PART III B

Chapter 19

The Turkish Catastrophe Insurance Pool (TCIP) and Compulsory Earthquake Insurance Scheme*

by
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The introduction of the Turkish Catastrophe Insurance Pool (TCIP), in 2000, provides a reliable method for compensation to homeowners in Turkey without reverting to government budget, social solidarity and risk sharing are effectively maintained through payments of affordable insurance premiums. Meanwhile, a large amount of the risk is being ceded to international reinsurance markets until sufficient financial resources are accumulated within TCIP. This chapter provides an overview of the rationale for the establishment of TCIP and of its specificities.

* This note was not presented during the Conference. It is included in the publication to complement the information provided by other reports on the TCIP.

** Economic Counsellor.

1. Background

Turkey is one of the countries that have long been affected by many natural disasters, particularly earthquakes and floods. The existing earthquake map of Turkey demonstrates that 96% of the land is susceptible to earthquake risk with varying degrees, and a considerable part of the population is living in the first and second degree earthquake zones where most of the damaging earthquakes occur. The two major earthquakes in 1999 in the Marmara region (the August event was magnitude 7.4, and the November event was 7.2) caused loss of thousands of lives and enormous financial burden on the economy and government.

Historically, earthquake insurance has existed in Turkey for a long time. Earthquake coverage has been traditionally provided as an allied peril to the fire policy and engineering policy. However, the penetration for such insurance has been quite low, especially for residential buildings (5% on average) and in rural areas.

Studies to create a special earthquake insurance scheme first started after the Erzincan earthquake in March 1992. These studies have envisaged promoting private insurance on the one hand and creating a public fund on the other hand to support insurance market, as there was lack of capacity in the market to cover more risks, and the market was relying on foreign reinsurance which has been very expensive during the hard market of that time. However, as there has been no clear determination, no scheme has come into existence.

After the Adana earthquake of June 1998, the discussion has received fresh attention. Economic impacts of such continuing disasters and low insurance penetration led the authorities to initiate a new study to promote disaster insurance and establish a widespread and effective earthquake insurance scheme. This new study has been initiated by the Undersecretariat of the Treasury, which is also responsible for regulating and supervising the insurance industry, in collaboration with the local insurance market and the World Bank, which has engaged in a lending program with the government after the Adana earthquake. During this study, various disaster insurance schemes, including the California's CEA and New Zealand's EQC, have been examined.

This study and visits to CEA and EQC have helped the Treasury to shape a new insurance scheme. With the help of political momentum emerged following the Marmara disasters in August and November 1999, as well as public and insurance industry recognition of the need for action, this scheme has received immediate acceptance, and the government decided to introduce it in 2000.

The legal framework of the new scheme was established by a decree with power of law. With this decree law, starting from 27 September 2000, taking out insurance was made compulsory for all residential buildings that fall within municipality boundaries, and The Turkish Catastrophe Insurance Pool (TCIP) was created to offer this insurance. Moreover, the obligation of the government to extend credit and construct buildings for the victims in case of an earthquake disaster (a requirement of the Disaster Law) was abolished (starting from 27 March 2001). The new insurance scheme has effectively replaced a big part of government obligations under the Disaster Law.

