TOWARD AFFORDABLE HOUSING IN ISRAEL

Financial Innovations Lab® Report

MILKEN INSTITUTE

September 2014

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The Milken Institute's signature tool for generating solutions is the Financial Innovations Lab. Each Lab assembles a multidisciplinary group of investors, industry experts, and public officials to tackle a specific financing or policy question. During an intensive daylong workshop, they explore the problem from every angle. It's a roll-up-your-sleeves approach that encourages collaboration and practicality. The results are fully documented in our Financial Innovations Lab reports—and the recommendations are ready to be put to work in the marketplace and the policy arena.

Acknowledgments

The Milken Institute thanks the Leichtag Foundation for its generous support of this project. We are grateful to those who participated in the Financial Innovations Lab for their contributions to the ideas and recommendations summarized in this report. Special thanks are due to Steven Zecher, project director; and Glenn Yago, senior director with the Milken Institute Israel Center, for the research, management, and preparation for the Lab and follow-up and writing of this report. We also thank the team of Milken Institute Fellows, Arnon Barak with the Ministry of Construction and Housing, Lili Friedler at the Heschel Sustainability Center, Gleb Klempert at MIU–Movement for Israeli Urbanism (Merchav), and Noa Litmanovitz at the National Economic Council in the Prime Minister's Office, for their research and contributions to policy discussion about affordable housing solutions. We also wish to express our appreciation to Milken Institute Financial Innovations Lab Associate Director Caitlin MacLean for the time and effort in the planning and execution of the Lab.

Financial Innovations Labs bring together researchers, policymakers, and business, financial, and professional practitioners to create market-based solutions to business and public policy challenges. Using real and simulated case studies, participants consider and design alternative capital structures and then apply appropriate financial technologies to them.

About the Milken Institute

A nonprofit, nonpartisan economic think tank, the Milken Institute works to improve lives around the world by advancing innovative economic and policy solutions that create jobs, widen access to capital, and enhance health. We produce rigorous, independent economic research—and maximize its impact by convening global leaders from the worlds of business, finance, government, and philanthropy. By fostering collaboration between the public and private sectors, we transform great ideas into action.

About the Milken Institute Israel Center

The Milken Institute Israel Center focuses on developing market-based solutions to Israel's greatest challenges as it transitions from a startup nation to a global nation. Through the Milken Institute Fellows program, we train some of Israel's best and brightest young professionals in creating pragmatic financing and economic policy solutions, and then deploy them as resources to government ministries, nonprofits, and other key organizations. Our applied research and Financial Innovations Labs serve as a launching pad for transformative change, using innovative financing mechanisms, programs, and policies to bridge social, regional, economic, and technological and productivity gaps within Israel and between Israel and the world. Our goal is to accelerate economic growth, build human capital, and cement Israel's role as a pioneer in addressing global challenges in water, food, education, health, and energy with solutions that others can replicate.

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Executive Summary

Israel is experiencing significant failures in its housing market. A dramatic increase in housing costs over the past five years has outpaced the rise in average household income. There are too few apartments for rent or purchase, and working families cannot compete in the current apartment market.

The housing dilemma is complex. It involves issues of housing policy, program development, banking and lending policies, and barriers not just to direct investment but also to public-private partnerships that leverage public funding with private capital. The solution lies in stocking a "toolbox" that includes novel applications for reliable financial instruments, and for uniting market-, community-, and policy-based approaches to bridge the gaps between housing costs and supply.

Various stakeholders in the issue—the central government, local governments, community groups, developers, and investors—have offered a number of initiatives designed overall to deliver more apartments and, as a result, more affordable apartments.

At the community level, these initiatives have been carried out on a project-by-project basis by bringing together philanthropic funding and mission-driven investors to overcome the complexities and high costs of development. But Israel needs financially feasible solutions that can expand efficiently and work on larger scales to ease the impacts of inadequate housing supply. Sustainability and scalability are key.

In October 2013, the Milken Institute convened a Financial Innovations Lab in Jerusalem to put the discussion of housing supply and demand into the context of affordability. What policy interventions could be implemented that would result in a range of product types at a range of price points—including affordable prices for average Israeli households?

The Lab examined the current situation—including gaps in the market; regulatory and financial barriers; and potential roles for investors, philanthropy, and government—and found that all could be addressed through the formation of public-private partnerships for affordable housing, which the Lab participants then set out to structure.

The group included representatives from the National Economic Council and the Ministries of Finance and Construction and Housing, private-sector investors, academics, architects and urban planners, philanthropists, and social entrepreneurs. They looked at best practices in public-private partnerships elsewhere that would help them design models to increase access to financing for affordable housing; such models would leverage public funding with private capital. The diverse composition of participation enabled the discussion to focus on actual application and implementation of solutions, as well as necessary policy and regulatory adjustments.

The roadmap forward will require a mix of project and capital solutions for each stakeholder: municipalities, the central government, developers, and residents:

- **For municipalities**, the *project solutions* would provide expanded amenities and infrastructure for new residents; and strengthen existing amenities for current residents. The solutions also focus on integration of multiple uses, including recreational, commercial, and residential uses, to create high-quality, community-oriented spaces with higher densities.

The *capital solutions* include opening the use of incremental taxes and fees to finance municipal improvements and recognizing that new residents require increases in municipal services to be compensated by increases in central government transfer payments, at least in the short term.

- For the **government**, the *project solutions* include accelerating the pace of development by facilitating the approval of plans and permits; increasing the pace of land tenders; opening new land for development, including former industrial and military sites; and refocusing on urban infill areas.

  For *capital solutions*, the government can finance the acquisition of land by offering a mortgage to finance the purchase; provide credit enhancements for debt; and open new sources of debt, including the capital markets. The government can also offer tax benefits, including tradable tax credits based on the capital investment in a qualified project and an exemption from the interest income on debt extended to qualified projects.

- For **developers and investors**, the *project solutions* include development partnerships with community-based partners and mixed-use projects that intensify development and lower the project risk.

  For *capital solutions*, financing the purchase of the land can lower the debt cost and lessen the financial strain on the project. Tax benefits can allow the developer to offer investors a tax credit for their investment. Credit enhancements can permit developers and investors to share a portion of the financial risk. Finally, by opening new sources of capital, such as the capital markets, developers will have competitive choices in pricing and terms of capital, thereby lowering the cost of the project.

- For **tenants and buyers**, the *project solutions* include creating a new class of projects, including multifamily (sometimes referred to as multitenant) long-term rental apartments and new types of owned-occupied and rental apartments (with shared spaces, smaller square footage, and cheaper costs). It can also mean the creation of "affordable communities" in urban infill locations, with low-cost, shared services, proximity to work locations, and public transit.

  For *capital solutions*, tenants and buyers can have access to pools of shared equity to lessen the upfront equity (down payment) burden and community-based lending to provide short-term financing until the conventional financing for the principal loan is affordable.

Overall, the direction and goals toward affordable housing in Israel include the following key elements:

1. **Expand housing types and price points (rents and sales prices).** This includes the development of investment vehicles for long-term multifamily rental projects, management companies for multifamily projects and scattered sites, and competitive land pricing.

2. **Refocus in urban areas.** This includes creating infill solutions, balancing municipal fiscal issues, improving urban services and amenities, accelerating permits and building, and building community involvement.

3. **Reinvent affordable communities.** This includes using new housing forms, shared services, microapartments, shared equity for new homeowners, and cohousing for students, young families and seniors.

4. **Invest in sustainable financial solutions.** New initiatives should seek to sustain the public outcomes (affordable apartments) for the longer term. This can be done by "paying forward" the benefits so that in addition to the initial tenants, subsequent tenants can benefit from the public investment.

The combination of these policy directions with long-term partnerships of private, public, and philanthropic investments will result in substantial new housing, both market-rate and affordable, to meet the needs in the Israeli market.

To reverse the current trends of insufficient supply, unaffordable for-sale apartments and absence of long-term rental apartments, the total capital cost is estimated at NIS 83 billion, a portion of which would be borne by the government and philanthropic guarantees and investments. The private investments would be leveraged by public and philanthropic sources, demonstrating a 6:1 leverage ratio of private to public-philanthropic investments for rental apartments and a 3:1 leverage ratio to support investment programs for for-sale apartments.

How do we navigate toward an affordable housing market?

Introduction

Israel is experiencing significant failures in its housing market. A dramatic increase in housing costs over the past five years has outpaced the rise in average household income. There are too few apartments for rent or purchase, and working families cannot compete in the current apartment market.

The housing situation is complex. It involves issues of housing policy, program development, land use, banking and lending policies, and barriers not just to direct investment but also to public-private partnerships that leverage public funding with private capital. The solution lies in stocking a "toolbox" that includes novel applications for reliable financial instruments, and for uniting market-, community-, and policy-based approaches to bridge the gaps between housing costs and supply.

Various stakeholders in the issue—the central government, local governments, community groups, developers, and investors—have offered a number of initiatives designed overall to deliver more apartments and, as a result, more affordable apartments.[1]

At the community level, these initiatives have been carried out on a project-by-project basis by bringing together philanthropic funding and mission-driven investors to overcome the complexities and high costs of development.[2] But Israel needs financially feasible solutions that can expand efficiently and work on larger scales to ease the impacts of inadequate housing supply. Sustainability and scalability are key.

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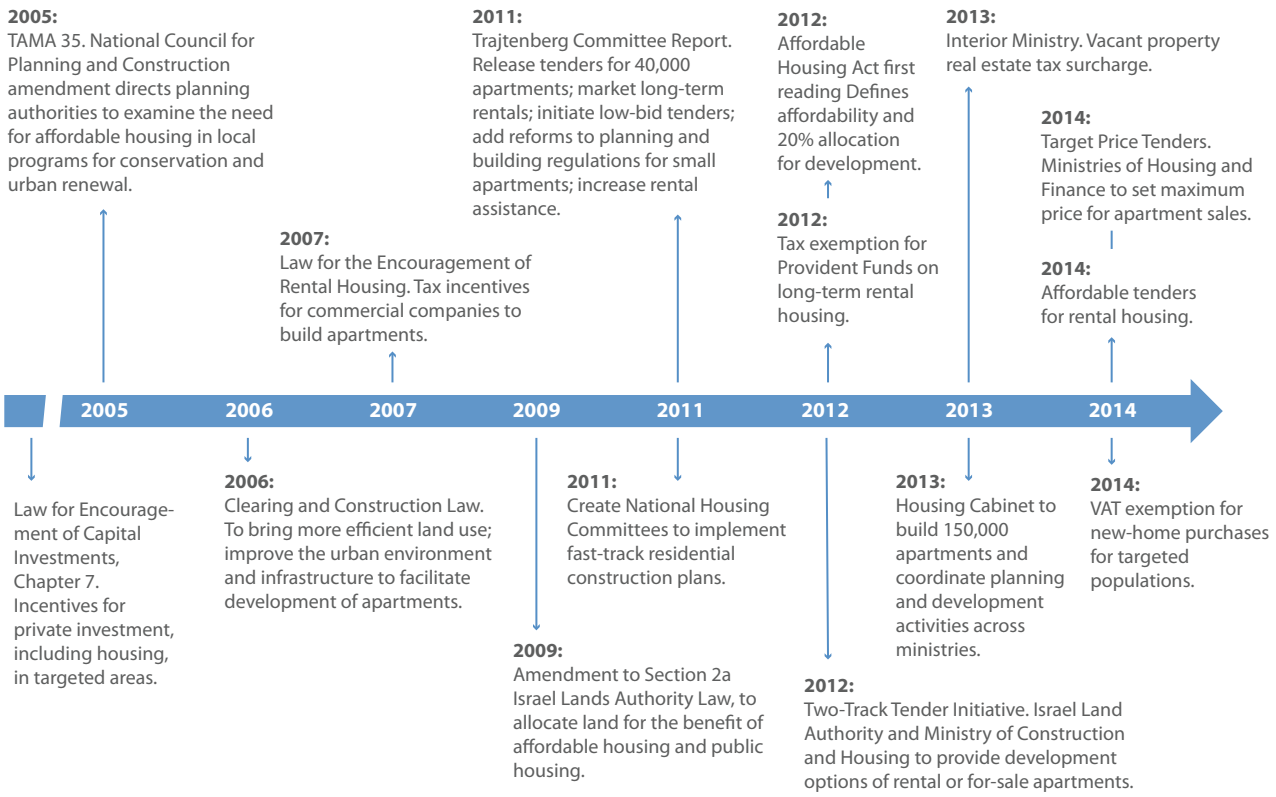
This report describes those discussions and concludes with a section that explains additional research undertaken as a result of ideas and proposals that came out of the Lab.

FIGURE 1

Policy development timeline



Source: Milken Institute.

Data and Perspective

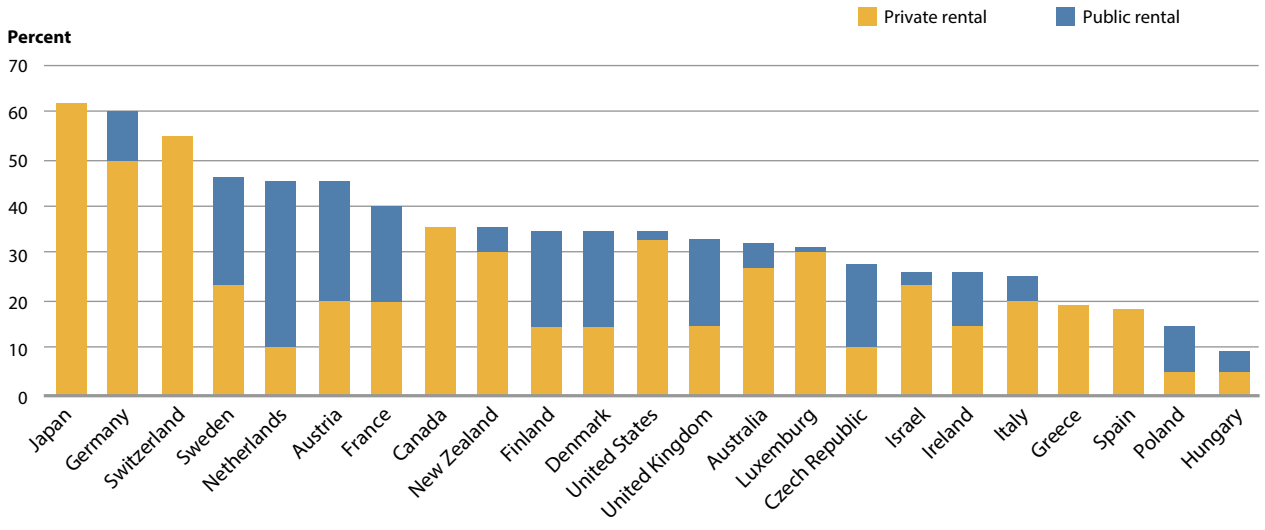
The Financial Innovations Lab got under way by posing two questions: How do we navigate toward an affordable housing market? And how do we achieve a market that balances not only supply and demand but also scalability and financial sustainability? To put these questions into context, the group reviewed current information about the market, real estate prices, household incomes, and affordability for various income groups.

SUPPLY AND DEMAND

In Israel's urban and rural communities, there were approximately 2.41 million apartments in 2013.[3] Almost 70 percent of these apartments were owner-occupied.[4] An estimated 26 percent were owned but leased out.[5] Most of these leased apartments were rented out directly by the owners—not, as in the U.S. rented through management companies working for the building or project owner.

