Turkish Residential Real Estate Investment Analysis

by

Berk Ciller

BS, Business Administration, 2003
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Submitted to the Department of Urban Studies and Planning
in Partial Fulfillment of the Requirements for the
Degree of Master of Science in Real Estate Development

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ABSTRACT

This paper examines the investment potential for Turkish Residential Real Estate Market, focusing mainly on Istanbul. With a stable economy since 2002, dynamic population, geo-political location and the potential accession to EU, Turkey provides exciting opportunities to local and international investors. Turkish economy, worldwide, ranks at twentieth in terms of GDP level and in 2005, ULI/ PriceWaterhouseCoopers has ranked Istanbul as the top development market.

The question the paper is trying to answer is: Does Turkey's Residential Real Estate Market provide an attractive investment opportunity? To determine this I have reviewed the following factors: economic forecasts, political stability, newly enacted mortgage market, FDI forecasts, potential for foreign real estate ownership, current status & future predictions of real estate sector, potential of EU accession and comparison to Spanish & Romanian real estate markets. The method I used to accomplish this was mainly literature review and interviews with real estate brokers/developers.

Turkey's economic stability, developing mortgage market, continuing FDI, foreigners' investment in vacation houses, improving legal transparency and potential accession to European Union makes Turkey, especially Istanbul, an increasingly attractive market. On the other hand, political stability is crucial for economic stability. In addition, slow legal system, unregistered construction activity, insufficient quality of some buildings and limited infrastructure in certain parts of the country remain to be problematic issues.

Considering Turkey's opportunities and risks, it is a top investment destination in Europe, dependent on sustainable political stability, an improved mortgage & legal system andsuc cessful implementation of EU accession plan.

Thesis Advisor: John Kennedy, Senior Lecturer, MIT Center for Real Estate

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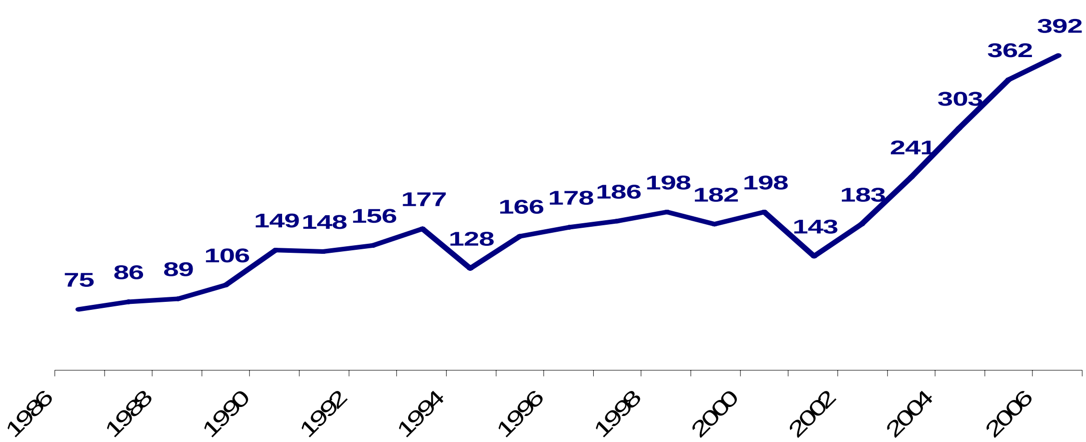
OVERVIEW OF TURKISH ECONOMY

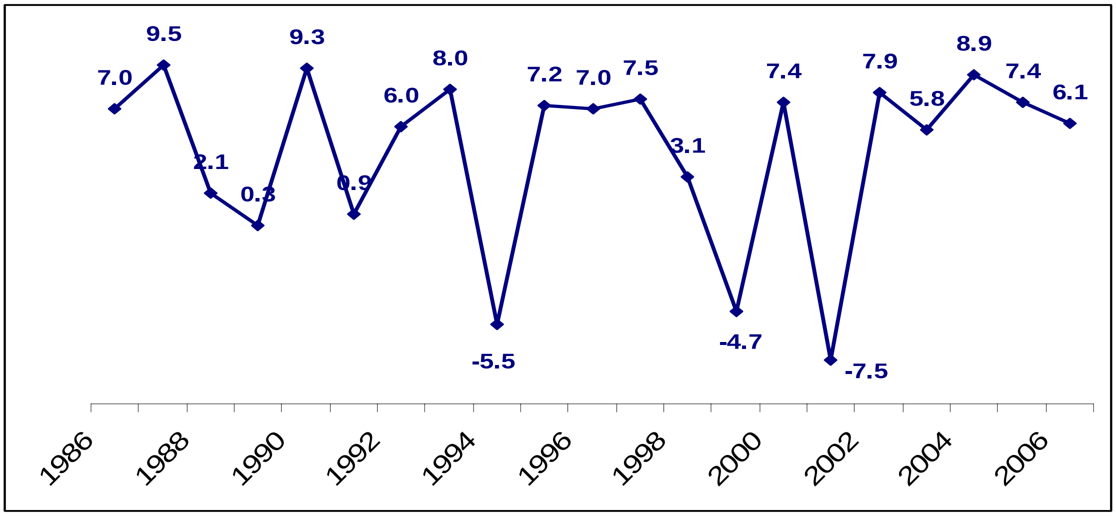
With a dynamic population, critical geo-political location and in the process of accession to EU, Turkey's economy demonstrated a distinctive performance in the last twenty years and still promises growth opportunities. Turkey's GDP has folded 6 times in the period 1986-2006 from USD 75 billion to USD 455 billion, while World GDP growth folded 3.5 times in the same period. Worldwide, Turkish economy ranks at 20 in terms of GDP level[1].



GDP of Turkey, USD billion , 1986-2006 - Souce: World Economic Outlook Databese, IMF

This growth performance is fuelled by a dynamic population as a source of workforce and consumption, infrastructure investments increasing efficiency and increasing export activity.

