The Turkish Insurance Market is growing by 24.8% as at end of September 2013. The Engineering Lines overall are growing by 37.7% when compared to the same period of time. When we look at the September results of the insurance companies in Turkey, Machinery Breakdown Insurances have grown by 24%, Electronic Equipment Insurance has grown by 21.2% and the Erection All Risks, together with Construction All Risks Insurances have grown by almost 60%. The major effect in this growth is one specific Project covering the highway construction from Istanbul to Izmir and the bridge to be built in the Izmit Bay.

There are many other Engineering projects in the pipeline to come. Here are some examples:
THE THIRD BOSPHORUS BRIDGE
Bridge of Firsts

The 3rd Bridge, which is going to be built on the Bosphorus, Istanbul within the Northern Marmara Motorway Project executed by IC Ictas – Astaldi Consortium, is considered the future of transportation and commerce.

The 3rd bridge, which is going to be built on the Bosphorus, Istanbul after the Bogazici Bridge, which started operating in 1972, and the Fatih Sultan Mehmet Bridge, which was completed in 1988, is regarded as the bridge of firsts.

8 lanes of motorway and 2 lanes of railway will be located at the same level on the 3rd Bosphorus Bridge, which will be a product of professional engineering and advanced technology built by a team, most of whom are Turkish engineers. It will be among the most important bridges of the world with its aesthetic and technical features.

The 3rd Bosphorus Bridge is going to be the widest suspension bridge in the world with a width of 59 meters and the longest spanning one that has a rail system on it, with a main span of 1408 meters. Another first of the bridge is that it is the suspension bridge with the highest towers of the world, with a height of more than 322 meters.

With its construction commencing in 2013 and aimed to be completed in 2015, the 3rd Bosphorus Bridge is going to be located in the Odayeri – Paşaköy section of the Northern Marmara Motorway project. The rail system on the bridge is going to transport passengers from Edirne to Izmit. The rail system is going to be integrated with the Marmaray and the Istanbul Subway to link Atatürk Airport, Sabiha Gökçen Airport, and the 3rd Airport which will be constructed.

The Northern Marmara Motorway and the 3rd Bosphorus Bridge are going to be executed with “Build- Operate – Transfer” model. With an investment value of 4.5 billion TL, the project’s operation, including construction, is going to be executed by IC Ictas – Astaldi Consortium for a period of 10 years 2 months and 20 days and then be transferred to the Ministry of Transportation at the end of this period.

The Northern Marmara Motorway and the 3rd Bosphorus Bridge Project will be one of the symbols of modern Turkey and will bring Turkey closer to its objective of being one of the biggest 10 economies of the world in 2023.
The Third Bosphorus Bridge Concept Design

The concept design of the 3rd bridge, which is going to be built on the Bosphorus, İstanbul within the Northern Marmara Motorway Project, has been made jointly by structural engineer Michel Virlogeux, regarded as the “French bridge master”, and Swiss Company, T-Engineering.

Some of the bridges bearing Virlogeux’s signature as one of the most experienced names in the world for bridge design are: Vasco de Gama Bridge, one of the longest bridges of Europe with a length of 17.2 kilometres, located on Tejo River in Lisbon, capital of Portugal, and Normandy Bridge, located on the Seine River in France, which held the title of the longest suspension bridge in the world for 4 years after 1st January 1995, when it was built.

NORTHERN MARMARA MOTORWAY

Northern Marmara Motorway of nearly 115 km length, which has 19 junctions and linking roads, is located in Odayeri – Paşaköy part of the project.

This motorway project is one that covers the Third Bosphorus Bridge which was put out to tender on 20.04.2012 with Build – Operate – Transfer model and is planned to be finished in 2015 to relieve the traffic load of Odayeri – Paşaköy lane, and the 1st Bosphorus Bridge and the 2nd Bosphorus Bridge, which are still in use, and to resolve the transportation problem of İstanbul.