FIGURE 2

Apartment market in select OECD countries (2009)

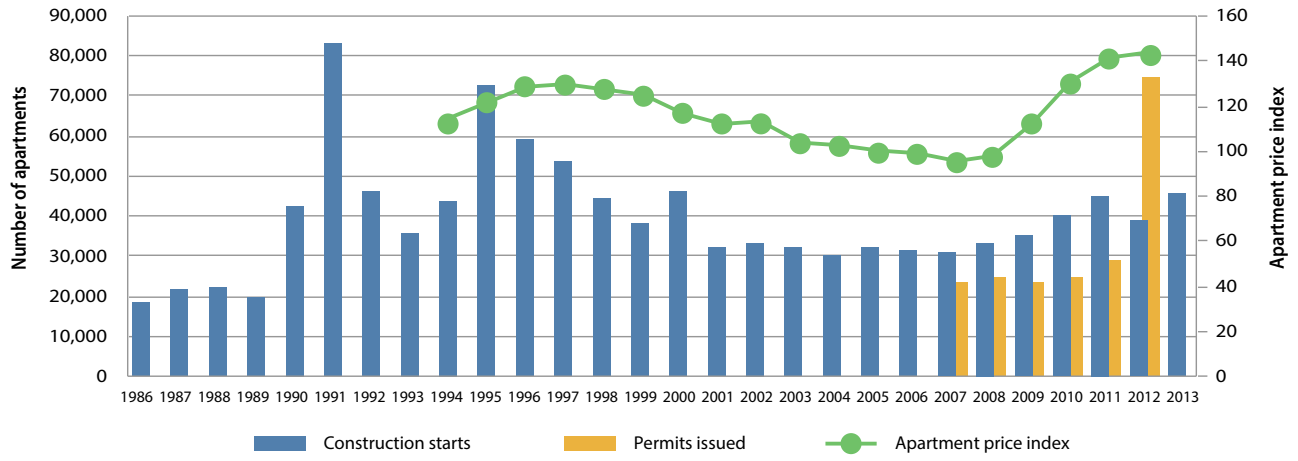


Sources: OECD, Paz Economics, and Engineering Ltd.

Since 2001 the supply for both owned and rented apartments has grown by 30,000 to 50,000 new apartments each year. The flow in the pipeline of new rental and for-sale apartments has also grown in recent years, driven by steep demand. However, approved private permits for new construction in the period 2007–2011 lagged (at approximately 24,000 per year) behind the surge in demand, only rising in 2012, when the number of issued permits hit approximately 75,000.

FIGURE 3

Apartment building starts, private permits, and prices



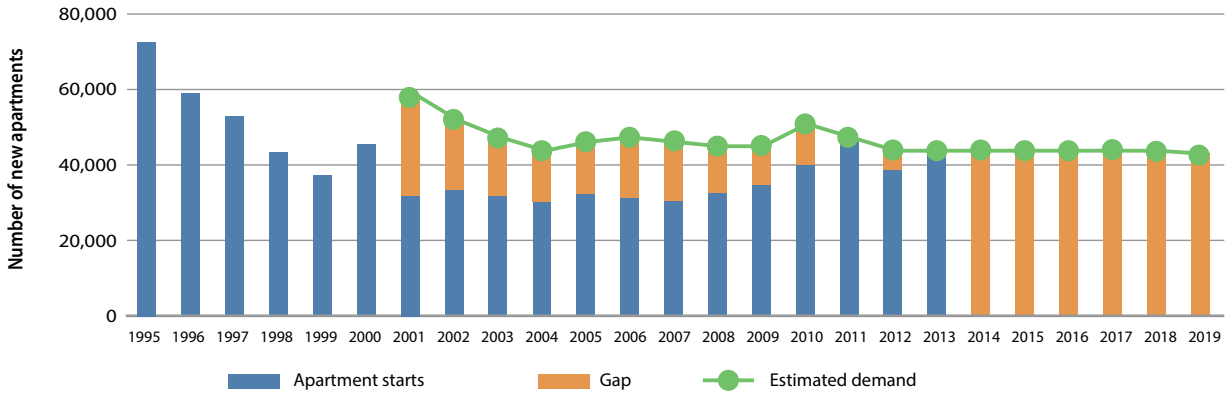
Sources: National Economic Council, Ministry of Construction and Housing.

Rental and for-sale apartments are clearly in short supply, based on population growth and the projected demand for housing. Ofer Dror, a senior economist with the National Economic Council, presented data projecting that while annual starts will eventually meet demand (approximately 44,000 per year), the backlog continues to outpace supply. And the imbalance will worsen before it gets better.

It is important to note that these projections don't focus on a demand for "affordable" apartments. Rather, the projections focus only on the structural need. A detailed discussion about meeting the demand for affordable apartments appears in the later sections of this chapter.

FIGURE 4

Projected demand for new apartments



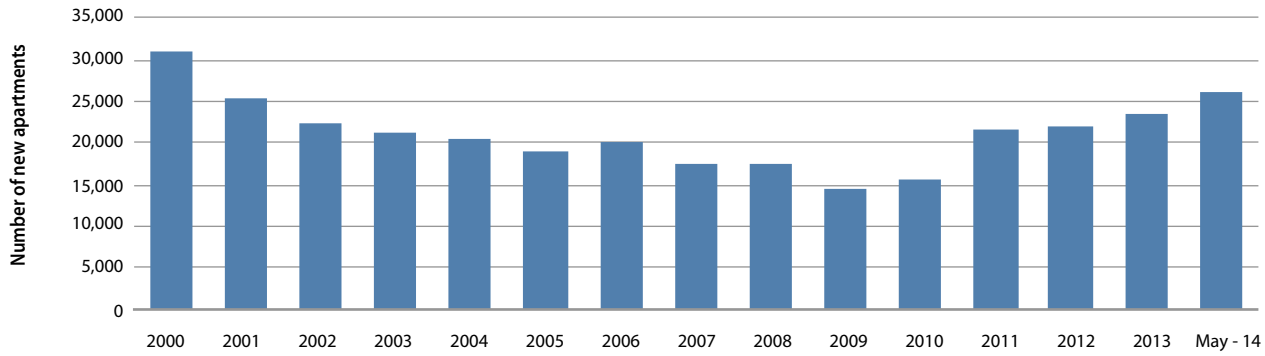
Sources: National Economic Council, Ministry of Construction and Housing.

According to Yossi Shabat, director of the Economic Analysis and Information Division of the Ministry of Construction and Housing, annual residential housing starts in the period 2010–2013 totaled nearly 43,000 apartments, compared with about 32,000 units in the years 2005–2008. The pace is improving, he told the Lab; furthermore, total apartments under construction peaked in 2013, with more than 92,577 units under construction, compared with 57,000 in 2005. The current level of apartment construction is approaching the level achieved in 1991, during the massive wave of immigration from the former Soviet Union.

This flow, however, is insufficient to meet the demand for affordable apartments now, even though the new-apartment inventory, according to Yossi Shabat, has been rising steadily since 2010. The inventory was estimated to total 22,000 in 2012, 23,300 in 2013, and 26,000 by May, 2014.

FIGURE 5

New-apartment inventory, for sale

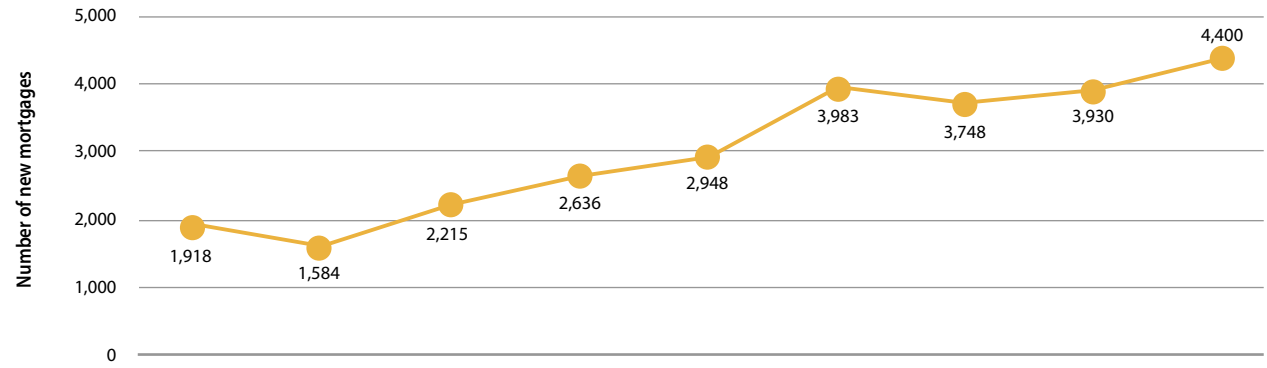


Source: Ministry of Construction and Housing.

Fueling these sales is access to mortgage loans, which rose to NIS 53 billion in 2013, from NIS 35 billion in 2009.

FIGURE 6

New mortgages (monthly)

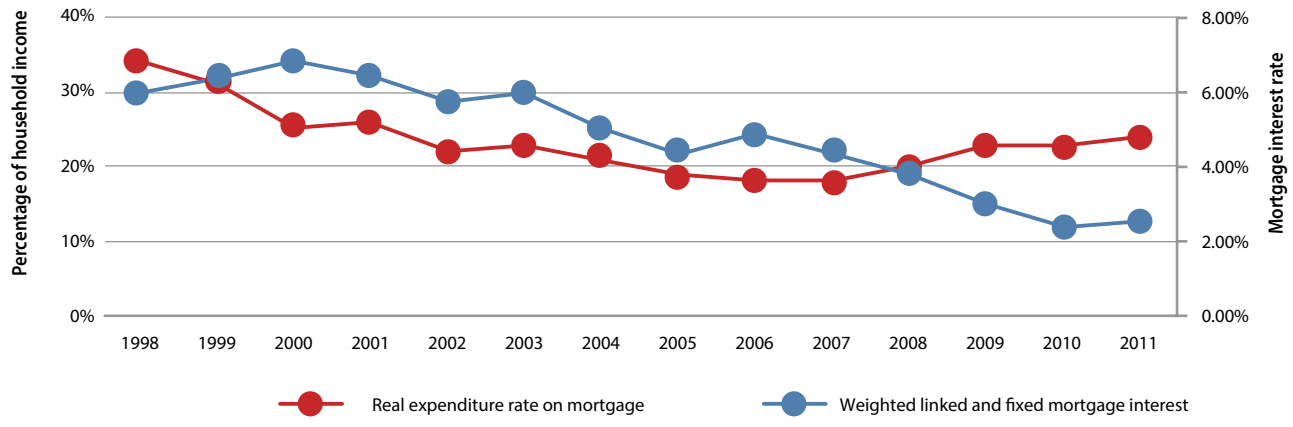


Sources: Bank of Israel, Ministry of Construction and Housing.

Lab participants discussed recent government and Bank of Israel policy developments, and the basic economic drivers underlying the housing market. In 2009 the central bank began to drop interest rates, making monthly mortgage payments more affordable. This continued to spur demand for more (and larger) mortgages.[6] In 2010 the bank tried to cool the rising demand (and slow the rate of price increases) with several measures, including increasing the amount of equity required by borrowers and limiting the share of a mortgage that could be priced on a floating rate basis, which made it easier for the borrower, at least initially. But demand continued to rise, and in 2013, to accommodate borrowers again, the bank introduced a sliding scale for the capital requirements imposed on financial institutions making mortgages. This resulted in loans with lower equity requirements, but which were very expensive for the lenders.[7]

FIGURE 7

Mortgage interest rates and share of median household income spent on mortgage



Sources: Bank of Israel, Ministry of Construction and Housing.

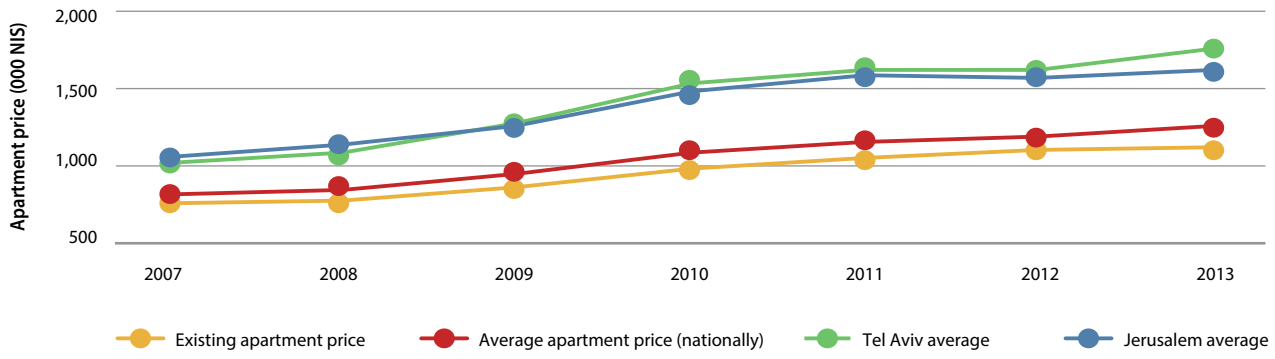
HOUSING PRICES

In a balanced market or condition of market equilibrium, an increase in demand leads to a corresponding increase in supply in the long run, allowing price to act as the equalizer and avoiding both shortages and surplus. But the Israeli housing supply is "inelastic," meaning it is unresponsive to changes in price. Amir Heller, deputy director general of the Israel Builders Association, noted that there is an unusually long lead time (almost 10 years) for planning, approval, site control, and development for a typical housing development. This delays the delivery of new apartments to the marketplace and exacerbates the imbalance between demand and supply. A large part of the demand that arose from the bank's mandated lower interest costs led instead to higher housing prices—not an increase in supply.

Apartment prices rose 7.1 percent in real terms from July 2012 to June 2013, said Yossi Shabat. While there has been some settling of prices in real terms during the period 2011–2012, prices have risen cumulatively by 50 percent in real terms since 2008, and 76 percent nominally for the period. The Bank of Israel saw some impact in demand (and resulting prices) from the regulatory changes, but the slowdown was short-lived.

FIGURE 8

Apartment prices, 2007–2013



Sources: Ministry of Construction and Housing, Milken Institute.

The average sale price of a new apartment in the 2013 was NIS 1.261 million. In the hottest markets, like Tel Aviv–Jaffa, the price was NIS 1.752 million. In Jerusalem the price was NIS 1.620 million. The average sale price for existing apartments was NIS 1.116 million in 2013.

According to the Ministry of Construction and Housing, average prices for new and existing apartments since July 2009 have risen 23 percent, more than the increase in rent during the period. The price-to-rent ratio—the cost of the apartment relative to the rent received—is high in Israel relative to ratios in other select OECD countries, as shown in the next figures, meaning that yields are relatively low, despite the especially high rents in in Jerusalem and Tel Aviv. With the gross yields on rent so low, given the operating costs, the net yields for rental apartments are negligible, making it even more difficult to rent at affordable levels.

TABLE 1

Yields on rents and price-to-rent ratios, Israeli cities, 2014

City	Gross rental yield, city center	Gross rental yield, beyond city center	Price-to-rent ratio, city center	Price-to-rent ratio, beyond city center
Jerusalem	2.2	2.6	45.3	38.6
Tel Aviv–Jaffa	3.1	3.6	32.3	27.8
Rehovot	2.9	3.1	34.7	32.1
Haifa	4.0	4.1	25.1	24.1
Beersheva	4.5	4.2	22.3	23.7
Israel	**3.6**	**3.7**	**27.7**	**26.8**

Source: Numbeo.

