data on land tenders for high-density residential construction (6 or more housing units), which indicate that the rate of success in 2021 was particularly high in both the regular tenders and the tenders for reduced-price housing. However, the rate of

[21] The rate of success is calculated based on the tenders that were already discussed, rather than tenders whose date of closing had not yet arrived.

success declined in 2022. The very high demand for land in 2021 is apparently explained by the low level of marketing in 2020, which was due to the onset of the pandemic, while the moderation in demand in 2022 was the result of massive marketing during the previous two years and the drop in sales of new homes.

There were an average of about 11.3 bids in the regular tenders during 2022, compared with 13.9 in 2021. In 2022, the average winning bid was 1.3 times the land's valuation and in only 54 percent of the lots was the winning bid higher than the valuation. In contrast, the average winning bid in 2021 was 2.4 times the valuation, and 78 percent of bids were higher than the land's valuation. The increase in interest rates is raising the cost of credit for the acquisition of land and is increasing the developers' cost of financing, which in turn is apparently having an effect on their willingness to offer high bids in ILA land tenders. Furthermore, in response to the increased rate of leverage on loans for the acquisition of land beginning in late 2020—in view of the low interest rates that prevailed then and the rapid increase in home prices—the Banking Supervision Department requested that the banking system adjust the group loan loss provision for the real estate and construction industry (during the second half of 2021) and that it allocate additional capital against highly leveraged land financing (in March 2022).[22] There is, however, an additional reason for the decline in the ratio of the winning bid to valuation in 2022. At the end of 2021, the ILA decided to reduce the monopolistic power of developers in "large" projects, in which several lots are marketed simultaneously, and even to divide the marketed land into a larger number of lots. Although a developer could make offers on all of the lots in the tender, he could not win more than one. As a result, in 2022 the amount of the winning bid was not necessarily the highest one given for the lot, which helped to moderate land prices.

[22] For further details, see Box 1.8 in Israel's Banking System, Annual Survey, 2021, Bank of Israel.

Table 8.2
Israel Land Authority Land Tender Amounts, 2021 and 2022

Year	Tender type	Number of dwellings published	Number of dwellings discussed[a]	Number of dwellings in tenders with winners	Success rate (as a share of those discussed)
2021	Ordinary public tender[b]	29,073	17,311	16,680	96.4%
2021	Reduced Price	5,860	5,860	5,603	95.6%
2021	Target Price	26,345	19,507	18,763	96.2%
2022	Ordinary public tender[b]	17,305	8,921	7,547	84.6%
2022	Target Price	46,036	15,616	11,923	76.4%

[a] Tenders in which the envelopes were opened. In addition, there are tenders that were published but did not yet reach their closure date. For instance, For Target Price tenders in 2022, tender closures and winner selections for 30,420 units will take place in the first half of 2023.

[b] Includes initiated tenders and tenders for nonspecific lots.

SOURCE: Based on Israel Land Authority.

Section II – Affordable Housing[23]

As a result of the steep rise in home prices that began in 2008 and the findings of the State Comptroller's Report (2015), which dealt with the housing crisis and was highly critical of the lack of affordable housing in Israel, the government presented a large-scale plan for subsidized housing in 2015 called Buyer's Price, which was aimed at households that did not own a home.[24] The program focused on the method of land marketing. Unlike conventional marketing, which is usually implemented by means of public tenders and in which the highest bidder wins, in the Buyer's Price tender the developers competed to offer the lowest price per square meter of housing and the winner acquired the land from the State at a subsidized price. The program was discontinued in 2020, but the results of the lotteries were not cancelled and the sale of homes that were already allocated in the Buyer's Price lotteries is still ongoing. At the end of 2020, the Buyer's Price program was replaced by a similar program called "Reduced Price Housing" in which the discounts to buyers were more limited. In September 2021, this program was replaced by the "Target Price 2.1" program, in which developers compete over the land price, while the price per built-up square meter is set by the State and the homes are meant to be sold at a discount that is 20 percent of that price though not more than NIS

[23] According to the Sixth Addendum to the Planning and Construction Law, 5725–1965, "affordable housing" is defined as either rental at a reduced price or long-term rental. We also include homes for sale that are subsidized by the government.

[24] For further details about the program, see the Bank of Israel *Annual Reports* for the years 2016 to 2019.