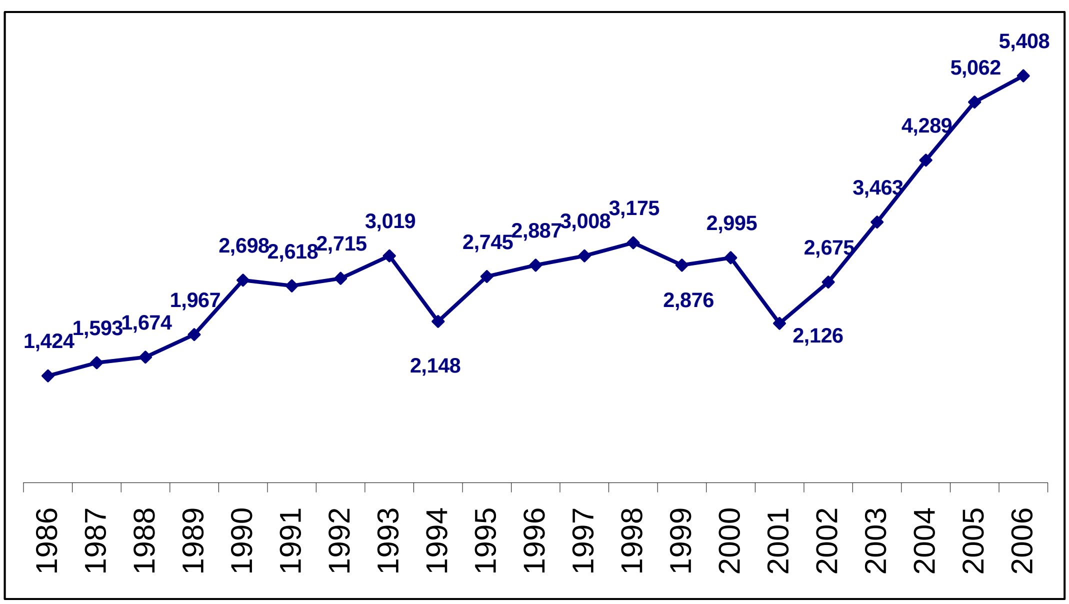
[1] IMF World Economic Outlook Database



Annual GDP Growth (%)- Source: TUIK

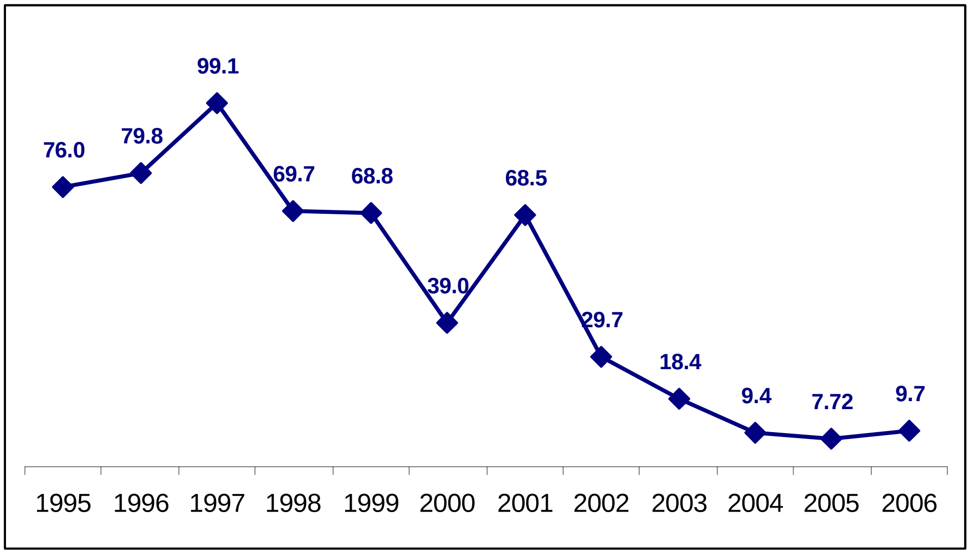
Average CAGR growth rate of Turkish economy for the last 20 years stands at 4.2%, annual rates fluctuating between -7.5% and 9.5%, showing a highly volatile structure. After the 2001 crisis, with the new economic program, GDP demonstrated a stable growth at an average of 7.2% p.a.

The growth performance has been translated into welfare as well. High GDP growth carried per capita GDP from $1,424 to $5,408, between 1986-2006. Since 2001 crises, per capita GDP experienced an average increase of 20% p.a. in dollar terms.



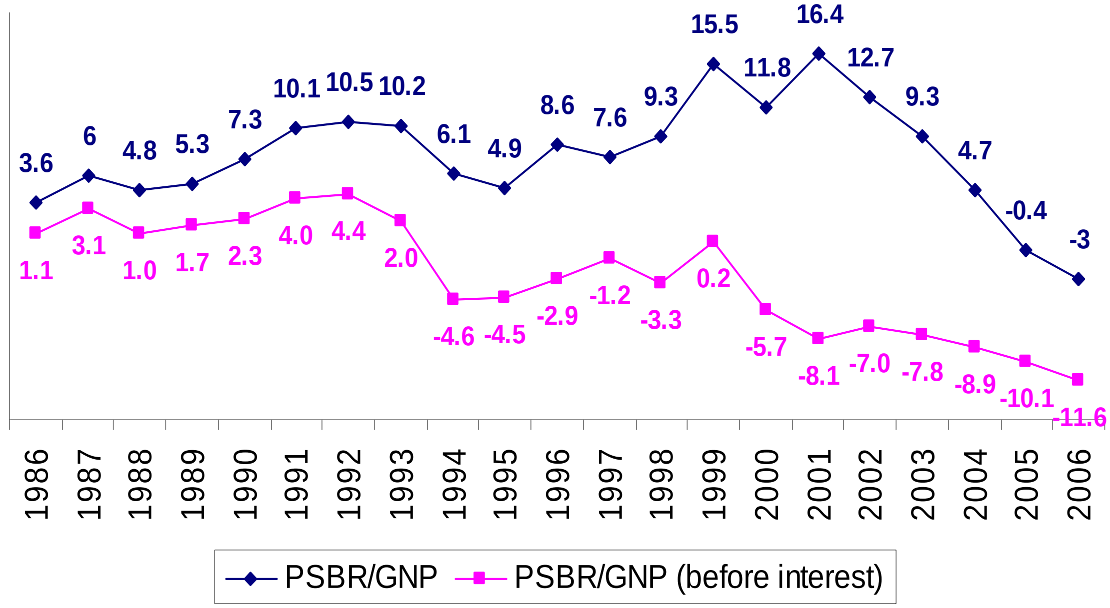
Per Capita GDP, USD- Source: World Economic Outlook Database, IMF

Turkish economy lived in a high level of 'chronic inflation' environment beginning from the late 70's. Between 1986 and 2001, the year of a major crisis, the average inflation rate on a compound basis stood at 69%. The chronic nature was due to a combination of public imbalances, demand, cost inflation and 'expectations' spiral. With strictly controlled fiscal policy and stabilized currency, inflation rates spiraled down as low as %7.76 in 2005. Slightly higher in 2006, one-digit inflation rate level is preserved.



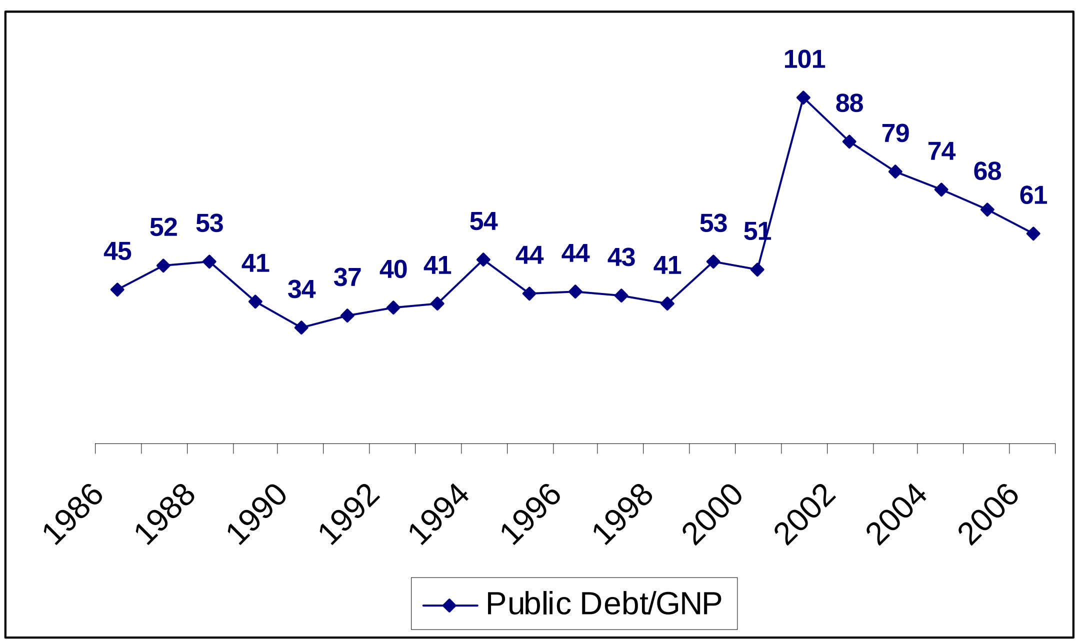
Annual CPI Inflation (%)- Source: TUIK

Public imbalance was a major source of destabilization and inefficiency throughout 1980s and 1990s. A large public sector with SEEs suffering heavy losses, uncontrolled fiscal policy and high-risk premium on public debt was the dynamics driving PSBR higher. Extensively controlled in mid 1990s, PSBR/GDP ratio then deteriorated up to 16.4 in 2001, the year of crisis. Despite a positive primary balance for most of this period, financial burden of accumulated debt stock drove deficit levels higher. Within the new fiscal regime, budget performance steadily improved with negative PSBR/GDP levels since 2005. PSBR/GDP ratio for 2006 has been -3%.



