

Insurance as a strategic tool for damage mitigation -Israel as case study "how not to act"

- Since ancient times, earthquakes have been regarded as one of the worst nature calamities, causing death in destruction of entire civilizations through time.
- The only proper form of minimizing the damage is a cross time multi-layer and discipline solution that will provide many layers of protection:

From scientific inventions through strict and novel building code to financial hedging of the risk. From early mitigation through response after onset to recovery.



One important aspect as mentioned, is financial readiness and mitigation that will serve as a form of hedging and externalization to the cost of damages that will occur. in which, one of the most important and strategic tools is insurance.

Why Israel?

- Israel is situated near the Syrian – African fault line, a high-risk zone for earthquakes.

On average, every 80 years, Israel will experience a major earthquake over 6 in the Richter scale, last one occurring in 1996. Therefore, it is estimated that a large earthquake will hit within the next 50 years.

The inevitable conclusion is that the risk of occurrence of a major earthquake is only a question of when not if ...

- Recent data shows that, up to 93% of structures residing near the fault line that were deemed for reinforcement against earthquakes, were not reinforced. Therefore, the expected cost of damages is enormous, ten even hundreds of billions of dollars from direct and indirect damages that will occur when the earthquake will strike.
- Unfortunately, as we will discuss, despite the fact that in Israel there are high rates of insured private buildings and real estate, it seems that these numbers are nothing more than an illusion of safety, a veil, set over our eyes to mask us from the dire truth.
- After the large earthquake that hit turkey in 1999, Israel decided to create a modern and comprehensive plan to ready itself by creating a new committee comprising of various representatives from all branches of government, security and research.

- Regarding financial readiness, it was agreed, that a two-layer approach should be taken: the first, formation of a governmental fund dedicated to provide compensation for the matter at hand.

Israel has a great experience with a similar fund dedicated to provide relief and compensation for war time damages that occur from time to time in Israel and is funded by allocation from real estate taxation tax.

Many countries such as: Belgium and New Zealand took said approach, allocating funds from taxes and/or insurance premium.

Unfortunately, this layer is buried over 10 years in red tape, and discussions in the Knesset while government officials claim that If and when the calamity will strike they will allocate funds from other funds such as the wartime fund or the recently created wealth fund from state earnings on gas rich deposits discovered in the Mediterranean Sea or as the famous Israeli saying: *אין אנו מוכנים*

- Therefore, essentially, we are left with one-layer approach, that can only be explained by the government novel approach of externalizing all-risk back to the civilians by mitigation of insurance through private insurance sector.
- For that intent and purpose, the government has acted to incentive the population to purchase insurance in two main forms:
 - By controlling and standardizing the terms of policy offered by the insurance companies in Israel, the government set an earthquake clause by default, this clause must be actively waived by the insured.
 - By requiring that (most) mortgage takers will be insured with said insurance.
- From recent data, it seems that the strategy succeeded with insurance rates up to 65% of all homes. The high number of insured has led the government to reject compulsory insurance that can be found in different states like Turkey or Mexico, settling only with directives to encourage population to acquire insurance.
- **However, if you take a deeper look into the terms of the standardized policy, it is easy to understand that it is only a mirage, an illusion of safety.**

Unfortunately, most of the insured, will find a very small compensation for their losses – let's dive in:

- **standard term of maximum time to rebuild** – the term states that rebuilding of the insured asset will take no longer than 12 months, in the case that, there is no possibility to complete rebuilding in said time frame, the insured and the insurer shall come to terms regarding extension of time frame. If an accord is not struck, then the insurer shall pay indemnity value (only).

Simply put this time frame is Ludacris. Average planning procedures in Israel (in normal times) is around 5 years, not considering building time and the huge amount of strain that will be implemented due huge numbers of buildings that will be destroyed and rebuild.

insurance companies are in a very obvious case of conflict of interest, especially when stating that they are obligated by under - insurers to complete rebuilding within a year.

Therefore, the outcome is clear, no extension will be made.