Further, these low yields explain, at least in part, the lack of a robust rental apartment industry in Israel—the low yields make it unattractive for sophisticated capital to put their money in the rental sector. Using these same measures to compare Israel's with other OECD markets, one finds that Israel's gross rental yields are much lower than in more robust rental markets, such as in the United States.[8, 9]

TABLE 2

Rental yields and price-to-rent ratios in select OECD countries, 2014

Country	Gross rental yield, city center	Gross rental yield, beyond city center	Price-to-rent ratio, city center	Price-to-rent ratio, beyond city center
Israel	**3.6**	**3.7**	**27.7**	**26.8**
Sweden	2.6	3.3	38.5	30.0
Japan	4.1	3.3	24.6	30.5
Jordan	7.4	7.2	13.5	13.9
United Kingdom	4.7	5.2	21.3	19.4
Norway	4.6	5.0	21.7	20.0
Cyprus	5.0	4.7	20.2	21.3
Switzerland	3.6	3.6	27.7	27.8
Germany	4.5	4.8	22.2	20.9
Canada	5.5	6.1	18.1	16.5
United States	11.0	12.6	9.1	8.0

Source: Numbeo.

Not surprisingly, the price-to-rent ratios in Tel Aviv and Jerusalem are higher than in other markets in Israel.

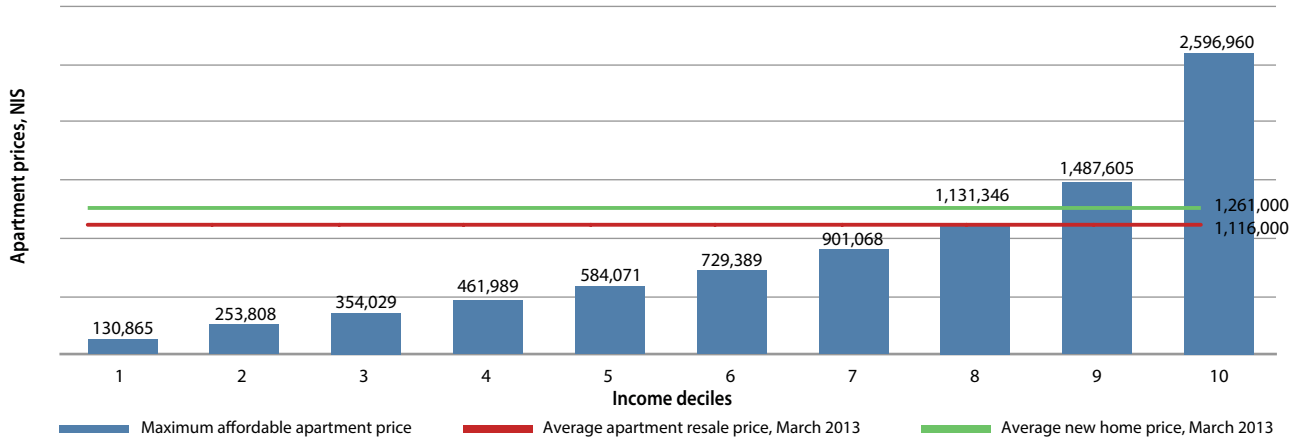
HOUSING AFFORDABILITY

Next, supply and demand were discussed in the context of affordability, which was the main theme of the Lab. For the purposes of analysis and the discussion, the average household income is estimated at approximately NIS 15,000 per month.[10] (This converts to US $4,337 as of early June 2014.) If one looks at the median distribution of income, however, NIS 15,000 is found only in the 70th decile and above.[11] Thus, 60 percent of households (or the bottom six deciles) fall below the average. This reflects patterns of growing income inequality that have continued to rise faster than the average rates in developed countries around the world.[12]

Assuming that the typical household spends 30 percent of its income for mortgage payments, it is possible to estimate the maximum affordable home mortgage for each decile, using standard loan terms in the local mortgage market[13] and the resulting price of each apartment.[14] When these maximum affordable apartment prices are compared with the average apartment price, it becomes clear that the bottom seven deciles (70 percent of the population) can't afford the average price for an existing apartment, and 80 percent can't afford the average price of a new apartment.

FIGURE 9

Affordable price versus current sales price

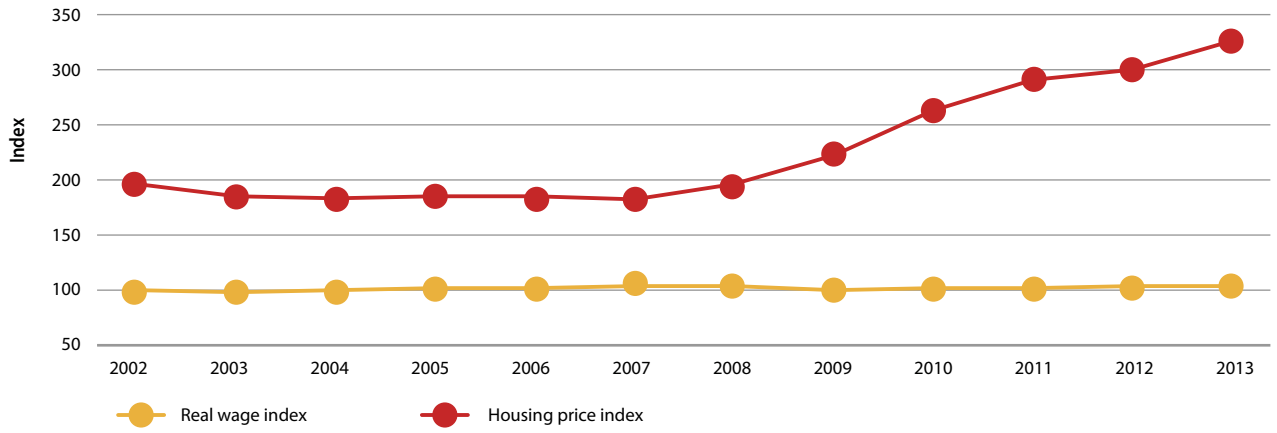


Sources: Central Bureau of Statistics (Israel), Ministry of Construction and Housing, Milken Institute.

This is not to suggest that the households in lower deciles don't buy apartments. But it does suggest that current conditions have made apartment purchases unaffordable. Indeed, as household expenditure data prove, unaffordability is also common for current owners, with 30 percent of current renters and 60 percent of current owners spending more than 30 percent of their household income on occupancy costs.[15]

FIGURE 10

Changes in housing prices and real wages in Israel



Sources: Ministry of Construction and Housing, Bank of Israel, Central Bureau of Statistics.

The discrepancy between household income and apartment pricing is exacerbated by the real increase in apartment price and the relatively flat growth in household income.[16] Even if a loan is affordable at the time it is approved and funded, when even a small portion of that mortgage is linked to a floating interest rate, this potentially increases the loan costs for the householder. Since household income isn't linked to an index, the cost of homeownership can quickly exceed the household's capacity to pay.[17] Debt costs, in fact, are exceeding 40 percent of household incomes as a result of the variable portion of the mortgage rising faster than household income.[18]

Affordability varies among Israeli cities, with Jerusalem and Tel Aviv–Jaffa being the least affordable on various measures, including price-to-income, mortgage as a percentage of income, and loan affordability.[19]

TABLE 3

Affordable measures among Israeli cities, 2014

City	Apartment price-to-income ratio	Mortgage as a percentage of income	Loan affordability
Jerusalem	21.3	151.0	0.7
Tel Aviv–Jaffa	17.0	119.6	0.8
Rehovot	8.9	62.1	1.6
Haifa	7.5	46.9	2.1
Beersheva	5.5	35.4	2.8
Israel	**12.8**	**92.6**	**1.1**

Source: Numbeo.

How does Israel compare with other OECD countries? One of the most widely used indicators to measure affordability is the price-to-income ratio, the relationship between average home price and the average household income. Israel's price-to-income ratio is 12.8 vs. 2.4 for the United States.

TABLE 4

Affordability measures among select countries, first quarter 2014

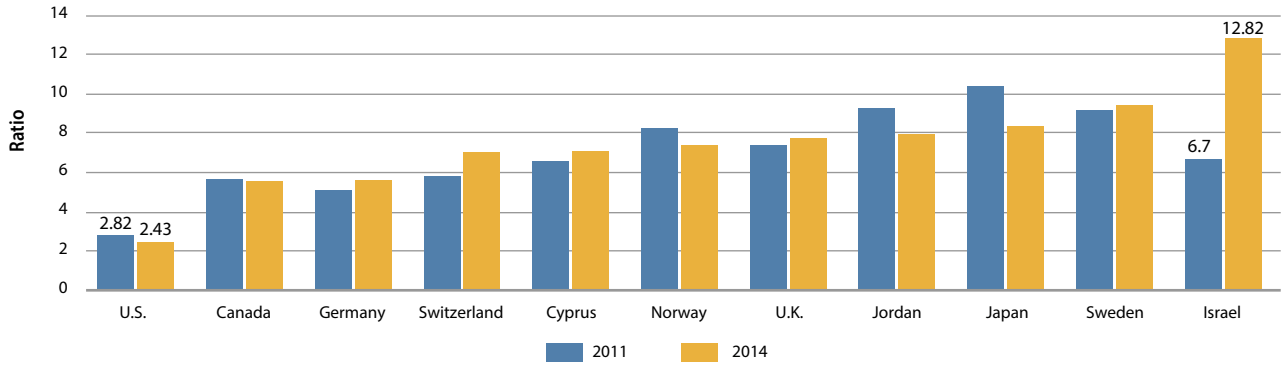
Country	Gross rental yield, city center	Gross rental yield, beyond city center	Price-to-rent ratio, city center
Israel	**12.8**	**92.6**	**1.1**
Sweden	9.4	65.0	1.5
Japan	8.3	50.4	2.0
Jordan	8.0	81.5	1.2
United Kingdom	7.7	57.7	1.7
Norway	7.4	52.7	1.9
Cyprus	7.1	62.7	1.6
Switzerland	7.1	42.7	2.3
Germany	5.6	38.0	2.6
Canada	5.6	38.7	2.6
United States	2.4	18.0	5.6

Source: Numbeo.

While these measures illustrate Israel's unaffordability relative to other countries, equally dramatic is the change in this ratio from 2011 to 2014: in 2011 the ratio of the average apartment price to household income stood at 6.7.[20]

FIGURE 11

Change in price-to-income ratio, 2011 to Q1 2014, select countries



Source: Numbeo.

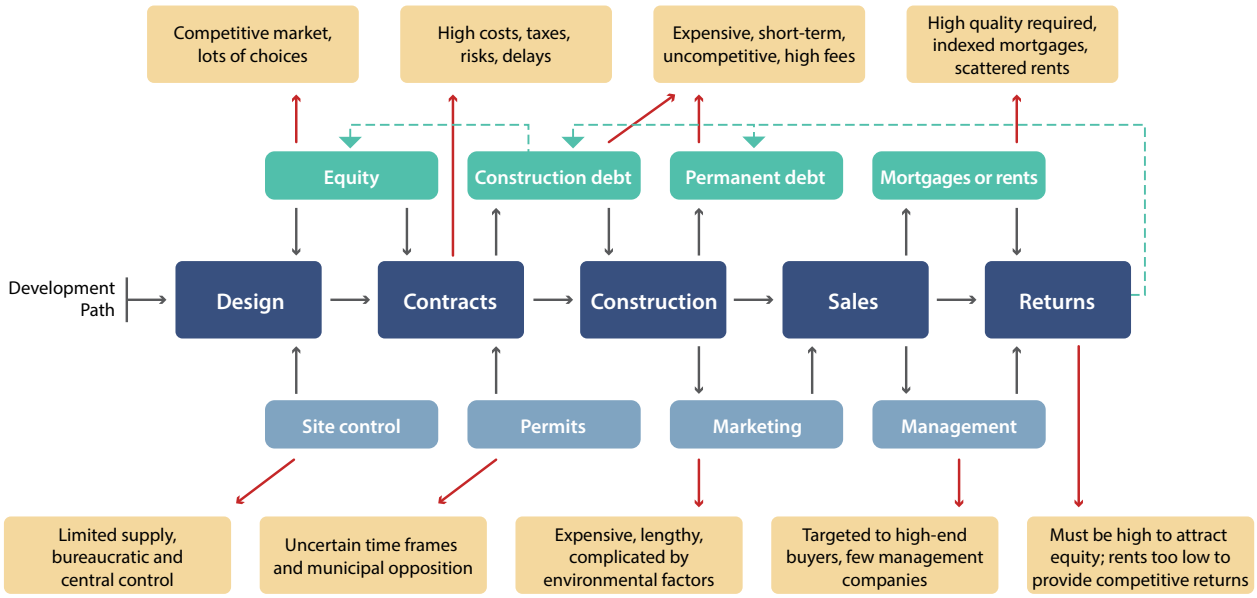
These numbers illustrate the limited supply, persistent demand, and the inability of households to afford apartments based upon the critical ratio between housing price and income. While the rents are low relative to prices, the prices are so high that the rents are unaffordable to the median household income. For both buyers and renters, there is a structural financial problem. Based on these numbers, Lab participants looked further into the causes, or drivers, behind each.

Barriers to Affordable Housing Development

Following the path that a project developer might take, from initial design through final return on investment, it is possible to break down the financial needs (equity, debt, and revenues) and the project needs (site control, permits, marketing, and management). Figure 12 illustrates some of the obstacles along this development path.

FIGURE 12

Development process and barriers



Source: Milken Institute.

Barrier 1: Land Cost and Control

The government, through the Israel Land Authority (ILA), controls the price, availability, and associated public development costs, for 93 percent of the land in Israel.

Gaining control of a development site through leases of 49 or 98 years is a prerequisite for most development processes. Here the developer must respond to a public tender from the ILA. The public tender laws require a competitive land lease, i.e., the ILA leases all its property on a long-term basis, giving an equitable interest to the developer for the term of the lease. The tender process is long, complicated, and expensive, and drives up the price of the property and the transaction costs along with it. This has the greatest impact on smaller developers and new entrants to the market, who may be more innovative.[21] In most instances, land costs and associated direct and indirect development costs represent from 20–30 percent of the capital costs in a development.

The ILA has begun to issue tenders designed to drive down the price by linking a reduced land price with an agreement to build lower-cost (affordable) apartments for sale. There are several arrangements available for these projects, including a mix of market-rate and reduced-price apartments, allowing for a cross-subsidy. However, the ILA's predominate source of financial support is from the sale or lease of property and associated fees. Therefore, low-bid tenders are unattractive, especially when compared with current market prices.[22]

Tender process bidding has other barrier effects. The Interior Ministry announced in May 2014, for example, that there is enough land—vacant sites that need to be rezoned or existing sites that need to be cleared and redeveloped—on which to build an estimated 500,000 apartments.[23] This is in addition to room for an additional 120,000–150,000 apartments on sites already in various stages of planning approval. Meanwhile, the real estate website Madlan reported that "five publicly traded property development companies were sitting on land zoned for some 20,000 homes, 7,000 of them on land that has already been cleared by authorities for building and the rest in various stages of planning." According to one of the website's owners, "There are instances where property companies prefer to build gradually over several years to avoid hurting price levels in particular by massive building all at once."[24] The "market risk" that could result in lower prices due to a market saturated with large-scale developments must be mitigated for both developers and the ILA.

Barrier 2: Permitting and Approval

The statutory and development processes, including reviews of permit requests by municipal planning committees and staff, lengthen the development period and add substantial costs in the interim. Of course, this assumes that a given residential project is welcomed by the local government, which will incur higher service costs (such as schools, roads, water and sewer, recreation, and cultural activities) and insufficient revenues (i.e., the limited revenues restricted to real estate taxes available to local government) from new development. Additionally, current public design and construction standards and requirements, such as sizing and allowances for things like underground parking and retaining walls, are often not economical for affordable housing development.

Contracting and construction costs include contingencies for various development risks, including increased costs and delays from archaeological (historic), environmental, accessibility, and political issues. The complexity of implementation in building projects adds substantially to the length of time needed to deliver a project, according to the Deshe Institute.[25] It can take 10 to 12 years for project approval and development, said Amir Peled of the Construction Contractors Association, particularly for projects in urban areas.