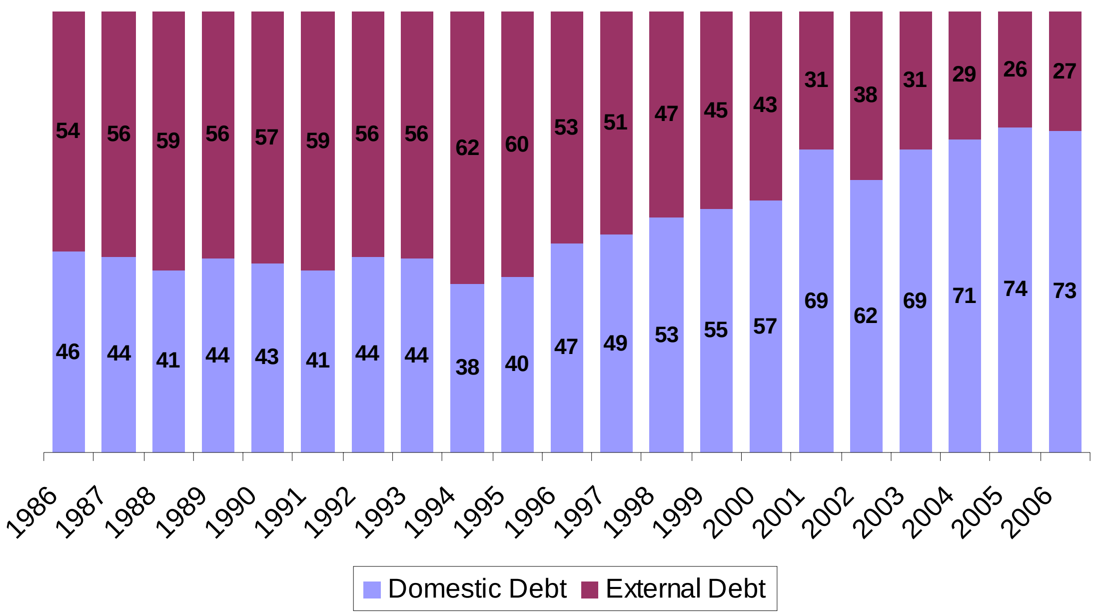
Public Sector Borrowing Requirement/GNP (%)- Source: Turkish Treasury, DPT, TUIK

Up until 2001, public debt stock vis-à-vis GDP has stayed at sustainable levels, remained somehow constant, at an average of 45% and fluctuating between 34% and 54%. 2001 experienced the level of debt surging to 101% of GDP. In the stabilization and growth environment, level of public debt vis-à-vis GDP also has been controlled extensively, steadily decreasing to 61%. As of end of 2006, total public debt stands at USD 245 billion, of which USD 179 billion is being domestic and USD 66 billion being external.



Public Debt Stock / GDP- Source: Turkish Treasury, TUIK

For the 1980s and 1990s, public debt structure comprised of long-term external debt -supplied through economic agencies and capital markets- making the majority part and short-term and high yielding domestic debt. Stabilizing fiscal balances and lower (even negative) PSBR caused domestic debt to be more favorable with higher maturities up to five years and narrower yields. As of end of 2006, total domestic debt consisted of 27% of external and 73% of domestic debt.



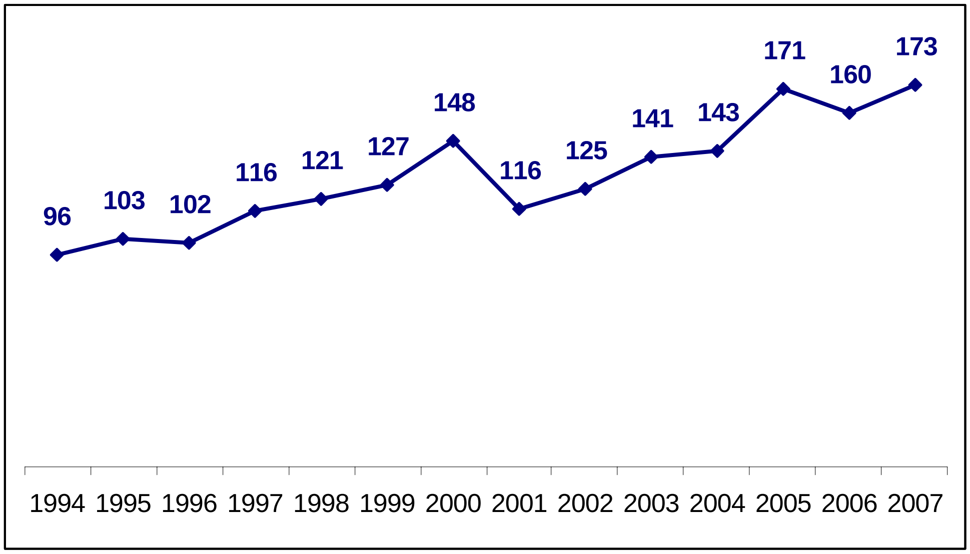
Breakdown of Public Debt between Domestic and External (%) - Source: Turkish Treasury

Interest rates remained at a chronic and volatile high level until 2001. Discrepancies between expected and realized inflation rates caused real interest rates calculated on an ex-post basis stay at negative during 80s. Real interest rates fluctuated around 20% in 90s. With a stabilizing environment, stronger fiscal performance and resulting lower risk perception and risk premium, real interest rates spiraled down to 7%.

Capital injection from abroad and FX liquidity caused the YTL to appreciate vis-à-vis foreign currencies. Over appreciation was one of the triggers behind 2001 crisis when real YTL index reached 148 in 2000 from 96 in 1994[2]. Despite the index surpassing previous pre-crisis level and driving the current account deficit, confidence in the future of Turkish economy and sound international reserves prevents a major currency crisis to happen other than easily managed

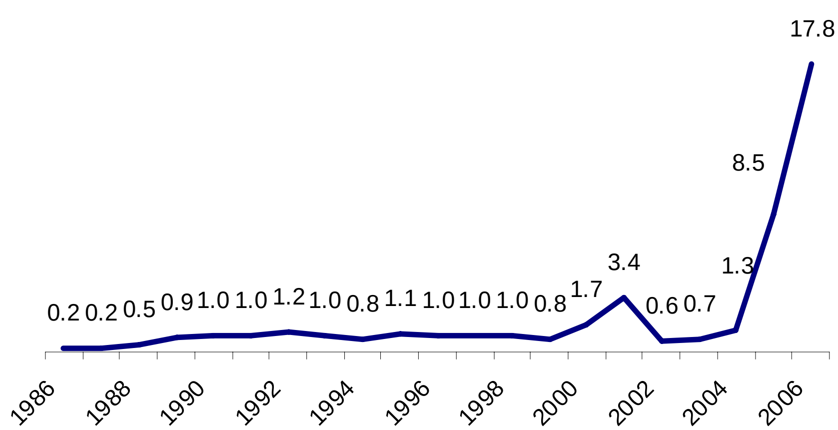
[2] Central Bank of Republic of Turkey, 2007

minor shocks.