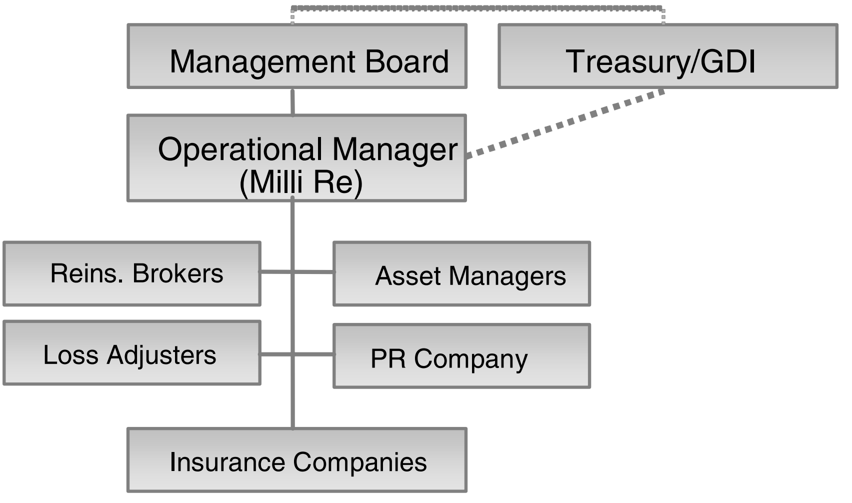
TCIP has been established under the supervision of the Treasury within the 9 months specified by the above mentioned decree law, and the first insurance policy was written on 27th of September 2000, as envisaged. The compulsory earthquake insurance scheme has aimed to offer such insurance coverage at affordable premiums, to alleviate the financial burden of earthquakes on the government budget (particularly relating to the construction of post disaster housing), to ensure risk sharing by residents, to encourage standard building practices, and to establish long term reserves in financing future earthquake losses.

With the introduction of the Turkish Catastrophe Insurance Tool (TCIP), a reliable method for compensation is provided to homeowners without reverting to government budget, social solidarity and risk sharing are effectively maintained through payments of affordable insurance premiums. Meanwhile, a large amount of the risk is being ceded to international reinsurance markets until sufficient financial resources are accumulated within TCIP.

2. Structure of TCIP

TCIP is a legal public entity managed through the TCIP Management Board consisting of representatives of the Prime Ministry, the Treasury, Ministry of Public Works and Settlement, the Capital Market Board, the Association of Insurers, the Operational Manager, and an earthquake scientist. Four members of the Board are public sector executives specialized in different areas, while two members represent insurance sector and one is from the academic community. The formation of the board and portraying of all key parties is very important in the success of TCIP. This has helped TCIP to better coordinate works, and increased ownership of the scheme.

Figure 19.1: TCIP Organizational Structure



Besides the Management Board, the Treasury is also a primary owner of the scheme. It is responsible for overseeing the whole program and auditing all operations and accounts of TCIP. The administrative and technical support of the Treasury has been a key factor for TCIP in achieving its goals. Other than the Treasury's audit, annual accounts are also audited by an independent auditing firm.

Operational management has been contracted out to Milli Re, the leading reinsurance company of Turkey, for five years. This contract is extendible for following terms. Milli Re has allocated part of its expert personnel to TCIP, and is ready to dedicate more human resources if needed. The operational manager receives payment depending on the overall volume of premiums received.

Aiming to minimize administrative costs and create an efficient operational structure, TCIP relies on external service providers for most of its operations. Insurance companies and their agencies are carrying out the distribution and marketing of policies. Almost all non-life insurance companies are participants of the scheme. The reliance on the ability of private insurers to sell policies and collect premiums has been very efficient in terms of reducing administrative costs. Participating insurers receive commission payments depending on the volume of premiums they have collected.

Public information campaigns are carried out with the help of a PR company and other subcontractors. TCIP has been carrying out massive information campaigns to increase insurance awareness and maintain and increase insurance takeout. Likewise, independent insurance loss adjusters commissioned by the operational manager are carrying out loss assessments when there is a reported loss.

TCIP and its revenues are exempt from all kinds of taxes, levies and charges to allow rapid accumulation of resources. Accumulated funds are kept in segregated accounts. Funds were being managed by the operational manager in the earlier years. However, with the increase in accumulated funds, two asset management companies have been retained in 2004 to manage funds. Funds are invested in diversified financial instruments following TCIP Board's investment guidelines.

3. Covered buildings

The compulsory scheme covers only residential buildings that fall within municipality boundaries. Eligible policyholders are owners or usufructuaries of such buildings or flats.