<table>
<thead>
<tr>
<th>THE THIRD BOSPHORUS BRIDGE AND THE NORTHERN MARMARA MOTORWAY PROJECT TAG</th>
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İZMİR HİGHWAY

The Gebze Orhagazi Izmir Project is the landmark transaction for the infrastructure sector in Turkey and one of the largest in the world. It is strategically important project for the Government of Turkey and the largest Public-Private partnership (“PPP”) project in Turkey to date.

The Project will provide a 421 kms Trans European Motorway (T.E.M.) standard highway between Gebze, on the north shore of Izmit Bay, and Izmir.

It will occupy a strategic place in the national transportation network, due to the cities and regions it will serve.

High Project Rationale

The Project will connect Istanbul with Izmir, two of the main economic centres of Turkey. The area across which the project stretches has one third of Turkey’s population and includes the seven most industrialised cities contributing to 45% of Turkey’s GDP. It is expected to increase industrial capacity of the region and reduce emission and pollution due to congestion on current routes. Travel time from Istanbul to Izmir is estimated to be reduced from 10 hours to 4 hours. The Project is of strategic importance in the context of the development of infrastructure in Turkey. It constitutes a Landmark transaction for the infrastructure sector in Turkey and one of the largest in the world and is a strategically important project for the Government of Turkey. It is also the largest Public-Private Partnership (“PPP”) infrastructure project in Turkey to date.

The Project has been awarded to a consortium of six Sponsors under a concession from the General Directorate of Highways (“KGM”)

- Nurol Insaat ve Ticaret A.S
- Ozaltin Insaat ve Ticaret A.S
- Mak- Yol Insaat Sanayi Turizm ve Ticaret A.S
- Astaldi S.p.A
- Yuksel Insaat A.S
- Gocay Insaat Taahhüt ve Ticaret A.S
The EPC Contractor of the Project is a JV participated by six Sponsors.

The EPC Contractor sub contract the construction of the Suspension Bridge to one of the major building company with leading expertise and proven experience in designing and building long suspension bridges, IHI Itochu.

Geology and Geotechnical Studies, Preliminary Design of the Motorway, Traffic Optimization Study and Expropriation Tasks, Technical Reviews and Risk Management, Environmental Impact Review, Permits and Licence Assessments, Insurance Plan, EPC contracts, O&M and HSEC procedures have already been completed by well experienced international firms.

The O&M Contractor of the Project will be selected among well-known international toll road operators, which will be responsible for the operation and maintenance of the Motorway.

The Contract Term is 22 years and 4 months in total (construction + operation) with a Construction Period of 7 years as of the date on which the Contract enters into force, in accordance with the contract signed:

- Approximately USD 6 billion Project Value
- Annual guaranteed income is approximately USD 700 million
- Asset to be transferred to the KGM at the end of the Concession period
- Tariff will be adjusted for inflation and indexed to US$
- Minimum traffic guarantee by KGM
- Debt assumption by KGM upon termination

The TANAP Project

Turkey and Azerbaijan is adding a brand new project to its successful on-going projects and signing for a project which will create a tremendous impression to the world energy marketplace. Name of that project is: Trans Anatolian Natural Gas Pipeline Project (TANAP)
As well as supplying the gas needs of Europe and Turkey, providing different types of gas is another purpose of this important project which has been emerged with the cooperation of two brother countries, Turkey and Azerbaijan.

Trans Anatolia Natural Gas Pipeline (TANAP) Project intends for the transportation of the natural gas to be produced in Shah Deniz 2 field and other fields of Azerbaijan (and other possible neighbouring countries) through Turkey to Europe. Memorandum of Understanding was signed between the governments of Turkey and Azerbaijan on December 24th 2011 in Ankara. The total sum Insured is expected to be around 10 Billion Dollars.

The companies appointed upon a joint consortium dedicatedly constituted for this project by both countries comprise of State Oil Company of Azerbaijan (SOCAR), and Petroleum Pipeline Corporation of Turkey (BOTAS) and/or Turkish Petroleum Corporation (TPAO). Trans Anatolia Natural Gas Pipeline (TANAP) Project is planned to begin from Georgia-Turkey border and go through the provincial borders of Ardahan, Kars, Erzurum, Bayburt, Gümüşhane, Erzincan, Sivas, Yozgat, Kırıkkale, Ankara, Eskişehir, Bilecik, Kütahya, Bursa, Balıkesir, Çanakkale, Tekirdağ, Edirne, respectively.