Real Value of YTL vis-à-vis weighted FX basket- Source: CBRT

Turkey's stabilizing economy diminishing structural risks, EU accession and growth opportunities also paved the way for growing FDI in the recent years. Annual FDI inflows stood at around USD 1 billion during 90s. FDI gained strength in 2005 and 2006 with inflows of USD 8.5 billion and USD 17.8 billion respectively. Major part of the inflows directed at telecommunications and banking sector.



FDI Inflows to Turkey, USD billion , 1986-2006- Source: Turkish Republic, 2007

According to 9th development plan by State Planning Organization, the vision is formulized as "Turkey with stabilized growth, fair income distribution, global competitiveness, transformed into information society and accomplished harmonization process for EU accession". With controlled risks and hidden opportunities, Turkey is expected to keep its growth rate while demonstrating a better-stabilized economy translating into a ‘sustainable growth’. Recent economical success, decreasing interest rates, and stronger financial institutions have increased the demand for real estate.. Foreign investors have been increasingly looking in to real estate sector in Turkey. Especially residential and retail real estate have become the most attractive segments.

TURKEY’S RESIDENTIAL REAL ESTATE MARKET: DEMAND AND SUPPLY

Turkey’s population is comprised of around 17 million households, with an average household size of 4.5 people. 500.000 marriages p.a. is the most important engine for driving the household number up. Over time, due to sociological and socio-economic factors the average household size is shrinking. Some of these factors include bachelor homes and divorces. These factors bring an extra dynamic to the household increases.

After the 2001 crisis, the number and area of licensed residential building constructions demonstrated a dramatic increase. New household openings are main source of residential demand, whereas the demand for replacement also brings demand for residential development. As of 2000 there was 13.6 million houses in Turkey, of which, 38% was constructed without a license. As of the same date, the same figure was %52 for Istanbul. Lack of supervision and compliance with standards, most of these unregistered houses can be deemed as having insufficient quality and poor condition.[3] According to official statistics, number of annual occupancy permits fluctuates between 280.000-320.000 signaling the level of unregistered residential construction activities.

In 1999, a major earthquake occurred with an epicenter of Izmit, part of the largest metropolitan area of Turkey and had a destructive effect in Istanbul, Izmit and Adapazari, major metropolitan areas of the north-west part of Turkey. This earthquake also brought the quality of current housing under debate. Legislation for the compliance with earthquake standards for new real estate developments has been enacted. But the current real estate stock still needs to be tested for these standards and reinforcements or even reconstructions has to be overtaken to bring the average quality of real estate stock to desired levels.

According to construction permits, housing activities has increased 4-fold between 2002-2006 in terms of residential units and total area. Average per m^2 value of the permitted houses

[3] Real Estate Research Report - Real Estate Indsutry and Outlook for 2015, GYODER, May 2006

also reached USD 318 in 2006 from USD 164 in 2002, reflecting both the appreciation of the construction inputs and real estate prices.

	# of buildings	# of units	Area (million m^2)	Value (USD million)	Value (USD/m^2)	Building size (units/buildings)
2002	22,554	131,463	20	3,302	164	5.8
2003	30,048	186,574	29	5,853	199	6.2
2004	40,705	302,463	45	10,863	241	7.4
2005	60,398	477,632	71	20,029	283	7.9
2006	67,297	538,515	83	26,386	318	8.0

Construction Statistics According to Construction Permits – Residential Buildings With At Least Two Independent Units - Source: TUIK, CBRT

Residential development is one of the three major items of the construction industry along with industrial development and infrastructure investments. In 2005, 77% of total construction permits by area came from residential demand. As a source of economic growth, each one dollar invested in residential development results in an economic value added of 2 dollars through the multiplier effect[4].

Currently the impetus for growth is coming from residential development. Especially 2005 and 2006 experienced increasing transactions in real estate. Real estate transactions January-September 2005 showed a 15.3% growth on a y-o-y basis, with a total amount of YTL 21.6 billion for 571.695 units[5].

The price level for housing also increased above CPI in the same period. The data reveals that new transactions does not reflect the ownership by lower income groups but second or third ownership of middle and upper income groups for investment purposes.

The percentage that residential developments receive from total public investment allocations is still at a low level with 0.6 % share[6]. Therefore, the major portion of the residential growth comes from private sector investments with support from TOKI's mass-housing investments as well as premium projects for high-income level. The introduction of the full-scale

[4] Turkish Construction Industry Report 2006, Yapı-Endüstri Merkezi, 2006
[5] Istanbul: Real Estate Market Report, Colliers International, 2006
[6] TUIK Database

mortgage system will alter the investment dynamics of the market in the near future.

A major sociological trend for Turkey was rural to urban migration for economic reasons. Especially major metropolitan areas like Istanbul, Ankara, and Izmir where plenty of employment potential existed were the destinations for this migration. Since the residential development could not satisfy the demand from immigrants, this population was accommodated in ghettos situated in the peripheral of metropolitan areas and mostly developed by their self-efforts. A vast majority of these housings is also in poor quality and poses a major threat in the case of an earthquake.

A recent trend in major cities is the demand for suburban type residential developments with high quality standards and including recreational facilities, positioned in the peripheral of metropolitan areas – just like ghettos. A portion of the working class who increased their current income and wealth parallel with economic growth is the source of this kind of development.
So in the following 10 years, major themes for the residential market will be, supply of high quality new developments for the upper income class, and urban re-development for lower and middle class with better quality and earthquake-complying standards.

To assess the residential development potential of Turkey, demographics are of main importance. Population and household projections and urbanization rate are the main parameters. According to TUIK, population of Turkey stands at 73 million. Turkey's population forecasts for 2015 and 2020 are 80.5 million and 84.3 million[7]. This pattern shows a decelerating population growth.

Urbanization rate has been increased from 53% to 65% between 1985-2000[8]. Rural to urban immigration puts the urban population growth much above rural growth. Increasing urbanization also brings lower household size with urban standards. Higher urbanization rates mean more demand for urban housing. UN Development Program forecasts that the number of cities in Turkey with a population of more than 1 million will increase from 5 to 7.

