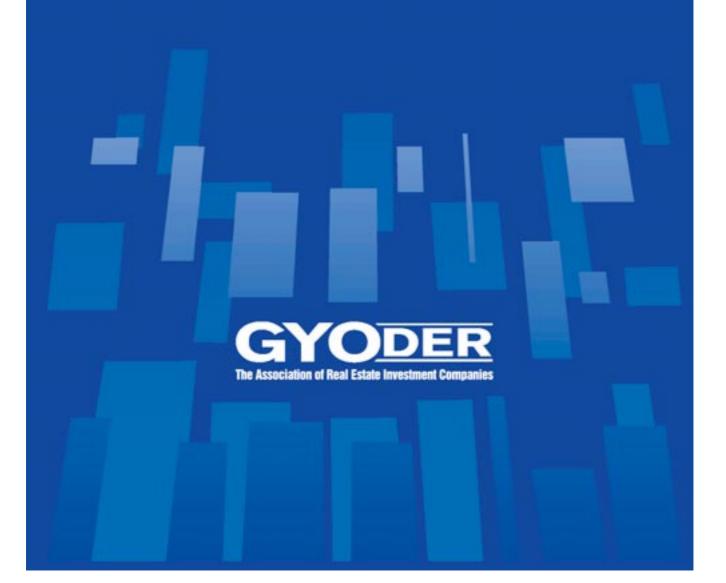
REAL ESTATE RESEARCH REPORT

# THE REAL ESTATE SECTOR AND PROGNOSES FOR ISTANBUL 2015





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Dr. Can Fuat Gürlesel

#### **PUBLISHER**

Gayrimenkul Yatırım Ortaklığı Derneği İktisadi İşletmesi Nispetiye Caddesi, Levent İş Merkezi, 6/2 34330 Levent - İstanbul

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Tel: +90 (212) 227 61 52/53/54 Faks: +90 (212) 227 61 44

#### PRINTING

Paymaş Ltd. Şti Tel: +90 (212) 637 32 10 Keresteciler Sitesi, Fatih Caddesi Kalender Sok. No: 17 K: 2 Merter- İstanbul

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ISBN 9944-5152-1-3

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#### Introduction...

**¬** he real estate sector in Turkey gives strong signs of entering a new stage of development. Now listed among fastly developing markets, the sector encompasses not only the residential but also the commercial real estate segments.

Economic improvement and stability along with the EU full membership process have created appropriate conditions to enhance the institutionalization of the real estate sector and to enable the inception of the mortgage system. The increasing interest and investments of foreign capital is also leading to the improvement of quality and standards in the sector.

The development of the real estate sector which started in major cities is now extending to smaller cities of Turkey as well. However, Istanbul still remains the focal point of this development.

"The Real Estate Sector and Prognoses for Istanbul 2015" study aims to anticipate the future stages of this development process in the real estate sector and to come up with proposals for its effective monitoring.

This study will deliver presumptions about the qualitative and quantitative changes in the real estate sector in and around Istanbul until the year 2015.

The study comprises a thorough analysis of the overall real estate sector, as well as presumptions for the development of residential, retail, office, hotel, industrial and logistics markets until 2015.

We hope that "The Real Estate Sector and Prognoses for Istanbul 2015" study will be beneficial for all players in the sector and will contribute to the institutionalization of the real estate sector.

Dr. Can Fuat Gürlesel

March 2006

#### **Executive Summary**

he real estate sector in Turkey has entered a new phase of development, marked by different aspects. While the sector gradually is adapting to global norms and standards, the housing and other subsectors are developing, the need to have a regularized market is increasing, an effective financing system is being built, institutionalization as well as the quality and standards of the products are improving, the interest and participation of foreigners is multiplying, and the sector is becoming globally attractive.

As the real estate sector shifts to a new stage, the housing sector preserves its priority and calls us to divert our attention to its social and societal dimensions. When comparing the number of buildings to that of households in Turkey, we don't observe a housing deficit. This outcome emanates from the fact that the majority of the demand for housing is met with substandard, low quality housing built illegally without a license. As of 2000, 38 % of the existing 13.6 million residential units in Turkey have been built without a building license. This ratio is 52 % for Istanbul. Thus, there is an important demand for housing built in accordance with regulations and standards in Istanbul and in Turkey.

Within this framework, the housing policies to be devised for the decade ahead must focus on the development of housing with appropriate permits, urban regeneration and transformation projects, the improvement of construction standards, quality research and the adoption of policies to prevent damages from earthquake and other natural disasters.

The Turkish real estate sector will be more and more susceptible to the developments in the global real estate sector. Following the 1997 Asia-Pacific economic crisis, the interest rates have dropped drastically, the real estate demand has boomed, and prices have skyrocketed. As of 2005, while the European and the US real estate markets are saturated, the Asian markets are the fastest developing in the world and display the most potential for growth. With its rapidly developing real estate markets, Turkey is becoming more and more attractive among developing countries. A report by ULI/PWC (2005) on developing real estate markets ranks Istanbul at the top of 27 metropolitan cities regarding real estate development potential excluding risks.

Turkey's EU membership process will also have a positive impact on the real estate sector by improving transparency, control, high standards, institutionalization and statistical data gathering. Foreign players will create competition in the sector and we are expected to witness mergers and acquisitions. As demonstrated in other countries, the EU membership process will increase foreign investments in Turkey.

Economic progress is crucial to the development of the real estate sector. Economic improvement, the stability of the Turkish currency, the decrease in inflation, and the harmonization of interest rates with global standards will help the sector to expand further. The real estate sector will experience a fast, stable and predictable development process.

The development of Istanbul in the coming decade will also be a major factor in the expansion of the real estate sector in general. Istanbul will display a development which focuses on the services sector. The urban industry is expected to move to the suburbs of the city in the middle and long run. The demand for qualified work force will increase while the capacity to create employment for the lesser qualified work force will decline. The Istanbul Metropolitan Planning Center, a division of the Istanbul Greater Metropolitan Municipality, will monitor the development of the city and its the real estate sector by planning central business districts, by creating new residential areas through urban regeneration and industrial transformation projects.

The analyses, evaluations and predictions for Istanbul's real estate market will comprise five segments: residential, offices, retail and shopping centers, industrial and logistics and hotels.

Predictions are also made for the housing deficit, demand and supply in Istanbul until 2015 as well as residential real estate prices.

The population and demographics are the fundamental indicators for the residential sector. The population of Istanbul as of 2005 is 11.48 million, which represents 15.8 % of Turkey's population. The population growth rate is decreasing; while it was 2.75 % in the period 2000-2005, it has come down to 2.5 % in 2005. The migration rate to Istanbul has also slowed down to 252.000 persons in 2000-2005.

We estimate the population growth rate, currently at 2.5 % in 2005, to be 2.4 % in the next five years, 2.3 % between 2010-2015, thus the population to reach 14.48 million in 2015. The population growth rate of Turkey is also foreseen to slow down and the national population to reach 81.65 million by 2015. Istanbul is expected to harbor 17.8 % of the national population; 80 % of this population growth emanating from the increase in city population while 20 % resulting from migration.

Parallel to the population increase predictions, the number of households in Istanbul is foreseen to increase from 2.9 million in 2005 to 4.08 million in 2015. In the next decade, a need for 1.18 million new housing units will emerge. As of 2005, there are 3.43 million residential units, of which 50 % are unlicensed and substandard.

We predict a residential need of 2.133.045 units in Istanbul until 2015 due to four primary reasons: 1.18 million new housing will be needed as a result of population growth. 171.500 new homes will be needed to replace old and shabby housing in the next 10 years. 182.557 new residential units will be needed as a result of earthquake risk. And finally, 600.000 new units will be needed to meet the demands of standardized, licensed and modern urban housing.

The housing demand in Istanbul in the next 10 years will be for use, upgrade and investment purposes. Three main factors define the housing demand: Preferences and habits of the household members, their income and savings, and the possibilities offered by the housing finance system.

According to statistics in 2000, 57.3 % of Istanbul households are home owners. 833.557 households are tenants. 679.816 of the home owners have one or more other homes either for their own use or as an investment. Home owners have bought their home(s) primarily with their own income and savings. 37 % of the people who are considering the purchase of a new home are planning to engage in a housing loan, widely available since three years. When we evaluate the households' level of income, spending and saving habits, we observe that the two highest income groups have the ability to purchase a new home or pay back the interest of the bank housing loans with their existing income and savings. The increase in household income will lead to a potential housing demand by approximately 1.6 million households until 2015.

The mortgage system, currently under development, will be the most important determinant of the housing demand, given that it functions effectively. Housing loans have reached 12 billion YTL at the end of 2005, and represented 2.48 % of the GNP. The average loan size was 45.000 YTL.

We predict the volume of the housing loans to reach 118.5 billion YTL and make up 15 % of the GNP until 2015. Additional loans in the next 10 years are expected to be 106.2 billion YTL. An average loan size of 75.000 YTL will mean that 1.42 million housing loans will be extended in this period, given that the monthly interest rate will be in the 0.6-0.8 % range. Therefore, we can assume that there will be an annual housing demand of 250.000 in Istanbul, a total of 2.5 million homes until 2015. This demand can be segregated as follows: 10.000 A class luxury homes, 170.000 B class standard quality homes, 70.000 C class social housing, 118.000 new homes demanded due to population growth, 119.000 for renewal/upgrade and 13.000 for investment purposes.

Of the annual supply of 250.000 homes, 180.000 will be produced under market conditions while 70.000 by public funding and public/private joint funding.

The limited size of areas suitable for development is the main obstacle to the housing supply. The 2004 numbers tell us that there are 2.025 km2 of public land in Istanbul, eligible for residential development. Silivri, Tuzla, Çatalca, Büyük Çekmece, Sarıyer and Beykoz will be the new development areas.

In Istanbul, new housing will be produced by the rebuilding and renewal of older homes in inner city, by urban transformation/regeneration and new investment in provinces outside the city walls, and by new housing developments in suburban areas.

The housing market for A class luxury homes will be saturated, leading to limited demand, to stabilization in sales prices and even a drop in the purchasing values. The demand for B class standard quality housing will expand, resulting in a raise in the sales prices and rents in this category.

The retail and shopping centers, offices, industry and logistics zones as well as hotels make up the commercial real estate market. The retail sector and the shopping center market will grow rapidly in the next decade.

As of the end 2005, the GNP is at \$358 billion; the retail market has a volume of \$70 billion with a retail market to GNP ratio of 19.6 %. There are 103 shopping centers in Turkey, with a total construction area of 1.940.860 m², an area per one thousand people of 26.8 m². The 36 shopping centers in Istanbul have a leasable area of 815.165 m², corresponding to an area of 71 m² per one thousand people. Shopping centers represent the organized markets of the overall retail market. Half of the retail market consists of food and the other half of non-food goods. 20 % of the non-food retail market is organized and has a volume of \$7 billion.

We predict the shopping centers to reach an area of 7.54 million m<sup>2</sup> and the GNP to grow by 5 % annually and reach \$555 billion in 2015. The retail market is expected to reach \$151.2 billion in 2015, with an annual growth rate of 8 %. Assuming that the non-food retail market will reach a market share of 60 %, and the organized market a share of 30 %, we predict that the non-food organized retail market will reach a volume of \$27.2 billion. 7.54 million m<sup>2</sup> of shopping centers will be needed to meet this commercial activity, increasing the per capita area per one thousand people to 92.4 m<sup>2</sup>. In Istanbul, the size of shopping centers is predicted at  $2.174.000~m^2$ , based on a 150  $m^2$  per one thousand people assumption, leading to a need for 1.4 million  $m^2$  of additional shopping centers.

Shopping centers will expand from big and attractive cities such as Istanbul to other cities of Turkey. Despite the potential negative effect on development that the Bill of Hypermarkets might create, shopping centers represent the most important segment of the commercial real estate market due to their tremendous growth potential.

The office market is another important segment of the commercial real estate sector.

Supply and demand in the office market is heavily influenced from economic and sectoral developments.

The A and B class office stock in Istanbul, which meets global standards, is 1.676.268 m² as of the end of 2005. A and B class offices have developed in the last 10 years, especially on the Beşiktaş-Maslak central business district axes. Kozyatağı-Altunizade-Kavacık axes on the Asian side and the Merter-Airport-İkitelli-Güneşli axis on the European side also harbor office buildings. Demand, sales prices and rents in the office sector have remarkably dropped after the 2001 economic crisis. The current vacancy rates range from 20-45 %in areas other than the Levent-Zincirlikuyu axis as of 2005, while rents are still below 2001 levels.

We presume that A class offices will be in demand in the coming decade, especially from foreign companies and big Turkish companies active in the services sector. The number of Turkish companies with a demand for A class offices is rather limited while prices of the B class offices are considered to be on the high side for Turkish companies. Yet, office prices in Istanbul are still low, as compared to international standards.

Depending on economic expectations for the next 10 years, we predict that the demand for A class offices will grow and that 350.000-400.000 m2 of office space will be needed. The demand for B class offices will primarily meet the available existing office stock, limiting the demand to 200-250.000 m2 in the upcoming decade. We expect the yield for A class offices to prevail in the 8-10 % range in the next ten years.

The industry and logistics market constitutes the third segment of the commercial real estate sector.

The industrial sector and the industry in Istanbul have entered a phase of restructuring. The industrial production facilities located at the heart of the city in Istanbul will be moving out of the city in the middle and long run. Two new industrial areas are expected to develop: the İkitelli-Hadımköy area on the European side and the Kartal-Gebze area on the Asian side. The demand for technology areas and Organized Industrial Zones is also expected to expand in the middle and long run.

The rapid growth witnessed in industry and commerce, the retail sector, foreign trade, foreign investments, and transit trade is leading to the fast development of the logistics sector and to a high level of demand for storage, distribution and logistics areas suitable to global size and standards. Güneşli, İkitelli, Ambarlı, Beylikdüzü and Hadımköy on the European side and Ümraniye, Dudullu, Samandra, Sangazi and Tuzla on the Asian side will be the developing logistics areas in the next decade. With the growth in demand for industry and logistics areas, we expect an increase in the sales prices of industrial areas and a raise in the rents of logistics areas.

The hotel market is the fourth segment of the commercial real estate market.

Developments and predictions in the tourism sector have a direct impact on the hotel market. 4.94 million tourists have visited Istanbul in 2005. As of the end of 2005, there is a capacity for 80.000 beds in Istanbul, of which 55.000 are in certified touristic establishments. The certified touristic establishments were 75 % full in 2005. On the average, a tourist spends 3 nights in Istanbul. The city hosts 35 international conventions per year with an attendee number of 31.000.

The predictions for the tourism sector in Istanbul for 2015 indicate that the number of visitors per year will reach 10 million, and that the average stay will be 4 nights. An occupancy rate of 75 % in hotel capacity means that 146.125 beds will be needed in 2015, thus 91.325 new beds must be added to the existing capacity in the next 10 years. Assuming that this increase in accommodation capacity is met with 5-star hotels with 600 beds and 3-4-star hotels with 200 beds, 60 new 5-star hotels and 276 new 3-star hotels will be needed. Within this framework, we can conclude that the hotel market in Istanbul will show an important development in the next decade.

Lastly, suggestions are presented as we see the need for the establishment of a national real estate index in order to ensure the development of the real estate market according to global standards.



## THE REAL ESTATE SECTOR IN TURKEY AND IN ISTANBUL

#### I.1 DEVELOPMENTS IN THE REAL ESTATE SECTOR

The real estate sector in Turkey has entered a new phase of development, due to recent improvements and stability in the economy. The main characteristics of the developments in the real estate sector and this new phase can be characterized as follows:

- The real estate sector in Turkey, formerly concentrated only in the residential arena, is now developing according to international norms.
- This new understanding is the result of economic developments along with the ripening of conditions which prepare the grounds for the development of the real estate sector. The curb in inflation, the adaptation of interest rates to international norms as well as the stability of the YTL are the main contributors.
- The Turkish real estate sector does not only encompass the residential sector, but also the commercial real estate sector, as in the case of international examples. The commercial real estate sector includes organized markets and shopping centers, offices, industry and logistics areas, and tourism establishments.
- This variety of scope enables the real estate sector to expand beyond the residential sector, housing policies, residential supply and demand perspectives.
- The real estate sector is well on its way of becoming an organized real estate market, with corresponding institutions and sub-segments.
- An effective financing system could not be established until now because of unfavorable economic conditions. A favorable economic environment, which now allows for the legal and institutional structure of the housing finance system to be built, is the most important factor for the development of the sector.
- Foreign capital and international funds display a growing interest to the Turkish real estate sector. This interest and involvement are expected to continue in the next decade.
- Institutionalization is increasing in all domains of the sector. Newcomers to the sector increase the degree of institutionalization.
- The dimensions of real estate investments are increasing and flourishing, leading to an improvement in the quality of end products. Meeting the demands of foreign investors has already become a preference.
- Parallel to these developments, the real estate sector is being built on a framework of neglected and illegal urban development which existed for many years. This unplanned and uncontrolled urbanization limits the pace of development of the sector.
- Turkey's EU full membership process also has a positive impact on the real estate sector. The sector is acquiring a leading position among developing markets.
- Developments in the real estate sector are now extending to cover cities other than Istanbul and major cities in Turkey. However, Istanbul still remains the engine of all developments.

■ Urban changes and developments that are expected in Istanbul in the next decade will positively contribute to the development of the real estate sector.

#### **1.2 THE RESIDENTIAL SECTOR**

Despite the fact that the real estate sector has entered a new phase of development, the residential sector remains an important market, also in terms of its economic and social dimensions. This fact necessitates detailed analyses made and policies to be formed independent of the real estate sector itself.

Housing, a must for sheltering all individuals and households, constitutes a human and social need.

Generally countries develop housing policies based on the cooperation and co-existence of public and private sectors to meet the need for housing. While the public sector produces social housing, the private sector meets housing needs according to market demand and conditions.

The sine qua non of any housing policy is the production of licensed buildings that meet minimum quality and standards.

The overwhelming problem of the residential sector in Turkey is the fact that the housing need is mostly met by unlicensed and substandard buildings.

A housing study done in 2000 tells us that, 38 % out of the 13.597.676 urban residential buildings in Turkey, and 52 % of the 3.136.931 homes in Istanbul are unlicensed.

Turkey's population increase in the last 45 years, fast rural migration, ad hoc urbanization, related socio-economic problems, lack of legislation and control, and the political efforts to legalize unlicensed housing led to the accumulation of problems in the real estate sector.

When we compare the number of households to the existing housing stock, we cannot deduce a housing deficit. But if we subtract the existing unlicensed and substandard residential units, we come across an important deficit in the housing stock.

The State Planning Organization (SPO) calculates the annual need for housing in its five year plans according to the projected annual increase in households and the need emanating from the risk of earthquake and natural disasters. The State Institute of Statistics (SIS) keeps an inventory of total residential units which are built with construction permits and have obtained utilization licenses.

Table 1 portrays this data since 1990. The need for urban housing for 1990-2005, as calculated by the SPO, is 7.868.400. The number of homes which have obtained construction permits and utilization licenses respectively is 6.221.915 and 3.632.123 in the same period.

These numbers indicate that the number of new home construction in the last 16 years has been far below the housing need. The construction of unlicensed housing met the majority of the gap in the need. In short, the stock of licensed and standardized housing is far below the growing need and this gap is widening every year.

TABLE 1: THE HOUSING NEED AND THE NUMBER OF HOMES WITH UTILIZATION LICENSES

YEARS	THE NEED FOR URBAN HOUSING	THE NUMBER OF HOMES WITH CONSTRUCTION PERMITS	THE NUMBER OF HOMES WITH UTILIZATION LICENSES	THE RATIO OF CONSTRUCTION PERMITS TO HOUSING NEED %	THE RATIO OF FULFILLED NEED %
1990	340,000	381,408	232,018	112.1	68.2
1991	354,000	392,943	227,471	111.0	64.2
1992	370,000	467,024	268,804	126.2	72.6
1993	381,000	548,129	269,695	143.8	70.8
1994	395,000	523,791	245,610	132.6	62.1
1995	414,000	518,236	248,946	125.1	60.1
1996	460,000	454,295	267,306	98.7	58.1
1997	498,000	464,117	277,056	93.1	55.6
1998	513,000	414,573	219,737	80.8	48.8
1999	516,000	339,446	215,613	65.7	41.8
2000	553,000	315,162	245,155	56.9	44.3
2001	565,600	279,616	243,464	49.1	42.8
2002	593,500	153,779	156,674	25.9	26.4
2003	599,700	194,748	158,392	32.4	26.4
2004	633,600	324,989	168,365	51.2	25.3
2005	679,600	449,659	195,817	66.2	28.8

Source; SPO, SIS

#### 1.3. Housing Policy

The basis of any housing policy is the construction, by public and private sectors, of planned, licensed, standardized, environment friendly housing which meets minimum standards to shelter individuals and households. Housing policies comprise the preparation and the implementation of the necessary legal framework, an effective control system, a healthy title registration system, the definition of private and institutional property rights as well as the development of land with adequate infrastructure. Furthermore, the establishment of an effective financing system for both the supply and demand in the housing sector is inevitable. The investment climate must also be rendered effective and efficient, as residential units are sought and demanded as investments.

In general, housing policies are devised mostly to meet the housing demand.

There are two main indicators in designing the housing policies in Turkey for the upcoming years. The first one is the existing housing stock and its distribution by cities. The second one is the prediction for the future housing need due to demographic changes.

The Housing Stock survey done by SIS in 2000 delivers many important facts regarding the existing housing stock and prepares the ground for devising new housing policies.

This survey indicates a surplus of housing in the majority of cities in Turkey and a shortage in only 7 cities. These results do not lead to the conclusion that there's no housing problem in Turkey, but actually mean that the housing need is met by unlicensed housing. When we probe deeper into the legal status of the homes in cities portraying a housing surplus, we observe a shortage of licensed but a surplus of substandard and unlicensed housing. This surplus leads to the existence of not only a quantity but also a quality problem in the existing housing stock. Unlicensed housing has also become an investment medium in addition to meeting sheltering needs illegally.