The total length of the pipeline within Turkey is expected to be 1900 Km’s. The Greek part is planned to be 67 Km’s. The pipes to be used will have a diameter of 56 Inches. The Project is expected to carry 165 billion m³ per annum Natural Gas from Azerbaijan to Europe.
THIRD AIRPORT IN ISTANBUL

The existing Atatürk Airport, on the European side of Istanbul, does not meet increasing demands and there is an increasing problem with slot times. There is not enough space to build an additional runway as the airport is absorbed within the city of Istanbul. North of the airport is covered with industrial areas whereas east and west is covered with residential areas. Because of the limited capacity, the Turkish Airspace Authority does not allow additional cargo or charter flights to the airport. Airlines which want to start new routes and/or to add additional flights urgently need new capacity. Especially, the national carrier Turkish Airlines was planning to gather all flights in Atatürk Airport in order to convert it into a transfer hub. Due to lack of slots and parking space some of Turkish Airlines aircraft are based in Sabiha Gökçen Airport which is on the Asian side of Istanbul. Sabiha Gökçen Airport is further away from the European part of the city in comparison with the Atatürk airport. Due to hub strategy of Turkish Airlines, most of the airlines passengers need to use Atatürk Airport instead of Sabiha Gökçen Airport as the latter is used mostly by charter and low-cost airlines. Studies to maximize the capacity of Atatürk Airport have shown that general aviation and training flights should be minimised. According to the results of 2012, Istanbul handled more than 60 million passengers with two airports.

The new airport will be constructed at the intersection of junction roads of Arnavutköy, Göktürk and Çatalca, north of European side of Istanbul between the Black Sea regions of Yeniköy and Akpınar. Construction zone will be 7,659 hectares region near Lake Terkos. Some 6,172 hectares of this area is state-owned forest land. Flying distance between Istanbul New Airport and Atatürk Airport is about 35 km (22 mi). In the area there are old open-pit coal mines, which have to be filled up with soil.

The project

The tender for construction and 25-year-operation has been held on May 3rd 2013 according to a statement made by Binali Yıldırım, Minister of Communications, Maritime affairs and Telecommunications. The project is made up of four construction stages. After all stages have been completed, the airport will be the biggest airport of the world with 150 million passenger capacity. First stage construction is planned to finish in 42 months after the delivery of the area. The total project cost is expected to be approximately EUR 7 billion, excluding financing costs. It has guaranteed 342 million passengers for 12 years.

The Turkish joint venture consortium of Cengiz-Kolin-Limak-Mapa-Kalyon won the tender for Istanbul's third airport, promising to pay the government €26.142 billion including value added
tax for a 25-year lease starting from 2017. The beginning of the construction's first stage is set for 2017, 42 months after the finalization of the tender approval.

First Stage
- A main terminal total of 90 million passengers capacity, capable of all kinds of equipment for the use of passengers with an area of 680,000 m$^2$ (7,300,000 sq ft).
- Second terminal building or two satellite terminal. (170,000 m$^2$ (1,800,000 sq ft))
- 88 aircraft passenger bridges at terminals
- Indoor parking with 12,000 vehicles capacity
- 3 independent runways
- 8 parallel taxiways
- Approximately 4,000,000 m$^2$ (43,000,000 sq ft) apron
- 3 technical blocks,
- 1 air traffic control tower
- VIP Lounge
- Cargo and general aviation terminals
- Other social reinforcement areas including hospitals, prayer-rooms, convention centres.