Analysis of regions according to demographic and socio-economic factors shows a high level of variance in the levels of development between regions. Eastern Marmara, Aegean Coast and Western Center Anatolian Regions show the highest level of socio-economic development. Urban areas like Istanbul, Kocaeli, Izmir, Mugla, Ankara lays within these regions[9]. In the figure below, lighter grey represents regions with higher development:

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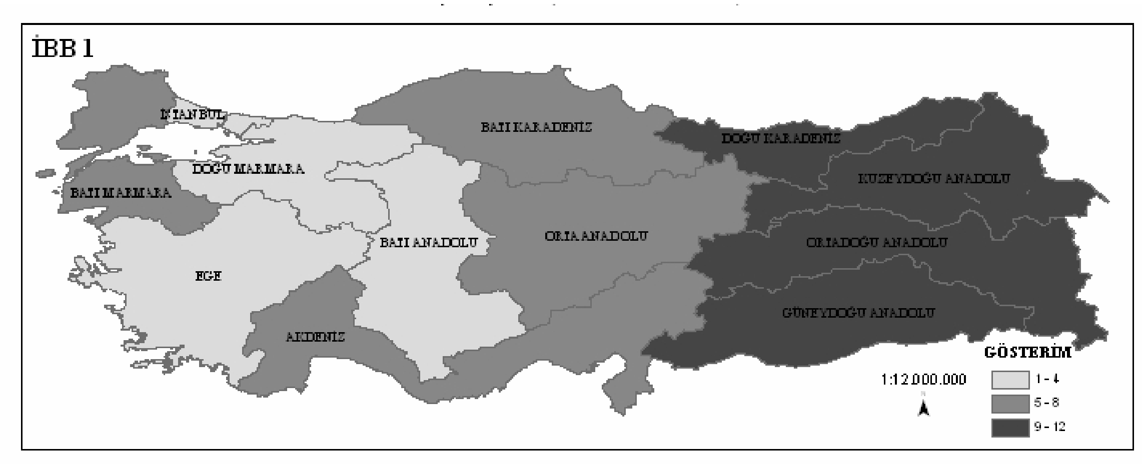
[7] TUIK database
[8] TUIK database
[9] Urbanization Specialization Commission Report, 2006, DPT



Level of Development According to Regions of Turkey, 2003- Source: DPT

The same urban areas (darker green) also have the highest level of per capita income in the figure below[10]:

Per Capita GDP by Provinces of Turkey, 2001 - Source: DPT

Istanbul, the financial center of Turkey, is the most attactive residential market in Turkey, due to its location, population, per capita GDP and real estate development activity. All these factors and improving Turkish economy make Istanbul stand out in Turkey and Europe.

ISTANBUL RESIDENTIAL REAL ESTATE MARKET

In developing countries, the largest city is twice as populated as the second city, which is also the case of Istanbul[11]. Istanbul, with a population of 11.5 million, 15.8% of Turkey's population, has a high population growth rate of 25 ‰ boosted with annual migrations of 250.000.

[10] Urbanization Specialization Commission Report, 2006, DPT
[11] Turkish Construction Industry Report 2006, Yapı-Endüstri Merkezi, 2006

As of 2005, urban household number is 2.9 million and total number of houses is 3.4 million.[12]

According to ULI/PWCs Emerging Trends in Real Estate Europe report for 2005, Istanbul was selected as the top development market – but with considerable risk – as it offers scope in most sectors and a vibrant, entrepreneurial high-growth economy that is aspiring to join the European Union, followed by Moscow[13]. Among the 27 metropolitan cities, this report ranks Istanbul as 13th on risk adjusted total real estate returns among these cities. Saturation in European markets also puts Istanbul and similar promising real estate markets in the focus of real estate investors.

CRITERIA	EXPECTATIONS	RANKING
RENT INCREASE	VERY GOOD	1
CAPITAL GROWTH	MODERATELY GOOD	1
SUPPLY/DEMAND BALANCE	AVERAGE	6
DEVELOPMENT	VERY GOOD	1

Expectations for the Istanbul Real Estate Market for 2005 – Source: "The Developing Real Estate Markets in 2005, ULI/PWC

Two recent land transactions also put real estate opportunities in Istanbul into the focus of both domestic and foreign institutional investors. For a land of 96.505 square meters currently occupied by General Directorate of Highways, Zorlu Group has bid the highest price of USD 800 million and won the tender in March 2007. In addition, the tender for the land utilized as an open garage for Istanbul Public Transportation administration, with total area of 46.241 square meters, has been won by Sheik of Dubai El Maktum for USD 1.152 million. However, the deal has not been finalized due winner party's concerns regarding the legal problems of the land.

The transportation structure of Istanbul is characterized by two bridges (Bosphorus bridges) as a liaison point for the two sides of the city, two peripheral highways as part of national highway system and TEM, each going through one Bosphorus bridge, two international airports, one in each side of the city and easily accessible from the two highways, a metro system between Taksim and Levent (mostly in the CBD), a west-east railway system in each part of the city with both metropolitan and national traffic, a light metro city from Kabataş to the Ataturk International Airport and maritime transportation between two sides.

[12] Real Estate Research Report - Real Estate Industry and Outlook 2015, GYODER, May 2006
[13] Emerging Trends in Real Estate – Europe, ULI and PWC, 2005

Locations of Residential Districts in İstanbul - Source: Colliers International Turkey

As of 2000, 57.3% of households in Istanbul are house owners, remaining being lessees. Most of house owners also own a second house for investment purposes. With narrowing risk premium, increasing liquidity, household income and savings, boosting residential debt are also enabling the lessees to own a land with long-term debt[14]. Recently enacted Mortgage Act will also expand the residential debt market.

	Istanbul	Turkey
Home Ownership	Household %	Household %
Home Owner	57.3	59.8
Tenant	35.6	31.6
Lodging Inhabitant	1	2.2
Doesn't Own/ Doesn't Pay Rent	5	5.5
Other	0.7	0.8
Unknown	0.1	0.1

Home Ownership of Households, 2000 - Source: National Census 2000, SIS

Satellite cities gain importance in the new residential market in both wings of the city. In European side Bahçeşehir and in the Asian side Ataşehir are the major satellite cities. They were

[14] Real Estate Research Report - Real Estate Industry and Outlook 2015, GYODER, May 2006

constructed as self-sufficient areas in the outskirts of Istanbul in 1990s. However, fast urbanization has rendered Ataşehir an urban area within in the city[15]. Still growing, Ataşehir welcomes 8.000 newly constructed residential units due to high demand. Bahçeşehir is still a peripheral area, not so integrated with the inner city. As Ataşehir reaches saturation, Bahçeşehir will again importance for development and investment opportunities.

For the last 15 years, residential property prices appreciated between 55% – 1.009 % according to regions. The return winners are Ataşehir, Kadıköy, Kozyatağı regions on the Asian side and Beylikdüzü on the European side[16].

(USD '000)	1991 price	2006 price
Ataköy	60	248
Ataşehir	15	179
Avcılar	22	76
Bahçelievler	68	130
Bakırköy	45.5	152
Beşiktaş	62.5	186
Beylikdüzü	15	117
Çamlıca	55	124
Fatih	30	103
Kadıköy	15	137
Kozyatağı	27	206
Küçükçekmece	22.5	62
Maltepe	35	110
Mecidiyeköy	47	193
Merter	22.7	90
Pendik	34	103
Şişli	80	124
Tuzla	15	72
Ümraniye	20.5	90

[15] 2007 Turkey Real Estate Market Review, Colliers International
[16] Prices Appreciated Most in Kadıköy and Ataşehir in the Last 15 Years, Referans Newspaper, 20.06.2007

Üsküdar	51	172

Residential Property Trends by Regions in İstanbul (for a typical apartment of 100-120 square meters)- Source: Turyap Gayrimenkul, Referans Newspaper

Developing sub-urban and urban residential regions of Istanbul, which will be reviewed in this paper, can be listed as follows:

Regions	Location (Istanbul)	Ease of Access to Downtown	Infrastructure	Density	Risk of Earthquake
Beykoz-Riva	Northeastern	Average	Limited	Low	Medium
Çekmeköy-Ümraniye	Southeastern	Average	Good	Medium	Medium
Tepeören-Tuzla -Ömerli	Eastern (North-South Corridor)	Bad	Limited	Low	Medium
Ataköy-Beylikdüzü -Halkalı	Southwestern	Average	Good	Low	High
Rumeli Feneri-Kilyos -Zekeriyaköy	Northeastern	Below-Average	Limited	Low	Low
Beyoğlu-Şişli	Center	Average	Average	High	Medium
Bahçeşehir-Hadımköy	Southwestern	Average	Good	Low	Medium

