

# **TURKISH CATASTROPHE INSURANCE POOL (TCIP): PAST EXPERIENCE**

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- **Turkish Catastrophe Insurance Pool**
- **Background Information and History**
- **Objectives**
- **The Compulsory Earthquake Insurance**
- **Facts and Numbers**
- **Concluding Comments Based on Past Experience**

**Turkish Catastrophe Insurance Pool (TCIP) is a non-profit public entity affiliated with the Ministry of State, to whom the Under-secretariat of Treasury reports. TCIP was established by the Decree Law 587 (Date: 27.12.1999) pertaining to the Compulsory Earthquake Insurance. According to the decree law earthquake insurance was made compulsory for all registered residential buildings within the municipality boundaries.**

**The financial resources of TCIP are composed of premium revenues, reinsurance coverage and the supplementary financing obtained externally, when needed.**

- **In Turkey, the State used to have a legal obligation (Disaster Law, No. 7269) to fund the costs of reconstructing buildings after an earthquake. This responsibility of the State brought an unplanned burden on the national economy and on the already limited central budget in the case of catastrophic seismic events.**
- **The two major earthquakes in Turkey on 17 August and 12 November 1999 both occurred in or near urban settlements and caused widespread destruction of the building stock.**

- **Accordingly the Government of Turkey has decided to enforce the earthquake insurance on the nationwide basis with the sole purpose of privatizing the potential risk by offering insurance through the Turkish Catastrophe Insurance Pool (TCIP) and then exporting the major part of this risk to the international reinsurance and capital markets.**
- **The idea of a nation-wide obligatory earthquake insurance enforcement, was first put forward in 1978 by the Ministry of Reconstruction and Settlement.**

- Although the main aim was to reduce government's fiscal exposure, it was also intended to encourage risk mitigation and safer construction practices.
- To achieve these purposes all registered residential dwellings that are located within municipality boundaries are required to be in the compulsory earthquake insurance coverage.
- Initially funded by the World Bank, TCIP was founded on 08.08.2000 and the TCIP program became effective since then.

- **TCIP was established under the supervision of Undersecretariat of Treasury to offer such insurance at affordable premiums.**
- **Original aim of TCIP was to provide a multi-peril coverage, but currently it provides only compulsory earthquake insurance coverage.**
- **Operational management has been contracted out to leading reinsurance companies in Turkey.**
  - **Milli Reinsurance Company for the first 5 years.**
  - **Garanti Insurance Company since 8 August 2005.**

The primary objectives of TCIP can be summarized as follows:

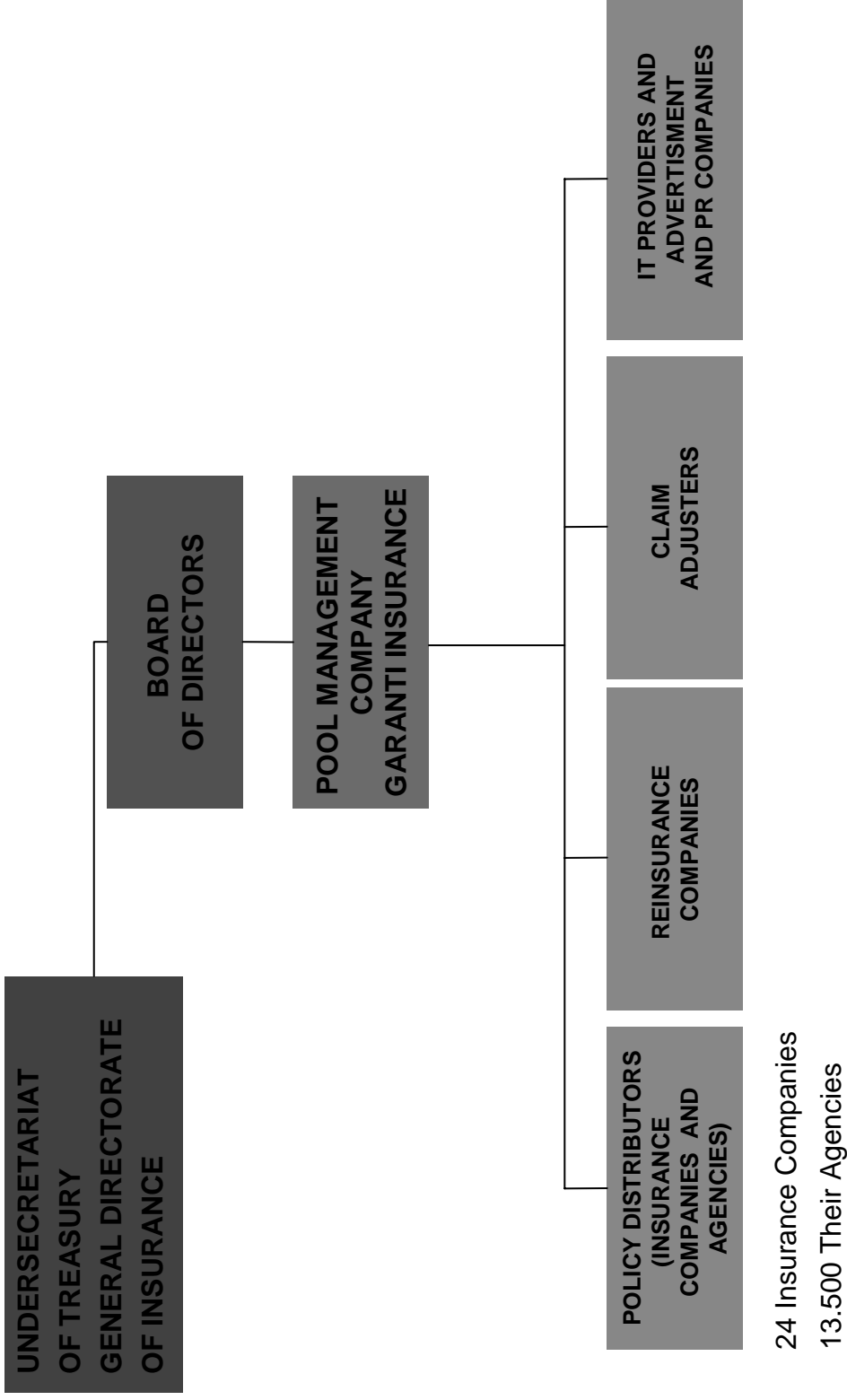
- To provide insurance coverage for all the dwellings within the scope of the TCIP policies against earthquake risk in return for a premium;
- To ensure risk sharing within the country and also to distribute the financial liabilities caused by earthquakes on to the international reinsurance markets;



- To mitigate the possible financial burdens on the government due to earthquakes (especially construction of new dwellings after a catastrophe);
- To utilize the insurance system as a means to encourage the construction of earthquake-resistant structures;
- To ensure the accumulation of long term reserves to finance the future earthquake losses;
- To contribute to the development of insurance consciousness in the public.

# Organization

## TURKISH CATASTROPHE INSURANCE POOL ORGANIZATIONAL STRUCTURE



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TCIP has no public employees

**The management of TCIP is performed by the TCIP Board of Directors composed of the following seven members:**

- **Representative of Prime Ministry**
- **Representative of Under-secretariat of Treasury**
- **Representative of Ministry of Public Works and Settlement**
- **Representative of Capital Markets Board**
- **Representative of the Association of the Insurance and Reinsurance Companies of Turkey**
- **Operational Manager**
- **Earthquake Scientist**

In general terms, the Compulsory Earthquake Insurance is an insurance product oriented towards the dwellings within the boundaries of the municipalities. This coverage is a compulsory insurance, for which the guarantee is provided by TCIP but the marketing authority is given to the authorized insurance companies and their agencies, to provide coverage for the property damages caused by the earthquakes on dwellings. The period of circulation of Compulsory Earthquake Insurance is one year. The policies must be renewed prior to its expiry every year.

Compulsory Earthquake insurance has to be bought for the dwellings and independent sections indicated below:

- The dwellings constructed on real estates, which are registered at the Land Registry Office and subject to private ownership;
- Independent sections which are situated within these buildings and used as workplace, office and with similar purposes;
- The dwellings either constructed by the State due to Natural Disasters or built with the credit provided by the government.

