

# Israeli developers reach for the skies



12 Jan, 2017 16:41

**Alfi Eliyahu Shauly**

Construction of a 100-floor Tel Aviv skyscraper begins soon but the higher you go, the more it costs.

Genesis 11 says, "Come, let us build us a city and a tower with its top in the sky." Even then, skyscrapers were being criticized. Now that land has become such an expensive resource in Israel, however, the number of towers is on the rise.

Tall buildings are not confined to Tel Aviv and the surrounding area. There is a 24-storey Efgad tower in Akko and a 32-storey tower is under construction in Beer Sheva (Om Brothers). Haifa has the **Israel Electric Corporation** (IEC) (TASE: ELEC.B22) Tower (30 storeys) and the Sail Tower (29 storeys), and there are residential towers just as high. Residential and office high-rises in Bat Yam are planned to cross the 40-storey line. Many, however, regard 50 storeys as something much harder to digest.

Since 2003, Moshe Aviv Tower, which contains residential, office, and commercial space, has been Israel's tallest building. Located at the intersection of Jabotinsky Street and Abba Hillel Street near the Ramat Gan Diamond Exchange, the 68-storey Moshe Aviv Tower is 235 meters high, but will soon lose its title to the Azrieli Sarona building on Kaplan Street in Tel Aviv, currently being completed, which is 238.5 meters high.

The height competition will be decided by another tower set to stretch skyward between Tel Aviv, Ramat Gan, and Givatayim – the Bein Arim Tower on the Parashat Drachim site opposite the Diamond Exchange compound. The Bein Arim Tower will have 100 storeys, and will rise to a height of 400 meters. It will have residential, office, commercial, and hotel space. The Tel Aviv District Planning and Building Commission is now due to approve the project, after which building permits will be granted in stages. Construction will take 4-5 years.

Architect Guy Miloslavsky of Miloslavsky Architects, who designed the Bein Arim Tower, asserts that Israel is not competing for the title of the world's tallest tower, but "It can definitely be seen that there is a local competition between the local authorities, developers, and planners to build the tallest building in Israel. In addition to height, there is competition over the tower facade and a wish to create a building that will be an icon that makes passersby gaze aloft in wonder."

### **"To use the land resource wisely"**

From a planning perspective, it appears that the trend is toward building much taller buildings than those seen today. Architect Gil Shenhav, a partner in Canaan Shenhav Architects and chairman of the Council on Tall Buildings and Urban Habitat (CTBUH) – Israel, says, "The 21st century is the century of urbanization. In the past, they built high. Now they're building very high, not only in Israel, but everywhere in the world."

"What characterizes high-rise construction is a high level of technology developed over the year, electromechanical systems, smart elevators, high-quality curtain walls, and smart buildings designed to last for 100 years or

more, and to be especially economical in the use of electricity, energy, water, fresh air, etc."

Shenhav adds, "These buildings enable us to live in city centers even in very crowded places, and to use the resource of land in desirable centers wisely, regardless of whether it's in New York, Montreal, or Tel Aviv."

*"Globes": Is there a limit to height of towers?*

*Shenhav:* "That's an economic and financial question, not a design one. The limit will usually be set by a balance between technology and economics. It's not definite that the Jeddah Tower, which cost \$2 billion to build, was economically worthwhile, but there are also considerations of prestige, ego, and politics. A CTBUH study found that 30% of the 100 tallest towers in the world, constructed at a cost of millions, were built solely in order to break the record and be listed as the tallest tower. The subject of prestige and ego is an integral part of high-rise construction.

"People are willing to pay a lot of money in order to live in the city center, until the price becomes unreasonable for them. In Israel, which has the highest birthrate in the Western world, the question of high-rise construction is not whether or not to do it, but how. The planners' role is to make sure that the towers contribute to the environment, not damage it," Shenhav declares.

One feature of super-high towers is a mixture of uses. Such a mixture is also an economic solution, because over the years, the use of the building can change. "The local authorities will want more public, business, and office space on which higher municipal property taxes are paid, and sometimes also public uses such as protected housing and hotels, but in combination with residences, because they want areas to be constantly bustling. The developer wants to increase the residential component, because its economic value for him is higher," Miloslavsky says.

### **Diseconomy of scale**

"A tower contradicts the economic principle of economy of scale. A tower has a diseconomy of scale, meaning that the per unit cost of maintenance rises

with the tower's height," says Prof. Rachelle Alterman, a senior researcher at the Samuel Neaman Institute for National Policy Research at the **Technion Israel Institute of Technology**. Alterman is considered the leader of an anti-towers agenda, primarily due to concern that they will be impossible to maintain in a few years.

"I have no problem with towers in city centers, because land there is expensive, and it selects the population living there according to its ability to pay. My problem is the towers in Beer Sheva, Afula, and anywhere there is a large-scale turnover of households, which will aggravate the market failure in a tower."

Doron Aviv, co-owner of the Aviv Group, which built the Moshe Aviv Tower, says, "In our company's projects, including the Moshe Aviv Tower, the management fees are very dependent on the level of services the tenants expect. The Aviv Tower is already 15 years old. There is natural wear and tear and systems that have to be fixed, and that's part of maintenance. Obviously, there are more systems, but on the other hand, guarding, a considerable part of the regular maintenance expenses for buildings, is divided over a larger area. Elevator expenses are higher. I estimate that the overall weighted cost of two 30-storey buildings is about the same as for very high buildings like Moshe Aviv."