TAMA 38 adds a new element to the planning and approval process.[26] The law allows higher densities (additional construction) for existing buildings in exchange for seismic strengthening of qualified buildings or reconstruction of the buildings according to new standards.[27] The individual apartment owners in a qualified building can engage a developer/builder to provide the additional apartments and upgrade the building. The new apartments act as the financial incentive to the developer/builder. Paradoxically, TAMA 38 works best in places with the high market prices, but these locations have the fewest eligible buildings. It is estimated that TAMA 38 could raise the number of apartments in a building by 20 percent. However, developer/builders also have an incentive to sell the new apartments at the highest possible price, limiting the program's impact on affordability.[28]

Barrier 3: Competition for Investors

Attracting equity for housing development is difficult, especially when investors have higher-value alternatives, including business ventures and overseas development opportunities; housing development might bring them 15–20 percent returns on equity investment, vs. a much higher multiple elsewhere. Of course, these alternative higher yields are offset by higher risks, limited liquidity, and long holding periods. Nevertheless, investment capital is fungible, and a case must be made why real estate is preferable. In order to attract investment capital, development partners may have to sacrifice cash flows if their investors demanded preferred returns (priority cash-flow payments) to mitigate their risk and boost returns.

Thus, competition for investors drives developers to pursue luxury projects with high payoffs, even though these luxury apartments add to the upward pressure in pricing. Meanwhile, the returns from rental projects are relatively low. Furthermore, the price-to-rent ratio is particularly high. As the market stands today, it is hard to make the case to investors that rental housing will provide solid returns.

In addition, while there have been some initiatives to provide tax exemptions or tax benefits in Israel for rental apartment projects, the exemptions were not effective for the targeted investors, and they have remained unused.[29] In contrast to other countries, as shown in the International Benchmarks section below, Israel is missing this important piece of the housing finance ecosystem.

Barrier 4: Expensive Project Financing

While Israel's mortgage lending is competitive, the same cannot be said for construction financing from commercial banks, especially outside of the center of the country. Construction loans usually depend on a long-term relationship with the lender, full collateralization of the loan, cross-guarantees of the assets being financed, and other assets of the development group. In addition, a project loan can carry a high and variable interest rate on the principal, plus periodic payments based on milestones.

Conversion to long-term financing is expensive and carries high fees and more expensive interest. Most important, permanent financing is generally set for only a portion of the asset's depreciable life (e.g., 10 years). Finally, the financing is based on experience and familiarity. For banks, the Bank of Israel restricts credit to real estate to 20 percent of the overall credit portfolio, and the bank reserve requirement for developers is 100 percent of the principal, making the cost to banks and the resulting interest rates and fees more expensive.[30] There are few multifamily development projects (for rent) and few developers, resulting in another barrier to developing the market.

Barrier 5: Unaffordable Mortgages and Rents

Mortgage lending may be competitive, but the loans are hard for most homebuyers to access, and especially for middle- and lower-income households that face high and variable interest costs, high equity requirements, and high fees.

Similarly, the high development and financing costs and the required returns to equity investors are causing rental projects to charge higher rents. This narrows the opportunities for young people and small families. Yet even higher rents may not be enough to overcome high development costs. As a result, rental projects are not competitive for investments.

These obstacles, most of which result in higher development costs and risks, create an incentive for developers to build homes targeted to higher-income households, those that have substantial equity from another home or who don't need a mortgage at all.[31] As noted already, the average home price is out of reach for 70 percent of households. Even rental rates are becoming too expensive for moderate- and lower-income households.

STAKEHOLDER PERSPECTIVE

Lab participants discussed these barriers from the perspective of multiple stakeholders. Representatives of municipalities, the central government, developers and investors, and tenants and buyers all had input, as illustrated in table 5.

TABLE 5 — *Challenges according to stakeholder perspectives*

Municipalities	1. Aim for the best use of revenues 2. Increase services (education, utilities, sanitation, religious services, etc.) 3. Find ways to pay for increasing costs 4. Rethink the relatively small fees given to local governments for the sale of the property by the Israel Land Authority
Central government	1. Provide more housing 2. Provide more affordable housing 3. Make the most of a limited budget 4. Find available land and reduce cost 5. Finance incremental infrastructure costs
Developers/ investors	1. Offset high costs 2. Provide competitive returns for equity investors 3. Secure competitive conventional debt at reasonable costs and terms 4. Manage rental apartments efficiently 5. Find a buyer in order to return equity investment
Tenants/buyers	1. Spend no more than 30 percent of household income on rent 2. Save enough money to have required equity for home purchase 3. Cover direct costs (utilities, taxes, services, etc.) and indirect occupancy costs (travel to work) 4. Create a sustainable, affordable community with services to meet community needs

Note: The Israel Land Authority pays municipalities a 12% development fee for tender-based sales. However, for redevelopment projects the fee is usually waived.

Source: Milken Institute.

Municipalities consider what budget options are best for their residents and for fiscal balance. They must use the land within their borders in ways that will improve the quality of life of the community, add value, and strengthen the tax base. New apartment developments add to costs for schools and other residential-based services, and increase density, which requires improvements in infrastructure (water and sewage, transportation, etc.), and they add less in the way of real estate taxes per dunam than commercial developments.[32] Municipalities also favor larger apartments with invested, permanent tenants, both of which counter the needs of younger families with less income and renters who may move in and out of the community. At the same time, they must evaluate the advantages from having more residents, who will spend more in local shops and for local services, adding to the viability of the local economy.

The central government has the broader perspective of trying to meet the diverse residential needs of the nation's growing population, setting policy on land uses and ownership, minimizing new capital and operating costs, and supporting national agencies, such as the ILA.

Developers and investors look at the financial feasibility of potential projects, the likelihood of competitive returns, and the costs of maintaining successful long-term operations so that they can invest their profits in new projects.

Tenants and buyers are concerned about upfront investment costs; minimizing their total occupancy costs, including loan payments, rents, operating costs, and travel; and creating sustainable communities.

The roadmap forward will require a mix of project and capital solutions.

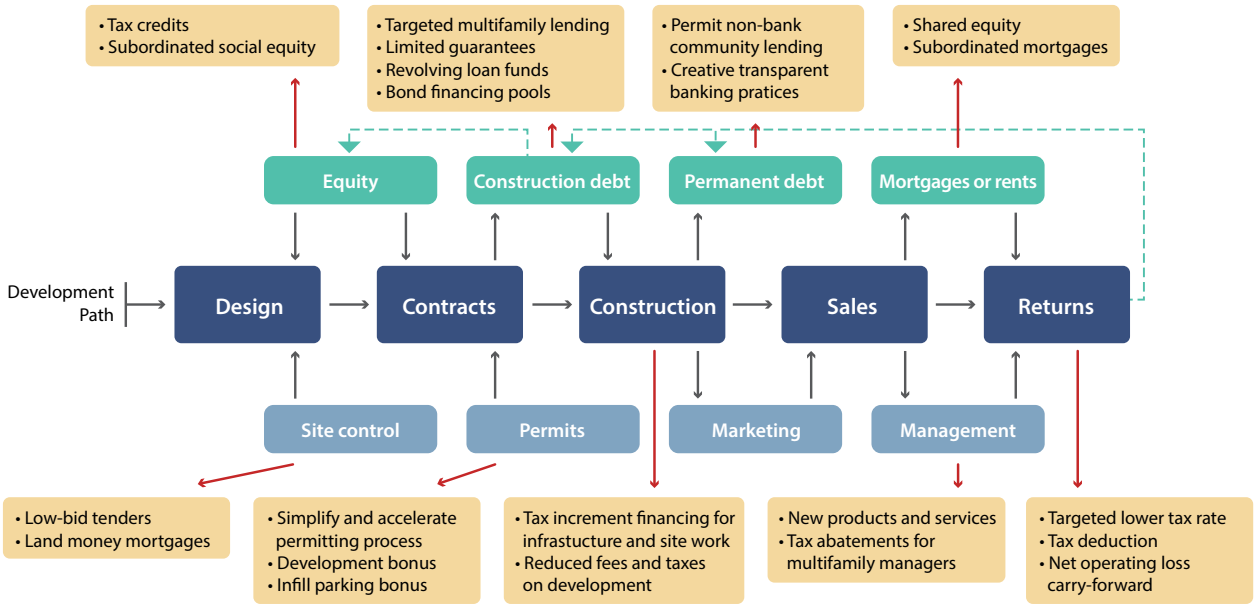
Project and Capital Solutions

The group reviewed numerous approaches and possible solutions based on the presentations and their own experiences in various markets. Solutions include what is possible immediately and what may require new regulations, programs, financial sources, and capacity. The solutions are described here.

Using the same approach used to understand the barriers (see figure 13), the discussion turned to the range of solutions and how each might be applied at various points along the development process.

FIGURE 13

Development process and solutions



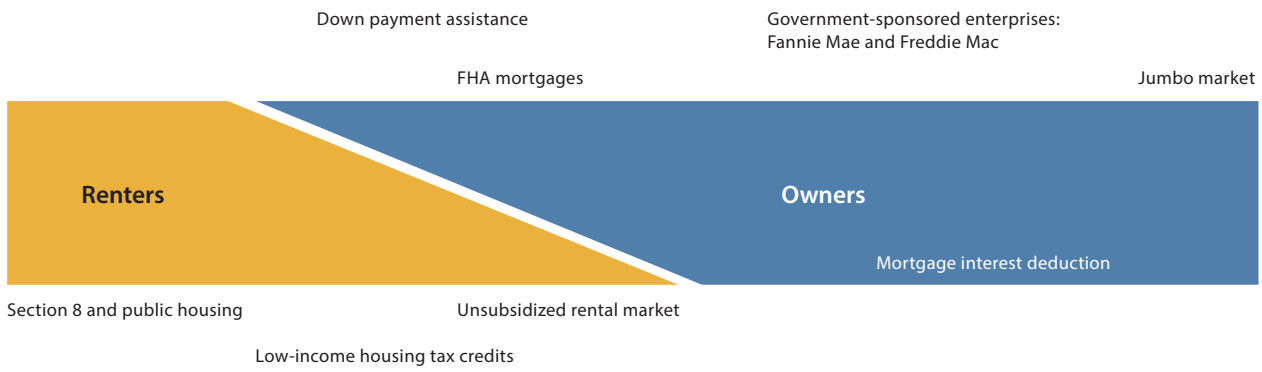
Source: Milken Institute.

ECOSYSTEM INFRASTRUCTURE

Andrew Jakabovics, a senior director of policy development and research at the U.S.-based Enterprise Community Partners, explained the U.S. housing finance ecosystem in terms of primary and secondary sources of project capital in the capital markets and how they relate to various types of housing products, such as rental and owned, market-based, and affordable. He also described how each of the tools was applicable to various segments of the population and income scale, and how they have evolved over decades to create the current housing market.

FIGURE 14

Overview of U.S. housing programs and policies



Source: Enterprise Community Partners.

The U.S. market, similar to that in the U.K., has a robust set of tools and programs, built over the past 80 years. The tools are fully integrated into the capital markets, tax codes, and community development infrastructures. Enterprise Community Partners, for example, is a nonprofit that brings capital for housing and community development through multiple channels, including as a certified community development financial institution and tax credit syndicator, and works with community partners and policymakers at the federal, state, and local levels to provide access to housing and financial solutions for target populations.

Table 6 is a review of the major tax and program initiatives available in other countries.

TABLE 6

Income tax treatment of residential rental income

Country	Lower tax on rental income	Mortgage interest deduction	Costs deductible	Depreciation allowance	Rental losses offset against other income types
United Kingdom	N	Y	Y	N	N
Austria	N	Y	Y	Y	N
Australia	N	Y	Y	Y but only new properties	Y
Belgium	Y	Y	Y	Y	
Denmark	Y institutions only	Y	Y	N	Y
Finland	Y	N	Y	Y for institutions	Y
France	N	Y but cannot lead to loss	Y	N	Y up to EUR 10,700
Germany	N	Y	Y	Y	Y
Hong Kong	N	Y	Y rates only	N	N

TABLE 6

Income tax treatment of residential rental income - continued

Country	Lower tax on rental income	Mortgage interest deduction	Costs deductible	Depreciation allowance	Rental losses offset against other income types
Ireland	N	75 percent of interest	Y	Y	N
United States	N	Y	Y	Y	Y with limits
Israel	N	N	Y	Y	Y limited to direct income for institutional investors

Note: Information also comes from "Towards a sustainable private rented sector: the lessons from other countries." Ed. Kath Scanlon and Ben Kochan. London School of Economics and Political Science (LSE). 2011.

Source: London School of Economics and Milken Institute.

TABLE 7

Financial tools and approaches in various countries

Country	Soft loans	Renovation subsidies	Tenant allowances	Other
United Kingdom	N	Selected local authorities	Y	
Austria	Y if rent units kept low during repayment period	Generous subsidies for energy-saving modernization	Y	Accelerated depreciation of dwellings on "appropriate losses"
Australia	N	Only for energy savings	Y	Tax credits for providers of affordable dwellings
Belgium	N	N	Y	Social rental agencies take housing on long-term lease
Denmark	N	Y for urban renewal	Y	
Finland	Y government-guaranteed loans for new construction	N	Y	
France	Y for energy saving investments	Y	Y	Tax incentives for purchase of new low-rent dwellings
Germany	Y in most states for low-income housing	Y for energy-saving investments	Y for unemployed tenants	
Hong Kong	N	N	N	
Ireland	N	N	Y	Local authorities take housing on long-term basis and use for social housing
United States	Y based on local and state program	Y in selected states	Y Section 8	Low-income housing tax credit and grants for long-term multifamily rental
Israel	Y limited amounts in targeted areas	Y limited to target areas	Y	

Source: London School of Economics, Milken Institute Note: Information also comes from "Towards a sustainable private rented sector: the lessons from other countries." Ed. Kath Scanlon and Ben Kochan. London School of Economics and Political Science (LSE). 2011.

Solution 1: Improve returns for investors

Low-Income Housing Tax Credit (LIHTC) Program

Authorized in 1986 in the United States, the LIHTC program is an "indirect federal subsidy" that gives private equity an incentive to invest in affordable rental housing, according to the federal Department of Housing and Urban Development. The tax credit creates a direct dollar-for-dollar reduction in the investor's federal tax obligation in exchange for a maximum rent set at a percentage of the area's average median income.

The LIHTC is a source of equity financing for the development of affordable housing that serves households earning 60 percent or less of the area median income. Rents are restricted to keep the units affordable; more than 2.5 million units have been built since its inception.

The developer can sell the tax credits to raise capital for the project, reducing the other equity and debt needed.

The amount of the tax credit is based on a percentage of the investment and whether the project is new construction or rehabilitation.

- **Lower the development costs**
- **Add tax benefits**

Improving returns for investors in affordable housing will attract more capital for more development. The most immediate way to improve returns for investors (and attract developers to affordable housing projects) is to lower the development costs in the capital budget—meaning, lower the land price and associated development costs, as well as selected construction requirements for the project, such as a parking.

Lab participants discussed several ways of reducing the effective land costs. These include lowering the cost directly, deferring payment for the land, using the land as equity in a portion of the project, and financing the land cost through a purchase-money mortgage.[32] With the exception of lowering the land costs (through a low-bid tender, for example), the other methods could result in a net zero cost to the ILA.[34]

Another common method of boosting returns to developers is to structure tax benefits that will improve the bottom line on their operating budgets. For example, tax credits can be based on some portion of total capital investment. The tax credits can be resold by the developer to reduce its share of equity in the project, thereby improving the return on investment. A reduction in corporate or value-added taxes on certain income from qualified projects, such as long-term multifamily rental housing, can also help improve profitability, dividend payment, and returns to investors for targeted projects.