- The amount of the annual premium shows variations in relation to the size of dwelling, type of construction and the seismic zone it is located in. There are five different seismic zones in Turkey. Accordingly, higher premiums are paid in high risk regions and lower premiums are paid in low risk regions.
- A deductible of 2% is imposed in order to avoid small claims and reduce administrative costs.

**The insurance premiums increase every year in parallel to the increase in the construction costs, but they are kept at an affordable level. If the dwelling sum insured exceeds the TCIP limit, then the insured can ask for a homeowners policy through the private insurance companies in excess of the current TCIP policy. The land value is not included under the “sum insured”.**





<b>TYPE OF CONSTRUCTION</b>	<b>Seismic Zone I ‰</b>	<b>Seismic Zone II ‰</b>	<b>Seismic Zone III ‰</b>	<b>Seismic Zone IV ‰</b>	<b>Seismic Zone V ‰</b>
<b>A-Steel or reinforced concrete</b>	<b>2.20</b>	<b>1.55</b>	<b>0.83</b>	<b>0.55</b>	<b>0.44</b>
<b>B-Masonry</b>	<b>3.85</b>	<b>2.75</b>	<b>1.43</b>	<b>0.60</b>	<b>0.50</b>
<b>C-Others</b>	<b>5.50</b>	<b>3.53</b>	<b>1.76</b>	<b>0.78</b>	<b>0.58</b>

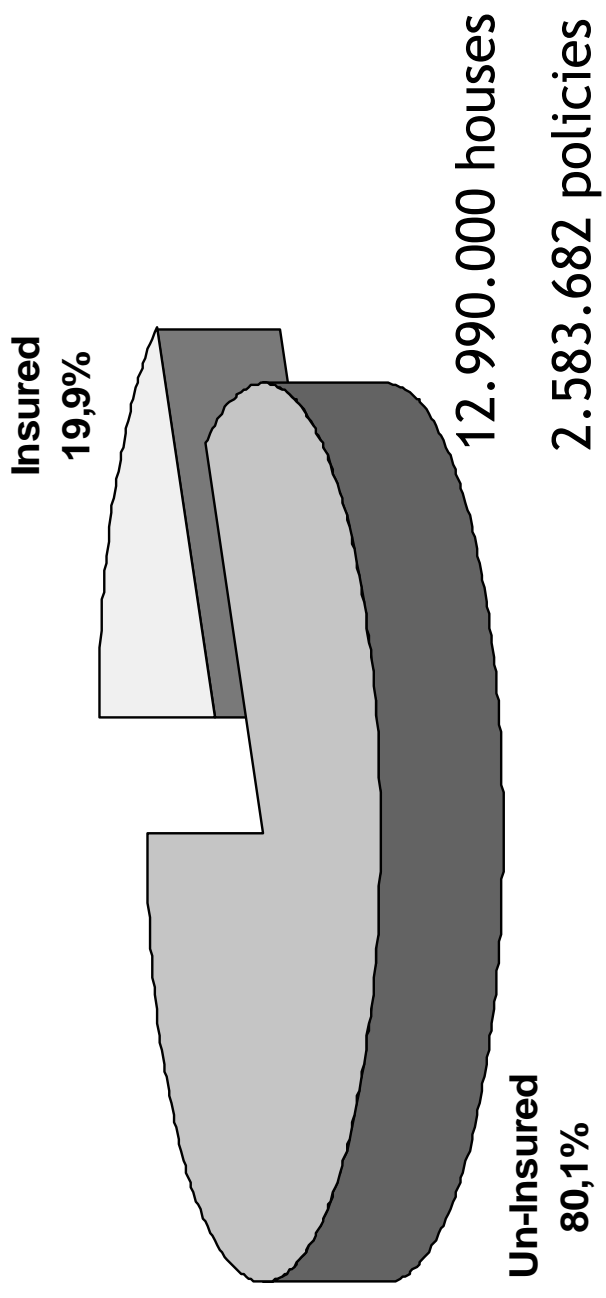
**Premium for a dwelling of 100 square meters**  
 (Calculated according to the rates of year 2006)