300,000.[25] Despite the differences between the programs, one thing remained unchanged: Due to the high demand for subsidized housing, the right to buy is decided by lottery among eligible candidates. As of the beginning of February 2023, about 102,900 households had won the right to purchase a home at a subsidized price and about 73,000 had already exercised that right. There are another roughly 261,300 households with certificates of eligibility who can participate in the lotteries.

BOX 8.1: THE BUYER'S PRICE PROGRAM'S EFFECT ON THE HOUSING MARKET

This analysis looks at the Buyer's Price program's effect on the prices of homes sold within the program as well as in the open market. It does so using a hedonic regression which is estimated using the Central Bureau of Statistics method[1] with some modifications. The analysis is based on data on the sale of housing units contained in the Real Estate Price Database (Karman), although we add an identifier for sales that were part of the Buyer's Price program (a dummy variable) which is taken from the Tax Authority's sales files.[2] This makes it possible to directly estimate the programs' effect on home prices. The estimation period is from January 2015 to September 2022[3] and the sample includes 915 Jewish and mixed localities, of which only 103 included housing units that were sold as part of the Buyer's Price program. There were a total of 57,300 sales with government subsidization in the sales files. For a full explanation of the estimation, see Equation (1) in the methodological appendix at the end of this chapter.

Table 1 presents the coefficients of Equation (1), which capture the effect of the program's sales on home prices in each district. The prices of housing units sold in the Buyer's Price program were between 26 and 40 percent lower on average than the prices of similar housing units sold in the open market, where the largest discounts were provided in the Central district. From a financial perspective, the estimated average discount implicit in the prices of government-subsidized 4-room housing units in 2022 ranged from only NIS 308 thousand in the Northern District to about NIS 1.2 million in the Tel Aviv District.

[1] For further details on the CBS method of estimation, see "Methodology for Calculating the Index of Home Prices and Average Quarterly and Annual Prices" [in Hebrew], Central Bureau of Statistics, May 14, 2020.

[2] An indicator for sales within the Buyer's Price program appears in the sales files starting only from August 2018, even though the sales began in the second quarter of 2016. Thus, we lose information on about 13,000 sales.

[3] The following are the factors taken into consideration in choosing the sample period: (1) The year 2015 is the basis for the calculations since it was the year in which the Buyer's Price program was announced, even though no housing units had yet been sold with government subsidization; (2) The calculations include sales in 2021 and 2022 even though the program was officially discontinued in 2020, since sales of housing units that were allocated in the lotteries were still ongoing.

[25] For further details, see the chapter on the Housing Market in the Bank of Israel *Annual Report* for 2021.

On the basis of the coefficients in Table 1, we calculated the program's cumulative contribution to the potential decline in prices in the housing market between 2015 and 2022. To do so, we multiplied the average discount on the district level by the weight of the sales that were part of the program by the total sales in the locality during the relevant period. The average cumulative weight of the sales of subsidized housing units as a share of total sales during the relevant period was 6.7 percent. In most of the localities in which the program operated, the potential contribution represented a reduction of only between 1 and 5 percent of the price level, in contrast to an overall increase in housing prices of about 47 percent during the relevant period. This contribution was more than 10 percent in only 8 localities, some of them small.[4]

Table 1
Average estimated discount in the "Buyer's Price" program, by district, 2015–2022

District	Jerusalem	North	Haifa	Center	Tel Aviv	South	Judea and Samaria
Coefficient	**-0.321*** **	**-0.262*** **	**-0.296*** **	**-0.404*** **	**-0.373*** **	**-0.255*** **	**-0.387*** **
Number of observations	56,720	69,360	110,744	184,269	123,051	123,397	20,886
Adj R ^{2}	0.660	0.816	0.782	0.792	0.726	0.839	0.813
Average discount calculated for a 4-room dwelling in 2022, NIS thousand	841	308	456	929	1,185	362	683

*** denotes statistical significance at the 1 percent level.

Despite the program's potential moderating effect on housing prices, an examination of the change in actual housing prices during this period shows that in all of the localities in which housing units were sold as part of the program, prices rose by a cumulative rate of between 8 and 90 percent. These data indicate that the price increases in the open market—both new and second-hand—overwhelmed the moderating impact of the Buyer's Price program. Therefore, in the second stage we examined the trend in home prices in the open market during the program and the association between those trends and the level of activity in the program on the locality level (i.e. the Buyer's Price program's proportion of total sales in that locality). This was done on the basis of the same equation estimated in the first stage but without the observations of sales within the program. We subsequently estimated a spatial regression, which examined the connection between the increase in housing prices in the open market and the proportion of Buyer's Price sales in that locality. (See the explanation of Equation (2) in the methodological appendix at the end of the chapter.) According to the estimation results (Table 2), there is a positive and statistically significant connection between the change in prices of homes sold in the open market and the proportion of Buyer's Price sales in the locality. This indicates that in the localities where a high proportion of sales were subsidized by the government, the prices of homes sold in the open market rose at a higher rate than in other localities. An increase of one