Tax-exempt financing for the capital costs of qualified projects could lower the debt costs substantially. Tax-exempt financing eliminates the tax on interest earnings on a loan, either by a bank lender or a bond buyer, creating the opportunity to lower the interest cost to the project.

Solution 2: Increase Supply of Developable Land

- **Use urban infill**
- **Promote brownfield redevelopment and reuse**

An example of urban development in Israel with infill potential.

Source: Israel Center for New Urbanism.

Israel has limited available land for development, which drives up the price of housing. While many initiatives have focused on reducing the cost of the land through low-bid tenders, Lab participants focused on solutions to reuse, redevelop, and revise zoning to permit development in underutilized neighborhoods, on unused lands, and even on former industrial or military sites close to urban centers, once they have been cleaned and prepared for a new use. The opportunity is particularly relevant with the current implementation of the relocation of major military bases to the Negev. Brownfield redevelopment strategies for urban revitalization have been quite successful throughout the United States, United Kingdom, and elsewhere in Europe.

Irit Solzi, the board chair of Merchav, the Movement for Israeli Urbanism, presented a compelling scenario of redevelopment potential in the urban cores that could add land and air rights for almost 400,000 apartments, with changes in zoning, leveraged development rights, and improvements to aging urban infrastructure.[35]

Fellows Research Highlights

Gleb Klempert, a 2013–2014 Milken Institute Fellow, has conducted research for Merchav and the Ministry of Environmental Protection that focuses on the costs and methods of finance for urban infill and suburban development in Israeli cities. By comparing the detailed direct and indirect development and operating costs for the infrastructure, he found a significant difference between the cost of construction and maintenance. For construction, the costs for urban infill development are NIS 38,000 per apartment. For suburban development, the cost is NIS 152,000 per apartment, a 300 percent cost difference. For operations and maintenance, the costs for urban infill development are NIS 2,700 per unit. For suburban development, the cost is NIS 19,000, a 600 percent cost difference.

Further, Klempert identifies a series of financing tools that can be used to leverage the increases in value from urban infill development, including business improvements districts (BIDs), tax increment financing, (TIF), tax exemptions for development taxes, transfer of development rights and direct loans for infrastructure costs.

Attorney Shraga Biran, founder of the Institute for Structural Reforms, offered an innovative plan to revise the statutory planning process and promote urban renewal by transferring development (construction) rights to residents, leveraging public improvements, creating economic opportunities for new infill apartments, and increasing the value of properties in distressed communities for their residents.[36]

Another way to increase the supply of land is to give incentives to the ILA to participate in the projects by taking a share of appreciated equity in the land or a deferred land mortgage that can provide a priority return upon sale or refinancing of the project.

These proposals could counteract the "cost" to the ILA of actively promoting the use of land to accommodate affordable housing. They could enable the ILA and Finance Ministry to structure incentive-aligned, retained-interest transactions through which they would retain a significant equity interest in the portfolios to be sold and participate in the high potential returns.[37] Such public-private partnership transactions have proved to be efficient vehicles for maximizing the value of government-held assets and increasing the opportunities for affordable real estate development.

Solution 3: New Products

- **Long-term rental apartments**
- **Multifamily housing**
- **Scattered rental sites management**
- **Shared services**
- **Micro and modular housing**

Lab participants agreed that Israel can't keep building the same product the same way and expect a different outcome. Chaim Fialkoff of Hebrew University recommended the formulation of guidelines to estimate the need for affordable housing, and the use of this information to shape and implement local strategies. These strategies can stimulate the market to develop new approaches and products. By creating "pull" mechanisms in the market, sustainable and scalable affordable housing projects will come from local initiatives, not central, top-down government service companies.

Long-term rental programs could help create options for young families, seniors, and working families. The structure, design, and management of long-term rental projects could create financing opportunities and warrant new financial tools and incentives, as well as the creation of new management and service companies.[38]

The creation of long-term rental housing in the form of single buildings, commonly owned and managed, is very different from the traditional method of rental apartment development and management, and will require a long ramp to build the infrastructure needed to support it—the finance, management, investors, etc. In the meantime, one solution offered in the Lab was to create a quasi-governmental or government-supported entity that would offer management services for existing rental apartments (and in scattered sites), such as maintenance and repairs, marketing and leasing, and tenant services now done on an individual basis by each apartment owner.

The central government has launched a major initiative to stimulate the development of a long-term rental market. This initiative is part of the government's formation of the Housing Cabinet and the creation of a government

services corporation to manage the development of this sector. The goal of this program is to institute incentives for planning, development, and financing to support the creation of 150,000 apartments.

New approaches also include microapartments with shared services, such as increased common areas, but decreased parking facilities, and fewer new access roads but rather designs compatible with existing topography. While these techniques may require adjustments to zoning and construction requirements, they also offer the opportunity to achieve scale and affordability. Similar experiments are under way in other countries, such as France and the U.S., and are helping to meet the needs of target markets.[39] In New York City, for example, former mayor Michael Bloomberg introduced numerous successful affordable housing initiatives over the past decade.[40] More than 165,000 units of affordable housing were created by finding new land for them, creating incentives to develop housing for new buyers and renters, harnessing the private market to create affordable housing, and preserving government-assisted affordable housing.

Israel has its own innovative models of shared services. Historically, the kibbutzim experimented (and succeeded) with small, modular apartments and shared services, including common dining and recreation areas. While these were almost wholly agricultural and industrial collectives, the government has begun to experiment with urban collectives and has introduced cooperative housing models. Using vacant public housing, absorption centers for new immigrants, and even vacant hotels and schools, community initiatives have been adapting these new models for singles, young families, and seniors.

While the collective economic model is interesting and important, the relevant point is that trade-offs are feasible between size of apartment (smaller and lower capital costs) and shared services (lower marginal costs at scale), which creates the opportunity for affordable apartments and affordable communities.

Solution 4: Attract New Sources of Capital

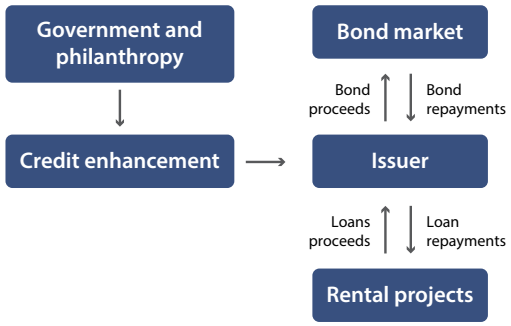
- **Bonds (international and domestic capital markets)**
- **Subordinated loan funds**
- **Bridge loans**
- **Credit enhancement**
- **Real estate investment trusts (REITs)**
- **Tax increment financing**

New scalable, sustainable sources of capital are key to the success of any project. Lab participants discussed the use of financing to fuel growth of the affordable housing market. Models from the United States, United Kingdom, and elsewhere illustrate that the use of the public debt market is the largest scalable source of capital.

This includes the use of bond debt, either on a project-by-project or pooled basis, using the long-term revenues from project investments for both long-term multifamily rental and for-sale projects. The use of subordinated loan funds can provide a lower-cost, long-term source of debt to reduce the loan-to-value ratio for the senior debt (either banks or bonds) and increase the likelihood of senior debt being made available.

FIGURE 15

Illustration of bond and credit enhancement structure

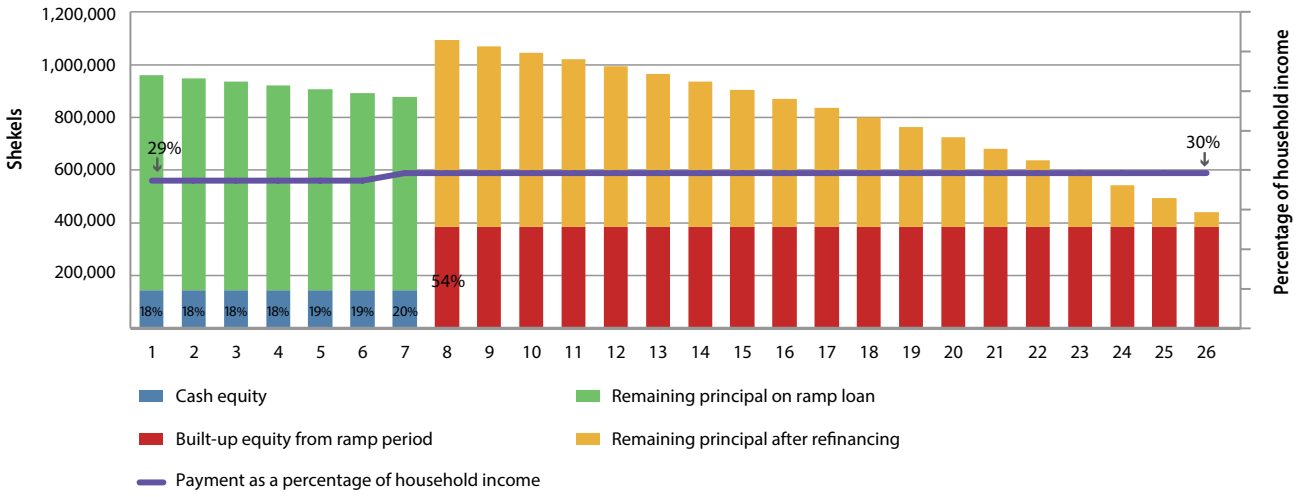


Source: Milken Institute.

Andrew Jakabovics of Enterprise Community Partners suggested an innovative kind of startup loan for homebuyers that could provide a ramp to overcome the equity thresholds for conventional mortgages. A ramp loan would fill in the missing piece of equity amount needed to buy the residence, especially for young families with limited cash equity. When the buyer has paid enough principal on the loan to qualify for a conventional loan, the ramp loan could be refinanced by a conventional lender with an even lower loan-to-value ratio, making the loan both affordable to the owner and attractive to the lender. This ramp facility could be capitalized by raising dedicated funds through Israel Bonds in the United States and repaid by the repayments from the ramp loans.

FIGURE 16

Illustration of a ramp loan facility



Source: Milken Institute.

This illustration is based on a soft source of capital (i.e., donations, concessionary subsidies from philanthropies, or grants that would defer direct requirements for return on investment) to finance the ramp loan at a fixed interest rate, 30-year amortization, seven-year balloon, and a 2 percent appreciation rate per year. The refinancing is provided by a conventional lender for a 20-year term at market interest rates. The payment is no more than 30 percent of the average household mortgage.

Another tool to leverage the senior debt is the use of a credit enhancement, either from government or philanthropic sources that absorb some of the risk from the bond buyers. This would create the opportunity to lower the operating costs of the projects and the occupancy costs for the tenants or buyers. These bonds could be issued through the government on behalf of private developers or quasi-governmental entities, and sold to international buyers to create a larger source of capital.

In conjunction with bond debt, the use of real estate investment trusts (REITs) could aggregate investors into specialized pools that lower entry costs, spread risks across a portfolio of project investments, and manage the targeted investments and returns on existing projects with proven cash flows. REITs have been successfully deployed in Israel on income-producing commercial projects, but not yet on housing. Models are available elsewhere for implementation with the development of the long-term multifamily market. For example, the Housing Partnership Equity Trust is a U.S.-based, social-purpose REIT owned by a consortium of nonprofit affordable housing developers with funding from a mix of for-profit investors and foundations that invest in multifamily rental projects for families and seniors.[41]

For the costs of public infrastructure, especially where those incremental costs can be paid by the incremental public revenues from projects, at least over the long term, Lab participants discussed the use of some form of tax increment financing (TIF). TIF uses the anticipated real estate taxes and development or impact fees resulting from the development, to fund the costs of new services and incremental infrastructure. In this way, the fiscal burdens on local authorities for new apartments can be neutralized.

Solution 5: Improve access to credit

The Enterprise Community Model

Enterprise Community Partners is a U.S.-based nonprofit organization that provides expertise and capital for affordable housing and sustainable communities.

Debt and equity financing are offered through its tax-exempt subsidiaries, Enterprise Community Loan Fund Inc. and Enterprise Community Investment Inc. Housing development and asset management services are offered through its for-profit subsidiary companies, Enterprise Homes Inc. and Enterprise Community Asset Management Inc. Multifamily financing and commercial real estate financing are offered through Bellwether Enterprise Real estate Capital LLC.

Enterprise closed $646 million in housing credit business, $50.8 million in new-market tax credit investments, and $848 million in multifamily mortgage loans. It deployed $1.5 billion for affordable and workforce housing developments, creating or preserving more than 16,800 homes. Altogether, Enterprise deployed nearly $2.5 billion in capital in 2013.

- **Shared equity**
- **Interest rate risk insurance**
- **Bridge loans**
- **Community development loans**

Lab participants discussed additional methods and tools to improve access to affordable housing,[42] including shared equity programs, in which the government or philanthropy retains an equity share in the project, thus reducing the amount of equity needed by the home buyer. Shared equity programs are common in the U.S. and U.K. markets. The government or philanthropic investor realizes its share of equity upon the sale or refinancing of the property.

Another tool could mitigate risk for banks by providing insurance on the interest rate, thus reducing the amount of the bank loan calculated on a variable basis.

A final set of tools includes subordinated loans to provide a ramp for homebuyers to pay down enough of the loan so they can establish an acceptable debt coverage for a bank loan, or to lower the overall cost of the debt with a blend of senior (bank) debt and subordinated (government or community-based) debt.

Another dimension of this activity could include the development of revolving community loan funds for housing, which would allow community-based stakeholders to organize projects and participate in the financial solutions on behalf of their own communities.

Fellows Research Highlights

Arnon Barak, a 2013–2014 Milken Institute Fellow, worked with the Ministry of Construction and Housing, and focused his research on a shared equity model, including structure, fiscal costs and benefits, and potential outcomes. The research includes a model based on international examples to structure the creation of a shared equity fund to provide a share of the equity for home purchases for qualified buyers.

The model demonstrates that based on the appreciation of the apartment values, the shared equity fund will realize a return on investment and a return of capital, and provide a way of reducing the cash needed by homebuyers. The shared equity program can also maintain its share of the equity, thereby creating a sustainable affordable apartment for subsequent buyers.