These regions' investment potential with their risk can be summarized as follows:

Regions	Ease of Development	Current Development	Current Asking Price ($/m2)	Investment Potential	Target Market by Income Level & Marriage Status
Beykoz-Riva	Good	Low	700-1500	Good	Middle to Upper-Middle Class (Family)
Çekmeköy-Ümraniye	Good	High	800-2000	Great	Middle to Upper-Middle Class (Single-Family)
Tepeören-Tuzla -Ömerli	Average	Low	900-1700	Good	Middle Class (Family)

Ataköy-Beylikdüzü -Halkalı	Average	Medium	700-3000	Good	Middle to Upper (Single-Family)
Rumeli Feneri-Kilyos -Zekeriyaköy	Average	Low	1000-2100	Good	Middle to Upper-Middle Class (Family)
Beyoğlu-Şişli	Good	Medium-High	1400-5000	Great	Middle to Upper Class (Single)
Bahçeşehir-Hadımköy	Good	High	500-200	Great	Low to Middle (Single-Family)

REGIONAL RESIDENTIAL REAL ESTATE INVESTMENT ANALYSIS

1. Beykoz-Riva

Location of Beykoz and Riva- Source: Google Earth

Beykoz and Riva regions are located in northeastern part of Istanbul, on the Asian side. Beykoz is a town by the Bosphorus and is mostly a part of the metropolitan area. Riva is by the Black Sea coast. Two locations are within a 20-22 km distance from each other. Beykoz is 26 km away from CBD of Istanbul (Levent-Zincirlikuyu), 15-20 km away from Kadıköy. Beykoz is an older suburban settlement as compared to other suburban locations and the closest suburban region to the CBD, which is also reflected in higher prices.

Most part of Beykoz is forest and makes this place a suitable choice for suburban housing. With a long beach by the North Sea and a 10-meter wide creek, Riva is a popular spot for fishing and seaside activities. Riva region is also surrounded by forests.

Riva Coast- Source: Kaan Gayrimenkul

By Fatih Bridge and its connected peripheral highway, quick access to Beykoz is available from both European and Asian side of the city. Public buses and ferry are means of transportation to Beykoz through public services. Public transportation to Riva is enabled through ferries from Bosphorus to the Black Sea coast. Newly completed Kavacık-Riva highway has facilitated transportation to Riva[17].

Being the only construction planned part of Beykoz district, Riva is expected gain popularity in recent future. Riva will also be a conjunction of the currently constructed Bulgaria Highway and Black Sea Highway to the third Bosphorus Bridge, which is still an ongoing project. The planned Black Sea Highway-Third Bridge connection highway will be just to the South of Riva. Since the development plan of the region permits only few storey buildings, the region will be the center of premium housing projects. Furthermore, the fact that biggest development companies like Alarko REIT and Yapı Kredi REIT owns more than 10 million m2 of land in this region for premium projects increase the attractiveness of Riva[18].

Although most part of Beykoz is preserved forest area, partial unlicensed occupations exist. Older development areas near the Bosphorus coast whereas new development projects like Beykoz Konakları by Tepe İnşaat and Acarkent by Acarlar İnşaat are located to the east. According to the Bosphorus Development Plan, in central Beykoz, construction permits are up to 3 stories with some exceptions going up to 6 stories.

Riva is more of an undiscovered spot because of its distance from the metropolitan area.

[17] İstanbul: Real Estate Market Report, Colliers International, 2006
[18] Where to Invest Report No:2, Zet Emlak

After being a part of Beykoz Municipality, development regulations also changed making it easier to get permits. Collective housing projects, villa type residences and sports camping facilities will be the form of development in the region.

Beykoz region also includes Kavacık, one of the three business districts of the Asian side. Accordingly, being also a business center as well as a suburban area the infrastructure level is also satisfactory. Road connections, water supply, electricity and telecommunication utilities are in well condition however, natural gas system needs to be developed. A recently constructed through fare connection TEM highway to Beykoz-Kavacık and further to Riva has also improved the quality of infrastructure in the region. The development of projects will also help develop the infrastructure. Riva's current infrastructure, however, will not satisfy the upcoming housing demand, so projects like Alarko Holding's Al-Riva will bring its own infrastructure to the region. Beykoz has plenty of social facilities for development of the social life. Sports clubs like Colliseum at Acarkent, several private hospitals and seaside restaurants.

A view from Beykoz Konakları- Source: Tepe İnşaat

Major completed projects of the region are Acarkent and Beykoz Konakları. Completed in 2002, Acarkent includes 1,453 villa and apartment type units with an average price of USD 1400-2600/m2. When first introduced in late 1990s, prices varied between USD 750-1,000/m2. After the earthquake the demand for the region dramatically increased pushing the prices up. With the same completion date, Beykoz Konakları has 401 villa type units with an average price of USD 2400-2800[19].

Beykoz Ayazma evleri, a recently completed project by Opak İnşaat in

[19] Turyap Emlak Magazine, June 2007

Mahmutşevketpaşa, town of Beykoz, consists of 18 villas on 19.000 m2 land with an average price of USD 400.000 per unit. The project is 3 km away from the Kavacık-Riva highway[20]. Yapı Endüstrisi also has a construction a residential project in Riva, called Villa Riva. The project will be developed on 21.000 m2 of land including 21 villa units, expected to be completed in 2008.

Development companies like Alarko REIT and Yapı Kredi Koray REIT are planning major projects in the region. Alarko Group’s Al-Riva Project will consist of 6,000 units and Yapı Kredi Koray REIT’s Project will have 700 units. There is also a plan for a ‘Satellite Town’ to host 60.000 residents. Garanti Bank also has a land in the region[21]. Other projects like Riva Park Evleri, Riva Konakları and Rivara Ranch are also on the pipeline[22].

Riva Konakları, a project consisting of 132 villa type units is interesting with the energy saving technology it utilizes. The system extracts the embedded heat of the deep soil, which is used for heating in wintertime and converted into electric energy for other purposes. This system is made compulsory by the government for decreasing the dependence on natural gas in Sweden[23].