The Under Secretariat of Housing of the Prime Ministry has analyzed the facts delivered by the SIS and come up with realistic proposals for housing policies.

The Under Secretariat proposes the housing policies to be devised within 4 different frameworks in Turkey. These are;

- 1. The production of licensed housing
- 2. The development of regeneration and transformation projects
- 3. The conduction of quality research
- 4. The development of policies related to earthquakes and other natural disasters.

According to this framework, housing policies to be implemented in Turkish cities can be prioritized as follows:

Policies to build licensed housing will be developed in the following cities which portray a lack of licensed and unlicensed housing stock: Bitlis, Hakkari, Kars, Aksaray, Kırıkkale, Ardahan, Sakarya, Şanlıurfa, Van, Mardin, Erzurum, Adıyaman, Ağrı, Şırnak, Muş, Düzce and Gümüşhane.

Transformation and regeneration projects will be developed for the following cities with a lack of licensed housing but a surplus of unlicensed housing, while the construction of legal licensed housing will be supported: Istanbul, Konya, Yozgat, Kahramanmaraş, Trabzon, Malatya, Osmaniye, Isparta, Batman, Niğde, Iğdır, Bingöl, Siirt, Tokat, Gaziantep, Rize, Tunceli, Çankırı, Artvin, Erzincan, Bayburt, Kütahya, Uşak, Bartın, Karaman, Burdur, Kilis, Diyarbakır, Sivas, Karabük, Manisa, Yalova, Hatay and Adana.

In cities with a major stock of unlicensed housing which, given the current trends continue, display the potential to improve licensed housing stock until 2010, the emphasis will be placed on regeneration policies. These cities are: Giresun, Amasya, Kırşehir, Bursa, İçel, İzmir, Afyon, Ordu, Eskişehir, Kayseri, Samsun, Antalya, Ankara, Kocaeli, Bilecik and Kırklareli.

In cities, with sufficient licensed buildings which meet the demand and where there is no unlicensed building problem, the housing policy will concentrate on research. These cities are: Aydın, Balıkesir, Muğla, Zonguldak, Elazığ, Nevşehir, Kastamonu, Sinop, Denizli, Çorum, Edirne, Tekirdağ, Çanakkale and Bolu.

#### 1.4 The Global Real Estate Sector

The global real estate sector has been marked by a fast growth in the last decade, resulting in an increase in real estate investments and an almost doubling of prices.

The Asia-Pacific economic crisis of 1997 led to a decrease in real estate prices. The subsequent crises in other financial domains resulted in global funds to gradually flow to the real estate sector. In the following years, the fall in interest rates in the USA caused a drop in the cost of financing real estate, leading to increased real estate demand and a rise in prices.

Today, we observe a saturation in real estate prices and yields, especially in the European real estate markets. There are still some niches for development in the US. The Asian real estate markets show the best performance and display the highest growth potential in this respect. The saturation in the developed real estate markets leads to a growing interest in the real estate sectors of the developing economies.

The global real estate investments in 2004 had a volume of 121 billion Euros, of which approximately 35 % consisted of cross-border investments. The United Kingdom, France and Sweden were the leading countries to host foreign real estate investments. The corporate investors from Germany, the USA and the Netherlands were the leading actors in cross-border investments. Half of international real estate investments flows to 10 major cities. Istanbul is not among these 10 leading cities, yet is evaluated as a city with such potential.

The European real estate markets display a high degree of saturation. As the European real estate prices hit the highest levels, the prices stabilized, which resulted in declining real estate investments.

As mentioned before, the Asian real estate markets are full of potential and promises. Although Europe has abundant resources and supply of funds for real estate investments, investment opportunities and returns are declining. Therefore, European real estate investors are seeking new alternative investments. Corporate real estate investors in Europe such as pension funds on the average invest 60 billion Euros in EU real estate markets every year. As the share of real estate investments in the portfolio of corporate investors increase every year, the need to increase international real estate investments rises in order to diversify the risks and increase investment returns. New real estate markets with tolerable risks and higher returns are becoming more attractive.

International, especially European, real estate investors are increasingly diverting their attention to the Turkish real estate market.

An increasing number of studies, analyzing and emphasizing the opportunities in the Turkish real estate market, are published and concentrate on Istanbul's real estate market.

The "The Developing Real Estate Markets in 2005" report jointly prepared by the Urban Land Institute (ULI) and Price Waterhouse Coopers (PWC) is an important study outlining the international positioning of Istanbul.

This report ranks Istanbul as the 13th on the risk adjusted total real estate returns among 27 metropolitan cities in the world. Istanbul has the highest rank, along with Moscow, on real estate returns unadjusted for risks. In this context, Istanbul has the most attractive real estate investment sector.

Istanbul also ranks first among 27 metropolitan cities in real estate development opportunities.

Economic, political and legal risks are the major concerns in the risk assessment of real estate markets. Foreign investors interested in the Turkish real estate market also consider the following risks: The regular payment of rents, deficiencies in infrastructure, ownership rights, taxation problems, the deviation between legislation and practical implementations, and the existence of grey areas (sales, purchases, permits, taxes, etc) in these domains. These problems emanate from the insufficient development of the Turkish real estate sector.

Some other assessments of the ULI/PWC study on the Istanbul real estate market are as follows:

- The sector is not as developed in A class real estate to attract international investments.
- Although economic development increases the demand for quality housing, the residential sector is faced with various limitations to hinder its growth.

- The increase in foreign direct investments (FDI's) and the penetration of global companies to the Turkish markets increase the demand for A class offices. The development potential of the office market is increasing.
- The retail and shopping centers sector is the fastest growing segment, with the highest growth potential and eligibility for investments.
  - Investments in the logistics areas and tourism are also expected to fastly expand.
- The ULI/PWC 2005 study evaluates the Paris, Milan and London real estate markets to yield the highest risk adjusted returns, however advises investments in the Prague, Warsaw and Budapest real estate markets.

TABLE 2: EXPECTATIONS FOR THE ISTANBUL REAL ESTATE MARKET FOR 2005

CRITERIA	EXPECTATIONS	ASSESSMENT	RANKING
RENT INCREASE	VERY GOOD	5.9	1,
CAPITAL GROWTH	MODERATELY GOOD	6.3	1.
SUPPLY/DEMAND BALANCE	AVERAGE	5.3	6.
DEVELOPMENT	VERY GOOD	6.2	1,

Souce: 'The Developing Real Estate Markets in 2005' Report, ULI / PWC

Another international study that evaluates Turkey's real estate sector is a report prepared by Cushman/ Wakefield Healey & Baker in 2005 on the developing real estate markets in Europe.

This report assesses the real estate sectors of European countries in light of 50 criteria that are assembled in three groups. Table 3 below portrays the comparative positioning of the Turkish real estate market.

TABLE 3: THE COMPARATIVE ANALYSIS OF DEVELOPING REAL ESTATE MARKETS

THE HIGHEST SCORE PERCENTAGE		RANKING 2005	RANKING 2004	CHANGE 2004-2005
% 71	THE CZECH REPUBLIC	1	1	
% 71	HUNGARY	2	2	
% 68	POLAND	3	3	
% 65	SLOVAKIA	4	4.	
% 61	ESTONIA	5	5	
% 59	RUSSIA	6	7	1 1
% 59	LATVIA	7.	8	
% 58	LITHUANIA	8	6.	
% 57	ROMANIA	9	12	
% 54	BULGARIA	10	10	
% 53	CROATIA	11	- 11	
% 53	SLOVENIA	12	9	-
% 50	TURKEY	13	13	

Source: Cushman & Wakefield Healey & Baker

#### 1.5 The European Union Process and The Real Estate Sector

Turkey's EU full membership process will have an impact on all sectors. The EU process will have the following impact on the real estate sector.

- The sector will be fully registered. All quality and standards pertaining to building and construction permits will be developed and standardized. All buildings will be constructed with legal permits and according to necessary standards.
- Transparency will increase in the sector. An independent control institution will control construction at all levels to guarantee this transparency. Legal control and compliance with the fundamental construction and building standards will be the basic criteria.
- Since the framework of the professional qualities will be defined mutually, all employees in the sector will be trained to reach those standards and their professional sufficiency will be certified.
- The sector will be institutionalized and corporate participation will increase. Corporations will expand their involvement to the diverse segments of the sector like construction, financing, control and services.
- The financing of the sector will be broadened. Real estate projects suitable to EU standards will be able to obtain global financing. Every project will be individually financed. The importance of project management will grow.
- The scales of the companies in the sector will increase. Companies will be restructured and develop into real estate development companies which provide all kinds of services. Increasing competitiveness in the sector will result in mergers and acquisitions.
- All data and registration systems pertaining to the sector, all statistics starting with Title and Registration offices will be regularly updated, stored and put to use in the e-environment.
- Harmony with the treaty on the free circulation of capital and services will lead to the activity of all the European corporate actors in Turkey. This will increase competition remarkably.
  - The real estate sector will enter a phase of more stable growth.
- As the real estate sector harmonizes with the EU, the corporate actors in the sector will have more access to funding resources. Long term funding will be more available.
- Foreign investments will increase in the real estate sector. New EU members such as Poland, the Czech Republic, Hungary and Slovakia are the best examples in this respect. Real estate investments in the four countries mentioned above as well as in Romania totaled \$150 million in 1998, \$600 million in 2001, \$2.3 billion in 2003, and lastly \$3.7 billion in 2004.

#### 1.6 Economic Developments and The Real Estate Sector

The economic life of the products is rather long in the real estate sector; not only predictions and decisions are made for the long run, but also investments and financing in the sector are based on long run projections. For this reason, economic stability which allows for long term predictions is more crucial for the real estate sector than for other sectors. This sector is highly dependent on economic development and stability.

Within this context, the economic development and stability which Turkey has achieved in the recent years and the economic expectations for the near future closely affect the real estate sector and have an impact on its further development.

- Economic stability enables long term predictions and allows more ground for decision making. Preserving the economic stability will reinforce the growth of the sector.
- Now that Turkey is entering a phase of sustainable growth and the per capita income is predicted to increase, first the demand then the supply will increase in the real estate sector. The rise in individual incomes and purchasing power will mostly contribute to the development of the residential and shopping centers sectors.
- A low inflation rate and accordingly the shrinkage in nominal and real interest rates, an important facet of economic stability, will enable the wider implementation of long term real estate financing.
- Long term real estate financing will lead to an expansion in both the demand (consumer financing and mortgage backed financing) and the supply (project financing) sides in the sector.
- Economic growth based on economic stability, the expansion of foreign trade volume, the development of the services sectors and the increasing foreign direct investments will lead to a rise in the demand for commercial real estate such as offices, logistics and industrial areas.
- Parallel to the economic stability, predictions for a growing tourism potential will necessitate the broadening of the capacity of touristic establishments.
- Economic stability will also bring a more stable supply/demand balance in the real estate sector, causing fluctuations in this balance to decrease. In line with the growth of demand and supply, prices will increase, price fluctuations will eventually drop and we will enter into a stable development phase. The predictability of prices will speed up real estate investments.
- The investments of domestic and foreign individual and corporate investors will increase with the rising economic stability. The volume of foreign corporate investments may even exceed those of domestic corporate investors.

#### 1.7 Predictions for Istanbul

The fulcrum of this study is the nature of the real estate sector in Istanbul. Consequently, predictions for the future of Istanbul are very crucial to anticipate the real estate sector in Turkey.

The developments in Istanbul in the next twenty years are foreseen as follows:

- Economically speaking, the services sector will grow more than the other sectors in Istanbul.
- Istanbul will become the service center for its region as well as for the whole country.
- Istanbul will turn into a regional commercial center. Multinational companies and other foreign capital corporations will increasingly use Istanbul as a hub for their regional transactions.

- The industry in Istanbul will move to the outskirts of the city in the middle and long run. The administration, technology and marketing functions of industries will remain within the city center.
- The industry will produce more qualified and technologically developed high end products. The industry will need more technological development and a well trained work force.
- The increase in individual incomes and the purchasing power of the households will result in the expansion of retail spending.
  - The tourism sector will display an important growth and diversification.
- The Istanbul Metropolitan Planning Center (IMPC), founded by the Istanbul Metropolitan Municipality, will monitor the city's development. The predictions of the IMPC are as follows: Three new Central Business Districts will be established in Ispartakule-Tatarcık Çiftliği, İkitelli and Kartal; the urban regeneration and transformation from industry will be conducted in the Topkapı, Kağıthane, Güneşli and the Büyükdere Avenue areas; urban regeneration projects and niches for quality social housing will be created in the Beylikdüzü, Küçük Çekmece, Zeytinburnu, İkitelli and Altınşehir regions.



## PREDICTIONS FOR THE REAL ESTATE SECTOR AND MARKETS IN ISTANBUL

#### II.1 The Redidential Sector and Markets

The residential sector and markets rank first in the evaluation of the real estate sector. This part of our study will comprise predictions for the development of the residential sector and markets specifically in Istanbul and in Turkey in general for the next decade. Istanbul is the core of all the prognoses we will deliver.

The main target of these predictions is to anticipate the housing deficit, demand and supply in Istanbul's residential real estate market in the next 10 years. Thus, all the factors that have an impact on the housing deficit, demand and supply will be analyzed and evaluated in this section of our study.

#### II.1.1 Demographics and Predictions for Population Change

Predictions pertaining to demographics and population change are the main determinants of the housing deficit and demand.

Demographics and population changes are, in this context, the natural indicators for any housing need. The rate of population growth, the absolute population increase, changes in the rate of urbanization, urban migration, and changes in the number of households are the criteria we use to make demographical predictions. Consequently, Turkey's current demographic transition period and its priorities are very important for making predictions for the near future.

Table 4 gives the cumulative population sizes for Istanbul and Turkey. According to this table, the population of Turkey grew from 35.6 million in 1970 to 72.5 million in 2005 in a period of 35 years, which represents a two fold growth. In the same period, Istanbul's population increased from 3 million to 11.48 million, which is a 3.82 fold growth.

Istanbul's share in the general Turkish population grew from 8.5 % in 1970 to 15.8 % in 2005. This 35 year trend in the population change in both Istanbul and Turkey is a very important factor and will be considered as an indicator for the changes in the years to come.

TABLE 4: THE POPULATION OF ISTANBUL AND TURKEY

YEARS	ISTANBUL (000)	TURKEY (000)	ISTANBUL'S SHARE (%)
1970	3,019	35,605	8.5
1975	3,904	40,348	9.7
1980	4,741	44,737	10.6
1985	5,843	50,664	11.5
1990	7,309	56,473	12.9
2000	10,018	67,804	14.8
2005 (1)	11,477	72,538	15.8

Source: 2000 National Census Results, SIS

(1): SIS 2005 Estimate

The rate of periodical population increase is the main indicator which shows the trends of population growth both in Istanbul and in Turkey. Table 5 gives an overview of the rate of population increase in five year periods.

TABLE 5: THE RATE OF POPULATION GROWTH IN ISTANBUL AND TURKEY

PERIODS	ISTANBUL (%)	TURKEY (%)
1970 -1975	51.44	25.01
1975 - 1980	38.86	20.65
1980 - 1985	41.76	24.88
1985 - 1990	44.78	21.71
1990 - 2000	33.08	18.28
2000 - 2005 (1)	27.50	13.60

Source: 2000 National Census Results, SIS

(1) SIS 2005 Estimate

While the cumulative birth rate, the rate of fertility and the cumulative death rate elicit the rate of population growth in Turkey, additional factors like the density of internal migration and the net migration rate contribute to the population growth rate in Istanbul.

This is why we come across different growth rates for Istanbul and Turkey when we study Table 5. We see a consistent decline in the population growth rate in Turkey in 1970-2000, which can be considered either as an indicator or as the result of the corresponding demographic process.

In contrast, Istanbul's population increases more rapidly than Turkey's total population in each of the five year periods. However, the rate of fertility and the rate of increase of the urban population in Istanbul are consistently below the Turkish averages for each of the 5 year periods. Thus, the main factor for the population increase in Istanbul is the migration of the rural population to the city.

Table 6 gives the internal migration values for Istanbul starting with 1970. In 1970-75, 441.000 people migrated to Istanbul and the net rate of migration was 12.7 %. These numbers were 291.000 and 6.72 % for 1975-80, 299.200 and 5.65 % for 1980-85, 656.700 and 9.98 % for 1985-90, and 407.500 and 4.5 % for 1990-2000 respectively. The migration waves to Istanbul and the net migration rates are also the determinants of the rate of general population growth.

The population growth rate in 2000-2005 shows an important change, which will affect the predictions for the years 2005-2015.

The rate of population growth has slowed down remarkably in 2000-2005. The population in Turkey grew by an annual average of 1.36 % in 2000-2005. The annual growth rate was 1.66 % in 2000 but 1.3 % in 2005. Presently, the decrease in the population growth rate is even higher than expected. This downward trend is foreseen to continue in the next 10 years.

TABLE 6: NET MIGRATION TO ISTANBUL AND THE NET MIGRATION RATE

PERIODS	NET MIGRATION (persons)	NET MIGRATION RATE (%)
1970 -1975	441,242	12.75
1975 - 1980	290,842	6.72
1980 - 1985	299,175	5.65
1985 - 1990	656,677	9.98
1990 - 2000	407,448	4.60
2000 - 2005 (1)	252,000	2.35

Source: SIS

We also pin down a slow down in the rate of population growth in Istanbul. The average population growth rate for Istanbul was 2.7 % in 2000-2005.

The population growth rate declined from 3 % in 2000 to 2.5 % in 2005. In this five year period, not only the rate of growth of the urban population, but also the rate of migration to the city has slowed down.

Both Istanbul and Turkey have entered a new demographic cycle in 2000, characterized by a decrease in the population growth rate. This is the result of an irreversible decrease in the birth rate and in the rate of population renewal. This new cycle will result in a more balanced population growth phase.

The growth rate of Istanbul's population will also be affected by this cycle. Table 7 gives the population predictions for Istanbul and Turkey according to these trends.

TABLE 7: PREDICTIONS FOR POPULATION GROWTH IN ISTANBUL AND TURKEY

YEARS	RATE OF POPULATION GROWTH IN TURKEY (%)	TURKEY'S POPULATION (000)	RATE OF POPULATION GROWTH IN ISTANBUL (%)	ISTANBUL'S POPULATION (800)	ISTANBUL'S SHARE IN THE GENERAL POPULATION (%)
2000	16.6	67,804	30.0	10,018	14.8
2005	13.0	72,538	25.0	11,477	15.8
2006	12.8	73,466	24.0	11,752	16.0
2007	12.6	74,392	24.0	12,034	16.2
2008	12.4	75,315	24.0	12,323	16.4
2009	12.2	76,234	24.0	12,619	16.6
2010	12.0	77,149	24.0	12,921	16.8
2011	11.8	78,059	23.0	13,219	16.9
2012	11.6	78,965	23.0	13,523	17.1
2013	11.4	79,865	23.0	13,834	17.3
2014	11.2	80,759	23.0	14,152	17.5
2015	11.0	81,647	23.0	14,478	17.8

We first present the population change predictions for Turkey. The rate of population growth will continue to decrease in Turkey. The period 2000-2005 has shown a fast drop in the rate of population growth. The decline in the population growth rate in 2005-2015 will be slower. The population growth rate of 1.3 % in 2005 is expected to be 1.2 % in 2010 and 1.1 % in 2015. These predictions are consistent with the population growth rate projections for Turkey for the demographic transition period in 2025 and 2040. The SIS foresees the rate of population growth to be 0.85 % in 2025.

Turkey's national population will be 77.15 million in 2010 and 81.64 million in 2015.

The rate of population growth will also decrease in Istanbul in 2005-2015. But this decrease will be more sluggish than the Turkish average. The 2.5 % population growth rate in Istanbul in 2005 is expected to be 2.4 % in the next five years and 2.3 % in the following five years. Consequently, Istanbul's population will increase faster than that of Turkey. Istanbul, with a population of 11.48 million in 2005, is predicted to house 12.92 million people in 2010 and 14.48 million in 2015.

Istanbul's share in Turkey's population will continue to increase. While it was 14.8 % in 2000 and 15.8 % in 2005, it is foreseen to be 16.8 % in 2010 and 17.8 % in 2015.

The demographic predictions made for Istanbul are the most important indicators for the city's housing need. The rate of accuracy in demographic predictions will have a direct impact on housing need projections.

We are basing our prognoses on two basic criteria for the population change in Istanbul: the urban population growth rate and the net migration rate to the city.

Table 8 shows the development of these two criteria in 1970-2005. Urban population growth figures and the growth rate indicate the growth of the city inhabitants. The urban population growth values demonstrate periodical fluctuations. The average rate of urban population growth sharply declined from 2.8 % per year in 1990-2000 to 2.3 % in 2000-2005. The growth rate of urban population is 2 % in 2005.

TABLE 8: THE SOURCES OF POPULATION GROWTH IN ISTANBUL

PERIODS	TOTAL POPULATION GROWTH	NET MIGRATION SIZE	NET INIGRATION PARE (%)	MET ANNUAL (%)	URBAN POPULATION GROWTH	RATE OF URBAN POPULATION GROWTH (%)
1979 - 1975	885,556	441,242	1274	234	444,314	2.6
1975 - 1980	807,202	290,842	6.73	1.29	546,460	2.6
1982 - 1985	1,101,095	299,175	5.65	1.00	801,920	11
1965 - 1960	1,466,205	656.677	0.00	1.88	819,328	74
1960 - 2000	2,79545	407,448	4.60	0.50	23/2/97	2.1
2000 - 2005	1.469.800	252,000	2.35	0.46	1,207,600	2.3

Source: Calculated from the SIS data

The net migration size shows the absolute migration volume realized in that period. The net rate of migration is calculated by dividing the net migration volume of the corresponding period to the average population size. The net migration rate fluctuates by periods, affected by economic and social conditions. For example, migration which followed a downward trend, increased in number and rate in 1985-1990. The size of the net annual migration in 1990-2000 was 40.700 people with a corresponding net migration rate of 4.60 %. The net size of migration in 2000-2005 is estimated to be 252.000 people. While 50.200 people have migrated to Istanbul per year, the net migration rate in that five year period has dropped to 2.35 %, indicating an annual net migration rate of 0.45 % to Istanbul.