Post-Lab Research Findings

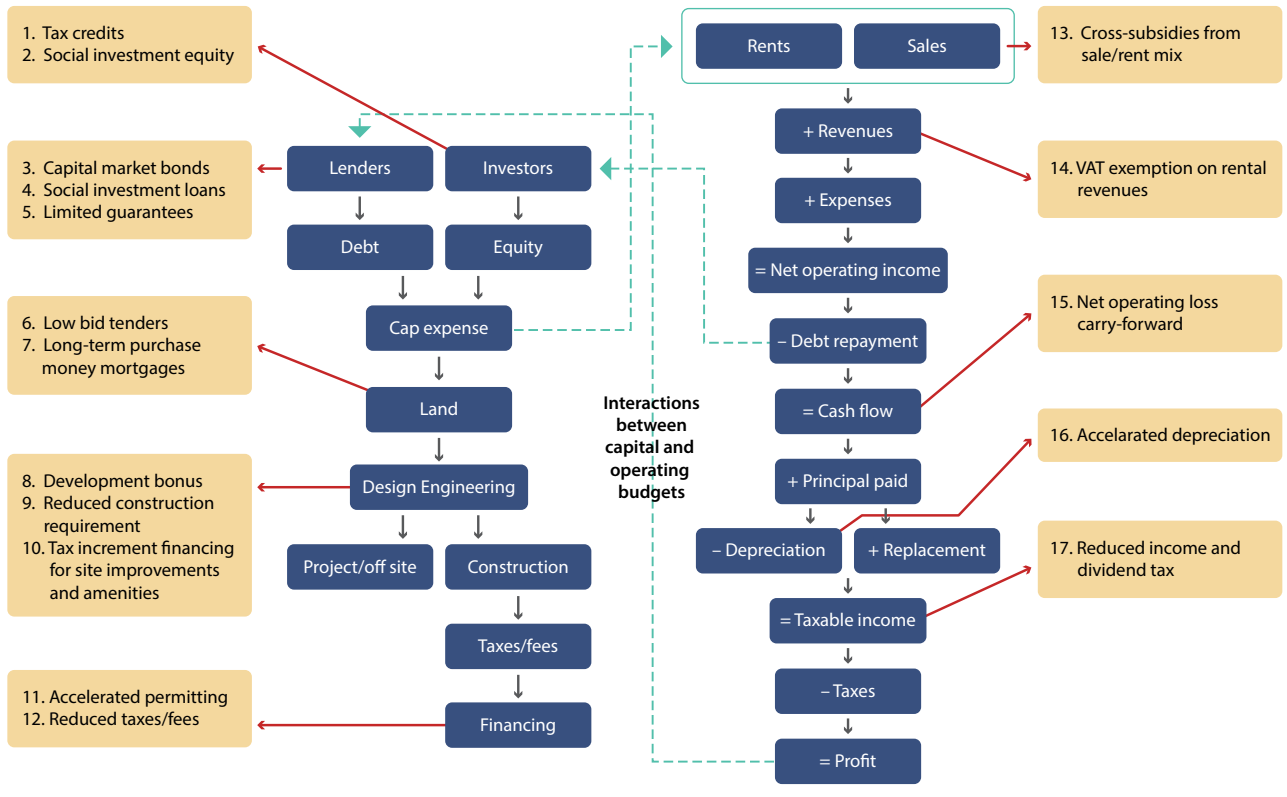
This section covers research and modeling produced as an outgrowth of the Lab proposals. Work included (1) studying the *financial context* for finance solutions and mapping the *financial tools*; (2) developing a *public-private partnership model*; (3) mapping the financial results through *model illustrations*; (4) reviewing *international benchmarks* on such issues as tax treatments of residential rental income; and (5) outlining *recommended legislative initiatives*.

FINANCIAL CONTEXT AND TOOLS

Lab participants discussed the applicability of the various tools and approaches in the context of capital and operation budgets at the project level. Each tool has a role in enhancing project feasibility and outcomes.

FIGURE 17

Financial context for solutions



Source: Milken Institute.

The following table lists selected financial tools and explains their use, importance, and costs.

TABLE 8 *Description of selected financial tools*

	What it is	How it works	Why it is important	Who pays for it
Subordinated debt	Secured, amortizing debt paid from the project's net operating income; applicable to multifamily rental and apartment buyers.	▪ Independent private, community, or government direct loans to eligible projects. ▪ Collateral and payments ▪ Usually includes deferrals, lower interest cost, and longer terms for repayment. ▪ Management through a separate revolving loan fund or contract to a financial institution for underwriting and loans management.	▪ Improves the debt coverage for senior debt, making conventional loan possible. ▪ Lowers the borrowing cost for the project, making affordable rents to tenants feasible. ▪ Improves project cash flow and dividend returns to investors.	▪ Loan fund capitalized by government and philanthropy investments and capital market loans (securitizing the repayments from loans).
Investment tax credit	A credit against the tax liability of an equity investor in an eligible project.	▪ The developer structures an eligible project (e.g., a long-term multifamily rental) and receives approval to use a tax credit. ▪ A percentage is applied to the eligible capital cost (e.g., construction, design, direct financing, land). This is the face value of the annual tax credit amount. ▪ The developer sells the discounted value (e.g., 10 years) of the credit to outside passive investors. ▪ This discounted credit, after structuring and selling costs (referred to as syndication costs), is invested in the project as equity. ▪ The passive investors claim the "face value" of the credit against their tax liability for the period of the tax credit. If the project is sold or does not comply with the regulations, the tax credit is prorated.	▪ Reduces the amount of developer's equity needed in the capital structure. ▪ Expands the base of potential investors in targeted projects. ▪ May increase the amount of equity available for the project, improving cash flow. ▪ Boosts the returns to investors by reducing their general tax liability.	▪ The syndication costs are paid from the proceeds from the tax credit. ▪ The government forgoes the amount of the tax credit on corporate or personal income taxes from the tax credit beneficiaries for the period of the tax credit. However, there is no direct government expenditure.

Source: Milken Institute.

TABLE 8

Description of selected financial tools - continued

	What it is	How it works	Why it is important	Who pays for it
Capital market bonds	Debt issued in the public or private capital bond markets	▪ A rental housing developer proposes an eligible project to a public or quasi-public bond issuer. ▪ The bond issuer packages the project either alone or along with other projects. The bonds require a senior mortgage on the apartment building project being financed. ▪ The bond issuer sells the bonds publicly (e.g., sophisticated investors) or privately (e.g., pension funds, corporate investment funds, etc.). ▪ The proceeds are loaned to the project and repaid from the project's net operating income. ▪ Depending on the creditworthiness of the project, the bonds may require letters of credit, guarantees, or special insurance.	▪ Longer terms for repayment; flexible repayment schedule, and fixed-rate, lower-cost interest improve the financial feasibility of the project. ▪ Project pools can be structured to improve the collateral and credit quality of the bonds. ▪ Costs are financeable.	▪ Public and private bond markets are the sources of the funds. ▪ The projects may be guaranteed in part by public or philanthropic sources, but recourse is generally limited to the project assets.
Credit enhancement	A pledge to cover part or all of the debt on a project, transferring a share of the risk for the debt from the lender to the guarantor.	▪ A guarantee is a contract to pay the lender a designated amount (all or a portion) of the debt in the event of a delinquency or default. ▪ The guarantor makes the payment, which may be a first-loss payment up to a certain amount, or a pro rata payment based on the guarantee's coverage of the loan. ▪ The borrower must repay the guarantor for the advance of the guarantee. ▪ The borrower assigns rights of the assets to the guarantor to cover a portion of the loss. ▪ The guarantees are a limited obligation, capped at the agreed-upon guarantee amount, and are non-recourse to the guarantee providers (e.g., philanthropy, government).	▪ Guarantees may lower the risk of the borrowing, saving between 50 and 200 basis points on the debt and improving the financial feasibility of the project. ▪ Guarantees may make a borrowing possible.	▪ The fee is paid by the borrower on the basis of 0.5–1.25 percent of the outstanding principal. ▪ The guarantee funds are provided by a combination of philanthropic investments, standby social investments, and government funds.

Source: Milken Institute.

TABLE 8

Description of selected financial tools - continued

	What it is	How it works	Why it is important	Who pays for it
Land mortgage	Financing the purchase of the land for development of long-term rental housing.	▪ Market value of the land when the project commences is documented. ▪ An unsubordinated mortgage on the land is executed and recorded. ▪ The land mortgage may be interest-only payments or deferred and accrued interest for a period, up to the repayment of the first mortgage lender. ▪ The land mortgage will be repaid, including principal and interest, over a longer term (e.g., up to 40 years from the commencement of the project).	▪ Eliminates the upfront payment for the land, lowering the amount of the capital needed to finance the project. ▪ Adds a source of financing to the capital structure. ▪ Lowers the debt cost from project net operating income during the term of the senior debt	▪ The Israel Land Authority forgoes upfront payment for the land; but the returns on the land mortgage pay back the value, plus interest, making the land mortgage a competitive investment for the ILA.
Shared equity	Participation or sharing the equity required by an apartment buyer.	▪ A patient shared equity fund is created by public or philanthropic sources. ▪ An eligible buyer, based on the income level, location, or some other criteria, provides not less than 10 percent of the equity in cash. ▪ The shared equity pool invests the remaining amount of the equity needed. ▪ The shared equity pool is paid back its pro rata share of the equity upon sale or refinancing of the apartment.	▪ Lowers the amount of cash equity required for an apartment purchase. ▪ Does not increase the debt required, thereby creating an affordable solution to apartment purchases.	▪ A shared equity fund can be created by a leveraged mix of philanthropic and public investments. ▪ Returns from participation in the rise of the market and sharing pro rata distribution of the sales or refinancing proceeds can repay the shared equity fund.
Tax increment financing	Financing public improvements based on the expected increases in tax revenues from the project.	▪ A project plan is approved, including residential, commercial, transportation, and amenity improvements. ▪ The expected tax increments resulting from the improvements for a designated period are pledged to pay for the cost of the improvements. No current taxes or fees are pledged. ▪ The pledge of the tax increments is used to leverage a borrowing of the cost of the improvements. ▪ The improvements are carried out, the tax increments are paid, and the debt is repaid.	▪ Creates a self-financing source of funds to pay for related capital improvements. ▪ Lowers the capital costs for off-site and related public improvements and amenities, improving the attractiveness and feasibility of the project. ▪ Works best in a mixed-used project.	▪ Tax and fee payers in project area, including project residents, surrounding residents, and commercial properties.

Source: Milken Institute.

TABLE 8

Description of selected financial tools - continued

	What it is	How it works	Why it is important	Who pays for it
Reduced construction	Reduction in the construction of parking spaces or the size of the units.	▪ In order to meet the municipal parking requirement, urban projects often include underground parking, requiring extensive excavation and foundation systems. Alternatively, projects may build cheaper surface parking, but pay for the additional land. ▪ An infill urban housing development can take advantage of access to public transportation. As a result, the municipal requirements for parking spaces may be lowered or eliminated. ▪ Projects may include small or even microapartments, and have shared spaces or common services.	▪ Lowers the capital cost, reduces the financing needed, and improves the cash flow and returns on investment on the project.	▪ The lack of dedicated parking may affect the marketability of the project. ▪ The variety of size and apartment types, along with shared spaces and services, may be attractive in the market, particularly for students and aging seniors.

Source: Milken Institute.

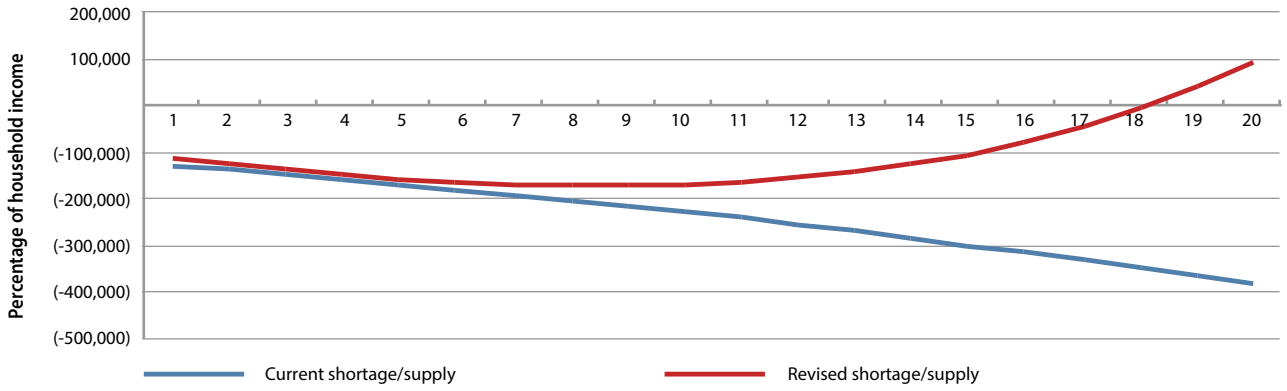
PUBLIC-PRIVATE PARTNERSHIP MODEL

Based on the Lab's analysis and discussion, it was possible to estimate the costs and benefits of a comprehensive public-private partnership to attract apartment development and leverage the required financing. It was also possible to calculate the cost of the public and philanthropic investments needed to act as a catalyst for a sustained, balanced apartment market.[43]

Based on three factors—the current supply, the rate of new inventory being added, and estimated apartment needs, based on population growth—the current shortage can be overcome with the addition of about 15,000–20,000 apartments per year over the next five years, for a total of 92,000 new apartments.

FIGURE 18

Estimated supply shortage and projected supply surplus



Source: Milken Institute.

Given the severity of the shortfall and continuing demand, however, continuing this rate of new construction will not result in a reversal of the growing gap until Year 9, and a break-even in supply and demand in Year 19, allowing prices to adjust gradually.

Projections call for a mix of rental and for-sale apartments in the rough proportion that exists in the market today (70 percent and 26 percent, respectively) and about 50 percent in the urban centers, with lower infrastructure costs. Finally, given the need to create incentives, approximately 50 percent of the new supply would be priced for affordability, meaning that no more than 30 percent of the average household income would be spent on occupancy costs.

The partnership would focus on projects that qualify according to the following criteria:

Location: Emphasis would be on urban, infill, and renewal areas, as well as access to public transit to employment centers.

Project types: Multifamily rental and for-sale apartments; projects could include combinations of for-sale and rental apartments, and some commercial and shared spaces.

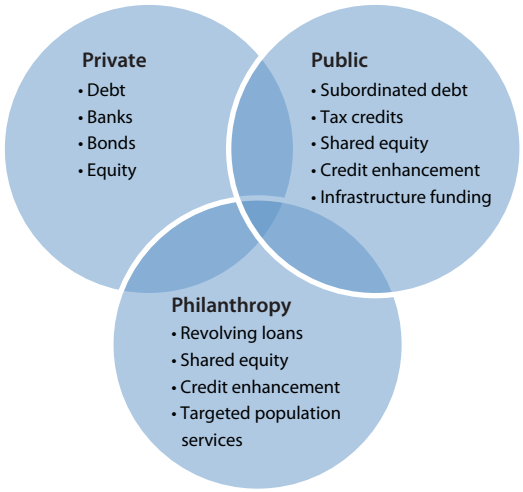
Project size: The average apartment size would be 80 square meters (or about 860 square feet).

Affordability: Debt, tax, and utilities would cost less than 30 percent of household income.

For the first five years, capital costs for rental apartments are estimated at NIS 20 billion. The capital structure would include a mix of private equity, sales, senior debt, and subordinated debt to improve the debt coverage, and tax credits to supplement the private equity. There would be a need as well for credit enhancement for the conventional debt, which could be structured for banks or bonds. This credit enhancement would cover the first loss on a qualified rental project, providing an affordable rent for a designated portion of the apartments of up to 10 percent of the principal borrowed and lowering the interest rate.

FIGURE 19

Public-private-philanthropic partnership



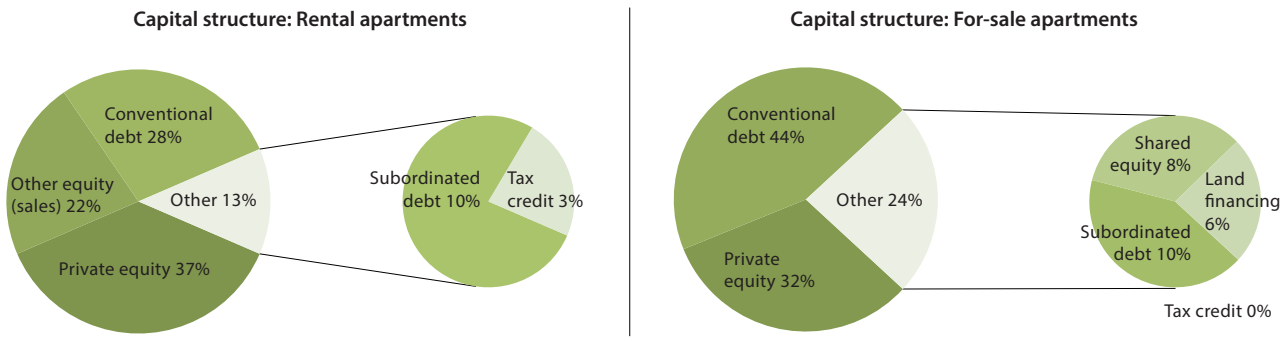
Source: Milken Institute.