Dwellings in small villages (with no municipality established) have been excluded from the scheme. The main reasons for this are as follows: First, homeowners in such areas have lower income level which makes it difficult for them to pay for insurance premiums. Second, the insurers' distribution network is not well established in such areas, which makes it expensive to distribute insurance. Thirdly, as the dwellings in those areas are more vulnerable, an actuarially fair price or even a subsidized price would not be affordable for homeowners at all. Therefore, state compensation under the Disaster Law for such small villages (constituting approximately 30% of the population) still prevails. On the other hand, such dwellings can be insured on a voluntary basis in the private insurance market.

4. Covered risks

Compulsory earthquake insurance is a stand-alone product and is sold separately from fire or homeowner's insurance. It covers all material damages caused directly by an earthquake (including fire, explosion and landslide following an earthquake) to the insured building.

TCIP does not provide coverage for contents, movable goods, debris removal, loss of profit, liability, human injury and death. Coverage for such losses can be purchased voluntarily under fire or homeowner's insurance from private insurance companies.

Although the original design of TCIP is a multi-peril natural hazard insurer, products for other natural hazards are not available yet. New products such as flood insurance are planned to be provided in the medium term.

5. Coverage and payment limits

TCIP aims to provide an adequate level of protection at affordable premiums. Therefore, the compulsory earthquake insurance has a ceiling in terms of coverage. This ceiling is approximately US$ 50,000 as of December 2004 (in current exchange rate), which appropriately reflects the cost for reconstruction of a quality typical dwelling in Turkey. This limit is reviewed semi-annually according to changes in the construction price index. Policyholders are free to buy additional coverage in excess of this limit from insurance companies if the value of their dwelling is more than this amount. In such cases, TCIP policy works on "fist loss" basis. In other words, there is no "average clause" applicable.

TCIP does not compensate for the land or any loss in market value of an insured dwelling. When assessing claims, TCIP takes into account market reconstruction prices at the date of event occurrence for each type of building, and any loss payment is limited to the sum insured. In the case of masonry type of buildings or small dwellings, the sum insured is usually below the maximum coverage limit as the reconstruction costs of such buildings are lower.

There is a 2% deductible applied over the sum insured. TCIP is responsible for the loss exceeding such an amount. However, there is no co-insurance condition.

The sum insured is calculated by multiplying the gross square meter of dwelling by the relevant unit reconstruction cost.

6. Insurance rates

Insurance rates account for seismicity and construction type. The earthquake map used by TCIP divides the country into five different categories of land according to the vulnerability factors whereas the tariff divides buildings into three categories according to their construction types. As the result of two groupings, fifteen different rates are applicable for buildings according to location and the type of construction. The rates range from 0.44 per mille at the lowest to 5.50 per mille at the highest (Table 19.1).

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Table 19.1 TCIP insurance rates

Type of Construction	Risk Regions				
	I	II	III	IV	V
	Insurance Rates (‰)				
Steel, concrete	2.20	1.55	0.83	0.55	0.44
Masonry	3.85	2.75	1.43	0.60	0.50
Other	5.50	3.53	1.76	0.78	0.58

Although the rates have been adjusted, a similar tariff was being used by insurance companies before the new scheme was introduced. The aim in adopting a similar tariff and keeping the rate matrix simple is to avoid creating complexities which would confuse potential policy holders.

A flat rate pricing option was also discussed at the design stage. However, this has not received much acceptance because risk based approach was well established in the insurance market, and recognized as a fair approach. On the other hand, one might argue that the current rates are not well representing the actual risk. This is true especially in the case of the more vulnerable types of buildings, and this implies that some homeowners are subsidizing others. Therefore, the solidarity approach is not totally missing in the scheme. Although the rates have been readjusted in 2004 by 10% on average, this argument still prevails.