The reasons for the slow down in migration to Istanbul in 2000-2005 were of economic and social nature, a direct result of the economic crisis.

Table 9 shows the predictions for the two criteria that make up the source of the population growth in Istanbul. The rate of urban population growth is expected to slow down to 1.9 % per year in 2005-2010 and to 1.8 % in 2011-1015. The possibility of the rate of urban population growth to deviate from these predictions is minimal due to the city's demographic process.

TABLE 9: PREDICTIONS FOR THE SOURCE OF POPULATION GROWTH IN ISTANBUL

YEARS	NET POPULATION GROWTH PER YEAR	URBAN POPULATION GROWTH		POPULATION GROWTH DU TO MIGRATION	
	(000)	%	(000)	% RATE	(000)
2005	281	2.0	230	0.45	51
2006	275	1.9	222	0.45	53
2007	282	1.9	228	0.45	54
2008	289	1.9	234	0.45	55
2009	296	1.9	239	0.45	57
2010	302	1.9	244	0.45	58
2011	298	1.8	238	0.45	60
2012	304	1.8	243	0.45	61
2013	311	1.8	249	0.45	62
2014	318	1,8	255	0.45	63
2015	326	1.8	261	0.45	65

The migration to Istanbul, the second important denominator, is predicted to reach its limits and to stabilize based on the following presumptions:

- Despite the dissolution expected in the rural areas as a result of the EU process, the planned rural development strategy will lead the rural population to form clusters in nearby urban areas.
- New attraction centers will arise and develop continuously in the Anatolian peninsula.
- Istanbul's industrial sector will move out of the city in order to increase its competitive power and to comply with the urban regeneration process.
- The fast development of Istanbul's services sector and the need for qualified work force will limit job opportunities for the unskilled work force.
  - The cost of living will rise in Istanbul.
  - The chances for physical expansion will be limited.
- The local administrations, whose authority will increase with decentralization, will control and limit migration.

Considering these facts, the net rate of migration to Istanbul of 0.45 % in 2005 will remain the same in the next ten years. Accordingly, 80 % of the increase in the population of Istanbul will emanate from urban growth and 20 % from migration to the city, while the population growth rate will be stabilized.

So far, we have delivered the predictions for population growth in Istanbul and Turkey. We now have to present our predictions for the number and size of households in order to calculate housing need, demand and supply.

Households in urban and rural areas differ in size. Since the housing demand exists in urban areas, the rate of urbanization, the size of urban households, and the number of households need to be calculated.

Table 10 gives the predictions pertaining to urbanization and the size and number of households in Turkey. We see that urbanization will continue in the near future. The EU full membership process demands the minimization of the rural population. Migration from rural to urban areas will be to the cities nearby or to the city centers, but it will be more planned and controlled. The rate of urbanization which was 64.9 % in 2000 is predicted to be 68 % in 2005, 72 % in 2010 and 75 % in 2015.

TABLE 10: PREDICTIONS FOR URBAN POPULATION AND SIZE OF HOUSEHOLDS IN TURKEY (000)

YEARS	TOTAL POPULATION	RATE OF URBANIZATION	URBAN POPULATION	SIZE OF URBAN HOUSEHOLDS	NUMBER OF URBAN HOUSEHOLDS
2000	67,804	64.9	44,006	4.39	10,024
2005	72,538	63.0	49,326	4.28	11,525
2006	73,466	68.8	50,545	4.25	11,893
2007	74,392	69.6	51,777	4.23	12,240
2008	75,315	70.4	53,022	4.21	12,594
2009	76,234	71.2	54,279	4.18	12,985
2010	77,149	72.0	55,547	4.16	13,352
2011	78,059	72.6	56,671	4.14	13,689
2012	78,965	73.2	57,802	4,11	14,064
2013	79,865	73.8	58,940	4.09	14,410
2014	80,759	74.4	60,085	4.07	14,763
2015	81,647	75.0	61,235	4.05	15,120

According to expected rates of urbanization, the total urban population of 49.3 million in 2005 will increase to 61.23 million in 2015.

The economic and social developments together with the demographic process will lead to a decrease in the size of urban households. The size of urban households which was 4.39 persons in 2000 dropped to 4.28 in 2005. The size of households is projected to be 4.16 in 2010 and 4.04 in 2015.

Depending on the rate of urbanization, the size of urban households and the total urban population, the number of urban households which was 11.52 million in 2005, will rise to 13.35 million in 2010 and 15.12 million in 2015. As a result, the number of urban households will increase by 3.6 million in 2005-2015.

The same method is used to predict the number of households in Istanbul, as shown in Table 11.

The rate of urbanization in Istanbul was 90.7 % in 2000. This rate is estimated as 91 %, 92 % and 93 % respectively for 2005, 2010 and 2015. The rate of urban population increase and the rate of migration to the city will be limited. Consequently, the size of the urban population which was 9 million in 2000 is predicted be 10.44 million in 2005, 11.8 million in 2010 and 13.46 million in 2015. The number of persons per household will continue to decrease. The number of persons per urban household which was 3.81 in 2000 and predicted to be 3.60 in 2005 will decline to 3.45 persons per household in 2010 and 3.30 persons in 2015.

Consequently, the number of urban households, which was 2.34 million in 2000, is predicted to be 2.9 million in 2005. The number of urban households will reach 3.44 million in 2010 and 4.08 million in 2015.

These calculations give us an increase of 1.18 million in the number of urban households in Istanbul in 2005-2015.

TABLE 11: PREDICTIONS ON URBAN POPULATION AND NUMBER OF URBAN HOUSEHOLDS IN ISTANBUL (000)

YEARS	TOTAL POPULATION	RATE OF URBANIZATION	URBAN POPULATION	SIZE OF URBAN HOUSEHOLDS	NUMBER OF URBAN HOUSEHOLDS
2000	10,018	90.7	9,086	3.81	2,339
2005	11,477	91.0	10,444	3.60	2,901
2006	11,752	91.2	10,718	3.57	3,002
2007	12,034	91.4	10,999	3.54	3,107
2008	12,323	91.6	11,288	3.51	3,215
2009	12,619	91.8	11,584	3.48	3,328
2010	12,921	92.0	11,887	3.45	3,445
2011	13,219	92.2	12,188	3.42	3,563
2012	13,523	92.4	12,495	3 39	3,685
2013	13,834	92.6	12,810	3.36	3,812
2014	14,152	92.8	13,133	3.33	3,943
2015	14,478	93.0	13,465	3.30	4,080

#### II.1.2 The Housing Stock in Istanbul

Demographic and population related predictions make up the basis to foresee the housing need, demand and supply.

Demographic changes determine "the need for new housing", based on the increase in the number of households.

When we discuss the housing need, demand, and supply, it is also necessary to evaluate the existing housing stock. This evaluation has two important results that have an impact on the housing need, demand, and supply:

■ To observe and determine whether there is an actual housing need or housing surplus in regard to the number of existing households,

■ To observe and determine how far the existing housing stock is in need of renewal because of its physical condition and/or legal status.

The housing stock in Istanbul will be defined in comparison to the general housing stock in Turkey. Total housing stock consists of the number of existing homes that meet the demands of the households as well homes which used to do so but are in a shabby condition at present and thus need to be demolished.

Even though the housing stock is an important variable for our calculations, it is rather problematic to have accurate and actual data of the existing housing stock both in Istanbul and Turkey. The main reason for this deficiency is the existence of buildings without construction and utilization permits.

The Building Census conducted in 2000 by the SIS gives us the healthiest data for Istanbul and Turkey. This study includes every building and residential unit with or without a construction permit and/or utilization license. The results of this study are presented in Table 12.

TABLE 12: THE HOUSING STOCK IN ISTANBUL AND IN TURKEY - 2000

INDICATORS	ISTANBUL	TURKEY
NUMBER OF BUILDINGS	869,444	7,838,675
NUMBER OF HOMES	3,393,077	16,235,830
NUMBER OF HOMES (PROVINCE AND DISTRICT)	3,136,931	13,597,676
CONSTRUCTION PERMIT (PROVINCE AND DISTRICT)	1,518,441	8,566,428
UTILIZATION LICENSE (PROVINCE AND DISTRICT)	598,532	4,524,170
NUMBER OF CONSTRUCTION PERMITS / TOTAL NUMBER OF HOMES	% 48	% 62
NUMBER OF UTILIZATION LICENSES / TOTAL NUMBER OF HOMES	% 19	% 33
UTILIZATION LICENSE / CONSTRUCTION PERMIT	% 39	% 54

Source: Building Census 2000, SIS

The general number of homes (flats) in Istanbul is counted as 3.393.077 in 2000. The total number of homes in Istanbul's urban area (city and districts) is 3.136.931.

Only 48 % of the 3.136.931 homes in Istanbul's urban area have a construction permit which makes a total of 1.518.441. Only 598.532 or 19 % of the total homes in Istanbul's urban area have a utilization license. Only 39 % of residential units which have a construction permit also have a utilization license. 1.618.490 homes have been built without a construction permit and are in use.

The 2000 census shows no housing deficit in Istanbul. Indeed, results show a total number of 3.393.077 homes for a total number of 2.550.607 households, thus a surplus of 842.470 residences in Istanbul in general (2000). The number of households in Istanbul's province and districts is 2.339.547, the total number of homes is 3.136.931, showing a surplus of 797.384 homes in the province and districts put together. The analysis of these values in Istanbul, as of 2000, shows us the following:

- Istanbul's housing need was met primarily by the construction of unlicensed buildings.
- Efforts to legalize the unlicensed housing stock became a permanent solution in the resolution of the housing problem.
  - This process led to the construction of low quality substandard housing.

There is no official housing stock data gathered after the 2000 census, as the construction of unlicensed housing is continuous.

Istanbul's housing stock in 2005 is estimated based on the following presumptions and its results are given in Table 13.

This study covers the housing stock in the province and districts. We added the number of building construction permits and the predictions for unlicensed buildings to the housing stock in 2000 and subtracted the number of homes estimated to be out of use in order to come up with an estimate for the housing stock in 2005.

We assumed that the construction of all homes with a construction permit was completed within one year. We took into account the number of construction permits issued in 2000-2004. 186.254 homes got a construction permit in this period.

The volume of unlicensed buildings was estimated based on data from the previous years and the ratio of unlicensed buildings in Istanbul while taking into consideration conditions relevant to the earthquake and to forest areas. This led us to the conclusion that the construction of unlicensed buildings still continues, but the ratio of unlicensed buildings to the licensed ones has decreased.

We presume the number of new buildings without a construction permit to be 125.000 in 2000-2004. We also assumed that 0.1 % of the housing stock was inhabitable due to physical conditions and needed renewal, thus 15.685 homes.

We estimated the total number of habitable homes in the province and districts of Istanbul to be 3.435.599 at the end of 2005 according to our calculations. The number of households in Istanbul's provinces and districts is 2.901.111 in 2005, leading to a housing surplus of 531.488. Only 50 % of these residential units have an actual construction permit.

TABLE 13: PREDICTIONS FOR THE HOUSING STOCK IN ISTANBUL IN 2005 (PROVINCE AND DISTRICTS)

INDICATORS	ISTANBUL
NUMBER OF HOMES 2000 (PROVINCE AND DISTRICTS)	3,136,931
CONSTRUCTION PERMITS (2000 - 2004)	186,254
NUMBER OF INHABITABLE HOMES (2001 - 2005)	- (15,685)
HOMES WITHOUT A CONSTRUCTION PERMIT (2000 - 2004)	125,000
TOTAL HOUSING STOCK 2005	3,432,599

#### II.1.3 The Housing Deficit in Istanbul

After the predictions about demographic changes and the assessment of the existing housing stock, we can come up with prognoses pertaining to the housing deficit in Istanbul for the years 2005-2015. Such prognoses are crucial to the residential sector and markets.

The housing need shows the number of homes which households need for their basic physical welfare and utilize as their permanent shelter. The increase in the number of households and the need for renewal are the two basic determinants of the housing need. Two additional factors hold true for Istanbul, the earthquake risk and the improvement of the quality and standard of the existing housing stock to increase the number of licensed buildings.

Presumptions are made for Istanbul's housing need for 2005-2015 within this framework. Four basic factors considered to determine Istanbul's housing need in this period are;

- The increase in the number of households and the housing need
- The need for renewal
- The housing need originating from earthquake and other risks
- The housing need originating from urban regeneration

#### 1- The Increase in the Number of Households and the Housing Need

The increase in the number of households in Istanbul in 2005-2015 will be the main indicator for the housing need. We have already given the details pertaining to the size of households in regard to demographics. The number of urban households, which was 2.901.111 in 2005, will rise to 4.080.303 in 2015. This gives us an increase of 1.179.192 urban households in Istanbul in 2005-

TABLE 14: PREDICTIONS FOR THE NEW HOUSING NEED IN ISTANBUL AS A RESULT OF THE INCREASE IN THE NUMBER OF HOUSEHOLDS

YEARS	INCREASE IN THE NUMBER OF URBAN HOUSEHOULDS	NEED FOR NEW URBAN HOUSING
2006	101,130	101,130
2007	104,821	104,821
2008	108,893	108,893
2009	112,781	112,781
2010	116,771	116,771
2011	118,236	118,236
2012	122,098	122,098
2013	126,659	126,659
2014	131,440	131,440
2015	136,459	136,459
TOTAL	1,179,192	1,179,192

2015 and we predict that the same amount of new housing will be needed to meet this increase. As we determine the housing need at this stage, we're not taking into account the existing housing stock and the housing supply.

In other words, we are disregarding Istanbul's actual housing surplus and calculating the need for new housing based on the increase in the number of urban households in the next 10 years.

Table 14 shows the yearly increase in urban households and the resulting housing need for the next 10 years. The need for new housing rises every year with respect to the increase in the number of households, as a result of the gradual reduction in the size of households.

#### 2- The Housing Need Originating from Renewal

The renewal need arises from the depreciation of existing houses that are too old to be habitable.

The assumptions we make in order to determine the volume of new housing needed as a result of renewal are important. As we are rather limited in judging how many residential units will be physically inhabitable in the future, we make a variety of assumptions. The State Planning Organization foresees the economic life of residences as 50 years in its calculations. The SPO used 0.51 % of the existing urban housing stock as a scale in its seventh and eighth 5 year developmental plans in calculating the need of renewal due to aging and natural disasters. The eight 5 year developmental plan foresees the number of homes to be renewed every year as 72.000.

When we discuss the need for renewal in Istanbul, we have to consider the physical condition and the economic life of Istanbul's existing housing stock.

The comparative physical condition of the housing stock, both in Istanbul and Turkey, is presented in the table below, as determined by the SIS Buildings Census in 2000.

TABLE 15: THE PHYSICAL CONDITION OF ISTANBUL'S AND **TURKEYS HOUSING STOCK 2000** 

INDICATORS	ISTANBUL	TURKEY
NUMBER OF HOMES	3,393,076	16,235,830
NUMBER OF HOMES (PROVINCE AND DISTRICTS)	3,136,931	13,597,676
NOT IN NEED OF REPAIR	2,195,852	8,294,582
IN NEED OF SIMPLE REPAIR AND RESTORATION	720,215	3,943,326
IN NEED OF SERIOUS REPAIR AND RESTORATION	156,847	951,837
RUINED, PLANNED TO BE DEMOLISHED	31,369	271,953
OF UNKNOWN CONDITION	31,369	135,977

Source: Building Census 2000, SIS

The construction year and the average age of buildings of Istanbul's housing stock are also major factors to be considered. Table 16 shows the construction years of Istanbul's residential buildings and other buildings that are used for residential purposes.

85 % of all residential buildings in Istanbul are built after 1970. As these buildings will be 45years old or below by 2015, the targeted year of the study, we predict no need of renewal because of aging. 15 % of the existing housing stock built before 1970 (of which historical buildings make up 1.5 %) will be in need of renewal because of aging. The number of buildings over the age of 50 will be 108.487 and the number of residential units in need of renewal will be 400.000 in Istanbul in 2000-2015.

TABLE 16: CONSTRUCTION YEARS OF THE BUILDINGS IN ISTANBUL 2000

THE DATE OF COMPLETION OF CONSTRUCTION	BUILDINGS ENTIRELY USED AS RESIDENCE	BUILDINGS MAINLY USED AS RESIDENCE
-1929	11,844	2,068
1930 - 1939	3,769	717
1940 - 1949	7,471	978
1950 - 1959	21,091	2,652
1960 - 1969	49,985	7,912
1970 - 1979	111,005	25,463
1980 - 1989	179,404	48,667
1990 - 2000	221,364	74,662
UNKNOWN	6,347	2,017
TOTAL	612,280	165,136

Source: Buildings Census 2000, SIS

Calculations for the need of renewal are built on the above data. We foresee that 0.5 % of the existing housing stock in Istanbul will be in need of renewal every year in the next 10 years starting with 2005.

Table 17 portrays the annual need for renewal for the housing stock in Istanbul. 171.500 homes will be in need of renewal between 2005-2015, which means that 40 % of the housing stock 50 years or older will be renewed in 2015.

We assume that the number of residential units in need of renewal will be equally distributed throughout the years.

TABLE 17: PREDICTIONS FOR THE RENEWAL OF THE HOUSING STOCK IN ISTANBUL'S URBAN AREA

YEARS	HOUSING NEED ORIGINATING FROM RENEWAL
2006	17,150
2007	17,150
2008	17,150
2009	17,150
2010	17,150
2011	17,150
2012	17,150
2013	17,150
2014	17,150
2015	17,150

#### 3- The Housing Need Originating from Earthquake Risk

The earthquake risk is the third important determinant of the city's housing need. Such natural disaster will potentially result in lightly damaged, severely damaged, totally damaged and inhabitable buildings. As we predict Istanbul's housing need for the coming decade, we have to consider the need to renew buildings which have a high exposure to earthquake risk.

Taking into account the possibility of a potential earthquake in Istanbul, it is necessary to determine the number of buildings that are at high risk in case of such disaster.

We use the data gathered by the JICA (Japanese International Cooperation Agency) study in 2002. Upon the appeal of the Turkish government, The Japanese government had commissioned the JICA to perform this study titled, "Core Plan Study on Disaster Prevention and Minimization Including the Seismic Micro-Regionalization of the Istanbul Province".

Four basic earthquake scenarios have been designed based on the seismic micro-regionalization study, the technical basis of JICA's work for the prevention and the minimization of disaster damage, to determine the earthquake resistance quotients of the existing housing stock and infrastructure in Istanbul. Model A, which is regarded as the scenario with the highest possibility to materialize, is also the one with the highest degree of potential damage. Model A constitutes the basis for all disaster prevention studies at present.

The Model A scenario rests on the probable rupture of the 120 km long fault that extends from the west of the fault that caused the 1999 İzmit Earthquake to Silivri. An earthquake with a magnitude of 7.5 on the Richter scale is predicted on this fault in this scenario.

Table 18 portrays the predictions about the housing damage in Istanbul's districts based on Model A.

If the Model A scenario materializes, a total of 51.447 buildings which contain 182.527 households will be severely damaged in Istanbul. Therefore, assuming that all of these buildings are fully occupied, 182.527 residential units are facing earthquake risk. The JICA study primarily evaluated the 11 districts with the highest earthquake risk: Adalar, Avcılar, Bahçelievler, Bakırköy, Bayrampaşa, Eminönü, Fatih, Güngören, Küçük Çekmece and Zeytinburnu. 26.071 buildings in these districts, sheltering 105.062 households, will be severely damaged in case of a possible earthquake.

The above data assessing the potential demand due to earthquake risk is considered as the third indicator to determine the future housing need.

Thus, 51.447 buildings and 182.527 residential units in Istanbul with the highest risk of exposure to severe earthquake damage must be renewed in the next 10 years. This renewal procedure must be completed until 2015.

The housing need in Istanbul in 2005-2015 appears to be 182.527 because of earthquake risk. Table 19 gives the distribution of the housing need according to years.

The following assumptions are made: 105.062 residential units must be totally renewed in the first five years in the 11 risky districts. The start of the renewal process will be simultaneous in other districts as well. The need for 125.000 residential units is distributed evenly per years. The

TABLE 18: HOUSING DAMAGE ACCORDING TO DISTRICTS: MODEL A

Name of District	Total Number of Ruildions	Severe	ere	Severe + Moderate	erate	Severe + Moderate + Low	ere erate ow	Number of Households in Severely Damaged
	en in in	Number	%	Number	%	Number	%	editionings
Adalar	6,522	1,614	24.8	2,703	41.4	4,131	63.3	1,054
Aveilar	14,030	1,975	14.1	4,172	29.7	7,781	55.5	8,413
Bahçellevler	19,690	2,577	13.1	5,748	292	11,287	57.3	16,022
Batorköy	10,067	1,839	18.3	3,686	36.6	6,434	63.9	11,206
Bağcılar	36,069	2,384	6.6	5,915	16.4	14,353	39.8	8,371
Beykoz	28,280	476	1.7	1,268	4.5	4.225	14.9	742
Beyodilu	26,468	2,335	8.8	4,940	18.7	10,197	38.5	5,331
Beşiktaş	14,399	584	4.1	1,410	8.6	3,744	26.0	2,534
Buyúkçekmece	3,348	351	10.5	800	23.9	1,680	502	9,516
Bayrampaşa	20,196	2,493	12.3	4,929	24.4	9,488	47.0	7,574
Eminonia	14,149	1,967	13.9	3,798	26.8	6,902	48.8	1,053
Eydp	25,718	1.890	7.3	4,122	16.0	8,979	34.9	4,417
Fath	31,947	5,111	16.0	806'6	31.0	17,689	55.4	17,986
Güngören	10,655	1,253	11.8	2,846	26.7	5,913	54.6	8,317
Gaziosmanpaşa	56,484	1,888	3.3	4,932	2.0	14,113	25.0	5,207
Kadiköy	38,615	1,944	5.0	4,755	12.3	12,206	31.6	10,381
Kartal	24.295	1,986	8.2	4,351	17.9	9,465	39.0	7,249
Kağıthane	28,737	1,107	3.9	2,747	9.6	7,367	25.6	3,390
Küçükçekmece	45,817	4,299	9.4	9,219	20.1	19,293	42.1	13,632
Maltepe	25,313	1,600	6.3	3,709	14.7	8,779	34.7	6.045
Pendik	39,877	2,835	7.1	6,365	16.0	14,343	36.0	6,628
Samyer	30,781	410	1.3	1,117	3.6	4,082	13.3	769
Şikli	22.576	727	3.2	1,874	6,3	5,386	23.9	2,548
Luzh	14,727	1,331	9.0	2,844	19.3	6,024	40.9	2,213
Omraneye	43,473	1,005	2.3	2,730	6.3	8,662	19.9	2,467
Oskūdar	43,021	1,093	2.5	2,978	69	9,335	21.7	3,408
Zeytinburnu	15,573	2,592	16.6	5,296	34.0	9.525	612	10,288
Esenler	22,700	1,355	6.0	3,312	14.6	8,216	36.2	5,166
Catalca	2,573	19	2.6	176	68	529	20.6	110
Silvri	8,534	329	42	885	10.4	2,342	27.4	489
TOTAL	724,623	51,447	7.1	113,535	15.7	252,370	34.8	182,527

need for the remaining 57.527 residences is also distributed equally in the following five years.