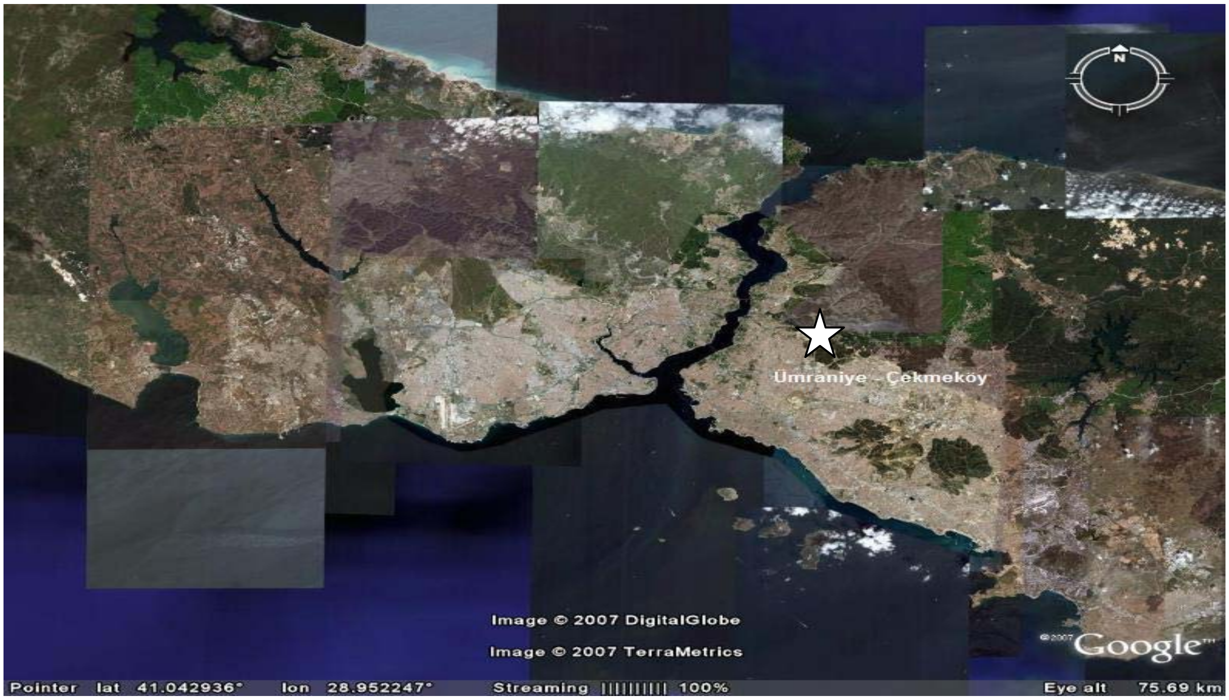
At the same time, major developers are acquiring vast amount of land for future development projects. Celaloğlu Family, owner of Beylik Mandra Ranch of 16 million m2, was the sole owner of the property in Riva before is divided up to be sold. Now the family owns 350.000 m2 of land. Ottoman Finance Company, Britain-based investment fund, has bought 1 million m2 of land for a price of USD 120 million in Riva from Celaloğlu Family in September 2006. A Project of 1,500 villa houses targeting upper-middle and higher income classes are planned[24]. Galatasaray Sports Club has a 1,175,000 m2 of land to be developed in the future. Though incomplete, German Hol Holding offered Galatasaray USD 356 million for the land in December 2006[25]. Out of the available land in Riva, 6 million m2 belongs to Alarko, 1.2 million m2 belongs to Galatasaray, 500.000 m2 belongs to Orhan Yavuz, 500.000 m2 belongs to Uzunhasan Family, 450.000 m2 belongs to Yapı Kredi Koray REIT and 100.000 m2 belongs to Sabancı Group[26].

A recent development is the new development plan of 1/100.000 scale as prepared by the

[20] Dünya Construction Magazine, January 2007
[21] İstanbul: Real Estate Market Report, Colliers International, 2006
[22] Kaan Gayrimenkul, June 2007
[23] Referans Newspaper, 12.02.2007
[24] The New Anatolian Newspaper, 04.09.2006
[25] IntelliNews – Turkey Sectors and Companies , 26.12.2006
[26] Riva News, Kaan Gayrimenkul

Istanbul Metropolitan Municipality, which may restrict the construction activities, though still under dispute[27]. The future of this plan will be one of the major determinants of the development potential of Riva, as well as other suburban regions.

2. Çekmeköy-Ümraniye



Ümraniye and Çekmeköy- Source: Google Earth

Ümraniye and Çekmeköy, two adjacent regions in the central part of the Asian side are among the major areas of residential development. This sub-region is close to the urban region of Asian side. The region is easily accessible through the TEM highway. TEM highway's Ümraniye exit is 15 km away from the Fatih Bridge. Çekmeköy is surrounded by forests. Ümraniye went through an extensive development beginning from the 1970s as a result of industrial activities. Çekmeköy has been a distant sub-urban spot until recently.

Apart from TEM connection, Çekmeköy and Ümraniye are also easily accessible through Bosphorus Bridge and Şile Highway. Most of the development is concentrated at the junction of TEM Highway and Şile Highway, with major retail malls like Carrefour and IKEA. Two rail connections will increase the attractiveness of the region. First, one is the planned Üsküdar-Ümraniye light subway line with a total length of 17 km and running parallel to the Şile Highway. The second is the Göztepe-Ümraniye Light Subway line with a length of 5.7 km and providing

[27] Para Magazine, February 2007

Access to Kadıköy, the center of Asian side[28].

Development of the high-rise residential buildings is concentrated along Şile Highway also helping Ümraniye to transform into the CBD of the Asian side. However, unlicensed constructions also play a major part in the residential development of the region. To control the licensing process better, many small towns have been converted into district municipalities. Çekmeköy region is comprised of mass housing and cooperative mass housing projects. The unlicensed construction activity in the region resulted in environmental problems and distorted the visual harmony. Multi-storey buildings are permitted in some areas of Çekmeköy region.

A View from Çekmeköy -Source: Adres Magazine

Technical infrastructure of the region is pretty well developed especially in terms of water, sewage, telecommunications and natural gas. The Carrefour Shopping Center opened in 2000 at the TEM-Şile junction contributed much to the social life of the district, enlivening the entire region. IKEA was introduced in 2005 as the first phase of M1 Meydan Shopping Center, developed by Metro Group, also has benefited the region. The second phase of the M1 Meydan Shopping Center is planned to be completed in 2008. The complex will be including Real Hypermarket and current IKEA over an area of 70.000 m2.

[28] İstanbul: Real Estate Market Report, Colliers International, 2006

A View from 'My Town' by Ağaoğlu- Source: Ağaoğlu İnşaat

Major completed projects of the region include:

- Aqua City, in Çekmeköy, constructed by Sinpaş, completed in 2001 with 1,164 units in villa and apartment form and with a price range of USD 1200 – 1800 per square meter
- Evidea, in Yukarı Dudullu/Ümraniye, constructed by Eltes, completed in 2006, with 473 units in apartment form and with a price range of USD 1000 – 1400 per square meter
- My Town, in Tepeüstü/Ümraniye, constructed by Ağaoğlu, completed in 2005, with 478 units in apartment form, with a price range of USD 1100 – 1500 per square meter
- My Country, in Çekmeköy, constructed by Ağaoğlu, completed in 2006, with 271 units in apartment and villa form, with a price range of USD 1400 – 2000 per square meter.
- The region is a green-field for numerous housing projects still going on. To name a few[29]:
- Antrium Residence, in Ümraniye, constructed by Ant Yapı, to be completed in 2007, with 420 units in apartment form, with a price range of USD 2100 – 2300 per square meter
- Fiba Life, in Yukarı Dudullu/Ümraniye, constructed by Finans REIT, to be completed in 2008, with 144 units in apartment form with a price range of USD 800-900 per square meter
- Greenium, in Çekmeköy/Ümraniye, constructed by Sur Yapı, to be completed in 2007, with 94 units in villa form, with a price range of USD 1400 – 2300 per square meter

Çekmeköy projects have the highest sales performance due to location advantage. Proximity to Kadıköy, CBD of the Asian side, as well as Üsküdar and Kozyatağı is a determinant

[29] İstanbul: Real Estate Market Report, Colliers International, 2006

of prices.

According to price studies, Asian side has performed the best in terms of price appreciation in last 15 years. Property prices in Ataşehir, a satellite city located proximate to Ümraniye-Çekmeköy have appreciated by 1,009% since 1991, from $15.000 for a 100-120 square meter apartment to $ 179.000 in 2006. Similarly, prices in Kadıköy have appreciated by more than 900%[30].