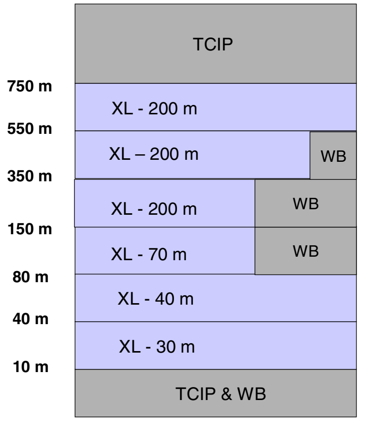
7. Financial resources and claim paying capacity

TCIP is a privately funded entity, and its funding has been primarily dependant upon premium contributions made by homeowners under the insurance scheme. TCIP has not faced any major disaster since the beginning of the program. Therefore, it could have accumulated some financial resources through retained insurance premiums and investment income in the last four years. However, since these resources are not sufficient, TCIP has to heavily rely on reinsurance to be able to indemnify policyholders if a major disaster occurs.

TCIP has been very successful in transferring its risks to international reinsurance markets up to now. The annual risk management and risk transfer program is prepared by the operational manager and discussed and approved by the Management Board. TCIP purchased reinsurance in the amounts of US$ 540 million, US$ 840 million and US$ 740 million in 2001, 2002 and 2003 respectively. The 2004 reinsurance program is also in the amount of US$ 740 million, and has 6 excess layers where the lowest attachment point is US$ 10 million (Figure 19.2). A similar program has been prepared for the year 2005 with the lowest attachment point being US$ 15 million. TCIP also has an access to a contingent credit facility in the amount of US$ 100 million from the World Bank, and a borrowing option from government in case of a major earthquake. All of these create a claims paying capacity of US$ 1 billion for TCIP in 2005, which is, given the current portfolio, estimated to be adequate against a major disaster.

TCIP has been criticized in the past for paying too much for reinsurance. However, given the lack of adequate financial resources, there is no other viable solution than relying on foreign reinsurance. In fact, TCIP has been very diligent in keeping a balance between accumulating more resources and having adequate protection for probable losses. This policy has been very well managed until now despite the fact that the premium levels are low and the overall penetration has been lower than expected.

Figure 19.2 TCIP 2004 risk management program (US$)



8. Claims payment

TCIP has had quite an experience regarding claims payment despite the fact that there has been no major disaster since the inception of the scheme. Table 19.2 below summarizes the claims paid by TCIP. The high frequency of small and medium size earthquakes occurring every year (21 events on average) is immediately evident from Table 19.2. This picture alone might indicate the importance of introducing the compulsory earthquake insurance scheme in Turkey. It is obvious also that the amount of payments would have been much higher if the insurance takeout by homeowners was higher.

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Table 19.2 TCIP claims payments (as of November 2004)

Year	Number of Earthquakes	Number of Claims Paid	Total Payment (US$)
2000	1	6	34,117
2001	17	338	89,554
2002	21	1,558	1,668,650
2003	20	2,503	3,529,277
2004	26	515	443,541
Total	85	4,920	5,765,139

TCIP has created a well functioning claims management system, and is continuously improving it in anticipation of a probable major event. Some features of this system are as follows:

- Claims filling: Claims can be filled through various channels, i.e.;
  - TCIP call center,
  - Internet (through TCIP website),
  - SMS messaging (established in cooperation with GSM operators),
  - Insurance companies and their agents.
- Claims assessment: Claims assessments are performed by independent loss adjusters commissioned by TCIP, following TCIP loss assessment guidelines.
- Local authorities are contacted immediately for exchange of information and to facilitate the assessment process.
- Loss adjusters have been previously retrained by TCIP for proper and consistent loss assessment.
- Training sessions are periodically repeated to keep loss adjusters up-to-date.
- Additional training programs are being held to create reserve loss assessment teams in case of a major disaster.
- IT system: IT system enables instant transfer of loss assessment data from the field, and quick payment of claims.
- Call center receives claims and notify policyholders about assessed damages.
- IT system also has capabilities of using bulk SMS messaging and e-mail messaging to notify policyholders about assessed claims and payments.

- Payment: After loss assessments are finalized and reports are approved, payments to policy holders are usually made through bank offices at the location of the occurrence directly by TCIP.
- Claims are paid within one month. In the case that loss adjustment extends to a longer period for any reason, policyholders are provided with advance payments.