[4] The localities are as follows: Beit Yanai, Beit Dagan, Mevasseret Tzion, Midreshet Ben Gurion, Shoham, Gedera, Yavne, and Beit El.

percentage point in the proportion of Buyer's Price sales as a share of total sales in a locality is associated with an increase of 0.45 percentage points in the prices of homes sold in the open market in that locality.[5]

Table 2

Link between change in home prices in the open market and the rate of "Buyer's Price" transactions in the locality

Constant	32.73***
Effect of "Buyer's Price" weight	0.45***
LR test[a]	33.71***

*** denotes statistical significance at the 1 percent level.
[a] LR test shows the statistical significance of the effect of proximity between localities.

This result can be explained by the assumption that the Buyer's Price program increased demand in the areas in which it was implemented and perhaps even in the housing market as a whole; however the demand by groups of buyers who were not eligible to participate in the lotteries did not decline. The program, which was intended to assist first-time home buyers, essentially reduced the supply of new homes to other buyers (repeat buyers and investors). In most cases the latter were forced into the second-hand market (since only a small amount of the land marketed by the ILA was intended for the open market) or to projects being built on private land, which contributed to the increase in their prices. Some of the first-time home buyers who decided not to participate in the lotteries or participated but did not win were also forced to purchase homes in the open market. Builders who won the Buyer's Price tenders that included housing units for sale in the open market, primarily designated unique or expensive housing units to that market.

[5] It can be argued that this connection involves an endogeneity problem due to the existence of a factor that does not appear in Equation (2) and which influences both the change in home prices in the open market and the proportion of Buyer's Price sales. However, the likelihood of this is low since the marketing of land in the program is not aimed at specific areas but rather only the method of the tender was changed and the land that was marketed was what was available at the time. In order to estimate the bias resulting from endogeneity, we estimated Equation (2) using a two-stage method, while using two alternative instrumental variables: the change in home prices in the locality during the five-year period prior to the sale or the number of housing units allocated by lottery in the locality during the two-year period prior to the sale. The choice of the former is based on the finding that the changes in prices in a cross-section of the localities after the implementation of the program are not correlated with price changes in previous years, even though the price levels are correlated. The use of the instrumental variables makes it possible to forecast the proportion of Buyer's Price sales by means of a probit regression using panel data on the individual sale level, while controlling for year fixed effects and for repeated observations of the localities as a random effect. Both of the instrumental variables show a statistically significant effect in the probit regression at the 1 percent level. In the second stage, we used the predicted weight (instead of the actual weight) as an explanatory variable in the spatial regression (Equation (2)). In this regression, we obtained an elasticity of 0.33 when using the first instrumental variable and 0.35 when using the second, which is somewhat lower than 0.45—the elasticity reported in Table 2—though they are still statistically significant at a level of 1 percent.

Although a regulatory infrastructure to incentivize and regulate the institutional long-term rental market has been put in place over the years, the inventory of such housing units is still low relative to the economy's needs.

An alternative to purchasing a home is to rent, and in order to provide stability to households in their place of residence, even if they do not have the means to purchase a home, there is a clear need for institutional long-term rental. Over the years, a regulatory infrastructure has taken shape that is meant to incentivize and regulate the institutional long-term rental housing market, which includes tools for the allocation of land and its marketing by the ILA, the allocation of planning rights (under the National Planning and Building Committee for Priority Housing Areas Law) and the provision of tax benefits on a number of parallel tracks (accelerated depreciation, income tax exemptions or reductions, and reduced rates of VAT, purchase tax, and betterment tax) that apply to the various participants, including developers, REIT funds[26], and provident funds.[27] The Central Bureau of Statistics began reporting building starts for long-term rental housing in 2017. According to that data, there have been about 15,800 rental housing starts so far (Table 8.1).[28]

In 2013, it was decided to create a designated government company to promote rental housing (Government Decisions 770 and 796) called "Home for Rent". The company partners with the ILA in the marketing of land that is earmarked for long-term rental. It offers rental housing for a period of 10 years, some of which is subject to rent control in the case of an eligible tenant. According to the information on its site, the company has populated 12 projects so far, consisting of 2,562 apartments, and 5 additional projects totaling 831 apartments will soon be populated. In addition, 32 projects with about 8,900 apartments are in various stages of completion.