- **standard term of maximum time of funding for alternative accommodation** - the term states that maximum time for funding is 12 months. As explained above this is simply not feasible.
- **Value of land, shared grounds and non-insured – given that:**
 - Most of Israel's population reside in shared apartment buildings
 - In Israel the value of the structure in relation of total value is roughly 1/3 – 1/4 the rest is value of the land itself.
 - As mentioned roughly 65% of population is insured.
 - Standard insurance only covers value of structure not value land (about 1% of insured has insurance to cover value of land)
 - Standard insurance covers relative value of shared grounds in relation of the insured apartment.
- **Given the hypothesis rendered above let's imagine this scenario:**
 1. Earthquake strikes a standard apartment building, ratio of insured/uninsured is equal to said above.
 2. Insured shall turn to insurer in order to rebuild, and insurer will be willing to pay for the insured apartment and relative ratio of shared grounds.
 3. However, with many uninsured and lacking funds to rebuilt, this option in most cases will be non-existent, most insured will have to forgo any chance of rebuilding, unless willing to fund uninsured part in the rebuilding.
 4. In this instance, the insurance company shall pay only indemnity value of the structure itself, as mentioned, a fraction of the full value of the apartment.
 5. So, in most cases – insured will be left with ruins and a small compensation for their damages.
- **Standard term of Deductible pay** – the Standard term states that Deductible pay shall be 10% of sum insured (with relation to damage), to put in perspective value of apartment – land (uninsured) – 4 M shekels; structure: 1 M shekels (insured sum) ;therefore, deductible is 100'000 shekels, meaning that "small" damages are not really insurable, even tough these are not so small at all....

For the most part insured have no idea that they can reduce deductible by extra premium...

- **Solution –hybrid approach:**

The OECD established main guidelines for financial readiness to earthquakes:

- a. Ability to valuate and quantify expected loss (pl) in a progressive and adaptive way.**
- b. Insurance will not be able to cover all damage in most states – government funds are needed.**
- c. Government action key in forming insurance mechanism – in order to facilitate a cheap and effective insurance the government must act in other disciplines to reduce expected damage and incentives population to purchase insurance**

AELR index

Recent data shows, that Israel never took any action in creating a valuation system of expected loss.

We propose to use A.E.L.R index suggested by FEMA – annualized earthquake loss ratio.

This ratio considers not only probability of occurrence and value of loss but also financial impact and annual loss stemming from the original damage in relation to the existing geographic location.

For example – with normal index los Angeles is at the top of risk in the US. However, with AELR – LA is ranked only 12 while anchorage, Alaska which was 14th is now 3rd due to the huge impact of any devastation of anchorage to the economy of its region and state in relative fashion.

By creating said index, the government can easily map key hot spots, that require extra attention and action and allocate resources to alleviate and mitigate expected loss.

One would suggest that through AI indexing could be almost limit less considering many factors at play to determine effect of damage in ratio with local economy and society

Revaluation of standardized insurance policy –

With many flaws found in the standardized insurance policy, we propose that the government will use its authority to renegotiate the terms (if not impose) of default policy. it is much more feasible that the government will dictate minimum term than the population, that is lacking in knowledge, "buying power" and expertise.

Creation of dedicated funds-

as set forth, insurance alone will not be able to mitigate all damages there for it is essential to create a dedicated fund to hedge all damages.

Formation of incentives – the government must take active measures to incentives the population to acquire insurance. With AELR it is possible to pin

point key hot spots and create better awareness, or even give tax returns or funding for insurance.

In conclusion, insurance is an important strategic tool in coping with earthquake, and as such must be used intelligently with emphasis of firstly evaluating the in a progressive and reactive way the pain points and weakness followed by a multi-layer approach of both governmental allocation of funds towards damage mitigation and regulations the will motivate the citizens to take proper action.

All layers must be well thought and tailor made to said population and circumstances, for not all factors are common to all countries.

Without careful planning and thought it seems that not only the layers of protection will be rendered useless, but it will cause further damages from relying on inefficient protection.