9. Market penetration

Compulsory insurance scheme has been in force since 27 September 2000. After the inception of the scheme, there has been a gradual growth for 5 months, and the number of policies has reached 460,000. However, due to increasing awareness among homeowners and the fact that obligation of the government for post disaster housing arising from the Disaster Law was to disappear at the end of March 2001, there has been a boom in policy numbers in the next 3 months. Following this boom, the number has reached over 2 million by the end of May 2001 despite the severe economic crisis that the country was experiencing at that time (Figure 19.3).

Keeping the trend, insurance policy numbers have reached to their highest with 2,430,000 dwellings insured as of end November 2001. This number represents approximately 20% of the total dwellings that fall within the compulsory scheme. However, after this peak point, there has been stagnation for 4 months, and a major drop by April 2002 because of non renewal of insurance policies. The main reasons of such a dramatic drop have been the decreasing income level of homeowners due to continuing economic crises, and the changing attitude of the government in favor of providing disaster housing to the victims of the Afyon earthquake of February 3, 2002, which occurred in a relatively poor province with low insurance penetration (7.1%). Thousands of homeowners have refused to renew their policies with an expectation that the government will compensate for the damages regardless of the insurance program.

TCIP has led intensive public information campaigns to boost insurance sales. As a result of these campaigns and TCIP's fast payment performance, the decrease has been ceased, and a lot of the policies have been gained back. Even, the take-up rate in Afyon has increased from 7 to 12% in a few months. Afterwards, total policies have been maintained at around 2 million for the last two years.

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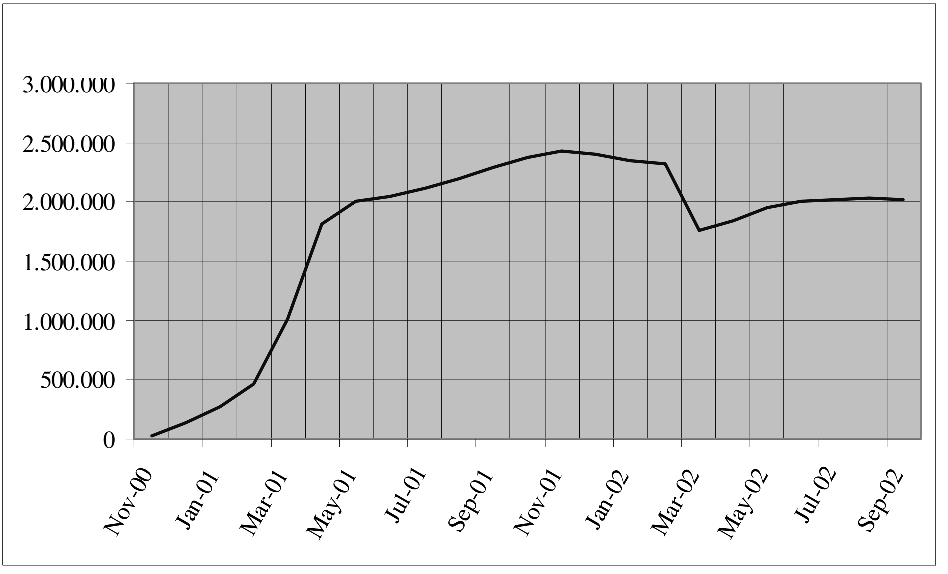
Figure 19.3: TCIP Policy Numbers in the First 2 Years



TCIP public information campaigns basically involve commercials and documentaries broadcasted on national and local TV channels, TV and radio programs, newspaper ads, and various printed materials to be distributed to homeowners and elementary school students. Moreover, aiming to increase awareness and exchange views, a series of local campaigns have been pursued in a dozen of cities since March 2002, where TCIP officials meet with the local authorities, homeowners, insurance agencies and local media. These campaigns have proved to be very helpful in maintaining the current level of insurance penetration.

Among the main reasons for low penetration are relatively low insurance culture, the traditional role of the state in compensating for disaster damages and the continuing expectation of the public in this direction, low level of enforcement and difficult economic conditions experienced in recent years.