With respect to for-sale apartments during the first five years, the capital costs are estimated at NIS 63 billion. The capital structure would include a mix of private equity and conventional debt, as well as a proposal to leverage affordable apartments through a combination of subordinated debt, shared equity, and land financing. In addition and in light of the variable indexed interest for conventional loans, it would be advisable to provide an interest rate guarantee for qualified projects to absorb the increases in interest costs that eventually render the apartments unaffordable.

The sources of funding to support this partnership would come from investor equity and private debt, as well as from banks, and bond markets. The bond markets offer lower-cost, fixed-rate, and longer-term debt financing for projects in the rental market. These bonds could be structured financings, pooling together groups of projects to create a portfolio of investments for a larger group of bond buyers, possibly through a REIT.

FIGURE 20

Capital structures for rental and for-sale apartments



Source: Milken Institute.

The public sources for this partnership could be made available through initial budget allocations to capitalize a subordinated debt fund.

- This subordinated debt fund could be structured as a revolving loan fund, with repayments of principal and interest paying for operating costs and new loans to qualified projects.

  A portion of the subordinated debt fund could be capitalized through a special revenue bond with pledged loan repayments (called a covered bond) supported by project debt. The bond could be issued through an international bond facility, such as Israel Bonds, and managed through a network of community development financial institutions[44] (CDFIs) to improve access to financing.

  An important part of the subordinated debt in for-sale projects will be land financing, i.e., taking a mortgage on a portion of the purchase price of the land. This would allow the buyer to reduce the upfront costs of the land and pay it over a long term.

- The government could provide tradable (salable) tax credits for personal or corporate tax liabilities to investors in qualified projects. These tax credits could be used on a prorated basis over a 10-year period. The public cost is the opportunity cost of reductions in corporate and personal taxes for the tax credit period.

- Shared equity and bridge loans could be jointly funded by the central government and philanthropic investors in a joint equity investment pool for qualified homebuyers. The source of the funding for this capital pool could be an international bond, such as a targeted stream through the existing Israel Bonds network.

  This amount would reduce the equity required by the homebuyer. It would be repaid on a prorated basis from appreciation in the value of the apartment upon sale or refinancing.

- Infrastructure funding could be leveraged on the anticipated real estate taxes and development fees. The funding would be used to cover the incremental costs of municipal services and new infrastructure costs needed to accommodate the new or renovated apartments.

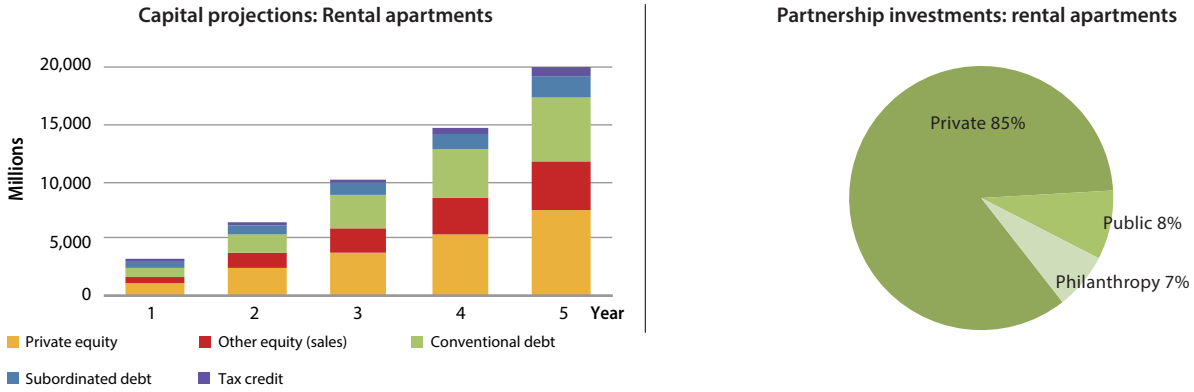
- The final part of the public role in the partnership is to share the cost of credit enhancement for both a portion of the private debt and the interest rate risk. The credit enhancement pool could be supported through balance sheet pledges from international philanthropic fund endowments and the government's guarantee program.

The philanthropic investors would participate in the subordinated debt, credit enhancement pool, and the shared equity. The philanthropy would also invest in services for special populations, including students, the elderly, and the handicapped.

Based on this capital structure, the following charts illustrate the amount of each source of capital over the first five years of the investment.

FIGURE 21

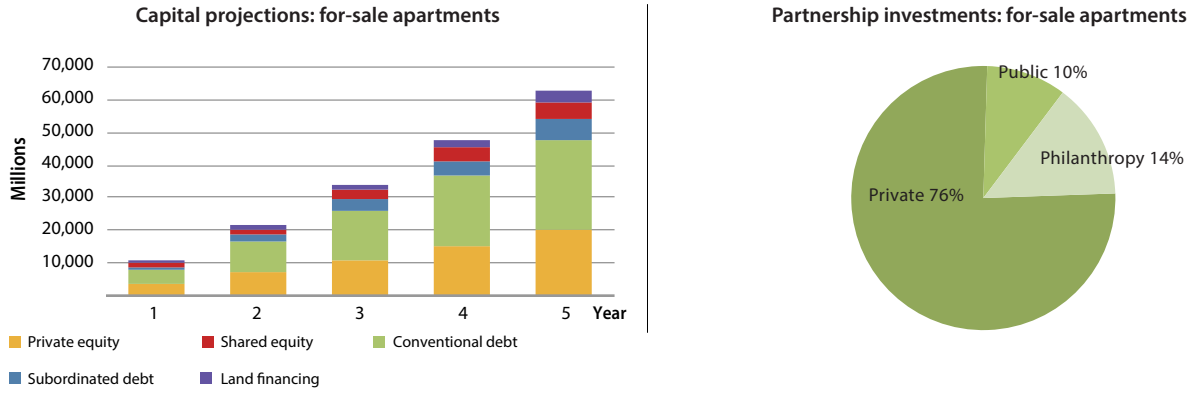
Capital structure for rental apartment developments



Source: Milken Institute.

FIGURE 22

Capital structure for for-sale apartment developments



Source: Milken Institute.

The private investments would be leveraged by public and philanthropic sources, demonstrating a 6:1 leverage ratio of private to public-philanthropic investments for rental apartments and a 3:1 leverage ratio to support investment programs for for-sale apartments.

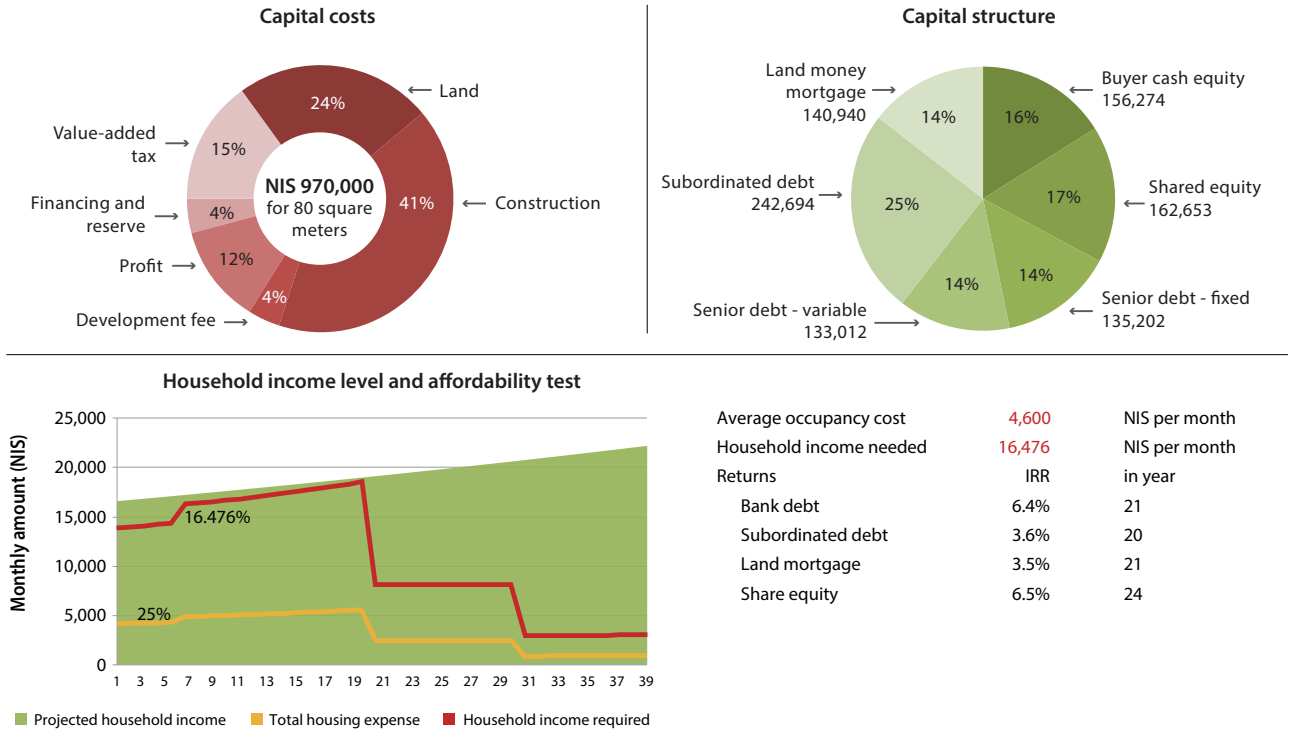
FINANCIAL RESULTS THROUGH MODEL ILLUSTRATIONS

Based on the Lab discussions, several modeled scenarios illustrate how selected tools and approaches to project and capital structure could affect the financial (feasibility and returns) and program outcomes (affordability).

The first example illustrates a for-sale apartment. The project structure calls for a small apartment, thereby lowering the capital costs. On the capital structure, this illustration highlights the use of a land loan and subordinated debt to lower the debt burden and shared equity to lessen the buyer's equity requirement.

FIGURE 23

For-sale apartment model: Costs and structure



Average occupancy cost	4,600	NIS per month
Household income needed	16,476	NIS per month
Returns	IRR	in year
Bank debt	6.4%	21
Subordinated debt	3.6%	20
Land mortgage	3.5%	21
Share equity	6.5%	24

Source: Milken Institute.

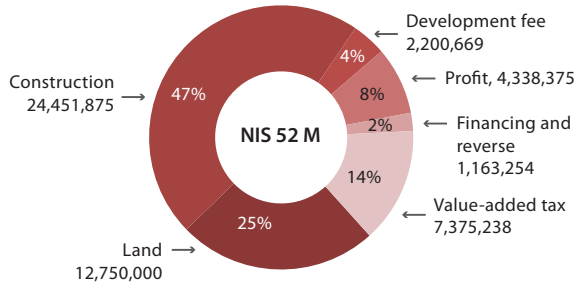
- Typical apartment size would be 80 square meters at an estimated cost of NIS 970,000.
- Fifty percent of the land cost is financed by the ILA, with an estimated internal rate of return of 3.5 percent.
- The buyer's equity is matched by a government or philanthropic shared equity, which is returned upon resale or refinancing, or by Year 24, whichever is first, at an estimated internal rate of return of 6.5 percent.
- The government and/or philanthropy provides a long-term, low-cost, subordinated loan for 25 percent of the project cost.
- The buyer pays a guarantee fee to cover the interest rate risk and reduce the cost of the floating rate, indexed bank loan.
- The buyer's occupancy costs remain at a target rate of approximately 25–30 percent of household income, including anticipated changes in interest costs on the bank loan.

The next example shows a rental apartment. The project structure includes a mix of affordable and market rate apartments, with several apartments for-sale at market rates. The capital structure demonstrates the use of a tax credit to lower the developer's equity and boost return on equity for the investors, and subordinated debt and the proceeds of apartment sales at market rates to lower the debt costs.

FIGURE 24

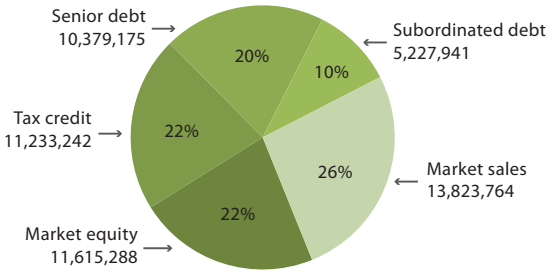
Rental apartment model: costs and structure

Capital costs

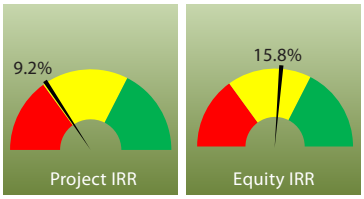


Total project cost	52,279,410
Total cost per apartment (average)	1,045,588
Total apartments	50

Capital structure



	Household income (monthly)			
Occupancy cost	16,500	25,000	35,000	Apartments
4,564	Affordable	Affordable	Affordable	23
5,959	Unaffordable	Affordable	Affordable	11
7,501	Unaffordable	Unaffordable	Affordable	11
1,902,353	Unaffordable	Unaffordable	Affordable	5
				50



Source: Milken Institute.

- Density could total 50 apartments per project.
- Average project cost would total NIS 52 million
- There would be no reduction in land cost or deferral on payment.
- The investor's cash equity is reduced by social equity funding and sale of tax credits, yielding on estimated internal rate of return of 16 percent for equity and 9 percent for the total investment, assuming a sale of the project in Year 10.
- Five of the apartments are sold for cash to pay for capital costs.
- Total occupancy cost for nearly 50 percent of the rental apartments is affordable (no more than 30 percent of the average household income).
- All apartments can be sold in Year 20.

RECOMMENDED LEGISLATIVE INITIATIVES

On the basis of the discussion and follow-up, the following changes are recommended to the 2007 Law for the Encouragement of Rental Housing. These adjustments are intended to increase inventory of apartments by multifamily operators.

TABLE 9 *Current legislation and possible adjustments*

Current Legislation	Recommended amendments pursuant to Lab and follow-up
Structured as entitlement available to eligible projects:	
▪ At least 16 apartments on four floors; apartments should not exceed 100 square meters	▪ Higher density (at least 50 apartments) construction ▪ Smaller apartments (average 80 square meters)
▪ New construction with at least 50 percent of the floor area of the building and 70 percent of the apartments for rent for a period of five of the first seven years after construction	▪ Hold apartments for at least 10 years ▪ Bonus incentives for holding for 20 years ▪ New construction and/or renovation of existing buildings
▪ Average rents less than NIS 6200 per month[45]	▪ At least 50 percent of the apartments would rent at less than NIS 4,200 per month
	▪ Permission to sell no more than 10 percent of apartments at market rates; explicitly allow affordable sales with long-term (min. 10 year) affordability restriction on sales price
Benefits include:	
▪ Accelerated depreciation (20 percent per year) on construction (not land) if project has positive cash flow ▪ Exemption of the appreciation tax if the building is operated for rentals for 25 years	▪ Developer to pay appreciation tax, but in urban redevelopments, able to allocate tax increments for related public improvements (infrastructure and public spaces)
▪ Reduced tax on rental income: 11 percent for companies and 20 percent for individuals; 10 percent on company income if the investment in the company exceeds 90 percent ▪ Dividend tax: 15 percent tax on dividends distributed ▪ Reduced purchase tax: 0.5 percent	▪ Eliminate tax on rental income for first 10 years; average apartment leases for five years or more
▪ Rent income exempt from VAT for a period of 25 years (Sec 31(1) of VAT Law)	▪ Direct reduction in corporation or personal taxes equal to 20 percent of the capital contribution to equity for qualified projects; usable over five-year term; transferable (saleable) to qualified investors
▪ VAT exemption on sale of rental portion of building if rented for at least five years (Sec 31(1a) of VAT Law)	▪ If rented for at least 10 years; average apartment leases for five years or more ▪ No VAT exemption for apartments for sale

Source: Milken Institute

Roadmap

Lab participants reviewed how each tool or program could be applied to encourage affordable housing. Each has impact on either capital structure, project structure, or both. Project structure involves the product type, features, size, and even participants.