Type of construction	Seismic Zone I	Seismic Zone II	Seismic Zone III	Seismic Zone IV	Seismic Zone V
A- Steel or reinforced concrete	100 YTL (\$ 70)	74 YTL	44 YTL	33 YTL	28 YTL (\$ 20)
B- Masonry	122 YTL (\$ 85)	90 YTL	51 YTL	27 YTL	25 YTL
C- Others	95 YTL (\$ 65)	65 YTL	37 YTL	25 YTL	25 YTL

Total Number of Policies	2.583.682
Total Coverage (YTL)	111.135.270.590 (\$ 78.3 x 10 <sup>9</sup> )
Total Annual Premium (YTL)	209.843.290
Average Coverage (YTL)	43,014 (\$ 30,500)
Average Premium (YTL)	81 (\$ 57)
Growth by number of policies (%)	6 %
Renewal Rate (%)	34 %
Total number of Claim Files	8.913
Total Claims Paid (since 2000)(YTL)	17.624.960 (\$ 12.500.000)

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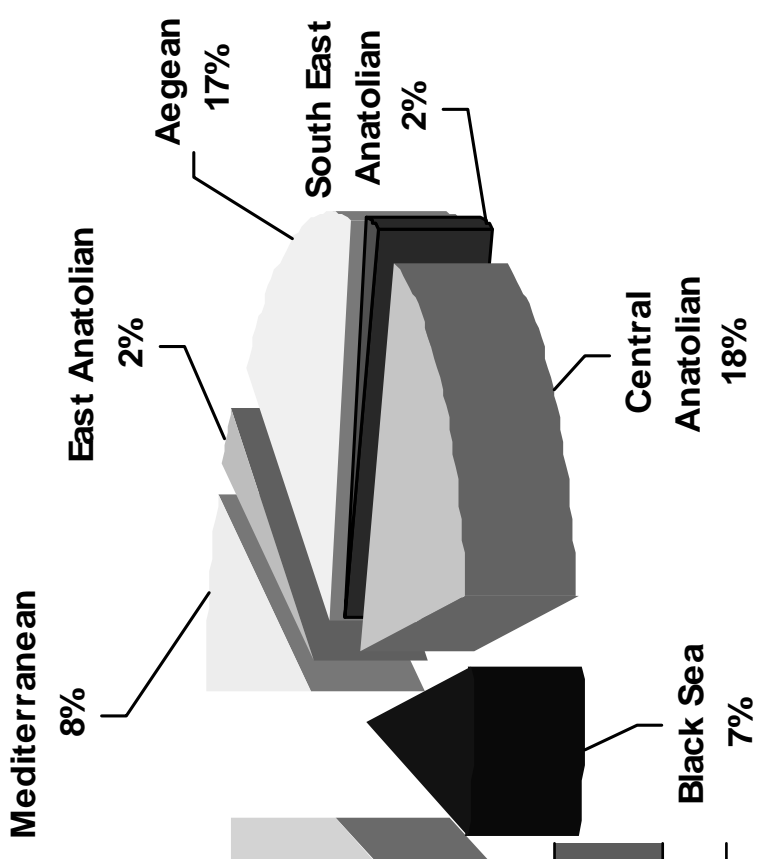
Penetration as of 24.01.2007



Penetration varies between 8% and 28%

REGION	NUMBER OF HOUSES *	NUMBER OF POLICIES	PENETRATION RATIO %	PREMIUM (YTL)
MEDITERRANEAN	1.663.126	209.060	12,6	15.715.684
EAST ANATOLIAN	611.788	64.092	10,5	5.988.528
AEGEAN	2.318.262	450.447	19,4	45.119.008
SOUTH EAST ANATOLIAN	742.865	57.592	7,8	3.486.163
BLACK SEA	1.282.095	171.713	13,4	12.989.866
MARMARA	4.143.473	1.177.012	28,4	107.229.916
CENTRAL ANATOLIA	2.227.055	453.766	20,4	19.079.602
<b>TOTAL</b>	<b>12.988.663</b>	<b>2.583.682</b>	<b>19,9</b>	<b>209.843.290</b>