Despite disincentives for insurance through additional government compensation, it seems that there has been also some change in the behaviors of homeowners in the affected areas after a damaging earthquake. Table 19.3 below indicates that insurance take-up rates have noticeably increased in such areas. This result can be attributable to good public relations, high service quality and rapid settlement of claims of TCIP.

Table 19.3 Insurance penetration after some earthquakes

Place of Earthquake	Date of Earthquake	Penetration at the Date of Earthquake (%)	Penetration in November 2004 (%)
Afyon	February 3, 2002	7.1	11.3
Tunceli	January 27, 2003	6.4	11.2
Izmir	April 10, 2003	14.3	16.4
Bingol	May 1, 2003	1.7	9,7

As of November 30, 2004, the total policy number is 2.058.222, and the penetration ratio is 16%. This is a moderate level of penetration for a mandatory scheme, and is definitely not the desired level yet. However, it is well above the penetration of homeowner's insurance prior to the start of the new scheme, and is therefore promising.

On the other hand, insurance penetration varies across various geographic regions and risk regions. The take-up rate is obviously higher in the economically more developed parts of the country (Table 19.4), especially if it is a high risk area (Figure 19.4). This implies that different regions should be treated differently in terms of marketing and public relations.

Table 19.4 Penetration across geographic regions (30 November 2004)

Geographic Region	Number of Policies	Penetration %
Marmara	1,059,807	25.6
Central	353,969	15.9
Aegean	339,143	14.6
Mediterranean	132,227	8,0
Black Sea	102,485	8,0
East	40,994	6.7
South East	29,597	4.0
Overall	2,058,222	15.9

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Figure 19.4 TCIP Portfolio Across Risk Regions

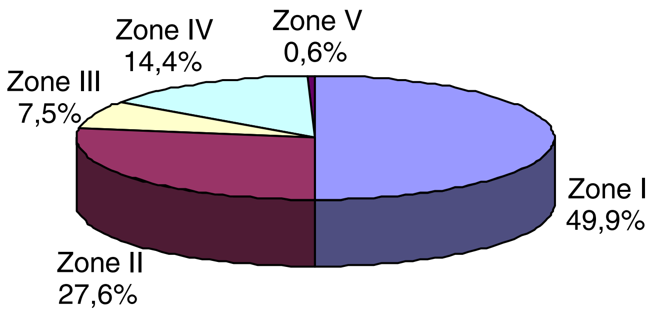

Table 19.5 Some figures of TCIP

	2001	2002	2003	2004*
Number of Policies (end of year)	2,427,000	2,128,000	2,022,000	2,058,000
Insurance penetration	18.7	16.4	15.6	15.9
Annual Premium Income (YTL)	54,240,600	66,605,100	86,305,345	122,371,800
Average Sum Insured (YTL)	14,760	19,970	27,165	35,078
Average Premium (YTL)	23	31	42	59
Claim Payment Capacity (US$)	600 ml	900 ml	1,000 ml	1,000 ml

*As of November 30, 2004

10. Enforcement of compliance

Although it is called "compulsory", under the current legislation, there is no penalty or fine imposed for not buying insurance. For the enforcement of insurance, there are two main sanctions currently applicable:

- The government's obligations to extend housing credit and to have buildings constructed, which arise from the Disaster Law, are abrogated as of March 27, 2001. Those who are required to carry earthquake insurance and fail to do so will not be eligible to receive any compensation from the government in the form of housing credit or reconstruction of damaged buildings in case of an earthquake. However, this provision has been waived twice in four years since the beginning of the scheme. The first event was Afyon Earthquake of February 2002 (a magnitude 6.0 earthquake), and the second event was Bingol Earthquake of May 2003 (a magnitude 6.4 earthquake).

- Homeowners have to present their insurance policy documents in order for the real estate registration offices to affect any procedures related to the buildings subject to the compulsory insurance. This has been a well functioning checkpoint. However, the database of such offices is not updated in some provinces. There is an ongoing IT project to establish a more reliable real estate database. This may help to increase compliance to some extent in the future.