The housing in Istanbul is of substandard and low quality, and below minimum standards. Almost 90 % of the existing housing stock in Istanbul doesn't comply with the new earthquake regulations.

The cement quality survey of the Istanbul Chamber of Engineers conducted on 1.178 buildings in 1998-2005 tells us that the cement quality of 72.4 % of these buildings is below the lowest acceptable quality.

Consequently, in case of a probable earthquake, more residences and buildings may be damaged than what the JICA study predicts. The need to renew such housing is evaluated within the framework of urban regeneration which is the fourth factor to determine the housing need.

TABLE 19: THE HOUSING NEED IN ISTANBUL ORIGINATING FROM EARTHQUAKE RISK

YEARS	THE HOUSING NEED ORIGINATING FROM EARTHQUAKE RISK
2006	25,000
2007	25,000
2008	25,000
2009	25,000
2010	25,000
2011	11,505
2012	11,505
2013	11,505
2014	11,505
2015	11,507
TOTAL	182,527

## 4- The Housing Need Originating from Urban Regeneration

Urban regeneration is the fourth factor to determine the housing need in Istanbul.

Istanbul has met half of its housing need by unlicensed buildings. The majority of the existing housing stock is of substandard low quality nature.

Istanbul's housing stock is in absolute need of renewal and repair. Repair and renewal must have two distinct targets. The first one is the legal production and use of the housing stock and the second one is the harmonization of building quality with minimum acceptable standards.

Such a wide need for repair and renewal necessitates a planned and well designed urban regeneration. Thus, urban regeneration becomes the fourth important factor for the determination of Istanbul's housing need.

The housing need arising from the improvement and renewal of the existing housing stock is the second most important denominator in determining the housing need in Istanbul. Within this framework, this need focuses on housing other than the ones which need renewal because of earthquake risk and aging. The majority of such residential units belong to lower and middle-lower income groups. Thus, the housing which will be built because of urban regeneration will fall into the social housing category.

The demand for new housing arising from urban regeneration will most probably not originate from home owners, but will emanate as a result of urban regeneration projects. Only a small part of the renewal demand will originate from the owners of substandard, low quality, unlicensed homes, willing to exchange their homes with the new and legal ones built to minimum standards.

The housing need arising from urban regeneration in Istanbul will be limited by private and public resources that will be devoted to urban regeneration, and by the purchasing power and income structure of home owners.

Depending on these hypothetical considerations and the limitations, we foresee two scenarios for urban regeneration in Istanbul in 2005-2015.

■ The first scenario is based on the renewal of half of the 1.716.3000 unlicensed housing stock in 2005-2015. The need for new housing is 858.150 in this period, distributed evenly per years.

■ The second scenario is based on the renewal of 35 % of the unlicensed housing in 2005-2015. The need for new housing is 600.000 in this period, distributed evenly per years.

The results for these two scenarios are presented in Table 20. The second scenario is more realistic and will be used as the basis of our final calculations.

TABLE 20: THE SCENARIOS FOR THE HOUSING NEED IN ISTANBUL BASED ON URBAN REGENERATION

YEAR\$	SCENARIO A	SCENARIO B	
2006	85,815	60,000	
2007	85,815	60,000	
2008	85,815	60,000	
2009	85,815	60,000	
2010	85,815	60,000	
2011	85,815	60,000	
2012	85,815	60,000	
2013	85,815	60,000	
2014	85,815	60,000	
2015	85,815	60,000	
TOTAL	858,150	600,000	

# 5- Predictions for the Total Housing Need in Istanbul

We have already cited the four factors that produce the housing need in Istanbul in 2005-2015. In this section, we will give the predictions pertaining to the total housing need of the city.

The increase in the number of households, the need for renewal, earthquake risk and urban regeneration are the four components determining the city's total housing need. We predict the total housing need to be 2.133.045 in the next ten years (2005-2015). Table 21 displays the distribution of the total housing need per year and per origin.

TABLE 21: PREDICTIONS FOR THE TOTAL HOUSING NEED IN ISTANBUL

YEARS	HOUSING NEED ORIGINATING FROM THE INCREASE IN HOUSEHOLDS	HOUSING MEED ORIGINATING FROM RENEWAL	HOUSING NEED ORIGINATING FROM EARTHQUAKE RISK	HOUSING NEED ORIGINATING FROM URBAN REGENEATION	TOTAL
2006	101,130	17,150	25,000	60,000	203,280
2007	104.821	17,150	25,000	60,000	206,971
2008	108,893	17,150	25,000	60,000	211,043
2009	112,761	17,150	25,000	60,000	214,992
2010	116,771	17,150	25,000	60,000	218,921
2011	118,236	17,150	11,505	60,000	206,891
2012	122,099	17,150	11,505	60,000	210,753
2013	126,659	17,150	11,505	60,000	215,314
2014	131,440	17,150	11,505	60,000	220,095
2015	135,459	17,150	11,507	60,000	225,119
TOTAL	1 179 288	171.500	182.257	800,000	2 133 045

The increase in the number of households is the first and foremost important determinant of the total housing need in Istanbul in the next decade, making up 55.3 % of the total. Urban regeneration is the second most important determinant.

We predict the total number of urban households to be 4.08 million in 2015 while the housing need is estimated to be 2.13 million in the next ten years. Consequently, we can say that almost 1 in 2 households will need a home until 2015.

Our housing need predictions will be substantiated with the housing demand prognoses given in the following sections of our study.

# II.1.4 Housing Demand in Istanbul

Predictions on the housing demand constitute the most important dimension of housing sector and market prognoses. Housing need and housing demand are two separate concepts, affected not only by common factors which have an impact on both, but also by different factors. Thus, the predicted or actual housing need and housing demand in given periods may not overlap.

The housing demand of households materializes in three ways:

## **Housing Demand For Use**

This is the demand that arises because of the increase in the number of new households. But every new household doesn't necessarily imply a demand for a new home. The income, savings and the preferences of household members determine the housing demand. In addition, the existing households which live in rentals and consider home ownership also create this demand.

# **Housing Demand For Upgrade Purposes**

Diverse tendencies and preferences of home owners such as the desire to renew an existing home, to acquire a new home of higher quality or to change their neighborhood lead to the housing demand for upgrade purposes.

### **Housing Demand For Investment Purposes**

This is the housing demand that arises when households, whether home owners or tenants, purchase a home as an investment in order to use, sell or rent in the future.

We can identify three basic determinants of the housing demand arising from use, upgrade and investment purposes:

- Living habits and inclinations of households
- Household income and savings
- The housing financing system and housing loans

#### 1-Living Habits and Inclinations of Households

It is necessary to evaluate the living habits and inclinations of households in predicting the housing demand. Such research and analyses are being conducted on households in Istanbul and Turkey to form a basis for further considerations and prognoses.

Primarily, the home ownership of existing urban households in Istanbul and in Turkey, as per the SIS National Census 2000 data, is evaluated in Table 22.

TABLE 22: HOME OWNERSHIP OF HOUSEHOLDS (URBAN HOUSEHOLDS) 2000

HOME OWNERSHIP	AE OWNEDSHIP ISTANBUL		TUR	KEY
HUME OWNERSHIP	HOUSEHOLD %	HOUSEHOLD	HOUSEHOLD %	HOUSEHOLD
HOME OWNER	57.3	1,340,032	59.8	6,205,927
TENANT	35,6	833,557	31.6	3,282,853
LODGING INHABITANT	1.0	24,406	2.2	228,085
DOESN'T OWN / DOESN'T PAY RENT	5.2	122,675	5.5	568,192
OTHER	0.7	15,571	0.8	79,825
UNKNOWN	0.1	3,306	0.1	8,981
TOTAL	100,0	2,339,547	100.0	10,373,863

Source: National Census 2000, SIS

1.340.032 households, which constitute 57.3 % of Istanbul's total 2.339.547 households, are home owners. 833.557 households (35.6 %) are tenants. The remaining 165.958 households fall into the lodging dwellers, non-owners who don't pay rent, unknown and others categories.

By definition, today's tenants make up the group with the highest potential to seek home ownership in the future. In Istanbul there are 833.557 such households. However, we must not forget that today's tenants will consider the purchase of a home only if appropriate conditions are present.

1.340.032 households (57.3 %) in Istanbul are already home owners; yet existing home ownership does not necessarily imply the lack of potential demand for new housing. Today's home owners may demand new residences for upgrade, relocation or investment purposes.

Indeed, the existing home owners own rental residences, and may have other homes than in which they reside.

There were 679.816 such households in Istanbul in 2000. The reason this number differs from the number of tenants, is the fact that not all home owners have a second residence. Table 23 below gives the reasons for the households to own a second residence.

TABLE 23: THE REASONS FOR SECOND RESIDENCE OWNERSHIP FOR ISTANBUL HOUSEHOLDS

REASONS	NUMBER OF HOUSEHOLDS	SHARE %
FOR RESIDENTIAL USE	88,911	13.1
FOR SEASONAL/WEEKEND USE	80,704	11.9
FOR RENTAL INCOME	189,448	27.9
FOR THE RESIDENTIAL USE OF A HOUSEHOLD MEMBER	153,884	22.6
FOR RENOVATION AND SALE	1,368	0.2
FOR INVESTMENT	115,584	17.0
INHERITANCE / ACQUISITION	47,875	7.0
OTHER	2,052	0.3
TOTAL	679,826	100.0

Source: Household Survey in Turkey, SIS, 1999

When we scrutinize the reasons for the households to own one or more residences other than the one in which they live, we come across two main reasons. One of them is the idea to have the household or a household member live in that residence permanently or temporarily. 323.597 households (47.6 %) have one or more homes other than their main residence for these purposes. 305.032 households (44.9 %) have at least a second home for investment or rental income purposes.

Consequently, the rate of ownership of a second home for residency or investment reasons is quite high in Istanbul. This household habit will be a significant factor in predicting the future housing demand in Istanbul.

The form of acquisition is another important sub-determinant for the housing demand in Istanbul, as portrayed in Table 24. 52.1 % of the households in Istanbul have outright purchased their home. The financial resources used in the purchase will be analyzed later on. The second big group of owners had their homes built by a contractor or engaged in ownership sharing agreements with them in exchange for the construction of a new building on their land or by tearing down their old building. Becoming a member of a cooperative for the acquisition of a new home is losing its importance.

The nature of financial resources used to purchase or build a home is also important. Table 25 gives the distribution of the financial resources other than loans that are used in building or purchasing a home. The usage of house loans was very limited in the year when the survey was conducted. Therefore, all the resources other than loans reflect almost the total volume of the resources used.

TABLE 24: THE DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE FORM OF ACQUISITION

FORMS OF HOME ACQUISITION	NUMBER OF HOUSEHOLDS	SHARE %	
COOPERATIVE	80,020	5.6	
PURCHASE (From Contractor, former owner, public authority)	742,063	52.1	
BUILDING THROUGH CONTRACTOR	408,590	28.7	
CONSTRUCTION BY PERCENTAGE SHARING AGREEMENT WITH CONTRACTOR	87,543	6.1	
INHERITANCE / HAND DOWN	103,273	7.2	
OTHER	2,736	0.2	
TOTAL	1,424,624	100.0	

Source: Household Survey in Turkey, SIS 1999

TABLE 25: RESOURCES USED WHEN BUYING OR BUILDING A HOME EXCLUDING LOANS

RESOURCES USED	SHARE %
SAVINGS	61.9
SALE OF A FORMER HOME	8.0
SALE OF OTHER REAL ESTATE	4.5
CONTRIBUTION OF FAMILY	10.3
BORROWING FROM RELATIVE / FRIEND	13.6
SAVINGS OBTAINED BY WORKING ABROAD	1,1
OTHER	0.6

Source: Household Survey in Turkey, SIS 1999

Savings have been the primary financial source of Istanbul households in the purchase or construction of a home. This inclination is also valid for Turkey in general. Households target home ownership in the middle and long run, save for it and buy a home when appropriate conditions arise. Households also buy a new home via the sale of existing real estate properties.

This household inclination and habit, which we generally observe, are important for our predictions for the potential housing demand. We also foresee that households save with the purpose of home ownership and divert their savings to buy a home given favorable conditions are present.

According to the Household Survey conducted by SIS in 1999, 1.094.970 households in Istanbul (44.6 %) have declared their desire to buy a home. 577.920 (52.8 %) of these households have stated their preference for the outright cash purchase of such home, demonstrating that almost 25 % of Istanbul households possess such savings or means.

TABLE 26: MEDIUM OF ACQUISITION PREFERRED BY HOUSEHOLDS THAT CONSIDER THE PURCHASE OF A HOME

MEDIUM OF HOME ACQUISITION	NUMBER OF HOUSEHOLDS	SHARE %
OUTRIGHT CASH PURCHASE	577.920	52.8
PURCHASE IN COOPERATIVES	207.914	19.0
BUY LAND FOR CONSTRUCTION	298.193	27.2
OTHER	10.943	1.0
TOTAL	1.094.970	100.0

Household Survey in Turkey, SIS 1999

These preferences and household habits we have evaluated so far reflect those recorded until the beginning of 2000's. Social and especially economic conditions of the period influence household habits and preferences.

The global tendency in home ownership is the utilization, to a great degree, of suitable long term financing. The high rates of interest and inflation in Turkey in the last 30 years have been an obstacle in the long term financing of home ownership. This environment led the households to save for a long time in order to be able to purchase a home, a fact which limits the housing demand per se. The age to buy a home with savings is also on the rise. Indeed, a study by the GFK in Turkey in December 2005 verifies this situation. The rate of home ownership in Turkey is 24 % for the age group 25-34, 41 % in the age group 35-54 and 71 % in the age group 55+.

The recent economic stability and the decrease in interest rates and inflation have led to the utilization of loans to purchase a home. Long term housing loans have already become an important medium for home acquisition.

The Master Index Survey of Master Card International, performed twice a year and simultaneously in many countries, is the most recent and relevant survey that shows these developing tendencies. The December 2005 survey on the method of home acquisition yields the following results: 37 % of the survey sample stated a preference for housing loans, 34 % indicated they would utilize their own savings, 13 % said that they would borrow money from family and relations, 12 % announced their interest in social housing, and lastly 4 % said that they would use the new mortgage system (Taking in account that the mortgage system is not fully understood, we can add this percentage to the ones preferring a housing loan).

Thus, we see that housing loans have become an effective medium in home purchases.

Another recent field research on households' inclinations and habits in home purchases is SONAR's survey of 1.407 households in Turkey in September 2005, whose results are given in Table 27.

This survey has a number of crucial results. One of them is the higher preference in owning a home both outside and in the closer vicinity of the city center. Independent houses and apartment buildings with few floors are preferred. The prices for such homes are higher than the others. Another important result of the survey is that the housing demand has revived in 2005 and that this trend will continue in 2006.

TABLE 27: FIELD RESEARCH RESULTS FOR HOUSING

PREFERENCES I	N BUYING A HOME			
44.1	CITY CENTER			
24.3	CLOSE TO THE CITY CENTER			
31.6	OUTSIDE OF THE CITY CENTER			
THE TYPE OF H	OME DESIRED			
49.9	INDIVIDUAL HOUSE			
29.6	FLAT IN AN APARTMENT BUILDING			
16.6	COLLECTIVE HOUSING COMPOUNDS			
2.7	COOPERATIVE FLAT			
1.2	OTHER			
THE NUMBER O	F FLOORS IN THE DESIRED RESIDENCE			
34.7	1 FLOOR			
51.1	2 - 5 FL00RS			
10.8	6 - 10 FLOORS			
2.3	11 - 15 FLOORS			
1.1	16 + FLOORS			
DID YOU OR AN	Y OF YOUR RELATIVES BUY A HOME IN THE LAST YEAR?			
53,3	NO			
41.2	YES			
5.7	NO IDEA / NO INFORMATION			
DO YOU CONSID	DER BUYING A HOME NEXT YEAR?			
47.9	NO			
40.2	YES			
11.9	NO IDEA / NO INFORMATION			

Source: SONAR RESEARCH, September 2005

# 2. Household Income and Savings

Household income and savings are one of the most important determinants of the housing demand. Economically speaking, demand is a function of income. Therefore, the volume and structure of household income become important in shaping housing demand all together.

We will analyze the income structure of the Istanbul households in the following section of this study. We have calculated the incomes of the Istanbul households from the data delivered by the SIS Survey of Households' Consumption Tendencies in 2004.

The number of households in Istanbul was 2.849.570 in 2004. We have categorized the households in 20 % slices according to their income levels, with 569.914 households in each slice.

The survey indicates the total disposable income of all households in Turkey to be 218.7 billion YTL as of 2004. Istanbul's share in this volume is 26.2 %; 2.85 million households in Istanbul

have a total annual disposable income of 57.22 billion YTL. This disposable income can be divided into 5 income groups in the following manner: The lowest income group in Istanbul makes up 6.4 % of total disposable income; the second lower 20 % income group's share is 10.1 %; the middle and higher 20 % income groups make up 13.7 % and 19.3 % respectively, while the top 20 % income group has 50.5 % of Istanbul's total disposable income. The lowest income group's average annual household income is 6.622 YTL, thus an average monthly income of 552 YTL. The highest income group has an average annual income of 50.511 YTL per household, thus an average monthly household income of 4.209 YTL.

Istanbul households have spent 43.25 billion YTL in 2004. The distribution of the share of spending per annum, of the five income groups categorized in percentiles of 20 %, is as follows: The lowest income group has spent 8.7 %, the second lower income group 12.4 %, the middle income group 15.8 %, the higher income group 20.1 % and the highest income group 43 % of the total annual spending volume.

TABLE 28: THE SHARES OF THE FIVE INCOME GROUPS IN THE HOUSEHOLDS' TOTAL INCOME AND SPENDING IN ISTANBUL IN 2004

	LOWEST % 20	LOW % 20	MIDDLE % 20	HIGH % 20	HIGHEST % 20
SHARE IN DISPOSABLE INCOME %	6.4	10.1	13.7	19.3	50.5
SHARE IN SPENDING %	8.7	12.4	15.8	20.1	43.0

Source: Survey of Households' Consumption Tendencies, SIS, 2004

According to this distribution, the lowest income group spends an average of 6.601 YTL per year and an average of 550 YTL per month. The highest income group spends an average of 32.630 YTL per year and an average of 2.729 YTL per month.

The households' average monthly and yearly consumption are the most important indicators for their monthly and yearly savings.

The volume of savings has a direct impact on the housing demand in two ways. Households can either purchase a home outright with their savings or pay back housing loan installments with their monthly income.

Within this framework, the savings volume of the 5 income groups is classified as follows: The lowest income group cannot save at all. The lower income group saves 60 YTL per month or 732 YTL per year. The middle income group saves an average of 147 YTL per month, thus 1.767 YTL per year. The actual income, spending and saving structure of these three income groups make these households a very unlikely constituent of the housing demand, in terms of buying a new home with savings or by paying monthly loan installments.

The data pertaining to the top 20 % and higher 20 % income groups is as follows: The average monthly savings of the higher income group is 353 YTL or 4.233 YTL yearly. The highest income (top 20 %) group saves 1.490 YTL monthly and 17.881 YTL yearly. Thus, both the highest and the higher income groups can create a housing demand either by using their savings or engaging in housing loans.

The capacity of Istanbul households to create a housing demand on the basis of their income structure is as follows: 569.914 households, which make up the highest income group, can easily create such a demand. The 569.914 households in the higher income group can create a limited demand for new housing. While 1.14 million households in Istanbul have the capacity to create a housing demand depending on their income and spending, 1.7 million households lack this capacity.

The assessments up to this point display the actual income structure of the households in Istanbul affecting the housing demand.

Economic growth and household income increase will be significant in the next ten years. The number of households also increases. Increases in household income will lead to more monthly and annual savings, and hence to a rise in the housing demand. We should again turn to the households' present income, spending and savings capacity in 2004 in order to quantify the effect of an income increase on the housing demand. Assuming that an average economic growth of 5 % per annum in the next 10 years is directly reflected in an increase in household incomes, the income of households will grow by 62 % in the next decade. This means monthly savings of 392 YTL and annual savings of 4.716 YTL (in today's values) for the middle income group in the upcoming ten year period. Thus, the increased income level of the middle income group in the next 10 years will allow for an increased capacity to create housing demand.

The lowest and lower income groups (the bottom 40 %) will not have the income nor savings capacity to create housing demand, despite the expected income growth in the next ten years. Consequently, we predict that 1.6 million households in Istanbul will have the income to create a housing demand in 2005-2015 depending on their present income size and income structure.