# Spread / Geographical Regions



REGION	NUMBER OF POLICY	SPREAD RATIO %
MEDITERRANEAN	209.060	8,1
EAST ANATOLIAN	64.092	2,5
AEGEAN	450.447	17,4
SOUTH EAST ANATOLIAN	57.592	2,2
BLACK SEA	171.713	6,6
MARMARA	1.177.012	45,6
CENTRAL ANATOLIA	453.766	17,6
<b>TOTAL</b>	<b>2.583.682</b>	<b>100,0</b>

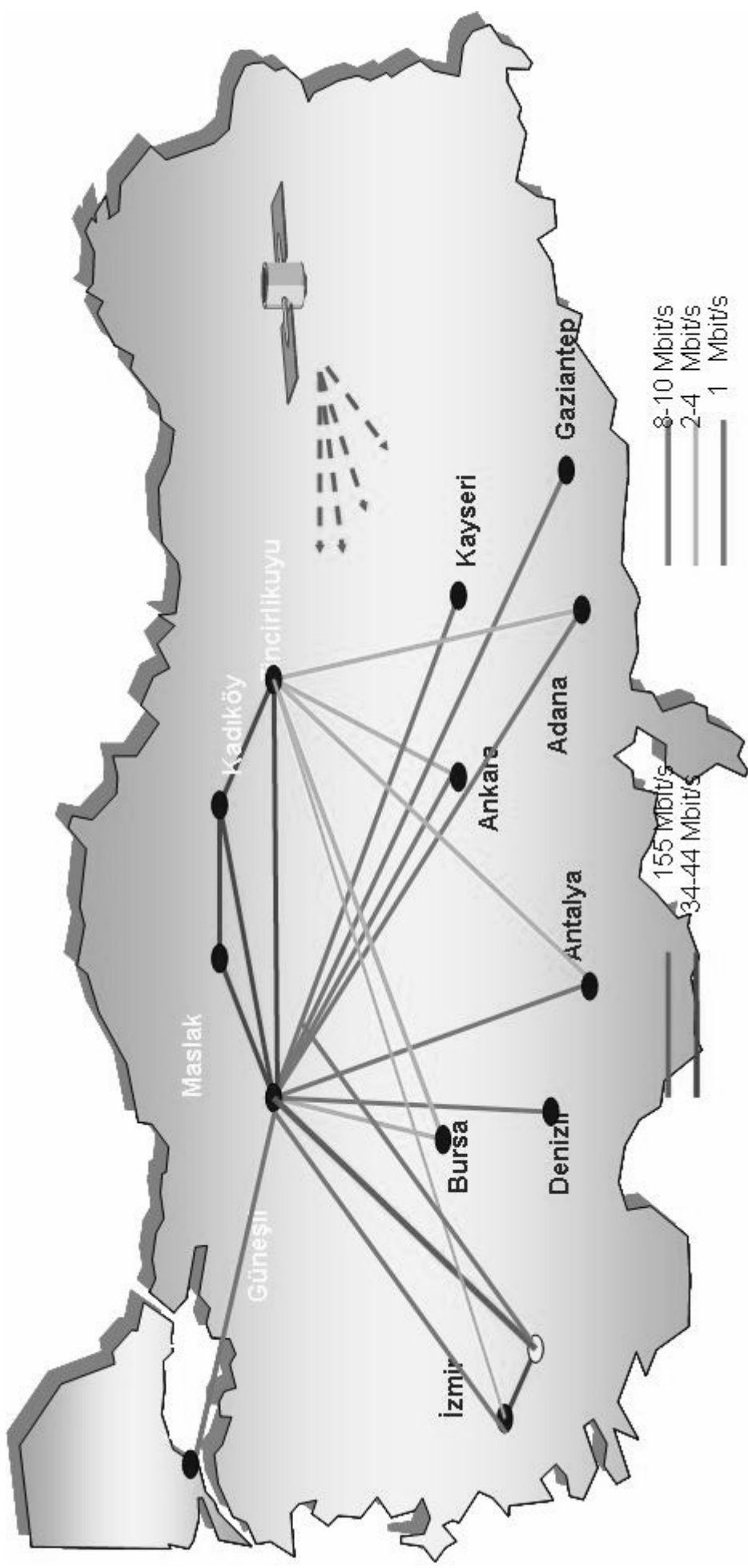
Claims as of 24.01.2007

Claims (24.01.2007)			
Year	Number of Earthquakes	Total No. of Claim Files	Total Claims Paid (000 YTL)
2000	1	6	23
2001	17	338	127
2002	21	1.558	2.284
2003	20	2.504	5.203
2004	31	586	768
2005	39	3.471	7.990
2006	19	450	1.203
<b>TOTAL</b>	<b>148</b>	<b>8.913</b>	<b>17.625</b>