A recent draft law envisages extending such a requirement to other public services and creating some new checkpoints for compliance. If these new checkpoints are applicable, homeowners will be obliged to present their insurance policy documents when opening accounts for such services as gas, water, electricity and telephone. In fact, a pilot application has already been started in 5 cities regarding water and gas services. The enactment of the draft law will extend this application and provide the necessary regulation backing. Moreover, managers of apartment buildings will be given an auxiliary role in taking out insurance and renewal. Again, the current application of TCIP has already envisaged such a new role for managers as 10 percent premium discount is granted for such policies covering at least 8 individual units in the same apartment building. These new measures to improve compliance are expected to bring in a large number of new policies every year. However the draft law has not been sent to the Parliament yet.

11. Conclusions

Within a short period of time, the performance of TCIP scheme has proved to be a well designed public-private partnership program. Moreover, many continuing initiatives in various areas such as claims management, IT systems, risk management, fund management and public relations aim to further improve service quality, minimize costs, increase penetration, and make TCIP a better business entity.

One of the key initiatives worth mentioning is the development of a unique and comprehensive IT system which puts TCIP technologically ahead of most of the insurance companies. The installation of this IT system allowed TCIP to sell almost half of the policies through authorized users (insurance companies and their agencies) over the Internet. In addition, the system allows the insurance companies to issue policies using their own infrastructure and make real-time transfer of data to the TCIP's central database. This enables TCIP to have real-time records about the sale of each policy. The system also provides for the instant transfer of all loss assessment data in case of an earthquake, and supports mobile communication devices. The IT system has a call center, and the capabilities of using SMS messaging and Internet technologies to notify policyholders about assessed damages. A Disaster Recovery Center is also established in another city. The next planned effort related to the IT system is to create a real time data exchange capability with the related agencies to improve compliance.

There may be several lessons that can be drawn from the Turkish experience of TCIP, especially for the countries facing similar conditions. It is not an easy task to make a big shift from conventional policies, and it may take several years to implement a real change in policies and behaviors. Such reforms are usually introduced in the aftermath of a major event. Although this is helpful in receiving support from various parties, working under intense conditions may lead to some errors in design, and lack of communication with all parties. The support may also diminish with the passing of time as people tend to forget the effects of such disasters.

Reform may be difficult to accomplish if there is a strong traditional role of the state in compensating the disaster losses. Things may even get more complicated when there is a sharp change of policy like abolishing all state support and replacing it with insurance. Low insurance penetration is the essential argument used by the government to step in when a disaster occurs. However, this tends to hinder insurance penetration in return. Instead of abolishing state compensation totally, which has not worked very well in the Turkish case, limiting state compensation and having a clear determination to promote insurance might serve both ways.

When measuring the success of TCIP, it is obvious that TCIP has been very efficient in providing compensation to its policyholders and the insurance take-up ratio has been improved a lot. Moreover, on the homeowners' side, when compared to the previous system of state compensation which used to replace houses in one year at the earliest, TCIP pays in cash within one month and provides a higher satisfaction in exchange of a small premium paid.

It can be said that a self-funding system against earthquake disasters would be created in the years to come when much of the building inventory can be taken into the TCIP portfolio. The current market penetration is promising for the future. However, there are still many challenges ahead for TCIP to be truly successful, especially in terms of compliance.

Annex 1

List of Speakers and Presentations at the Conference*

Session 1 - Insurability of catastrophic risks

- Economics of catastrophe risk insurance, *Christian Gollier (University of Toulouse).*
- Insurability of terrorism risk: challenges and perspectives, *Howard Kunreuther and Erwann Michel-Kerjan (Wharton School, University of Pennsylvania).*
- Industrial, technological and other catastrophes, *Christian Lahnstein (Munich Re).*
- Recent trends in the catastrophe risk insurance/reinsurance market, *Patrick Murphy O'Connor (Benfield).*
- Role of the reinsurance industry in the management of weather related risks, *Peter Zimmerli (Swiss Re).*
- Issues and options in the management of terrorism risk through insurance, *Robert Reville (Rand Corporation).*
- Current state of the coverage for war and terrorism risks - including NBC - in the aviation sector, *Eugene Hoeven (IATA)*
- Free market solutions for terrorism risks coverage, *Ben Garston (MAP Underwriting and Lloyd's Terrorism Panel).*

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* Power point presentations summarising papers included in this publication as well as other presentations made at the conference are available on the OECD Insurance homepage: http://www.oecd.org/daf/insurance.