TABLE 29: INCOMES AND SPENDING STRUCTURES OF ISTANBUL HOUSEHOLDS ACCORDING TO INCOME GROUPS IN 2004 (NEW TURKISH LIRA)

	1 % 20	2 % 20	3 % 20	4 % 20	5 % 20	TOTAL
NUMBER OF HOUSEHOLDS	569,916	569.914	589.914	569.914	569,914	2.849.570
HOUSEHOLD SIZE	3.67	3.67	4.02	4.19	3.75	3.86
AVERAGE ANNUAL DISPOSABLE HOUSEHOLD INCOME	6.622	10.142	13.756	19.485	50.511	20.082
AVERAGE MONTHLY DISPOSABLE HOUSEHOLD INCOME	552	845	1.146	1,654	4.209	1,674
AVERAGE ANNUAL SPENDING PER HOUSEHOLD	6.601	9.410	11,989	15.252	32.630	15.180
AVERAGE MONTHLY SPENDING PER HOUSEHOLD	550	785	999	1.271	2.719	1.265
AVERAGE ANNUAL SAVINGS PER HOUSEHOLD	22	732	1.767	4.233	17.881	4,902
AVERAGE MONTHLY SAVINGS PER HOUSEOLD	2	61	147	353	1.490	408

### 3. The Housing Finance System (Mortgage) and Loan Possibilities

An effective housing finance system and loan possibilities make up the third important determinant of the housing demand.

As seen in global examples, an effective housing finance system with long term housing credit possibilities lead to the development of residential markets as well as to an expansion of housing demand.

The existence of an efficient housing finance system actually constitutes the basis for the emergence of a consistent, continuous and predictable housing demand.

Such a housing demand causes the residential sector to respond by producing and diversifying new housing, by shortening the project work time, by creating new possibilities, and by getting institutionalized.

Contrary to global examples, Turkey's housing sector has so far developed without an effective and institutionalized financing system. The housing demand thus was created in the absence of a financing system and housing loan possibilities.

The mortgage system and housing loan possibilities will become the most important determinants of the housing demand in Turkey in the next 10 years, as the mortgage system is in the process of being established and the housing loans market is fastly developing.

Economic stability and improvement, the decline in inflation and interest rates have prepared the take off phase of the housing loans in the past two years.

The second most important step in the Housing Finance System (Mortgage System) will be completed with the full preparation of the legal framework and the effective functioning of the system.

# The New Mortgage System

The new mortgage financing system, in the process of establishment, targets the use of long term and constant funding. This system comprises primary and secondary markets. The primary market will enable households to use mortgages through authorized banks and other financial institutions.

The real change takes place at the secondary market level, whereby banks and financial institutions will in turn sell mortgages issued in the primary market or mortgage backed securities to obtain funding. Mortgage institutions brokering these transactions as well as domestic or foreign investment institutions granting long term funds will be the institutional actors of the secondary mortgage market.

Some conditions, pertaining to the structure of the existing residential real estate market in Turkey, need to be in place for the mortgage system to be successful.

- The residential property, which will be the collateral of the loan, must have a legal status with construction permits and utilization licenses in place, for property rights to prevail.
- The physical sustainability of the home must continue, i.e. it must not run the risk of being demolished for being built illegally and it must be insured against all physical risks.

- The market value of the residential property must be determined in a transparent manner. The market value and the collateral value must be harmonized. The market value must be decided upon objectively. (The valuation of licensed assessment authorities must be the basis)
- The residential real estate market must be fully registered. The new mortgage system will enforce this registration.
- The residential real estate sector must be legalized for physical sustainability. Those buildings without a construction permit must be excluded from the market within a period of time.
- Home owners must fulfill their financial responsibilities arising from home ownership to the public authority.
- Homes must have mandatory earthquake insurance as well as other supplementary insurances related to the value of real estate (fire, supplementary earthquake insurance, etc.) Home owners must have the freedom to choose the insurance company.
- Conditions of the mortgages and collateral properties must satisfy the prerequisites of the institutions that will fund the mortgages on the secondary market.

If the new mortgage system fails to operate effectively, the banks' actual capital structure will limit the size of the mortgages to be issued on the primary market. The banks will only be able to give limited long term loans with their short term assets. The effective functioning of the mortgage system will allow the banks to have access to middle and long term funds on the secondary market, thus to finance mortgages in the primary market. Such mid and long term funds will come primarily from global markets.

The draft of the bill which forms the basis of the new mortgage system shows the following inadequacies:

- Incentives are not provided to first time home buyers. Income tax exemption must be granted to first time home buyers, up to a certain credit limit.
- Mortgages will have fixed or variable interest rates. However, the criteria for variable rates are not clear and are to be defined by the bank.
- In the event that the bank which issued the housing loan has a sale agreement with the developer/contractor, the bank is responsible up to the amount of the loan if anything goes wrong. This responsibility should cover the entire value of the home.
- The draft foresees a penalty of 2 % for the prepayment of the loan. There should be no such punitive practice.
- A withholding tax of 15 % will be imposed on the returns from investments made in mortgage backed securities. These revenues should be fully exempt from income tax to prevent this 15 % tax to be reflected on the final consumer. Furthermore, this tax discourages foreign investors who look for the best financial climate to invest in Turkey.
- The deduction of mortgage interest payments from the tax payer's income tax basis will create a reasonable incentive and must be considered.

- The Treasury doesn't provide any reasonable guarantee against the risk of default which long term funds raised from global markets may encounter. The provision of even a symbolic guarantee in this respect will create confidence for international funds.
- As seen in global examples, the establishment of institutions which will create confidence in the initial phase of the mortgage system must be undertaken by the public sector.
- The present regulations allow only the banks (and other institutions determined by the BRSA -Banking Regulation and Supervision Agency- as creditworthy) to extend housing loans on the primary market. The Mortgage Institutions, to be established by the mortgage law, should also have the right to issue mortgage loans directly.
- The passing of the bill on the legal framework of the mortgage system should also benefit the exisiting housing projects in the works.

The new mortgage system will not only improve the residential real estate sector but also will trigger the development of many fields in the economy.

- Primarily, the new funds created by the mortgage system will enlarge the volume of the housing loans and therefore lead to a decrease in mortgage interest rates.
- It will lead to the production and the affordability of standardized high quality housing stock which will improve the quality of life.
- The mortgage system will cause the savings in order to purchase a home to be injected into the economy in the middle and long run.
- The banks which extend mortgages will improve their capital base and hence will have more flexibility.
- This system will create access to new and alternative sources of global middle-long term funding and the integration of these funds into the economy.
- The new mortgage system will enhance and enlarge the capital markets.

#### **Housing Loans**

Housing loans are one of the most important determinants of the housing demand. Mortgages constitute the preferred medium of home acquisition globally. Economically developed countries already have an established mortgage system which finance housing by creating middle and long term funds.

Table 30 gives the size of loans and their ratio to GNP in developed countries. It is evident that housing loan stocks are abundant in developed countries as a result of the mortgage systems.

As we can see, housing loans are very limited in Turkey. The chronic high inflation and interest rates in the past made the utilization and the repayment of housing loans quasi impossible. The limited size of housing loans led to the financing of home purchases by other methods in Turkey. The fast decline in inflation and interest rates in the past three years as well as the preparations

for the legal and institutional framework of the TABLE 30: THE RATIO OF MORTGAGES mortgage system have triggered the utilization of housing loans. Table 31 shows the volume of housing loans used in Turkey in 2001-2005. The volume of loans was 12.0 billion YTL as of the end of 2005, making up 2.48 % of GNP.

The currency, number, volume and average size of the housing loans are portrayed in Table 32. Housing loans have boomed in 2005. A total of 192.912 people have utilized a total of 8.48 billion YTL worth of housing loans in the first nine months of 2005. The average size of the loan was 44.000 YTL. 99.5 % of the loans were in Turkish currency because of the drop in Turkish Lira interest rates. Only 981 people have borrowed in foreign currency. The average size of foreign currency loans was 175.800 YTL, almost 4 times the size of YTL loans.

# TO GNP IN SOME COUNTRIES

COUNTRIES	2003 % GNP
NETHERLANDS	99.9
UNITED KINGDOM	63.8
USA	63.7
PORTUGAL	50.0
GERMANY	54.3
CANADA	42.8
SPAIN	42.1
JAPAN	36.4
FRANCE	24.8
GREECE	15.0
ITALY	13.3
TURKEY	0.4

Source: European Mortgage Federation 2003

TABLE 31: THE RATIO OF HOUSING LOANS TO GNP IN TURKEY (BILLION YTL)

YEARS	HOUSING LOANS	GNP	% GNP
2001	1.31	176.4	0.75
2002	1.35	273.4	0.50
2003	1.58	356.6	0.45
2004	3.52	428.9	0.83
2005	12.02	485.0	2.48

Source: Central Bank of Turkey, SIS

TABLE 32: THE HOUSING LOANS UTILIZED IN TURKEY

YEARS	CURRENCY AND TOTAL	LOAN Million	NUMBER OF PERSONS	AVERAGE LOAN SIZE
	YTL	519.3	55,859	9,291
2000	FC	153.9	2,756	55,842
	T	673.2	58,615	11,482
0.000	YTL	17.7	2,457	7,205
2001	FC	30.4	454	66.960
	T	48.1	2,911	16,525
	YTL	132.5	9,767	13,565
2002	FC	125.5	1,148	109.320
	T	258.0	10,915	23,637
	YTL	524.0	24,298	21,603
2003	FC	281.0	2,694	104,306
	T	805.0	26,992	29,825
Service 1	YTL	2.225.8	96,678	23.022
2004	FC	486.8	3,771	129,090
	T	2.712.6	100,449	27,005
	YTL	8.315.1	191,931	43,325
2005/9	FC	172.5	981	175,840
	T	8.487.6	192,912	43,997

YTL: New Turkish Lira, FC: Foreign Currency, T: Total

Source: Association of Turkish Banks

The volume of the housing loans borrowed can be an indicator of the size and price of the homes demanded. Indeed, borrowers on the average financed about 35 % of the total value of their home (the rates vary between 30 % and 50 %). This inclination proves that the majority of the housing loans used in 2005 were borrowed to acquire housing with a cost of 150.000-200.000 YTL.

At the present, only banks can extend housing loans in Turkey. Consequently, the resources and the balance sheet structures of the banks limit the potential volume of the loans. Table 33 shows the share of the housing loans as a percentage of total credits and total assets of banks. The total share of the housing loans were 8.47 % of total loans and 3.16 % of total bank assets.

TABLE 33: THE SHARE OF HOUSING LOANS WITHIN THE BANKING SYSTEM (BILLION YTL)

YEARS	TOTAL BANK ASSETS	TOTAL BANK LOANS	HOUSING LOAMS	HOUSING LOANS TOTAL LOANS	HOUSING LOAMS
2001	214.5	57.9	1.31	2.29	0.60
2002	212.6	56.3	1.35	2.40	0.64
2003	249.7	69.9	1.58	2.26	0.64
2004	306.4	103.2	3.52	3.42	1,15
2005	381.0 (1)	142.0	12.02	8.47	3.16

Source: Association of Turkish Banks

(1) Estimate

The volume of housing loans is foreseen to expand once the mortgage system is established and functional. The effective functioning of the mortgage system will lead to a stabilized housing demand for the first time in Turkey.

The volume of yearly housing loans and the average size of the loans will be determinants of the demand for housing.

The following prerequisites have to be met so that the housing finance system can work effectively and predictions can materialize:

- The annual inflation rates should be 4-5 %
- The annual housing finance interest rate should be 6-7 %

When these ratios are met, the housing finance system will start to work more effectively. The following predictions are based on the assumptions that Turkey will reach these ratios in the years 2007 - 2008.

First of all, predictions are made regarding the growth of the housing loans until 2015 and presented in Table 34 as 2 different scenarios. The growth of the housing loans is predicted as a ratio of the GNP. The GNP growth is estimated as 5 % while the increase in prices (the GNP deflator) is not taken into account. The GNP growth until 2015 is predicted based on 2005 prices.

Two scenarios are used for the anticipated growth of the housing loans. Scenario A assumes the volume of the housing loans to become 15 % of GNP by 2015. This assumption is 20 % for Scenario B. The growth rate in both scenarios is faster for the first years of the inception of the mortgage system. The growth rate slows down in subsequent years in Scenario A while the pace of growth continues for another 6 - 8 years in Scenario B.

TABLE 34: HOUSING LOAN PREDICTIONS FOR 2005-2015

	*2535201	GNP	SCE	LARIO A	SCE	IARIO B
	GROWTH	BILLION YTL	HOUSING LOAMS / GMP	HOUSING LOANS BILLION YTL	HOUSING LOANS / GNP	HOUSING LOANS BILLION YTL
2005	5.0	485.0	2.5	12.0	2.5	12.0
2006	5.0	509.3	4.0	20.4	4.0	20.4
2007	5.0	534.5	6.0	32.0	6.0	32.0
2008	5.0	561.2	8.0	44.9	8.0	44.9
2009	5.0	589.3	9.0	53.0	10.0	58.9
2010	5.0	618.7	10.0	61.9	12.0	74.2
2011	5.0	650.0	11.0	71.5	14,0	91.0
2012	5.0	682.5	12.0	81.9	16.0	109.2
2013	5.0	716.6	13.0	93.2	18.0	128.9
2014	5.0	752.5	14.0	105.4	19,0	142.9
2015	50	790.0	15.0	118.5	20.0	158.0

The anticipated growth of the banking system and the corresponding size of the housing loans constitute other important predictions on housing loans.

The banking sector will be able to extend housing credits within the limits of its growth. Therefore, the housing loans are estimated based on the anticipations about the growth of the total assets of the banking sector.

Accordingly, the savings volume, the financial system, financial assets and the banking system are relatively small in Turkey, and both financial assets and assets of the banking sector are below the size of the GNP. The 2001 economic crisis led to an important shrinkage in financial assets.

Nonetheless, the structure and growth of the financial system and the banking sector have become healthier after the 2001 crisis. The total assets of the sector have grown by approximately 25 % in 2005. Consequently, we predict the banking system to continue its growth in a steady manner.

The total assets of the banking system are expected to grow by 10 % annually for the next 10 years, based on the following assumptions: economic stability, an expansion in the income and savings volume, the participation of foreign banks, the increase in competition and in the variety of services, and foremost the fact that banks will utilize additional long term capital (of foreign origin) through the secondary mortgage markets.

The growth scenarios of housing loans are evaluated in conjunction with the predicted growth of the banking sector, as presented in Table 35.

According to this table, the banking sector, with an annual growth rate of 10 %, will reach a total asset size of 988 billion YTL in 2015 (in today's prices), corresponding to 1.25 times the size of the GNP. This ratio is considered to be reasonable as far as developed financial systems are concerned.

TABLE 35 THE PREDICTIONS ABOUT THE SHARE OF THE HOUSING LOANS WITHIN THE BANKING SYSTEM

	CNF	CHP BANK ASSETS		BOX	MARIO A	SCHWARIO B	
YHARE	BILLION YTL	NAME ADDRESS /	BILLION YTL	HOUSING LOANS BILLION YTE	HOUSING LEARS / BANK ASSETS	HOUSING LOANS BILLION YTL	HOUSING LOAMS / BANK ASSETS
2005	48.0	76.5	261.0	12.0	1%	12.0	316
2005	509.3	423	419.1	20.4	4.87	20.4	4.67
2007	536.5	83	461.0	22.0	4.95	21	135
700f	981.7	90.4	567.1	44.9	1.0	44.9	136
2009	586.3	147	557.6	53.0	9.51	56.9	10.96
2010	618.7	99.2	613.6	81.9	10.09	74.2	2.0
2011	650.0	103.6	674.9	715	10.60	91.0	13-9
2012	682.5	108.8	742.5	81.9	1102	109.7	14.71
2013	796.8	114.0	816.7	917	11.42	120.0	15.79
2014	752.5	119-4	898.4	105.4	1124	142.9	19.91
2015	790.0	125.1	988.0	1185	12.00	198.0	16.00

The ratios of the total housing loans to the banking sector in Scenarios A and B will be 12 %and 16 % respectively in the year 2015.

When these two figures are compared, Scenario A appears to be the more realistic one, with a higher probability of realization.

Predictions on the volume of housing loans, the number of loans, and the number of homes to be demanded as a result of housing loans are given below.

Projections are made for each scenario. The additional housing loans are calculated according to years. The number of loans to be awarded per year is calculated for an average loan size of 50.000 YTL, 75.000 YTL and 100.000 YTL. A loan size of 50.000 YTL is considered to be the most reasonable, given that the average loan size as of the end of 2005 is 43.000 YTL. The 75.000 YTL and 100.000 YTL scenarios are also presented to anticipate for a rise in household income.

It is assumed that the number of housing loans will translate into an equal number of housing demand. Accordingly, Scenario A shows a housing demand of 2.12 million, 1.41 million and 1.06 million between 2005-2015 respectively for an average loan size of 50.000 YTL, 75.000 YTL and 100.000 YTL.

TABLE 36: THE PREDICTIONS ABOUT THE USAGE OF ADDITIONAL HOUSING LOANS AND THE NUMBER OF LOANS ACCORDING TO YEARS (SCENARIO A)

YEARS	ADDITIONAL LOANS BILLION YTL	SIZE OF LOAN 50.000 YTL	SIZE OF LOAN 75.000 YTL	SIZE OF LOAN 108.008 YTL
2006	8,1	162,000	108,000	81,000
2007	11.6	232,000	154,650	116,000
2008	12.9	258,000	172,000	129,000
2009	8.1	162,000	108,000	81,000
2010	8.9	178,000	118,650	89,000
2011	9.6	192,000	128,000	96,000
2012	1.04	208,000	138,650	104,000
2013	11.3	226,000	150,650	113,000
2014	12.2	244,000	162,650	122,000
2015	13.1	262,000	174,650	131,000
TOTAL	106.2	2,124,000	1,415,900	1,062,000

For the same period, Scenario B indicates a demand for 2.91 million homes if the average loan size is 50.000 YTL. The housing demand will be 1.94 million and 1.46 million for average loan sizes of 75.000 YTL and 100.000 YTL.

TABLE 37: THE PREDICTIONS ABOUT USAGE OF ADDITIONAL HOUSING LOANS AND THE NUMBER OF LOANS ACCORDING TO YEARS (SCENARIO B)

YEARS	ADDITIONAL LOANS BILLION YTL	SIZE OF LOAN 50.000 YTL	SIZE OF LOAN 75.000 YTL	SIZE OF LOAN 100.000 YTL
2006	8.1	162,000	108,000	81,000
2007	11.6	232,000	154,650	116,000
2008	12.9	258,000	172,000	129,000
2009	14.0	280,000	186,650	140,000
2010	15.3	306,000	204,000	153,000
2011	16.8	336,000	224,000	168,000
2012	18.2	364,000	242,650	182,000
2013	19.7	394,000	262,650	197,000
2014	14.0	280,000	186,650	140,000
2015	15.1	302,000	201,350	151,000
TOTAL	145.7	2,914,000	1,942,600	1,457,000

Housing loans awarded in Turkey represent mostly 30 % to 50 % of home values. Accordingly, it is predicted that;

- **a-** A loan size of 50.000 YTL will create demand for homes worth 100.000-150.000 YTL,
- b- A loan size of 75.000 YTL will create demand for homes worth 150.000-200.000 YTL,
- c- A loan size of 100.000 YTL will create demand for homes worth 200.000-300.000 YTL.

In order to reach such housing loan volume, the interests on these loans should be at affordable and repayable levels.

The analyses of the income / spending / savings structure of Istanbul households, presented in earlier sections, have displayed the monthly loan installment payment capacity of households. Accordingly, the above loan volume and size projections can be met if interest rates settle at 0.60 % - 0.80 % per month.

Table 38 below presents the monthly installments for housing loan sizes of 50.000 YTL and 100.000 YTL for 4 different maturity periods and 4 different monthly interest rates.

TABLE 38: THE PRINCIPAL AND INTEREST RATE PAYMENTS FOR 100.000 YTL AND 50.000 YTL HOUSING LOANS

THE MATURITY PERIODS OF THE	LOAN INTEREST RATES AND INSTALLEMENTS				TOTAL PAYMENTS			
LOAN	1.35	1.10	0.80	0.60	1,35	1.10	0.80	9.60
60 months	2,486	2.320	2,129	2.007	149,148	139,174	127,719	120,399
120 months	1,739	1,470	1,326	1,190	208,633	176,353	159,113	142,818
190 months	1,540	1,239	1,080	930	277,148	223,027	194,311	187,477
240 morths	1,488	1.143	970	209	352,215	274,387	232,879	194,224
60 months	1,243	1,160	1,065	1,004	74,574	69,587	63,860	60,200
120 months	870	735	663	595	104,317	88.177	79,557	71,409
180 months	770	620	540	465	138,574	111,514	97,156	83,739
240 months	724	577	425	405	178,108	137.184	116,440	97.112

For monthly interest rates of 0.60 % - 0.80 %, 10 - 12 year housing loans appear to be the most appropriate loans whose utilization will increase.

As of 2005, 45 % of the total housing loans were awarded in Istanbul. Therefore we estimate that 30 % of the total housing loans on the average will again be awarded in Istanbul in the next decade.

# Prognoses for the Housing Demand in Istanbul

Detailed analyses have been made to evaluate factors that may affect the potential housing demand in Istanbul for the upcoming 10 years.

Housing demand prognoses for Istanbul based on these analyses are shown in Table 39. According to the data of the Registration and Fees Office, 206.587 residential properties have been sold in Istanbul in 2005.

Table 39 indicates the average number of housing demand per year in the next ten years. Demand arising from need, upgrade and investment purposes, is categorized into 3 subcategories according to home values: Group A stands for luxury homes (\$300.000 +), Group B standard quality housing (\$100.000-\$300.000) and Group C social housing (\$50.000-\$75.000).