The relatively small number of rental projects that have so far been populated—despite the government's intention to market sufficient land for the construction of 10,000 housing units per year and the relatively long period of time that has elapsed since the establishment of "Home for Rent"—is explained by the small number of land tenders for rental construction up until two years ago. However, even in 2021–22 the marketing of land was sufficient for less than 6,000 housing units per year. The year 2021 was the most successful with respect to marketing. Tenders for the construction of 5,610 housing units were successfully completed (a success rate of 95 percent) and in most of them the winning bid was higher than the valuation of the land. In contrast, in 2022

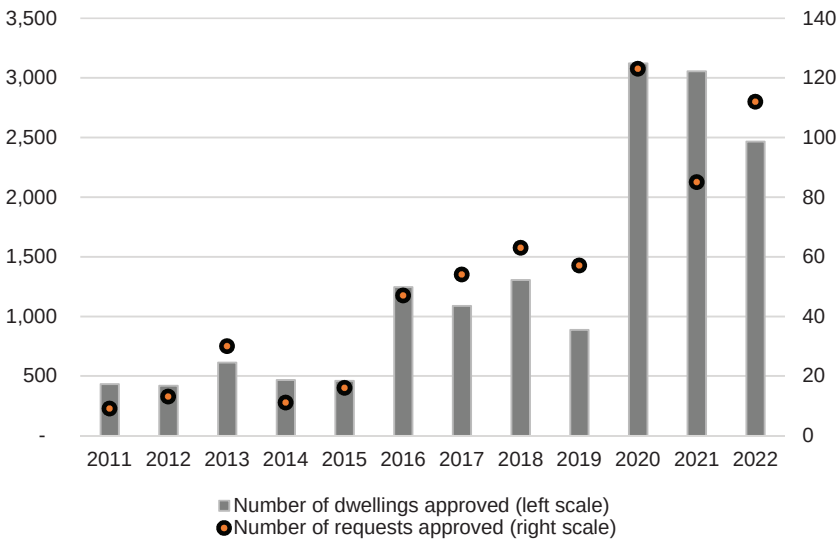
[26] In 2005, the Income Tax Ordinance defined an investment instrument called a Real Estate Investment Trust (REIT), a financial entity the purpose of which is to invest in trust in commercial property. A REIT fund can purchase commercial centers, office buildings, and residential apartment buildings with the goal of renting them out for the long term. It is traded on the stock exchange, which enables the public to purchase its shares. Income Tax Ordinance Amendment (no. 222), 5766–2016 established tax incentives for REITs to focus on investment in projects for residential rentals for periods of at least 15 years.

[27] For further details, see M. Rabinowitz and N. Ziv, "Long-term Rental in Israel: The Current Situation and an Assessment of Government Policy", Social Housing Policy Research and Development, Tel Aviv University, June 2021. [Hebrew]

[28] This number is negligible relative to the number of households that are renting (about 885,000 in 2021).

tenders were successfully completed for only 2,235 housing units (a success rate of about 70 percent) and in all of them the winning bid was lower than the valuation. Bids on tenders for 2,614 housing units from among those published in 2022 are expected to be discussed during 2023.[29] The low response in 2022 and the relatively low price bids are primarily the result of the increase in interest rates (both short-term and long-term), which reduce the profitability of long-term rental projects.

Figure 8.10
Number of Requests and Dwellings Approved for Long-Term Rental Construction as Part of the Capital Investment Encouragement Law, 2011–2022



SOURCE: Investment Authority, Ministry of Economy and Industry.

In addition to "Home for Rent", which is a government company, there are two private REITS in Israel that operate in commercial residential real estate (Megureit and REIT Azorim Living[30]). However, the number of apartments they rent is still small. According to their financial statements for the third quarter of 2022, these two REITS have 1,370 rented apartments, 1,777 apartments under development, construction, or renovation, and another 1,434 apartments under planning. In addition, construction companies are building long-term rental apartments that are eligible for benefits under the Encouragement of Capital

[29] In actuality, this number also includes housing units that are intended for sale in projects where it was decided to allow the sale of some of the apartments in order to improve the profitability of the project, particularly in outlying cities.