- Improving insurability and affordability: the role of insurance in hazard identification, risk assessment, risk prevention and mitigation for industrial/chemical accidents, *Satyananda Mishra, IAS, Disaster Management Institute, Bhopal - Government of Madhya Pradesh, India).*

Session 2 - Financial market solutions to manage catastrophic risks

- International financing solutions to catastrophic risk exposures, *Torben Juul Andersen (Copenhagen Business School).*
- The use of risk linked securities to manage catastrophic risks, including terrorism, *Christian Mumenthaler (Swiss Re).*
- Current challenges in terrorism risk securitization, *Gordon Woo (RMS).*
- Financing catastrophic risks in non-OECD countries: challenges and perspectives, *Reinhard Mechler (IIASA).*
- Current market trends for catastrophe bonds and risk kinked securities, *Christopher McGhee (MMC Securities, Guy Carpenter).*
- The potential for new risk transfer instruments to cover terrorism risks, *Michele David (The Bond Market Association).*
- Rating agency's perspective on catastrophe bonds and risk linked securities, *Rodrigo Araya (Moody's).*

Session 3 - Role of governments and development of public-private partnerships for catastrophe risk management

- Role of governments in natural catastrophe risk management and financing in OECD countries, *Paul K. Freeman (University of Denver).*
- Catastrophe insurance programs in emerging countries: field experience, *Eugene Gurenko (World Bank, Financial Sector Operations and Policy Department).*
- Potential role for governments in terrorism coverage, *Dwight Jaffee (Haas School of Business, UC Berkeley).*
- Public-private partnerships to cover terrorism risks in OECD countries, *John Cooke (International Economic Relations Consultant, London).*

- Role of the US government in the prevention and mitigation of terrorism risks, *Robert Liscouski (Infrastructure Protection Office, Department of Homeland Security, USA).*

- Disaster risk management policy in Japan, *Kazuhiro Kawachimaru (NIPPONKOA Insurance Company Ltd).*

- The Spanish experience in the management of extraordinary risks, including terrorism, *Ignacio Machetti (Consorcio de Compensación de Seguros).*

- A stakeholder approach for developing a public-private partnership: the Hungarian case*, Reinhard Mechler (IIASA).*

- Disaster risk management policy in China, *Yuanchang Zheng and Jianguo Mu (Department of Disaster and Social Relief, Ministry of Civil Affairs).*

- The French experience in natural catastrophe risk management, *Suzanne Vallet (Caisse Centrale de Réassurance).*

- Earthquake risk management policy in Indonesia, *Werner Bugl (PT Asuransi, MAIPARK Indonesia)*.

- Disaster risk management policy in Mexico, *Carlos Bayo Martinez (FONDEN).*

- Disaster risk management policy in the Philippines, *Ronald I. Flores (Department of National Defense, Office of Civil Defense, National Disasters Coordinating Council).*

- Disaster management in India, *D. Madan (Under Secretary, National Disaster Management Division, Ministry of Home Affairs, Government of India).*

- Management of extraordinary risks, including terrorism, in India: achievements and perspectives, *C. S. Rao (Indian Insurance Regulatory and Development Authority).*

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* Background Note of Mr Kawachimaru's presentation (NIPPONKOA Insurance Company Ltd), based on *Governmental Earthquake Insurance System in Japan*, from *Earthquake Insurance in Japan*, written and published in March 2003 by Non-Life Insurance Rating Organization of Japan.


Policy Issues in Insurance
Catastrophic Risks and Insurance
No. 8