TABLE 39: THE AVERAGE ANNUAL DEMAND FOR THE YEARS 2005-2015

GROUPS	NEED	UPGRADE	INVESTMENT	TOTAL
GROUP A LUXURY HOMES	3,000	4,000	3,000	10,000
GROUP B STANDARD QUALITY HOUSING	80,000	80,000	10,000	170,000
GROUP C SOCIAL HOUSING	35,000	35,000		70,000
TOTAL	118,000	119,000	13,000	250,000

# Accordingly;

The average demand for Group A luxury homes is predicted to be 10.000 per year. This market is saturated to a large extent. It is foreseen that 3.000 units will be demanded out of need, while upgrade and investment demand will respectively be 4.000 and 3.000. Group A homes will be mostly financed with accumulated savings.

The demand for Group B standard quality housing will constitute the highest portion of the total housing demand. 80.000 units will be demanded as a result of need, 80.000 for upgrade and 10.000 for investment purposes. Housing loans will be utilized to a large extent for the acquisition of Group B housing.

The demand for Group C social housing will be determined according to the supply of social housing built by public institutions and will be financed with minor housing loans.

The total average yearly housing demand consists of 118.000 new residential units as a result of need, 119.000 for upgrade and 13.000 for investment purposes. The demand emanating from need is consistent with the predicted yearly increase of 117.985 new households in Istanbul. The upgrade demand is compatible with the volume of housing loans to be awarded in Istanbul, the income of household members and their need for upgrade and renewal. The investment demand supports household tendencies for home ownership and home acquisition for investment purposes.

## II.1.5. Prognoses for the Housing Supply in Istanbul

Housing supply projections are made in order to meet the predicted housing demand. It is assumed that A and B class housing will be built by the private sector according to market conditions, while C class social housing will be produced either by the public sector or by publicprivate partnerships.

Table 40 below shows the prognoses about the housing supply.

TABLE 40: PROGNOSES FOR THE HOUSING SUPPLY IN ISTANBUL

YEARS	HOUSING DEMAND	HOUSING SUPPLY	HOMES BUILT UNDER MARKET CONDITIONS	HOMES BUILT BY THE PUBLIC SECTOR
2006	225,000	225,000	162,000	63,000
2007	250,000	250,000	180,000	70,000
2008	275,000	275,000	198,000	77,000
2009	250,000	250,000	180,000	79,000
2010	250,000	250,000	190,000	70,000
2011	250,000	250,000	180,000	70,000
2012	250,000	250,000	180,000	70,000
2013	250,000	250,000	190,000	70,000
2014	250,000	250,000	180,000	70,000
2015	250,000	250,000	180,000	70,000
TOTAL	2,500,000	2,500,000	1,800,000	700,800

The average annual housing demand of 250,000 is foreseen to be distributed equally throughout the years, except for the years 2006, 2007 and 2008 when the new mortgage system is predicted to be in effect and the interest rates are expected to decline to 7 - 8 %. The demand will grow in a steady manner in the following years.

72 % of the housing supply is predicted to be built under the market conditions while 28 % built by the public sector or public-private partnerships.

The need for housing especially emanating from urban regeneration, upgrade and earthquake risk has to be met by the public sector.

New housing should be built through the Collective Housing Administration (CHA) at a macro level, and through KİPTAŞ at a regional level.

The Collective Housing Administration is building 23.154 homes in prestigious projects and 20.368 homes in urban and social housing projects in 2005. The CHA has plans for building 21.650 units within the framework of urban regeneration and social housing projects. (7.000 in Maltepe, 7.000 in Esentepe, 1.100 in Zeytinburnu, 5.000 in Silivri Selimpaşa, 700 in Mimarsinan and 850 in Sefaköy)

CHA's construction of 44.804 social housing units and 20.368 prestigious residential units as of the end of 2005 implies a significant volume of housing supply and production. The CHA should continue such production of social housing in the next 10 years and produce 40.000 - 50.000 new residential units in Istanbul annually.

The Metropolitan Municipality of Istanbul (MMI) is also directly participating in social housing production. The Collective Housing Administration is building 40.000 of the 70.000 social housing units targeted by the MMI for the low and middle income groups, while the remaining 30.000 are being produced by KİPTAŞ, MMI's housing construction company.

Accordingly, the MMI has to produce a supply of 20.000 residential units for the low and middle income groups annually for the next 10 years directly through KİPTAŞ. Another tool to meet the demand and the need for social housing in Istanbul will be the residential supply by the district municipalities within the framework of urban transformation and regeneration projects. 10.000 residential units has to be supplied annually for this purpose.

# The Land Capacity of Istanbul and the Potential Development Areas

The land capacity suitable for residential development in Istanbul is the foremost determinant for the housing supply to meet the demand for housing.

An evaluation made as of the end of 2005 shows that the capacity of land in Istanbul which is suitable for residential development has decreased to a large extent. This constraint affects the supply and prices of residential real estate in Istanbul. The demand pressure causes the share of the cost of land to increase within the total housing costs, which might lead to a rise in the sales prices of residential properties in the middle and long term.

An important part of the housing policy consists of the healthy development of suitable land with proper infrastructure. The public sector has to play an important role and fulfill its duty in this matter.

TABLE 41: PUBLIC LANDS IN TURKEY

LANDS	LAND KM2	% PERCENTAGE
THE LAND OWNED BY THE STATE	66,335	8.5
THE LAND ADMINISTERED BY THE STATE	360,576	46.2
OTHER	353,665	45.3
TOTAL	780,576	100.0

Source: The Registration and Fees Office

The state still owns more than half of the land in Turkey and in Istanbul. The data about the land owned and administered by the state as of the end of 2004 are stated in Table 41. The land owned and administered by the state as of the end of 2004 is 426.910 square kilometers, corresponding to 54.7 % percent of the total land.

In Istanbul, 3.495 square kilometers of the total 5.220 square kilometers land is owned or administered by the state, as of the end of 2004.

The total land in Istanbul, which is registered at the National Real Estate Directorate and is suitable for development is 2.025 square kilometers as of the end of 2004. The distribution of this land is as follows:

TABLE 42: THE DISTRIBUTION OF THE REAL ESTATE IN ISTANBUL THAT IS REGISTERED WITH THE NATIONAL REAL ESTATE DIRECTORATE, 2004

NATIONAL REAL ESTATE DIRECTORATES	NUMBER	TOTAL AREA KM2
BEYOĞLU	16,081	49
KADIKŌY	16,486	926
KARTAL	10,488	118
TOPKAPI	12,409	74
MARMARA	25,582	858
TOTAL	81,446	2.025

Source: The Istanbul Revenue Department

There is also real estate suitable for development, owned by private persons and legal entities in Istanbul. However, no data could be obtained about the size of such private real estate.

The area needed to satisfy an anticipated demand of 2.5 million housing units until 2015 is calculated as approximately 390 km2. It has been assumed that 60 % of the land would be used for housing, with a construction area coefficient of 1.5 and an average gross area of 140 m<sup>2</sup> per housing unit.

Within the framework of these assumptions, in order to meet the presumed demand in Istanbul, it is inevitable that:

- **a** the public land suitable for development should be opened to construction,
- **b-** new areas should be generated through renewal and urban regeneration.

As can be seen in Table 42, the adequate land held by the public is only sufficient in two regions.

The evaluation of three regions of Istanbul as far as the land capacity is concerned is as follows;

■ There is almost no land suitable for development within the limits of the old Istanbul city walls, or the districts surrounding/neighboring the city walls. These districts include Beşiktaş, Eminönü, Kadıköy, Üsküdar, Fatih, Beyoğlu, Şişli and Bakırköy.

■ There is a limited land capacity for residential development in the districts that are outside the city walls. The Zeytinburnu, K.Çekmece, Avcılar, Esenler, Bayrampaşa, Güngören, Gaziosmanpaşa and Kartal districts are in this group.

■ The districts that are completely outside the city center offer adequate land capacity for residential development. The Silivri, Tuzla, Çatalca, B.Çekmece, Sarıyer and Beykoz districts are in this group.

The most important determinant of the housing costs in Istanbul is thus the cost of the land. Table 43 shows the average dollar prices per square meter of land suitable for residential development in existing and newly developing areas.

Within this framework, the regions where housing will be supplied in Istanbul, the production of housing and types of housing are predicted as follows;

TABLE 43: THE AVERAGE M2 RESIDENTIAL LAND PRICES IN AMERICAN DOLLARS IN EXISTING AND NEWLY DEVELOPING AREAS

BUYUKÇEKMECE MIMARSINAN MIMAROBA	100 - 200	BEYKOZ KAVACIK GUBUKLU	250 - 500
BAHÇEŞEHIR ESENKENT BOGAZKOY	100 - 150	BEYLERBEYI ÇENGELKOY KANDILLI	750 - 1000
BEYLIKDÓZÓ GÖRPINAR	150 - 250	ÚSKÚDAR ANADOLU HISARI	750 - 1500
AVCILAR	200 - 250	KARTAL MALTEPE PENDIK	200 - 400
K.ÇEKMECE	200 - 300	OMRANIYE	350 - 500
IKITELLI	500 - 800	ACIBADEM ALTUNIZADE CAMLICA	1000 - 1500
KEMERBURGAZ	150 - 300	KADIKOY GOZTEPE BOSTANCI KOZYATAĞI	750 - 1250
ZEKERIYAKOY DEMIRCIKOY	150 - 200	ŞİLE AĞVA RIVA	50 - 100
FLORYA YEŞILKOY	1000 - 2000	SAMANDRA SARIGAZI SULTANBEYLI	100 - 200
BAKIRKOY BAHÇELIEVLER	500 -700	TUZLA KURTKÓY ORHANLI	50 - 100
BAGCILAR	250 - 300	SARIYER TARABYA ISTINYE	500 - 1000

- Renewal investments will take place within the old Istanbul city walls and the regions surrounding and neighboring the city walls (through demolishing old buildings). As land prices are high, the development of luxury housing and high rise buildings (where permitted) as well as B class high quality housing will be preferred.
- In the districts that are outside the city walls, urban regeneration / renewal and a limited number of new housing investments will be made. B class high quality housing and C class social housing will be built in these regions.
- Luxury housing, B class high quality housing, mass housing and C class social housing will be produced in the districts that are farthest away from the city center.

The residential sales prices in Istanbul greatly vary according to the quality of the housing project as well as how far the project is located from the city center as categorized above. The following Table 44 presents the sales prices of different types of housing built in these 3 different location categories in Istanbul.

Factors like the quality of the housing project, the square meter size of the units, the social and other amenities also influence the sales prices.

TABLE 44: THE RESIDENTIAL PRICES IN ISTANBUL

REGION / Location	THE SIZES AND TYPES OF HOUSING	THE PRICE RANGE IN THOUSAND US \$
ÖMERLİ	APARTMENT	114-175
ÖMERLİ	DETACHED RESIDENCE	250-347
ÖMERLİ	VİLLA	200-370
HALKALI	APARTMENT	47-200
HALKALI	VİLLA	200-358
ÇEKMEKÖY	APARTMENT	72-243
TUZLA	VİLLA	134-302
HADIMKÖY	DETACHED RESIDENCE	215-295
LEVENT	121-302 M <sup>2</sup>	325-735
ETİLER	169-400 M <sup>2</sup>	490-900
LEVENT	82-212 M <sup>2</sup>	250-760
ATAŞEHİR	75-207 M <sup>2</sup>	80-215

Source: COLLIERS RESCO 2005

# II.1.6 The Housing Market as a Real Estate Investment

The following developments are foreseen in the housing market as a real estate investment for the next 10 years.

- The luxury housing market is saturated. Prices have risen very quickly as the result of the demand that had been postponed and accumulated during the last years. It is predicted that the demand for luxury housing will slow down in the next 10 years. Accordingly, the increase in prices will also slow down, and prices will remain the same or even decrease in some districts.
- The demand for B class high quality housing will expand quickly. The increase in the purchasing power and the fact that the housing loans will be mostly used to finance these units

will trigger the demand, leading to housing quality and standards to rise further. The sales prices and rental rates of these housing units will increase as a result of uniform and continuous demand as well as the increase in quality. However, since the number of housing units is predicted to be sufficient, the annual price increase will be around 8 - 10 % for the first five years. The prices will increase in proportion to the inflation rate in the years after. Product diversification and different pricing policies will become important for B class housing.

■ The development of the prices in the housing market is expected to be more stable during the next ten years. Residential prices that have sharply declined during the economic crisis of 2001, have increased quickly in 2004 and especially in 2005. A major fluctuation occurred in a short period of time. It is predicted that the prices that have increased as a result of the postponed demand will be balanced by the expanding supply, causing no more major fluctuations.

■ The decrease in interest rates, economic expansion, the increase in personal incomes, and the housing loans will be the most important determinants for the demand and sales prices. The prices of the housing units which are suitable for mortgage financing will increase relatively faster compared to other housing prices. As tenants will become home owners, the supply of rental units will rise, causing rents of older residential units to drop. The rents of the new housing units will rise faster.

#### II.2. The Retail Market and Shopping Centers

Commercial real estate constitutes the second important group in the real estate sector. There are 4 types of commercial real estate; shopping centers, offices, industrial and logistical areas and

Shopping centers are examined in detail in this part of the study and predictions are made pertaining to the retail market.

The shopping centers constitute an important part of the retail market. The retail market and the shopping centers are mutually interactive. Therefore, analyses and projections are made on the retail market in order to make predictions about the shopping centers.

#### II.2.1 The Retail Market

Major developments are expected in the retail market in the coming years, as a result of the improvements, stability and growth expected in the economy. The developments that are anticipated in the retail market and the organized retail segment will be caused by:

- Sustainable economic growth and increase in the per capita income
- Population growth and growth in the population of the urban areas
- Changes and upgrade in personal consumption and spending as a result of the increase in the household and personal incomes; diversification in the demand for products
- Changes in consumption habits and expansion in the demand for shopping at organized multi purpose markets

We foresee the retail market in Turkey to grow as a result of the economic growth and the increase in personal income, and the share of the organized retail market to expand within the retail market.

These predictions indicate the need and the demand for shopping centers, an important component of the organized retail market, to also expand.

The national income of Turkey will be approximately 358 billion dollars as of the end of 2005, while the size of the retail market will be around 70 billion dollars. According to these figures, the retail market / GNP ratio will be 19.6 %. (These data were not officially declared at the time of this study.)

The retail market's growth rate reached 10 % annually starting with 2002, subsequent to the 2001 economic crisis. Half of the retail market consists of food while the other half consists of non-food retail products. This ratio grows in favor of the non-food retail products as the increase in personal income levels does not create additional demand or expenditure for food retail products beyond a certain point. The growth of the retail market in Turkey in the last years has been oriented towards the non-food retail products.

## **II.2.2 Shopping Centers**

Non-food retail shopping centers is the link between the retail sector and the real estate sector. Shopping centers are the organized markets of the retail market.

Approximately 30 % of the retail market in Turkey consists of organized markets. This ratio is about 40 % for food products and approximately 20 % for non-food retail products. There is a total of 103 shopping centers in Turkey as of the end of 2005. 31 of these are hypermarkets, 31 are regional centers, 22 are neighborhood centers, 9 of them are outlet centers, 5 are fashion/life style centers and 5 are centers with a theme and marina type centers.

36 of these 103 shopping centers are situated in Istanbul while 67 are situated in other cities. The shopping centers outside of Istanbul are distributed as follows;

13 in Ankara, 7 in Antalya, 7 in Muğla, 10 in İzmir, 4 in Bursa, 4 in İzmit, 3 in Adana, 3 in Konya, 2 each in Çorlu - Diyarbakır - Gaziantep - Kayseri - Ordu - Van and 1 each in Aydın - Bolu - Denizli - Elazığ - Erzincan - Mersin. While the shopping centers in Istanbul are visited by 15 - 18 thousand people daily, those in other cities have 10 - 12 thousand visitors daily.

There are 134 shopping centers in Turkey that are either under construction or in the planning stage as of 2005, of which 66 are in Istanbul. Thus the number of shopping centers will increase to 237, of which 102 will be situated in Istanbul.

TABLE 45: THE SHOPPING CENTERS IN TURKEY AS OF THE END OF 2005

	TOTAL	ISTANBUL	OTHER
ACTIVE	103	36	67
UNDER CONSTRUCTION	51	30	21
IN THE PLANNING STAGE	83	36	47
TOTAL	237	102	135

The most important international indicator about the development of the shopping centers is the total usable area and the gross leasable area per one thousand people.

As of the end of 2005, the total usable area of the shopping centers in Turkey is 1.940.868 m<sup>2</sup>, corresponding to 26.8 m<sup>2</sup> per one thousand people.

The United Kingdom has the largest shopping center area in Europe with 13.5 million m2. France follows with 12.8 million m<sup>2</sup>. Norway takes first place in the shopping center area per one thousand people with 734 m<sup>2</sup>. England's shopping center area per one thousand people is 230 m<sup>2</sup>, followed by Italy with 121 m2. Two new EU members, Poland and the Czech Republic, respectively have a shopping center area of 100 and 80 m<sup>2</sup> per one thousand people.

Turkey is still in the first stages of shopping center development with 26.8 m<sup>2</sup> of shopping center area per one thousand people. In addition to the existing 1.940.868 m<sup>2</sup> of shopping center area, the 134 shopping centers which will be operational in the coming 4 years will add approximately 1.5 million m<sup>2</sup> of shopping center area.

As far as the square meter areas of the shopping centers are concerned, 42 % are in Istanbul. With 815.165 m<sup>2</sup> of total shopping center area and a population of 11.48 million, Istanbul has a shopping center area per one thousand people of 71 m<sup>2</sup>.

#### **II.2.3 Prognoses for Shopping Centers**

Prognoses about the development of the shopping centers in Turkey are made for the upcoming 10 years. First of all, predictions are made about the size of the GNP and the retail market. The annual economic growth rate for the next 10 years is calculated as 5 %. The growth in GNP is calculated in US dollars with the present prices, without taking the price changes (increases) into account. Accordingly, the GNP which is 358 billion dollars in 2005 will be 555 billion dollars in 2015.

The annual growth rate for the retail market is foreseen to be 8 % for the next 10 years. Growth will be 3 points above the national income each year. According to these assumptions, the size of the retail market will reach 151.2 billion dollars in 2015 while its ratio to the GNP will be 25 %. The retail market size is predicted to be compatible with the per capita income which is expected to be \$7.300 in 2015.

The retail market consists of the food and non-food products retail markets. Predictions are made about the non-food retail markets in relation to shopping centers.

The share of the non-food retail market within the total retail market will increase as a result of economic growth and the increase in the per capita income. We anticipate this share, which is 50 % in 2005, to increase by 1 % annually and to become 60 % in 2015. Thus, the size of the non-food retail market will reach 90.7 billion dollars in 2015.

Finally, predictions are made as to the size of the non-food organized markets which are formed by shopping centers. The share of the organized markets, 20 % in 2005, is foreseen to grow by 1 % annually to become 30 % in 2015. Thus, the size of the organized market which is 7 billion dollars in 2005 will quadruple and become 27.2 billion dollars in 2015.

The predictions about the sizes of the shopping centers are based on the relationship between the sizes of the organized retail market and shopping centers, and shown in Table 47 below.

TABLE 46: PROGNOSES ABOUT THE RETAIL MARKET (IN BILLION DOLLARS)

YEARS	CNP	THE PERCENTAGE SHARE OF THE RETAIL MARKET	THE RETAIL MARKET	THE PERCENTAGE SHARF OF THE NON- FOOD RETAIL MARKET	THE PERCENTAGE SHARE OF THE ORGANIZED HON-FOOD RETAIL MARKET	THE NON-FOOD ORGANIZED RETAIL MARKET
2006	308	10.6	70	25	20	7.0
2006	362	19.6	75.6	26.6	21	8.1
3907	401	20.3	81.6	424	. 22	9.3
2006	421	209	88.2	41	23	10.6
2009.	442	21.5	96.2	\$1.4	24	12.3
2010	405	22.1	102.8	56.5	. 25	14.1
2011	488	22.8	111.0	62.2	26	16.2
2012	513	23.4	120.0	58.4	27	18.5
2213	539	24.0	129.0	75.2	20	213
2014	500	24.6	140.0	\$2.0	79	24.0
2015	595	25.4	151.2	90.7	30	27.2

7 billion dollars of organized retail expenditure was realized in 2005 in 1.940.868 m2 of shopping center area. The adequate size for shopping centers is calculated according to the anticipated yearly increase in the volume of the organized retail market. A total of 7.541.658 m<sup>2</sup> of shopping center space will be needed in 2015 to accommodate an organized retail market of 27.2 billion dollars. Thus, the shopping center area per one thousand people will become 92.4 m², which will represent a 3.5 fold increase in 10 years.

A one to one ratio between the growth of the retail market and the growth of the usable space of shopping centers is assumed in this calculation. If we take into consideration that the growth of the retail market will also be reflected in the existing shopping centers, the demand for additional shopping centers will be less. However, this presumption is disregarded in our prognoses.

The prognoses about shopping centers apply to Turkey in general. An evaluation is also made for Istanbul. As of 2005, the total size of the shopping centers in Istanbul is 815.165 m² and the space per one thousand people is 72.1 m². Istanbul is the most developed city in Turkey as far as the shopping centers are concerned. If the shopping center space per one thousand people is predicted to be 150 m<sup>2</sup> in Istanbul in 2015 (with a population of 14.5 millions), which represents a

TABLE 47: PROGNOSES FOR SHOPPING CENTERS (IN BILLION DOLLARS)

YEARS	THE NON-FOOD ORGANIZED RETAIL MARKET	USABLE AREA M2	POPULATION IN THOUSANDS	USABLE AREA PER ONE THOUSAND PEOPLE M2
2005	7.0	1,940,868	72,358	26.8
2006	8,1	2,245,862	73,466	30,5
2007	9.3	2,578,582	74,392	34.7
2008	10.8	2,994,482	75,315	39.8
2009	12.3	3,410,382	76,234	44.7
2010	14.1	3,909,462	77,149	50.7
2011	16.2	4,491,723	78,059	57.5
2012	18.5	5,129,436	78,965	64.9
2013	21.1	5,850,330	79,865	73.2
2014	24.0	6,654,404	80,759	82.4
2015	27.2	7,541,658	81,647	92.4

value close to the European average, the corresponding total shopping center area will be 2.175.000 m<sup>2</sup>. This means that an additional 1.359.835 m<sup>2</sup> of shopping center area could be built in Istanbul within the next 10 years. The total gross leasable area of shopping centers under construction and planned in Istanbul as of the end of 2005 is approximately 600.000 m<sup>2</sup>.