[30] There is another REIT that will soon be listed on the stock exchange called Aura REIT and another company called Rent It, which has started to purchase long-term rental housing, though it is not listed on the stock exchange.

Investment Law.[31] The number of apartments approved for construction on this track has increased in recent years, and overall about 15,600 apartments were approved between 2011 and 2022 on this track.

Methodological Appendix: An econometric explanation of the analysis in Box 8.1

In the first stage of the analysis, we estimated regressions in order to calculate the hedonic annual index on the locality level according to the following equation:

$$\log\left(P_{ijt}^{(d)}\right) = c_0^{(d)} + \sum_k \alpha_k^{(d)} X_k + \beta^{(d)} M_i + \gamma_{jt} FE_{jt} + \varepsilon_{ijt}^{(d)} \quad (d = 1, \dots 7) \qquad (1)$$

where the index *d* indicates the district and the indexes *i*, *j*, *k*, and *t* denote the transaction, the locality, the housing unit's characteristics and the year of the transaction, respectively;
P is the value of the transaction;
X represents characteristics of the housing unit, including the socioeconomic index of the statistical area[1], the age of the building, the type of home (including identification of nonstandard dwellings such as a garden apartment, a penthouse, a duplex, a semidetached dwelling, etc.), second-hand homes, a new home bought "on paper" outside of the Buyer's Price program, the meterage of the home, and the number of rooms;
M is a dummy variable that identifies the sale of a home built as part of the Buyer's Price program;
FE represents fixed effects, which are an interaction between a year vector (2015, … 2022) and a vector of localities that belong to the district;
$c_0^{(d)}, \alpha_k^{(d)}, \beta^{(d)}, \gamma_{jt}$ are the parameters to be estimated using maximum likelihood; and
ε represents random error.

In order to shed light on the spatial distribution of the program's effect, we estimated regressions on the localitylevel in separate panels for each of the seven districts, while weighting the sales according to the locality's population. The high spatial resolution of the analysis imposes a low frequency (i.e. annual) on the indices and the fixed effects in the district regressions are therefore defined as an interaction between year and locality. The outliers are filtered out using the CBS method, whereby sales with a value of less than 45 percent or more than 220 percent of the average value of a sale in that locality during the 18 months previous to the transaction are omitted. (The CBS uses an average of three months due to the low spatial resolution.)

[31] The benefits include a reduced corporate tax rate of no more than 11 percent compared to the regular rate of 23 percent, and accelerated depreciation at a rate of 20 percent per year. In November 2021, the rental period to be eligible for the tax benefits was lengthened from an average of five years out of the first seven years from the completion of construction to an average of 15 years out of the first 18 years from the completion of construction. However, the developer was given the opportunity to sell the project to a "continuing renter" who would replace him at the end of five years of rental. In that case, the "continuing renter" would pay a reduced purchase tax of only 0.5 percent.

The annual change (in terms of log differences) in the hedonic price in locality *j* derived from Equation (1) is given by:

$$\gamma_{jt} - \gamma_{j(t-1)}$$

In the second stage, we calculated the change in the Index of Home Prices only on the basis of sales in the open market. To this end, we estimated Equation (1) again, except this time without the sales that were part of the Buyer's Price program and without the βM component.

In order to test the association between the proportion of sales of housing units built as part of the Buyer's Price program as a share of total sales and the change in the prices of homes sold in the open market during those years, we estimated Equation (2) while taking into consideration the effect of spatial dependence, among other things:

$$\Delta\gamma_j = \alpha + \vartheta G_j + \rho \sum_l W_{jl}\, \Delta\gamma_j + \xi_j \qquad (2)$$

where:
$\Delta\gamma_j$ is the change in the hedonic price of homes sold in the open market (whether new or second hand) in locality *j* during the years 2018–2022;
G_j is the proportion of homes sold that were built as part of the Buyer's Price program within total sales in locality *j* during the years 2018–2022;
W_{jl} is the spatial weights between locality *j* and each of the localities in the sample that constitute row *j* in the spatial matrix *W* (195X195), which is calculated on the basis of the GIS method;
α, ϑ, ρ are the parameters to be estimated; and ξrepresents random error.

Due to the high degree of heterogeneity of the localities by size, we weighted the observations according to the cumulative number of transactions in each locality during the 2018–2022 period.

[1] If the socioeconomic index of the statistical area is not known, the calculation is made according to the average socioeconomic index of the statistical areas in the vicinity of the housing unit or according to the locality's average.