Examples of these types of tools or programs include the *land-use requirements*, such as building density (floors), apartment size, features (parking), and public and/or shared spaces. *Project structure* also includes organization, ownership, and apartment type (sale or rent). *Capital structure* involves the sources of financing, the way the project financing is layered, how dividends are paid, what types of collateral or credit enhancements are used, and how revenues are structured and secured, as well as tax treatment of the property, revenues, and profits.

Table 10 summarizes how each solution addresses a major stakeholder challenge, in terms of both project and capital structure.

TABLE 10

Challenges and solutions among stakeholder perspectives

	Challenge	**Project solutions**	**Capital solutions**
Municipalities	1. Aim for best use of revenues 2. Increase services (education, utilities, sanitation, religious services, etc.) 3. Find ways to pay for increasing costs 4. Rethink the relatively small fees given to local governments for the sale of the property by the Israel Land Authority	1. Amenities 2. Expanded infrastructure 3. Mixed uses	1. Tax increment financing 2. Government compensation for incremental costs
Government	1. Provide more housing 2. Provide more affordable housing 3. Make the most of a limited budget 4. Find available land and reduce cost 5. Finance incremental infrastructure costs	1. Accelerate permitting 2. Urban and brownfield redevelopment 3. Estimate needs for affordable housing; coordinate information and plans to meet these needs	1. Land financing 2. Open new sources of capital 3. Leverage credit enhancements 4. Tax benefits
Developers/ investors	1. Offset high costs 2. Provide competitive returns for equity investors 3. Secure competitive conventional debt at reasonable costs and terms 4. Manage rental apartments efficiently 5. Find a buyer in order to return equity investment	1. Development partnerships 2. Mixed uses	1. Land financing 2. Tax benefits 3. Limited guarantees 4. Capital market bonds 5. Subordinated debt 6. Philanthropic/Social equity
Tenants and buyers	1. Spend no more than 30 percent of household income on rent 2. Save enough money to have required equity for home purchase 3. Cover direct (taxes, utilities, services) and indirect occupancy costs (travel to work, etc.) 4. Create a sustainable, affordable community with services to meet community needs	1. Multifamily rental housing 2. Community financing, ownership, and management 3. Urban infill 4. Shared spaces	1. Shared equity 2. Community-based financing 3. Ramp loans

Note: The Israel Land Authority pays municipalities a 12% development fee for tender-based sales. However, for redevelopment projects the fee is usually waived.

Source: Milken Institute.

For **municipalities**, the *project solutions* would provide expanded amenities and infrastructure for new residents, and strengthen existing amenities for current residents. The solutions also focus on integration of multiple uses, including recreational, commercial, and residential uses, to create high-quality, community-oriented spaces with higher densities.

The *capital solutions* include opening the use of incremental taxes and fees to finance municipal improvements and recognizing that new residents require increases in municipal services to be compensated by increases in central government transfer payments, at least in the short term.

For the **government**, the *project solutions* include accelerating the pace of development by facilitating the approval of plans and permits; increasing the pace of land tenders; opening new land for development, including former industrial and military sites; and refocusing on urban infill areas.

For *capital solutions*, the government can finance the acquisition of land by offering a mortgage to finance the purchase; provide credit enhancements for debt; and open new sources of debt, including the capital markets. The government can also offer tax benefits, including tradable tax credits based on the capital investment in a qualified project and an exemption from the interest income on debt extended to qualified projects.

For **developers and investors**, the *project solutions* include development partnerships with community-based partners and mixed-use projects that intensify development and lower the project risk.

For *capital solutions*, financing the purchase of the land can lower the debt cost and lessen the financial strain on the project. Tax benefits can allow the developer to offer investors a tax credit. Credit enhancements can permit developers and investors to share a portion of the financial risk. Finally, by opening new sources of capital, such as the capital markets, developers will have competitive choices in pricing and terms of capital, thereby lowering the cost of the project.

For **tenants and buyers**, the *project solutions* include creating a new class of projects, including multifamily (sometimes referred to as multitenant) long-term rental apartments, and new types of owned-occupied and rental apartments (with shared spaces, smaller square footage, and cheaper costs). It can also mean the creation of "affordable communities" in urban infill locations, with low-cost, shared services, proximity to work locations, and public transit.

For *capital solutions*, tenants and buyers can have access to pools of shared equity to lessen the down payment burden, and community-based lending to provide short-term financing until the conventional financing for the principal loan is affordable.

Conclusion

Lab participants reached agreement over four broad policy directions to guide the development of affordable housing solutions.

1. **Expand housing types and price points (rents and sales prices).** This includes the development of investment vehicles for long-term multifamily rental projects; management companies for multifamily projects and scattered sites; and competitive land pricing.
2. **Refocus in urban areas.** Create infill solutions; balance municipal fiscal issues; improve urban services and amenities; accelerate permits and building; and build community involvement.
3. **Reinvent affordable communities.** This includes using new housing forms; shared services; microapartments; shared equity for new homeowners; and cohousing for students, young families, and seniors.
4. **Invest in sustainable financial solutions.** New initiatives should seek to sustain public outcomes (affordable apartments) for the longer term. This can be done by "paying forward" the benefits so that in addition to the initial tenants, subsequent tenants can benefit from the public investment.

The combination of these policy directions with long-term partnerships of private, public, and philanthropic investments will result in substantial new housing, both market-rate and affordable, to meet the needs in the Israeli market.

APPENDIX

Financial Innovations Lab Participants

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ENDNOTES

1. In Israel, more so than in the U.S., the term "apartment" refers to a rented or owned residence in a building with multiple units. For owned apartments, the owner has an interest in the building and a responsibility to the operations and upkeep of the whole building, similar to the owner of a condominium in the U.S.. For-rent apartments are usually rented by individual apartment owners on a private, one-on-one basis. "Affordable" apartments are not specifically defined, as they are in the U.S. and other markets, although there are several Israeli regulatory initiatives over the past decades to define the term.
2. "Locally Initiated Affordable Housing Projects in Israel," Sarah Kreimer and Chaim Fialkoff. Tel Aviv University Legal Clinics. May 2012.
3. This estimate is based on the 1995 census and is adjusted by the new inventory built each year through 2013, according to the Ministry of Construction and Housing.
4. The definition of public rental housing varies among countries, including publicly owned housing with long-term rentals (project housing) and voucher subsidies for rental of private apartments (e.g., Section 8), and nonprofit or local authority housing companies and nonprofit management (e.g., "registered social landlord" and an arm's length management organization [ALMO]). In many countries, there is a trend to transition from public ownership to private ownership and management, with methods to maintain long-term affordability.
5. Approximately 5 percent of households live in other forms of housing, such as institutional and long-term care facilities.
6. Household mortgage debt outstanding to banks rose from NIS 136 billion in 2007 to NIS 242 billion in 2012, an increase of 78 percent. While a substantial portion of this was from refinancing to take advantage of the lower interest rates in 2010, the rise continued through 2013. "Israel's Housing Price Boom: Matching Demand with Supply." Knowledge @ Wharton. Wharton School of the University of Pennsylvania, August 2013.
7. Ibid.
8. The source for this data is Numbeo, an online user-contributed database comprising a number of socioeconomic areas. The residential data for Israel represents 7,446 entries from January 2013 to May 2014. See: *http://www.numbeo.com/property-investment/country_result.jsp?country=Israel.* Last accessed May 18, 2014.
9. In Israel, renters are responsible for paying their property taxes directly to the local authority, as opposed to having taxes be the responsibility of the owner in the U.S., which is ostensibly passed through to the tenant in the overall rent paid. That may account in part for the significant difference between the gross yields in the U.S. and most other countries.
10. This represents approximately NIS 9,000 per worker in employment income, and approximately 1.6 incomes per household, according to the 2012 Household Expenditure Survey, National Insurance Institute, and the Central Bureau of Statistics.
11. Each decile is made up of 10 percent of Israeli households.

12. Bank of Israel. Annual Report. Chapter 5. 2013.
13. The Bank of Israel regulates the local mortgage industry. Among the requirements, home mortgages must be covered with a 100 percent capital reserve, making them expensive for the lender. To cover the interest risk, variable rate mortgages are linked to the prime rate or a cost of living index. These loans can be for up to 30 years. For loans linked to the cost of living, the outstanding principal is adjusted accordingly, resulting in a proportionate change in the interest charged for each period. Fixed-rate loans are available for a term of 20 years.
14. We use the following loan terms: loan-to-value = 60 percent; term = 20 years; interest rate = 5.5 percent fixed.
15. Housing Expenditures Survey. Central Bureau of Statistics. 2013.
16. Ministry of Construction and Housing, Price Index of Dwellings–Changes, Table B.1., Bank of Israel, Real Wage Index by Industry, 1980-2012, Table 5.A.7.
17. This mismatch potentially creates systemic risk for banks with large mortgage portfolios. Based on a Bank of Israel report (see next footnote), this is leading to an adjustment in mortgage risk reserves (and bank profitability) and may lead to a slowdown in mortgage lending activity.
18. See: *http://www.bankisrael.gov.il/en/NewsAndPublications/PressReleases/Pages/15-09-2013-morga.aspx*
19. These measures are derived from the Numbeo website, which includes a user-based compilation of data about property prices, rents, and third-party demographic sources. The data are based on 2011 and 2014 (June). Each year's summaries are based on the end of first quarter. The measures include: (1) a price-to-income ratio, the basic measure for apartment purchase affordability and the ratio of median apartment prices to median familial disposable income, expressed as years of income; (2) gross rental yield, the total yearly gross rent divided by the house price (expressed in percentages); (3) the price-to-rent ratio, the average cost of ownership divided by the received rent income (if buying to let) or the estimated rent that would be paid if renting (if buying to reside); (4) mortgage as a percentage of income, the ratio of the actual monthly cost of the mortgage to take-home family income; (5) gross rental yield, the total yearly gross rent divided by the house price (expressed in percentages); and (6) a loan affordability index, the inverse of average mortgage as percentage of average income.
20. The price-to-income ratio for the first quarter 2014 is estimated based on the projected median household disposable income, based on trends (actual income data are not yet available for 2014 on a country basis) and on the estimated median apartment price for each country.
21. Larger developers have larger reserves and experienced teams to handle the complicated processes. Smaller developers and new entrants into regulated markets find it difficult to overcome the bureaucracy.
22. With projected need for total apartments based on the Housing Cabinet's plan, the estimated cost of land is NIS 35 billion. This assumes a mix of urban, suburban, and rural areas, and an average lot price and standard building densities.

23. Ministry of the Interior. Survey of Sites for Housing. May 2014.
24. "Government finds it has more land for homes than it needs." Nimrod Bousso. *Haaretz.* May 13, 2014.
25. "Planning Residential Districts in Tel Aviv and the Center," Deshe Institute, Planners Forum, and Society for the Protection of Nature, April 2014.
26. TAMA 38 is the National Outline Plan 38 for the Seismic Strengthening of Existing Buildings. Adopted in 2005, the law applies to buildings erected before January 1, 1980.
27. There are two types of Tama 38: Tama 38/1, in which the additional construction is on top of the building and strengthening the existing apartments; and Tama 38/2 (since 2010), which refers to demolition of the building and construction of a new one with more apartments.
28. TAMA 38 offers special incentives in disadvantaged communities and targeted disadvantaged populations to encourage apartment owners to participate in the program. Several concerns are raised with these incentives: (1) They may be insufficient to have an economic impact on the decision-making for investment; (2) the targeted incentives may have the effect of maintaining poor areas, instead of integrating these areas with mixed incomes; (3) the use of the program in targeted neighborhoods may be mutually exclusive with other urban renewal incentives and programs and (4) the program may have a secondary impact of creating new apartments, but it is not the priority or focus of the program.
29. In 2012, the Ministry of Finance introduced a tax exemption on the cash-flow distributions for institutional investors, called provident funds in Israel, for long-term rental apartments.
30. The Bank of Israel requires 35 percent reserve for apartment mortgages.
31. New homes are larger today (140 square meters in 1990 vs. 180 square meters in 2010) and more expensive. "Affordable Housing," *The Jerusalem Report.* Shlomo Maital. January 2011.
32. The real estate tax rate on residential use is less than the rate for commercial use, even though the municipal costs for residential uses are higher. This creates a perverse incentive toward commercial development for the municipality.
33. A purchase-money mortgage is a form of seller financing. The seller conveys the land and extends a mortgage on the land for the buyer. Rather than the buyer securing a mortgage from a bank and repaying the bank with interest, the buyer pays the seller the principal and interest over the term of the purchase-money mortgage. This strategy lowers the amount of financing from lenders and allows the land seller the opportunity to receive payment for the land plus interest, albeit over time.
34. The effective interest rate charged on the portion of the land financed can be used to cover the opportunity cost of the deferred capital. If the mechanism is to use a portion of the land, the amount paid to the ILA at sale or refinancing would be equal to the amount deferred plus a share of the increased value of the land.

35. "Lab for New Urbanism, Tools for Revitalizing Neighborhoods, Strengthening City Centers, and Solutions for Affordable Housing." Movement for Israeli Urbanism. October 2012 [Hebrew]. This work, along with a special, multiministerial committee led by the Ministry of Environmental Protection, has been focusing on the opportunity of urban infill and the cost differential between urban infill and urban periphery development. See: *http://www.globes.co.il/news/article.aspx?did=1000928004*.

36. Shraga Biran. Institute for Structural Reforms. "Structural Reform in Planning." February 2013.

37. Cyrus J. Gardner and Roger C. Kormendi. "Retained Interests Transactions: Models from the RTC." *Journal of Corporate Renewal.* February 1, 2000.

38. The model of rental housing in Israel is almost exclusively dominated by scattered apartments. Apartment owners individually market, rent, and manage apartments, usually on a short-term (one to two years) basis. Each owner handles the fiscal matters, operations, legalities, and services.

39. "Alternative Housing Models to Create Affordable Communities: The Case for Micro Apartments," Lili Friedler, Milken Institute Fellows Program, (Hebrew), publication forthcoming.

40. See: *http://www.archdaily.com/324418/adapt-nyc-competition-announces-micro-apartment-winner-and-finalists/*

41. The Housing Partnership Equity Trust has attracted investments from Citi, Morgan Stanley, Prudential Financial, the John D. and Catherine T. MacArthur Foundation, and the Ford Foundation.

42. Enterprise Community Partnership website. See: w*ww.enterprisecommunity.com*

43. This analysis is based on data presented in the Lab, as well as research and modeling about a range of apartment types, price points, and scale.

44. Community development financial institutions are a class of community lenders, including community loan funds and community banks, such as cooperatives and credit unions. Because these institutions specialize in affordable housing, they can take deposits and shareholder investments, and lend to community-based projects on behalf of conventional banks and institutional investment funds.

45. Benefits are based on average rent of NIS 6,200 per month (average rent and fees for all apartments). Benefits are prorated for the apartments that meet this threshold. If the average for the building exceeds NIS 6,200 per month, the building is not eligible for the benefits under the law.

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