The general trends related to shopping centers for the upcoming ten years are predicted as follows;

- The investments in the sector will continue at an increasing rate. The sector is completing its first stage of development. New investments will be towards regional, super regional and entertainment centers. The nature of the investors will gradually change. The share of institutional investors and foreign investors will increase.
- Shopping centers are concentrated in specific areas and the process of dispersion has just started. Investments will shift from big cities to other cities. The investments will expand in coastal cities first, and then in cities which will become centers of attraction as a result of economic growth as well as increases in the population and income. The first group of cities with a potential for shopping center investments other than Istanbul, Ankara and İzmir consists of Bursa, Eskişehir, İzmit, Antalya, Muğla, Denizli, Adana and Mersin. The second group comprises Gaziantep, Kayseri, Malatya, Konya, Diyarbakır, Trabzon and Samsun, while the third group consists of Erzincan, Elazığ, Aydın and Manisa.
- While investments aimed at the middle-upper and the top income groups will be realized, taking into account their purchasing power and incomes, special projects targeting the low and lower-middle groups will also be realized.
- More foreigners will enter the sector, creating more competition. The increasing competition will speed up the mergers and acquisitions. The players in the sector as well as foreign investors will prefer to grow organically via mergers and acquisitions.
- The demand for shopping centers will push up the prices of land adequate for shopping center development. The average m<sup>2</sup> price that was 250 dollars in 2003 has risen to 400 dollars in 2005. The land prices will continue to increase, especially in big cities which have a usable land deficit.

# II.2.4 The Bill for Hypermarkets

An important legal proposal has been prepared concerning the development of the organized retail market and the shopping centers.

The Bill for Hypermarkets, which will be discussed at the Grand National Assembly of Turkey, organizes the establishment and working conditions of the organized retail market and of shopping centers. Some of the decrees will only apply for new shopping center developments. Some of the articles that are closely related to the growth of the market are as follows;

- The consideration of criteria such as the density of local craftsmen, artisans, small and medium sized establishments, traffic and population at the place of activity, in issuing new establishement permits may restrict the development of new establishments.
- In case there is a lack of commercial areas in the zoning plans for shopping centers with 15.000 m² of sales area and above, the governorship may propose areas outside the city residential zones

for the establishment of shopping centers, in accordance with the opinions of the municipalities, professional chambers and associations, subject to the approval of the Ministry of Industry and Trade. Such proposal creates a bureaucratic process.

- The limit imposed on hypermarkets for sales of their own brand products not to exceed 40 % of total turnover will improve conditions of competition.
- Organic growth might be curtailed if the bill includes conditions for the hypermarkets to establish chain stores and sales sites, directly or indirectly, in the same or different residential areas.
- The definition of the hypermarkets working hours during week days, weekends, public and national holidays by the governorships upon the advice of the chambers and the municipality, may limit the commercial activities of hypermarkets.
- The fairness of competition will be violated as stores whose size does not exceed 400 square meters will not be included in the bill.

# II.2.5 Shopping Centers as a Real Estate Investment

- The shopping centers are considered as the market with the top priority in the commercial real estate market because of their growth potential.
- The occupancy rate of the shopping centers is around 95 100 % and the demand for rentals continues to increase.
- The rents of the shopping centers that are situated in Istanbul fall in a wide range. As of 2005, there are shopping centers whose rents vary between 15 - 20 dollars and 150 - 180 dollars per m<sup>2</sup>. The shopping centers situated in central zones command rents between 60 - 180 dollars (Akmerkez, Carousel, Capitol, Mayadrom, and Metrocity), the rents at the shopping centers with town center characteristics are between 25 - 70 dollars (Town Center, Has Center, Atrium) while rents at outlet type shopping centers are between 30 - 40 dollars (Olivium).
  - The average annual yields of the shopping centers are between 11 12 %.
- The saturation in the markets of the developed European countries and yields in Europe varying between 6 - 8 % are leading foreign, especially European, investors to become more and more interested in Turkey. Turkey is becoming an important investment market following the new EU member countries.
- The evaluations of the Urban Land Institute and Price Waterhouse Company about the retail real estate sector in Istanbul, in the context of the Developing Real Estate Markets of Europe Study, are presented in Table 48.

TABLE 48: THE BUY / HOLD / SELL RECOMMENDATIONS FOR RETAIL REAL ESTATE ACCORDING TO CITIES

	BUY %	HOLD %	SELL %
MILAN	67	20	13
PRAGUE	65	23	13
HELSINKI	63	29	8
WARSAW	62	21	17
ROME	61	32	8
PARIS	60	27	13
LYON	58	21	21
BRUSSELS	52	36	12
BUDAPEST	50	38	13
ISTANBUL	47	35	18
MOSCOW	45	23	32
BARCELONA	45	45	10
STOCKHOLM	43	43	14
MUNICH	41	49	10
LISBON	41	41	17
MADRID	41	36	23
ATHENS	40	20	40
ZURICH	40	47	13
BERLIN	38	44	18
WIEN	36	41	23
EDINBURGH	33	52	14
COPENHAGEN	33	56	- 11
HAMBURG	32	58	11
LONDON	30	47	23
FRANKFURT	26	67	7
AMSTERDAM	25	41	34
DUBLIN	21	37	42

Source: The Developing Real Estate Markets of Europe Poll 2005, ULI, PWC

## **II.3 THE OFFICE MARKET**

The office market constitutes another important sub-sector of the commercial real estate market. Economic growth and stability are the most important determining factors in the office market. The expansion of companies, parallel to the revival and growth in the economy, brings the demand and the need for offices to light. The growth of existing companies, the founding of new companies, diversification in business and investments, and especially the progress in foreign capital investments are the determinants. The expansion in the services sector is also influential. Economic recession and contraction periods result in the demand and need for office space to slow down and decline.

## II.3.1 Developments in the Office Market

Within the frameworks of the economic evaluations, the general tendencies in the office market nowadays are as follows;

- The mobility of supply and demand is mostly for high quality offices, identified as A class offices.
- The demand for offices increases at a rate slower than the expansion in the economy. One of the reasons for this is that big companies in Istanbul own their own headquarters and administrative buildings. Therefore the demand for offices grows at a limited rate.
- The services sector companies that are influential in creating demand and need for offices are still in a developmental stage.
- Most of the companies in Turkey and in Istanbul are small and medium scaled. The number of companies with a headcount of 100 people or more at their headquarters are limited, and not increasing sufficiently.
- The rents of A and B class offices are lower as compared to the other developed metropoles, however still high for Turkish companies.
- A and B class offices are mostly demanded by foreign companies and big Turkish corporations. Therefore, the influence of the introduction of foreign capital on the demand for A and B class offices increases gradually.
- The insufficiency in the number of medium sized companies limits product diversification in office space. The demand for offices is oriented towards offices with 5 - 6 dollars per m2 rent and for offices which cost 20 dollars and more per m2. The demand for offices that cost between 5 - 20 dollars per m<sup>2</sup> is limited.
- The withholding tax and the VAT paid on rents by real persons and legal entities are quite high (22 % withholding tax for real persons, 18 % VAT for legal entities) and this has a limiting effect on the demand for offices. In addition, monthly operational costs vary between 1-8 dollars per m<sup>2</sup> of office space.

#### II.3.2 Central Business Districts and the Office Stock

The Central Business District containing A and B class offices suitable to international standards is located on the Beşiktaş - Maslak axis in Istanbul. The Beşiktaş - Maslak axis

TABLE 49: THE DEVELOPMENT OF A AND B CLASS OFFICE STOCK IN ISTANBUL

YEARS	OFFICE STOCK M2	AVERAGE RENTS DOLLARS / MONTH / M2
1997	267,858	18.4
1998	364,168	19.0
1999	742,454	18.0
2000	977,496	17.0
2001	1,267,091	12.0
2002/2	1,373,845	12.2
2002 / 11	1,441,805	10.5
2003	1,496,565	10.7
2004	1,578,820	10.6
2005/2	1,657,688	10.7
2005 /11	1.676.268	11.3

Source: PEGA

comprises the Beşiktaş, Fulya, Balmumcu, Zincirlikuyu, Esentepe, Şişli, Etiler, Akatlar, Levent and

The regions that have A and B class offices which are located outside the central business district are divided into 2 groups. These are the Kozyatağı, Altunizade and Kavacık regions and the Merter, Airport, Güneşli and İkitelli regions.

The A and B class offices suitable to international standards have developed in the last 10 years. Table 49 shows the development of the A and B class offices. According to this table, the office stock that was 267.858 m2 in 1997 reached 1.267.091 m2 in the subsequent 4 years. There was a rapid office construction during this period. The office demand in Istanbul together with the economic expansion caused this development. As a matter of fact, office rents which were 18.4 dollars / month / m2 in 1997 when the office supply was insufficient regressed to 12 dollars / month / m<sup>2</sup> in 2001 as a result of the rapid expansion of the office supply.

The economic crisis in 2001 resulted in a slow down in the expansion of office stock. Together with the offices built in the following years, the A and B class office stock of Istanbul became 1.676.268 m<sup>2</sup> as of the end of 2005. The A class office stock of Istanbul is 1.300.000 m<sup>2</sup> as of the end of 2005. Of the 345.000 m2 of B class office stock, 200.000 m2 is located in Merter, Airport, Güneşli and İkitelli, 65.000 m² in Altunizade, 26.000 m² in Kavacık and 80.000 m² in Ümraniye.

As of the end of 2005, there are 73 A class office buildings on the Beşiktaş - Maslak axis and a total of 137 office buildings in the other two regions.

TABLE 50: THE DEVELOPMENT OF THE RENTS AND THE OCCUPANCY RATES FOR A CLASS OFFICES IN ISTANBUL

	EUROPEAN SIDE		ASIAN SIDE	
YEARS	RENT / MZ / MONTH / DOLLARS	VACANCY RATE %	RENT / M2 / MONTH / DOLLARS	VACANCY RATE %
2000	17.5	10.0	14.5	32.0
2001	16.0	13.0	13.0	50.0
2002	13.0	20.0	11.5	41.5
2003	12.5	16.5	11.0	43.0
2004	13.0	16.3	11.5	45.3
2005	14.5	11.8	12.1	28.9

Source: DTZ Pamir, Soyuer, 2006

The development of the rents and vacancy rates of A class offices situated in the European and Anatolian sides of Istanbul for the years 2000 - 2005 are presented in Table 50.

The rents of the offices and their occupancy rates according to regions as of the end of 2005 are presented in Table 51.

The occupancy and vacancy rates of offices as well as the change in rent prices indicate the demand for offices, the office supply and the need for additional offices. According to this table, the vacancy rates decreased significantly between February 2005 and November 2005 in all of the office subregions. The decrease in the vacancy rates in spite of the new office supply shows that the demand for offices has increased. In connection with this rapid increase in demand, the rents have also increased in November compared to February in all sub-regions except for Altunizade. However vacancy rates varying between 19 -33 % prevail in all sub-regions except for Levent - Zincirlikuyu.

TABLE 51: RENTS AND VACANCY RATES IN THE ISTANBUL OFFICE MARKET

	2005 FE	2005 FEBRUARY		VEMBER
	RENT MONTH / DOLLAR / M2	VACANCY %	RENT MONTH / DOLLAR / M2	VACANCY %
LEVENT - ZINCIRLIKUYU	12.82	10,00	14,69	7.39
MASLAK	11.20	18.98	11.88	20.21
SISLI - BESIKTAS	11.74	25,40	11.95	19.23
KAVACIK	7.78	27.78	9.00	20,13
ALTUNIZADE	9.16	40.28	8.90	27.89
KOZYATAGI - BOSTANCI	9.88	35.3	9.74	21.17
AIRPORT	7.24	43.13	7.74	33.28

Source: PEGA

The offices with higher standards are demanded in spite of their higher rents. On the contrary, offices with lower standards are not demanded although their rents are lower.

# II.3.3 Prognoses for the Office Need in Istanbul

The need for offices in Istanbul for the next 10 years will mainly be dependant on the stability of the economy. The office demand that expanded after the economic crisis of 2001 has not yet fulfilled the present office stock capacity.

Differences in the office need according to regions and office classes will prevail. Since foreign capital investments are anticipated to continue, the need for A class offices will increase at a quicker pace.

The A class office need in the next ten years is predicted to be around 350 - 400 thousand m², assuming that each office is 500 m<sup>2</sup>. 6 office buildings currently under construction in the Central Business District in Istanbul, house 82.840 m2 of A class office space. Thus, the need for office buildings containing A class office space in Istanbul will prevail in the coming ten years.

The demand for B class offices is anticipated to increase at a more limited rate. It is also observed that there is an unused capacity in the B class offices. The expanding demand for B class offices will initially fulfill the present capacity. Accordingly, the demand for B class offices is foreseen to be around 200 - 250 thousand m2 for the next 10 years.

The "built to suit" method will also be preferred in the office market. Office projects will be implemented according to the needs and demands of the companies that will rent the buildings.

#### II.3.4 The Office Market as a Real Estate Investment

The following developments are foreseen to take place in the Istanbul office market in the next 10 years.

■ The rents of A class offices in Istanbul will increase parallel to economic growth, the expansion of foreign capital investments and the development of the services sector in Istanbul.

The office rents in Istanbul are still pretty low compared to international markets. According to the 2005 data of the real estate consultancy company Cushman & Wakefield Healey & Baker, the average prime office square meter rents per month in some of the important cities are as follows; 163 dollars in London, 120 dollars in Hong Kong, 118 dollars in Tokyo, 101 dollars in Paris, 75 dollars in Moscow, 66 dollars in Milan, 59 dollars in New York, 58 dollars in Geneva, 56 dollars in Seoul and Stockholm. The same study indicates that the average square meter rent in Istanbul is 28 dollars. According to this, the office rents in Istanbul are still comparatively low and Istanbul is evaluated as a market with a high development potential.

■ The demand for A class offices, especially from foreign investors, will increase the rents as well as the yields in the middle-long term.

TABLE 52: RECOMMENDATIONS TO BUY / KEEP / SELL OFFICE SPACE ACCORDING TO CITIES

	BUY %	KEEP %	SELL %
PRAGUE	73	20	7
HELSINKI	66	17	17
WARSAW	62	28	10
LYON	60	32	8
BUDAPEST	57	40	3
PARIS	55	29	16
STOCKHOLM	50	34	16
MOSCOW	46	21	33
LONDON	42	37	20
BARCELONA	42	46	12
MILAN	42	46	12
ZURICH	40	47	13
MADRID	38	41	21
ROME	37	49	14
BRUSSELS	37	37	27
DUBLIN	35	20	45
COPENHAGEN	35	60	5
LISBON	28	44	28
HAMBURG	27	49	24
MUNICH	27	49	24
ATHENS	25	38	38
WIEN	25	54	21
ISTANBUL	25	63	13
BERLIN	22	41	37
EDINBURGH	17	78	4
AMSTERDAM	15	53	32
FRANKFURT	11	47	42

Source: The Developing Real Estate Markets of Europe Poll, 2005

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The average yields of the A class offices which are at 8 - 10 % in 2005 are expected to remain the same for the next 10 years. Compared to the 4 -5 % average yields in Europe, Turkey is an attractive area for investments. The values of the commercial real estate will increase in line with the yields. Therefore, the yields on office investments will remain the same despite rent increase expectations. Commercial real estate values are expected to increase by 15 - 20 %.

- The demand for B class offices in Istanbul will grow at a slower pace. Therefore, the rents of B class offices are foreseen to increase at a limited rate or even remain at the same level in some regions. The commercial real estate values of B class offices will increase at a limited rate.
- The evaluation of the comparative situation of the Istanbul office market in The Developing Real Estate Markets 2005 report by the Urban Land Institute and Price Waterhouse Coopers is presented in Table 52 above.

#### II.4 THE INDUSTRIAL AND LOGISTICS AREAS MARKET

Industrial and logistics areas constitute the third segment of the commercial real estate market.

Although Istanbul is an industrial city and is developed as the center of industry, an organized industrial and logistics market has not developed. Therefore, the industrial and logistics market is still in the developing stage within the commercial real estate market.

The industrial and logistics sector will grow more steadily and rapidly in the next 10 years, since the industry in Istanbul is in the process of restructuring and the logistics sector is in a rapid development stage in connection with the expansion in related sectors.

### II.4.1 The Industrial Areas Market

# 1. Industry in Istanbul and the Development of Industrial Areas

Istanbul has developed as an industrial center since the beginning of the 1950's. With the planned development periods of the 1960's the Topkapı - Bayrampaşa and Kartal regions of Istanbul have been chosen as industrial zones and industry has settled in these areas intensively. In the following forty years, industry on the European side has expanded towards the west and the north of the specified industrial zones. This expansion has reached Ikitelli after the second Bosporus bridge and the connecting highways were built and has continued its growth westbound and northbound. On the Asian side, industrial areas have expanded from Kartal to the east towards Gebze and again towards the north. During the last twenty years, 8 Organized Industrial Zones have been founded within Istanbul city limits to provide industry with organized areas with adequate infrastructure, in the Tuzla, Ümraniye, İkitelli and Çerkezköy regions.

# 2. The Prognoses for the Development of Industry in Istanbul

The most important factor that will influence the growth of the industrial market in the coming periods is the development of industry in Istanbul. Therefore, predictions about the future of the industry in Istanbul have to be made first.

■ The industrial production units inside the city limits of Istanbul will move outside of Istanbul in the medium and mostly long term, because of the pressures exerted by competition and production conditions.

- The existing industry in Istanbul will prefer manifacturing in the surroundings of Istanbul or in Anatolia.
- The headquarters of industrial companies will remain in Istanbul and will perform functions such as administration, marketing and technological improvements.
- The industrial companies will enlarge their scales with local and foreign partners, mergers and take-overs.
- The industrial sector will incline towards products with more character, quality, carrying fashion-design and trademarks. The technological improvement activities will expand and there will be a growing demand for more qualified manpower.
  - The share of the industrial sector in Istanbul will regress in favor of the service sectors.
  - The Development of Industrial Areas in Istanbul and the Prognoses

The following predictions about the growth of industrial areas for the next 10 years are made in relation with the prognoses for the development of industry in Istanbul.

- The new industrial growth has concentrated in two areas. These are the areas between İkitelli and Hadımköy on the European side and the areas between Kartal and Gebze on the Asian side. The industry in Istanbul is expanding towards the west and the east. The industrial areas market will develop in these regions.
- Güneşli Yenibosna İkitelli, Beylikdüzü and Hadımköy on the European side and Pendik, Tuzla, Gebze, Maltepe, and to a limited extent Ümraniye - Sangazi - Dudullu - Samandıra on the Asian side will become concentrated industrial zones.
- A medium to long term transformation will take place in Topkapı Maltepe and Kartal where the existing industry is located. Almost all of the industrial areas in these regions are owned by industrial manufacturing companies. The planning of these areas as a Central Business District is causing a gain in land values and thus creating pressure for transformation. The industrial companies that will leave these areas will create an important demand for the areas close-by. The areas that will be vacated will mostly be used for building offices, shopping and entertainment centers.
- As a result of the Law of Technology Development Regions that was passed in 2001, techno parks are foreseen as a new field of development. The inclination of industry towards high value-added and high technology products will increase the demand for techno parks. Of the two existing techno parks in Istanbul which belong to the Istanbul Technical University (ITU), one is operational while the other one is in the planning stage. The ITU ARI 1 techno park, with a total area of 6.500 m<sup>2</sup> and a leasable area of 3.500 m<sup>2</sup>, is in Ayazağa. ITU ARI 2 techno park is planned for construction in Florya, with 18.700 m<sup>2</sup> of total area and 16.500 m<sup>2</sup> of leasable area.
- The organized industrial areas in Istanbul consist of Organized Industrial Zones (OIZ). The information about the organized industrial zones of Istanbul is presented in Table 53. There are 8 organized industrial zones in Istanbul. The Izmit - Gebze OIZ is a nearby alternative zone for the relocation of Istanbul's industry. The occupancy rates of the organized industrial zones as of 2004 indicate that there might still be some demand, except for the Dudullu OIZ.

TABLE 53: THE ORGANIZED INDUSTRIAL ZONES IN ISTANBUL

INDUSTRIAL ZONE	LOCATION	NUMBER OF BUSINESSES	OCCUPANCY RATES %	TOTAL AREA M2	TOTAL CLOSED AREA M2
IKITELLI	KOTELLI	30,000	60	7,000,000	6,850,000
DUDULLU	UMRANIYE	107	95	2,650,000	1,029,415
QERKEZKÓY.	ÇERKEZKÖY	195	20	13,500,000	10,800,000
TUZLA	TUZLA	9	6	45,000	9,055
TUZLA BOYA VERNIK	TUZLA	43	42	517,887	327,274
TUZLA MERMERCILER	TUZLA	154	60	722,000	590,000
TUZLA DERI	TUZLA	398	75	68,000,000	1,000,000
TUZLA KIMYA	TUZLA	116	40	742,208	590,000
GERZE	GEBZE KOCAELI	81	30	10.370.000	773.290

#### II.4.2 The Logistics Areas Market

The logistics areas are also gaining importance together with the industrial areas, a result of economic growth. The demand created for logistic areas is important for the commercial real estate sector.

#### 1. Prognoses for the Development of the Logistics Sector

In light of the structural and sectoral developments of the economy, the logistics sector is developing significantly and this growth is anticipated to continue in the next 10 years at an increased pace. The factors that support this anticipation of growth are as follows.

- The growth in the industrial and commercial sectors resulting from economic growth increases the need for storage areas.
- The rapid expansion in the exports and imports increases the need for storage and distribution.
- The fact that Istanbul is becoming a regional commercial center increases the need for storage, distribution and logistics.
- The rapid expansion and the growth anticipation in the retail sector increase the need for storage, and especially the need for logistics.
- The expansion of foreign capital investments enlarges the scales and increases the need for distribution and logistics.