- **Two different access methods are used by insurance companies:**
  - **Direct access via internet ([www.dask.gov.tr](http://www.dask.gov.tr));**
  - **Online real time connection between DASK application and insurance company's software.**
- **TCIP application is three level java based application, so there are web, java application and database servers.**



# TCIP - Network Topology





## CONCLUDING COMMENTS BASED ON PAST EXPERIENCE

- The decision that only property covered by the insurance will be eligible to receive compensation is a very significant reform, considering the traditional practice and realities in Turkey. TCIP was aimed to be the only source of funding for the earthquake losses in residential buildings.
- TCIP is proved to be a well designed public-private partnership due to its satisfactory performance over a relatively short period of time. A number of initiatives are still being undertaken for the betterment of the system in various aspects.

- **TCIP is supervised by the Under-secretariat of Treasury, which forms the public side of this partnership. The Under-secretariat is responsible for overseeing of the program, auditing of all operations and accounts of TCIP.**
- **The other partner (private sector) performs the administrative duties. By engaging the private sector in the process of administration, the bureaucratic burdens are minimized.**
- **Formation of a very large pool independent of the national budget and therefore to a large extent free of the molest of political decision makers is among the major benefits of the system.**

- In terms of program characteristics TCIP can form a role model for countries with similar exposures and economic conditions.
- TCIP has all the main components and the potential for substituting for the government, in compensating post disaster losses in residential buildings through an insurance program.

## MAJOR PROBLEMS

- **Low penetration rate:**
  - **If the whole building stock is considered the current penetration rate is about 20%.**
  - **If the eligible building stock is considered (i.e. those buildings that are registered at the cadastral records) a more realistic rate will be obtained as 35%-40%.**
- **Low rate of renewal:**
  - It is about 34% as of January, 2007, and needs to be improved substantially.**

**Reasons for low level of penetration are:**

- **A fatalistic mentality in society and the habit of expecting the State to provide everything;**
- **A low level of income;**
- **The cultural awareness of insurance has not reached a sufficient level in our country and obtaining insurance is not a high priority in our daily lives;**
- **There are no legal penalties or fines for the enforcement of the “compulsory” earthquake insurance.**

- **The populist trend of governments: willingness to provide post disaster aid to homeowners by themselves. This destroys the homeowners' incentive to participate in the program.**
- **Instead, the State may subsidize the earthquake insurance premium for the low-income section of the population.**



- As of March 27, 2001 the legal obligation of the government, determined by the Disaster Law for the compensation of losses of disaster victims, has been terminated. However, this provision has been waived twice since then: after the 3 February 2002 Afyon (magnitude 6.0) and 1 May 2003 Bingol (magnitude 6.4) earthquakes. This attitude had a very adverse effect on the penetration rate.
- TCIP was established by a temporary governmental decree. For its full effect the parliament should pass the follow up “Earthquake Insurance Law”, making the earthquake insurance really a compulsory one. To date the parliament has not passed this legislation which has been waiting there for more than a year.

## FUTURE ISSUES

- Allocation of a modest portion of annual income of the pool to mitigation investments (e.g. risk avoidance and reduction projects, revisions in land use planning, retrofitting of public and private buildings).
- Due to poor control of construction in Turkey, a large degree of damage is expected if a major earthquake hits a large city, as observed during the recent earthquakes. The earthquake insurance can be used as a tool for the enforcement of the earthquake resistant provisions of the Code. For this purpose insurance premiums should be graduated taking into consideration the “seismic resistance quality” of the buildings. In other words, lower premiums should be charged for buildings that comply with the Seismic Code requirements.

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