Second Stage
- 1 runway
- 3 parallel taxiways

Third Stage
- A terminal with a capacity of 30 million passengers, where will be built at the sea side in an area of 500,000 m$^2$ (5,400,000 sq ft)
- 1 runway
- 1 parallel taxiway
- Apron

Fourth Stage
- A terminal with a capacity of 30 million passengers where will be built in an area of 340,000 m$^2$ (3,700,000 sq ft)
- 1 runway

At the End of the Stages
- 6 runways
- 16 taxiways
- 150 million passengers capacity
- 1,400,000 m$^2$ (15,000,000 sq ft) indoor area
- 165 aircraft passenger bridges at all terminals
- 4 terminal buildings, with rail access between terminals
- 3 technical blocks
- 1 air traffic control tower
- 8 ramp control tower
- 650,000 m$^2$ (7,000,000 sq ft) apron with 500 aircraft parking capacity
- VIP Lounge
- Cargo and general aviation terminals
- State Palace
• Indoor and outdoor parking with a capacity of about 70,000 cars
• Aviation medical centre
• ARFF buildings
• Garage buildings
• Hotels
• Convention centres
• Power plants
• Water treatment and waste facilities

Controversy
As stated by the Forestry Ministry, a study conducted on the environmental impact of the project and published in April 2013, reports that there are a total of 2,513,341 trees in the area and 657,950 of them will need to be cut down while 1,855,391 trees will be moved to new places.

The Turkish Chamber of Environmental Engineers (ÇMO) has taken the project tender to court on grounds that the project violated the existing legislation for the preparation of the environmental impact assessment report.

The airport will provide jobs for 100,000 people and will be so large that it will be visible from space.

İstanbul Mayor Kadir Topbaş earlier said the new airport would have a total passenger capacity of 150 million per year.

Currently, there are two airports: İstanbul Atatürk Airport, on the European side of the city, and Sabiha Gökçen International Airport, on the Asian side. Both are quite large: in 2011 İstanbul Atatürk saw more than 37 million passengers, with Sabiha Gökçen at over 13 million. However, the two airports are insufficient to meet growing domestic and international passenger demands.

THE GOLDEN HORN PORT PROJECT

The Sembol-Ekopark İnşaat-Fine Otelcilik joint venture has won the tender for the Haliç Yacht Port and Complex Project, following the build-operate-transfer (BOT) model, organized by the Ministry of Transport, Maritime and Communication.
The project for the privatisation of Camialtı and Taşkızak shipyards in the Golden Horn includes two yacht ports, two five-star hotels – each with 400 rooms – a big mosque for 1,000 persons and shopping malls and parks in the area of around 230,000 square meters. The consortium will build the tourism complex in four years and hold the operation rights for 49 years.

Conservation of the historical structures of the area, which is over 500 years old, is to be taken into account. The Sum Insured for the Project is expected to be around a Billion TL. The Golden Horn is near Karaköy where the Galataport privatization was recently held. Doğuş Holding made the highest offer for the privatization of the Istanbul Salıpazarı Port Area, commonly known as Galataport, with a $702 million bid, winning the right to operate the port area for 30 years.

**MARMARAY (THE BOSPBHORUS IMMERSED TUNNEL PART) IS IN OPERATION**

The tunnel was officially opened on October 29, 2013 on the Turkish Republic's 90th anniversary Republic Day. The maiden journey took place following the grand opening ceremony attended by Turkish President Abdullah Gül and Prime Minister Recep Tayyip Erdoğan, as well as Japanese Prime Minister Shinzō Abe, Romanian Prime Minister Victor Ponta, Somali President Hassan Sheikh Mohamud, and a number of foreign civil servants.

Following the opening ceremony, commuter trains now go from Ayrılıkçeşme station (Asian side) to Kazlıçeşme station (European side), stopping at 3 underground stations along the way where the rest of the Project is to be completed afterwards.

The following figures give approximate information regarding the design of the whole Project:

- Total length: 76.3 km
- European side: 19.3 km
- Asian side: 43.4 km
- Immersed tube tunnel: 1.4 km
- Bored tunnel: 9.8 km
- Cut-and-cover and open cut: 2.4 km
- Maximum Depth of immersed tube tunnel: 56 m
- Existing stations upgraded/rebuilt: 37
New underground stations: 3
Length of platform, minimum: 225 m
Design speed: 100 km/hour
Expected mean speed: 45 km/hour
Number of new vehicles: Up to 440

Volkan Babür, Mapfre-Sigorta
Nov 2013