## 2. Prognoses for Growth in the Logistics Areas

- The demand for new areas in Istanbul for storage, distribution and logistics purposes is increasing and Güneşli, İkitelli, Ambarlı, Beylikdüzü, Hadımköy on the European side, and Ümraniye, Dudullu, Samandıra, Sarıgazi, Tuzla and Gebze on the Asian side, stand out as new developmental niches.
- In view of the increased economic and commercial activities, the existing warehouses / storage areas in Istanbul, with an average size of 1.000 - 3.000 square meters, which are squeezed inside the city are insufficient. Thus, the location of logistics areas is shifting and sizes are increasing.
- Almost none of the existing logistics areas are in conformity with international standards. Therefore, adherence to international standards constitutes an important improvement in the new

logistics areas. The logistics areas of 1.000 - 3.000 m<sup>2</sup> inside the city are shifting to bigger areas of 5.000 - 10.000 m<sup>2</sup>. The big logistics companies demand and use 20.000 - 40.000 m<sup>2</sup> areas. Small warehouses are transforming into big distribution centers. New areas with high ceilings, single storey, many doors and a minimum number of columns are being constructed.

- As a result of the expansion of foreign capital investments, and the demands of foreign institutions, the scales are enlarged and the standards and quality are rising. The demand of the foreigners, which increases prices, is for single storey 20.000 m<sup>2</sup> base area warehouses.
- The aim is to decrease the storage, distribution costs and costs per package / ton at the logistics centers by using bigger scales.
- The storage, distribution and logistics centers and areas are concentrated in areas that have transportation and access advantages.
- The need to reconsider and plan logistics areas in the zoning plans and transportation master plans is also increasing.

#### II.4.3 The Industrial and Logistics Areas Market as a Real Estate Investment

- An important market for new industrial and logistics areas is being created in Istanbul.
- The existing old industrial areas are of poor standard and quality as far as real estate investments are concerned. The demand for investing in high quality industrial buildings and logistics areas is increasing.
- With the relocation of the industry towards the two new industrial zones around Istanbul, the sales prices of the industrial areas in these regions are expected to rise.
- The industrial companies prefer to own their production and storage areas. Therefore the sales prices of the industrial areas will gain more importance.
- The square meter prices of industrial land in the new industrial zones of Istanbul as of 2005 are presented in the following Table 54.

TABLE 54: THE SALES PRICES OF THE LAND WITH INDUSTRIAL ZONING IN ISTANBUL IN 2005

INDUSTRIAL AREAS	M2 PRICES IN DOLLARS	
ÇATALCA	25 - 50	
HADIMKOY	40 -100	
KIRAÇ BEYLIKDÜZÜ	60 -150	
HARAMIDERE, FIRUZKOY, ESENYURT	150 - 200	
GÖNEŞLİ, HALKALİ, İKİTELLİ	250 - 500	
OMRANIYE, DUDULLU	150 - 200	
SAMANDRA, SARIGAZI, SULTANBEYLI	100 -150	
KARTAL, PENDIK, TUZLA	75 - 150	
ŞEKERPINAR, KURTKÖY	60 - 100	

■ The demand for the organized industrial zones in Istanbul is also predicted to expand. The prices of the industrial land inside the OIZ are higher because of their infrastructure and other advantages. In 2005, the m2 sales prices were 350 - 600 dollars in the İkitelli OIZ, 300 - 500 dollars in the Dudullu Organized Industrial Zone and 100 - 150 dollars in the Tuzla OIZ.

■ The expansion of unit areas needed for storage, distribution and logistics will result in preferences for renting rather than buying. The rapid increase in demand expected in this segment is anticipated to cause an increase in rents in the short-middle run. The m2 / month / dollar rent prices in various regions as of 2004 are as follows: Maltepe 3.5, Kartal 3.5, Ümraniye 3.5, Sarıgazi, Dudullu 4.5, Samandıra 4, Pendik 3, Tuzla 2.5, Ayazağa 4.5, Kemerburgaz 4, Güneşli - Yenibosna 3.5, İkitelli 4.5, Beylikdüzü 3, Hadimköy 3. (Source: Colliers Resco 2004)

■ The industrial and logistics areas are just reaching suitable international standards. The expansion in the short-medium term need and demand will result in increasing yields in the middle run.

■ The comparative evaluation of the Istanbul industrial and logistics real estate market according to the Developing Real Estate Markets in Europe 2005 report of the Urban Land Institute and Price Waterhouse Coopers Corporation are presented in the following Table 55.

TABLE 55: BUY / KEEP / SELL RECOMMENDATIONS FOR INDUSTRIAL / LOGISTICS REAL ESTATE ACCORDING TO CITIES

	BUY %	KEEP %	SELL %
PRAGUE	88	4	8
BUDAPEST	83	13	4
LYON	72	12	16
WARSAW	72	24	4
MILAN	63	28	10
MOSCOW	60	15	25
ISTANBUL	50	44	6
PARIS	48	32	20
ROME	45	33	21
HELSINKI	45	36	18
BERLIN	41	37	22
FRANKFURT	40	33	28
AMSTERDAM	40	40	20
MADRID	39	39	22
WIEN	38	44	19
MUNICH	36	41	23
BARCELONA	33	47	20
LONDON	32	43	25
HAMBURG	31	51	18
LISBON	29	38	33
BRUSSELS	29	42	29
ATHENS	27	27	46
EDINBURGH	26	58	16
COPENHAGEN	23	54	23
STOCKHOLM	22	70	8
DUBLIN	19	38	43
ZURICH	17	58	25

Source: The Developing Real Estate Markets of Europe Poll, 2005

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#### **II.5 THE HOTEL MARKET**

The hotel market is the fourth component of the commercial real estate market. The hotel market is shaped as a result of the developments in the tourism sector. Therefore, predictions about the tourism sector in Istanbul are made first, prior to those about the hotel market.

#### II.5.1 The Tourism Sector in Istanbul and Prognoses for the Future

- The tourism sector in Turkey will continue to grow in terms of the number of tourists and tourism income. Turkey is entering a new 20-year-period in tourism, and the number of tourists at the end of this period is predicted to reach 40 million.
- The development of tourism will increase the diversification in tourism. The summer season oriented tourism will shift to other types of tourism, especially to city tourism, and will expand to 12 months of the year.
- Istanbul will be the most attractive area of development for city tourism. Istanbul will expand in history-culture-art, entertainment-recreation-sports, convention tourism and yacht tourism.
- 3.4 million and 4.94 million tourists have visited Istanbul respectively in 2004 and in 2005. There is a bed capacity of 80.000 in Istanbul as of 2005. 22.000 of these beds are at five-star hotels, 55.000 are at qualified hotels with tourism certificates, and 25.000 are at municipality licensed low standard hotels.
- 35 international conventions have been held in Istanbul as of 2004, and 31.000 tourists have been accommodated. Convention tourism will be an important area of development. Two large culture and convention centers are under construction.
- There are three marinas suitable to international standards in Istanbul with a capacity of 2.400 vachts. Yacht tourism will be another important area of development.
- The average stay of the tourists visiting Istanbul is calculated as 3 nights. The occupancy rate for Istanbul hotels with tourism certificates and a 55.000 bed capacity is 75 %, ranking Istanbul at the first place in Europe for occupancy.
- Istanbul is nominated as the culture capital of Europe in 2010. Additionally, the fact that the city started to host an increasing number of international events is supporting the predictions for an increase in the number of tourists.
- The number of tourists visiting Istanbul is expected to reach 10 million per year by 2015. This expectation reveals the need for new accommodation establishments and other touristic facilities in Istanbul.

#### II.5.2 Prognoses Pertaining to Touristic Facilities in Istanbul

Predictions are made about the touristic facilities in light of the developments expected in Istanbul. These predictions will be important indicators for the hotel market which is a sub-sector of the commercial real estate market. Predictions about the need for bed capacity and hotels in Istanbul are made until 2015.

In order to be able to foresee the bed and hotel capacities that will be necessary in Istanbul in the next 10 years, predictions about the number of tourists visiting Istanbul and the total numbers of overnight stays according to the length of average stays (nights) have to be made in the first place.

The number of visitors is expected to increase uniformly and reach 10 million in 2015. Depending on the variety of touristic activities, the average periods of stay are anticipated to be 3.5 days in 2007 and 4 days in 2011. The total overnight stays will be 40 million in 2015 according to these assumptions.

The need for bed capacity will increase in connection with the increasing number of overnight stays. The need for bed capacity is calculated according to the total overnight predictions, taking into account a room / bed occupancy rate of 75 %.

TABLE 56: PROGNOSES ABOUT THE NUMBER OF TOURISTS THAT VISIT ISTANBUL AND THE TOTAL NUMBER OF OVERNIGHT

YEARS	NUMBER OF TOURISTS MILLION	AVERAGE DURATION OF STAY / DAYS	(IN THOUSANDS)
2005	5,000,000	3	15,000
2006	5,500,000	3	16,500
2007	6,000,000	3.5	21,000
2008	6,500,000	3.5	22,750
2009	7,000,000	3.5	24,500
2010	7,500,000	3.5	26,250
2011	8,000,000	4.0	32,000
2012	8,500,000	4.0	34,000
2013	9,000,000	4.0	36,000
2014	9,500,000	4.0	38,000
2015	10,000,000	4.0	40,000

The additional bed capacity needed yearly is presented in Table 57 below.

The need for annual overnight capacity has been calculated as 53.33 million, and the bed capacity need is calculated as 146.125 (divided by 365) for 2015, assuming 40 million overnights and an occupancy rate of 75 %.

The annual need for additional bed capacity and the resulting need for new 3-4 and 5-star hotels is calculated according to the total bed capacity need.

Accordingly, an additional bed capacity of 91.325 beds will be necessary until 2015. In order to fulfill this need, 60 new 5-star hotels and 276 3-4-star hotels will be needed. 36.000 of the 91.325 new beds will be in 5-star hotels, rising the total 5-star hotel bed capacity in 2015 to 58.000. The average bed capacity is assumed to be 600 and 200 respectively for 5-star hotels and 3-4-star hotels in the calculations.

TABLE 57: THE ANNUAL NEED FOR BED CAPACITY ACCORDING TO THE TOTAL OVERNIGHT PREDICTIONS

YEARS	TOTAL OVERNIGHTS (IN THOUSANDS)	OCCUPANCY RATES	ANNUAL OVERNIGHT CAPACITY (IN THOUSANDS)	NEED FOR BED CAPACITY
2005	15,000	75	20,000	54,800
2006	16,500	75	22,000	60,275
2007	21,000	75	28,000	76,715
2008	22,750	75	30,265	82,920
2009	24,500	75	32,665	89,495
2010	26,250	75	35,000	95,890
2011	32,000	75	42,665	116,895
2012	34,000	75	45,335	124,205
2013	36,000	75	48,000	131,510
2014	38,000	75	50,665	138,808
2015	40,000	75	53,335	146,125

The uneven distribution of the need for additional bed capacity among the 5-star and 3-4-star hotels will change the number of hotels needed. An important assumption in the above predictions is that only the increase in visiting foreigners were taken into account in calculating the need for new hotels and additional bed capacity.

TABLE 58: THE NEED FOR ADDITIONAL BED CAPACITY AND HOTEL INVESTMENT ACCORDING TO YEARS

YEARS		S-STAR HOTEL		3-4 STAR HOTELS	
	ADDITIONAL BED CAPACITY	QUANTITY	BEDS	GUANTITY	BEDS
2006	5,475	6	9,600	9	1,875
2007	18,440		4,800	58	11,640
2008	6,205	.6	3,600	13	2,605
2009	6,575	6	3,600	15	2,975
2010	6,395	4	3,600	14	2,795
2011	21,005	1	4,800	81	16,205
2012	7,310	5	3,000	21	4,310
2013	7,305	5	3,000	22	4,305
2014	7,298	5	3,000	21	4,296
2015	7,317	5	3,000	22	4,317
TOTAL	91,325	60	36,000	276	55,325

### II.5.3 The Hotel Market as a Real Estate Investment

An important need for additional bed capacity arises based on the target and prediction to accommodate 10 million tourists annually in Istanbul. This need translates to an increase of almost 1.5 times in the existing accomodation capacity. An important number of new 5-star and 3-4-star hotels and other touristic facilities will be required to satisfy this need, indicating that the hotel market in Istanbul will undergo a new and important development process.



# FOREIGNERS' ACQUISITION OF REAL ESTATE IN TURKEY AND THEIR **RELEVANT DEMANDS**

he acquisition of real estate by foreign nationals is one of the factors affecting the development of the real estate sector in Turkey. Cross-border acquisitions of foreigners are for investment and utilization purposes.

The utilization oriented cross-border real estate acquisitions especially experienced in Europe, make the acquisitions by foreigners important for Turkey which entered a new stage of real estate development. Europeans are mostly acquiring residential properties. Therefore, the residential real estate market will be more affected by the real estate acquisitions of foreigner citizens.

The foreign demand for buying real estate in Turkey has been continuously increasing in the last years. The execution of the existing law about the foreigners' real estate acquisitions has been suspended in 2005, then a new legal legislation has been developed to define the legal framework for the acquisition of real estate by foreigners.

The approval of the Law about Changing the Registration Law by the Grand National Assembly of Turkey re-arranged conditions for foreign nationals to buy real estate in Turkey. According to the clauses of this law;

- 1. A maximum of 2.5 hectares (25 thousand square meters) of real estate can be sold to foreign nationals, subject to mutual reciprocity agreements (present with 87 countries).
- 2. The total size of real estate a foreign national real person can acquire in Turkey can not exceed 2.5 hectares. The Cabinet has the authority to raise this amount up to 30 hectares.
  - 3. Only foreign national real persons and legal entities are entitled to acquire real estate in Turkey.
- 4. Foreign companies can only acquire real estate ownership and limited real rights over the real estate within the frameworks of the special clauses in the law. Land acquisitions of these companies will not be subject to area limits. However, these foreign companies can only legally acquire land

within the frameworks of the promotion of tourism law, the industrial zones law, the petroleum law and the law directly promoting foreign investments.

5. The Cabinet will decide on the maximum size of real estate that can be sold to foreign real persons in a city. This percentage can not exceed 0.5 % of the area of the city.

The real estate acquisitions of foreign nationals are predicted to expand in Turkey as the legal framework for such acquisitions are determined by law. The reasons and dimensions of this development are evaluated as follows:

- 1. A demand aimed at Turkey is expected, especially emanating from European countries. The housing demand habits especially in Northern European countries is the main reason for this demand. The citizens of England, Ireland, Germany, Holland, Belgium and the Scandinavian countries buy residences in southern European countries. These residential properties, that are generally bought after retirement for the purpose of permanent residency, are concentrated in coastal cities. This demand has been targeted to France, Italy, then Spain, Portugal and Greece in the last twenty five years. The citizens of northern countries buy homes in foreign countries at prices lower than those in their countries and use these homes for permanent or long-term residency. Another reason for preferring to live and purchase housing in these countries is that the comparative costs of living are lower. As an indicator, the number of homes bought in Spain by foreigners has reached 1.4 million. 62.000 homes were sold to foreigners in 2005 with a value of approximately 8 billion Euros.
- 2. The EU full membership process makes Turkey a potential country for the citizens of European and near-by neighboring countries to acquire homes. The demand of the citizens of the European countries to acquire homes in Spain, Portugal and Greece is reaching a saturation point. Therefore, they are turning to new countries headed by Turkey and followed by Croatia, Cyprus, Bulgaria and Romania. Turkey has a priority over other alternative countries.
- 3. Even though the main demand will emanate from European countries, the demand from Russian citizens and from neighboring countries is also predicted to expand.
- 4. The residential demand for Turkey will be concentrated foremost at the coastal cities of the Aegean and Mediterranean regions. The acquisitions of homes by foreigners will be concentrated at the coast line of Antalya, Muğla and İzmir. This demand is subsequently expected to shift to the Black Sea coast.

According to the data of the Registration and Fees Administration, foreign real persons acquired 37.342 pieces of real estate, between 1934 when foreigners first started to acquire real estate in Turkey and July 19th, 2003 when the law lifting restrictions for the acquisition of real estate by foreigners in Turkey to a large extent took effect.

We observe that foreigners' real estate acquisitions in Turkey started to increase starting with 2003. According to the data of the Turkish Central Bank, foreign nationals bought 998 million dollars worth of real estate in 2003, and 1.34 billion dollars worth of real estate in 2004. Real estate acquisitions in the first seven months of 2005 totaled 1.83 billion dollars.

Real estate acquisitions mostly consist of residential properties. It is observed that foreign nationals demand homes that cost around 60 - 80 thousand dollars. Foreigners' acquisitions of real estate during the 2 years between 19 July 2003 and 25 July 2005 when the decree of annulment took effect are presented in Table 1.

TABLE 1: FOREIGNERS' ACQUISITIONS OF REAL ESTATE 2003-2005

COUNTRY OF ORIGIN	NUMBER OF PIECES OF REAL ESTATE	PERSONS	SIZE (M2)	
ENGLAND	6.333	8,625	2,577,382	
GERMANY	3.482	3,210	3.584.902	
IRELAND	1,199	1,563	305,416	
NETHERLANDS	996	1,293	625,442	
DENMARK	757	1,089	295,699	
NORWAY	413	551	43.224	
GREECE	427	456	242,386	
BELGIUM	384	420	151,411	
AUSTRIA	310	270	254,742	
USA	196	189	221,617	
FRANCE	168	181	99,610	
SWEDEN	134	151	29,771	
RUSSIA	107	107	24,176	
ITALY	101	98	16,083	
SERBIA-KARABAGH	100	97	16,186	
TURKISH REPUBLIC OF NORTHERN CYPRUS	73	70	69,781	
MACEDONIA.	71	65	2,932	
FINLAND	48	65	9,441	
SWITZERLAND	62	64	73,618	
AZERBAIJAN	40	39	3,573	
AUSTRALIA	41	35	730,067	
ISRAFL	77	31	48,305	
SYRIA	52	24	314,982	
SPAIN	23	23	163,899	
LEBANON	36	22	279,033	
BOSNIA-HERZEGOVINA	20	22	12,781	
SOUTH KOREA	23	21	2,547	
CANADA	17	20	3,914	
JAPAN	16	18	1,679	
BULGARIA	4	12	3.551	

Source: Registration and Fees Administration

The foreigners' demand for homes in particular will continue to expand from 2006 onwards. Starting with 2006; the average real estate acquisitions are predicted to be around 2 - 2.5 billion dollars annually for the next ten years. An important percentage of this will be for residential real estate.

The foreign real estate demand for housing Istanbul is foreseen to be limited. This demand for will probably be for luxury homes in Istanbul. Since homes of this quality are rather located outside the city center, the demand will concentrate on homes along the Bosphorus coast, and on full service residences.

It is predicted that the effect of the demand of the foreigners within the general demand for housing in Istanbul will be limited, and this demand will be met by a limited quantity of high quality and luxury housing projects.



## NATIONAL REAL ESTATE INDEX

¶he development and growth of the real estate sector in Turkey to global norms makes the inception of a national real estate index necessary. The national real estate index indicates the developments in prices and yields for the real estate sector in general as well as its subsectors in a continuous and steady manner.

The national real estate index should be prepared according to international standards, based on international criteria and should be comparable with other foreign real estate indices.

The following have to be carried out while preparing the index.

1. The general index and other sub-indices have to be specified for relevant sub-groups. Residential, shopping centers, offices, industrial and logistics areas and hotels are the potential sub-groups. The weight of the sub-groups within the general index has to be determined.

The general index will represent a weighted average of sub-groups indices. The weight of the sub-groups within the general index should be variable on a yearly basis depending on possible changes that might take place in the sub-groups. The intervals which will reflect price changes in the general and sub-indices should be determined. These intervals should be monthly or weekly.

The currency unit of the indices is also important, requiring a decision to be made on the use of YTL or foreign currency as the basis of the index. The currency unit of the prices in the market gains importance in making this decision.

- 2. In preparing the sub-indices;
- a. Housing Index: The regions, adequate numbers, housing types and specific homes/housing projects to be represented in the index should be determined for the A type luxury and B type standard and high quality housing whose price changes are to be followed. International standards should be respected for these determinations. Their prioritization in the housing index should represent the structure in the residential market.

- b. Retail Index: The regions, adequate numbers, standards of shopping centers as well as specific shopping centers which will be included in the index and whose price changes will be monitored should be determined. Their prioritizations within the retail index should be decided upon. These determinations should adhere to international standards.
- c. Office Index: The regions to be represented in the index, the criteria for standards and quality, adequate numbers, specific office buildings and their weighted average in the index should be determined for A and B class offices within the Central Business District whose price variations will be monitored. The weighting of these buildings within the office index shall be representative of the structure in the office market. International standards should be used in such determinations.
- d. Industrial and Logistics Areas Index: The standard and quality criteria, the regions to be represented in the index, the number of areas and particular industrial and logistics areas have to be decided upon to monitor price changes. Their prioritizations within the index should represent the structure within the industrial and logistics areas market. International standards should be used for these determinations.
- e. Hotel Index: The standards, star categories, regions and the number of hotels as well as specific hotels whose price changes have to be followed and represented in the index have to be determined. Hotels have to be prioritized within the index to reflect the structure of the hotel market. International standards should apply.
- 3. The respective weights of real estate values and yields to be represented in index price changes have to be determined. The extent to which the changes in sales prices and rental values should be reflected to the index have to be determined.
- 4. The method for monitoring, measuring and evaluating price changes should be determined. Multiple market data could be used for this, however it will be safer and preferable if an independent organization monitors price fluctuations of the real estate in the index group.
- 5. The index should be have a flexible structure to be able to reflect new developments (new real estate properties) according to periods and be easy to update.
- 6. After all the sub-criteria and determinations to form the index are completed, the index to be chosen and the method of calculation have to be determined according to the science of statistics.
- 7. The establishment that will create and administer the index has to be an independent organization specialized in and representative of the real estate sector.

#### THE REAL ESTATE SECTOR AND PROGNOSES FOR ISTANBUL 2015

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