Miloslavsky adds, "The tallest one is not always a worthwhile project. We see that some of the high buildings planned in Israel are eventually left on the planning table, sometimes because of environmental objections or objections by the local authority, and sometimes because the buildings are not worthwhile for the developer. You have to realize that a taller building costs more, because construction and the systems become more and more complicated."

### **The lot size is a limiting factor**

Engineer Israel David explains that from an engineering standpoint, the first limit in building a high-rise is the size of the lot, because a rate of 12:1 between the tower's height and width must be maintained. "A 400-meter-high tower requires a plot with a minimum width of over 30 meters. In order to build

such towers, you therefore have to find lots of suitable size. In addition, the construction reinforcement in high buildings also requires support walls in the shell. That's what was done in the Moshe Aviv Tower, for which I did the engineering design. Technology now links the center of the frame to the shell in order to accommodate a better view in the building."

*How much does that cost?*

*David:* "In towers above a certain height, the average price per sq.m. of construction is over NIS 10,000 per sq.m. , while a similar sq.m. in the specifications for a lower tower costs NIS 7,000. The question of whether to build two 30-storey buildings or one 60-storey tower, when the cost of the project is similar, is a question of the developer – whether to sell and build one building and then start marketing the second one, or to go for one project requiring more capital in the taller building option."

Sivan Berkowitz, CEO of **ZMH Hammerman Ltd.** (TASE:ZMH) subsidiary Sivan Bi-Zua, says, "There is an enormous gap of 20% or more between building an 18-20 storey building and a tower with 40-50 or more storeys, depending on the building design and the finishing materials. Asking about costs of performance work in a high-rise is like asking how much a car costs. In principle, the cost is NIS 5,000 per gross sq.m. + VAT in an 18-storey building and up to NIS 6,000 per sq.m. + VAT in a 50-storey tower. The cost rises, however, according to the finishing materials and the systems we are obligated to install in residential high rises."

One of the challenges in performance work on residential towers is vertical movement of all the construction materials, from concrete for the building frame to the flooring. This is insignificant in a 20-storey building, but in a 50-storey high-rise, it is significant for performance times and costs. In many cases, such construction is industrialized. You won't see blocks and plaster in construction of residential towers with 40-50 or more floors.

Perhaps for this reason, despite the many fatal accidents on construction sites, you won't find a single worker who fell from a great height.

## ***RELATED ARTICLES***



Azrieli signs huge lease with law firm for new tower

---

Azrieli revalues land for 80-floor Tel Aviv building

### **The Elite Tower saga: Even Trump couldn't help**

The gap between a skyscraper vision and down-to-earth reality is reflected in the giant towers that are often left on the drawing board. The Elite Tower in Ramat Gan, which was often described in the past decade as the tallest building in Israel, might be the best example of this.

US company Crescent Heights acquired the Elite factory at the famous intersection in Ramat Gan for \$44 million. Several weeks later, the company already announced that it had combined forces with renowned businessman (and US President-elect) Donald Trump, who joined the project as a developer. The project was to bear his name - Trump Plaza Tower.

A year later, however, **Azorim Investment, Development and Construction Ltd.** (TASE: AZRM), then controlled by Shaya Boymelgreen, and a groups of diamond traders acquired the construction rights in the tower for \$80 million. Azorim announced that it would a build the largest tower in the coming years - 75 storeys with both offices and housing units - at a total cost of \$175 million. The company announced, "This is the luxury project most available for construction. We met with the municipality, and there is no delay in issuing building permits. We estimate that the entire project, including the design stage, will take four years; the offices will be built within three years, and the housing a year after that." It was reported in 2008 that the company had asked for permission to make the building a 280-meter high 85-storey tower.

Almost a decade has passed, and the old Elite factory is still standing on the site. Meanwhile, despite the dream of the highest tower in the Middle East, Azorim and the group of diamond dealers have submitted a request for construction of two towers: one for housing and one for offices. The maximum height has been dramatically lowered to at most 65 floors (less than Moshe Aviv Tower facing it).

Azorim has already sold 100 apartments in the residential tower, which will have 296 apartments and 60 floors. Then, in March 2015, the company suddenly announced that the plan had been called off. Azorim informed the buyers that unfortunately, despite the great efforts and many resources it had invested in the building, the contingent conditions for carrying out the deal had not been fulfilled by the date stipulated in the sale agreement (obtaining a building permit for the tower), and the deal was therefore cancelled. The buyers were asked to sign documents notifying the tax authorities of the deal's cancelation. The last word from the buyers of apartments in the tower has probably not yet been heard. For many of them, the fact that housing prices went on rising over the past two years means that they have missed the boat. While Azorim claimed that its attempts to obtain a building permit from the Ramat Gan municipality had been unsuccessful, the municipality said that the company's request for a building permit had already been approved in May 2014 with several conditions, but the company had taken no action to comply with them. In any case, the tower at the Elite Junction that has yet to be built and the fact that even the theoretical height was reduced by 25 storeys show

something about the gap between skyscraping dreams and down-to-earth reality.