3. Tepeören-Tuzla-Ömerli

Tepeören, Tuzla, Ömerli- Source: Google Earth

The sub-region is a north-south corridor on the eastern part of the Asian side of Istanbul. Ömerli town is located at the North of Ömerli Lake, which is a major water reserve for the Asian

[30] Prices Appreciated Most in Kadıköy and Ataşehir in the Last 15 Years, Referans Newspaper, 20.06.2007

side. Tepeören is located to the South of Ömerli Lake. The corridor continues with Kurtköy to the South and ends up with Tuzla at the Marmara Sea coast. This corridor is easily accessible through TEM and E-5 Highways. Tepeören and Ömerli are at a 15-20 km distance from the Ümraniye exit of TEM Highway. Other Access is through E-5 Highway via Kurtköy and the region is at a 13 km distance from Pendik on the E-5 Highway. Ömerli region is surrounded with private and public forests[31]. Kurtköy, which is on this axis attracted interest beginning from the late 80s for the expectations of increased industrial and commercial activities. This has led to the construction of Sabiha Gökçen Airport nearby.

Road infrastructure is satisfactory although public transportation has not yet been provided. The Şile Highway also makes Ömerli an easily accessible location.

Because of unlicensed development, small towns have been rendered district municipality status to control the development activities. The 1/50.000 scaled development plan aimed at moving industrial activities away from the central parts of the city. Accordingly, several industrial zones like Gebze Industrial Zone, Dudulu Industrial zone, Tuzla Leather & Industrial Free Zone and Tuzla Tübitak Technological Free Zone have been developed on the Asian side. Gebze's industrial development and according employment will also increase the attractiveness of the Ömerli-Tepeören-Tuzla axis, which is located proximate and has an easy access to Gebze.

Most of Ömerli region is preserved forest and has limited development potential due to limited construction permits. Surrounding small towns are suitable for development and the construction permits are up to 1-2 storey buildings in these spots.

Tepeören's proximity to Gebze and Formula 1 circuit makes this spot popular. Construction permits are up to- 1-3 storey buildings with some exceptions for mass housing projects in Kurtköy.

Because of the ongoing projects in the region, infrastructure developments also accelerated. Sabiha Gökçen International Airport and Formula 1 circuit are the main impetus behind the development of the region. Ömerli and Tepeören's infrastructure is less developed due to their distance from the central urban areas. In these two spots, although electricity and telecommunications are sufficient, natural gas infrastructure is expected to take some time to be available. With proximity to Ömerli Dam, water supply problems can be easily solved. The bus terminal projects in Ümraniye and Kartal will make the region easily accessible.

[31] İstanbul: Real Estate Market Report, Colliers International, 2006

The region is also developing with educational facilities like Has University and Sabancı University. Recreational and social facilities also add value to the social life of the region. Among these facilities stand H2O Water Park, Umut Foundation Hospital, Ömerli Sports Club and Sezer İnanoğlu Horse Riding Sports Club.

Other projects that can increase the development of the regions include Istanbul Bosphorus Tunnel Project, Gebze-Haydarpaşa local-line, Istanbul Chamber of Commerce's Trade University Akfırat Resort Project and Industrial Technological Park.

Most important completed residential projects of the region are Kasaba Evleri and Optimum. Kasaba Evleri, located in Ömerli, is a project developed under the collaboration of Türkiye İş Bankası and Koray İnşaat. The project completed in 2004, consists of 278 units in apartment, villa and townhouse forms. Optimum projects, also located in Ömerli are developed under the collaboration of Türkiye İş Bankası and EMTA. The total Project consists of 59 villas. Planned under two phases, the first phase has been completed in 2003, with the second phase to be finished in 2007. The price range is USD 1400-1500/ m2.

Some ongoing residential development projects are as follows[32]:

- Akfırat Evleri, in Tepeören/Akfırat, constructed by Milpa and D-Yapı, to be completed in 2007, with 143 units in villa form, with a price range of USD 900 – 1000 per square meter
- Arkeon Evleri, in Tepeören, constructed by Yapı Merkezi and Yapı Konut, to be completed in 2006*, with 329 units in villa and townhouse form, with a price range of USD 1000 – 1700 per square meter
- Gizlibahçe Manzara Konakları, in Çamlıbelde/Tuzla, constructed by Dumankaya İnşaat, to be completed in 2007, with 103 units in apartment form, with a price of ~USD 1100 per square meter.

Ömerli ranks behind Çekmeköy in terms of popularity. The construction permits by the local municipality is only for single-family villas making the projects more difficult to sell due to higher price.

Tepeören, Tuzla and Kurtköy are gaining strategic importance due to heavy development activities going on. The region will attract demand furthermore due to road developments and on going social, educational and recreational projects and expected to benefit price appreciation.

[32] İstanbul: Real Estate Market Report, Colliers International, 2006

Ömerli, with a distance from the urban centers and limited development permits will take time to realize its potential. Prospective development plan changes and permits will make more villa projects available in the spot.

Tepeören, with more suburban characteristics like Ömerli but proximate to CBDs of the Asian side offers more potential as compared with Ömerli and Tuzla. Cheaper townhouse or villa residential developments are suitable for this region. Arkeon Evleri and Trend transformed the landscape of the region and Formula 1 circuit also increased the demand significantly.

4. Ataköy-Beylikdüzü-Halkalı

Beylikdüzü, Halkalı and Ataköy- Source: Google Earth

The region is located on the southwestern part of European side of Istanbul. Ataköy is located near the Marmara coast to the south of European side. Beylikdüzü is located to the east of Küçükçekmece Lake. Halkalı is located to the east of Büyükçekmece and Bahçeşehir[33]. Ataköy is the largest and oldest mass-housing project is Istanbul. Halkalı is a fast growing suburban spot with numerous development projects. Due to its proximity to the urban regions, access is rather easy. Halkalı and Beylikdüzü region is located near TEM Highway. Plans for a rail system will facilitate transportation to the region. Ataköy is easily accessible via E-5 or coastal road from

[33] İstanbul: Real Estate Market Report, Colliers International, 2006

Eminönü and Bakırköy.

Development plans and public biddings in Ataköy and Halkalı are controlled and coordinated by TOKİ. Development in Ataköy started in 1950s and currently there is a lack of available land for development. Beylikdüzü Municipality permits multi-storey buildings for residential development.

Infrastructure of the region is fully developed in terms of natural gas, telecommunications, electricity lines and public utility services. Social development is also satisfactory in the region. Ataköy's social life is enhanced by Galleria and Atrium malls. Galleria, the first shopping mall in Istanbul lies within a complex also including Holiday Inn, five-star hotel, and a marina. International Hospital also lies in the region. Istanbul Kültür University is a private university located near both Ataköy and Halkalı. Shopping centers Migros, Beylicium and Paradise stand in Beylikdüzü region.

Numerous projects still developed in this area, some of them are summarized as below:

- Aktel Residence, in Beylikdüzü, developed by Aktel İnşaat, to be completed in 2008, with 104 units in residence form, with a price range of USD 700 – 1000 per m2.
- Ataköy Konakları, in Ataköy, developed by TOKİ, to be completed in 2007, with 952 units in apartment form, with a price range of USD 1700 – 3000 per square meter
- Avrupa Konutları, in Halkalı, developed in cooperation with Özsaya İnşaat and Gün-er İnşaat, to be completed in 2006, with 1368 units in apartment form with a price range of USD 800- 1,300 per square meter.

Ataköy was one of the popular residential spots in Istanbul until 1999 Earthquake. Laying within high-risk zone for earthquake this area has experienced a decrease in residential demand. With increasing commercial activities within the region pumped the need for residential development here. However, sales expectations have underperformed expectations. With the mortgage system and with affordable financing terms the region is expected to regain popularity

5. Rumeli Feneri, Kilyos, Zekeriyaköy

Rumeli Feneri, Kilyos, Zekeriyaköy- Source: Google Earth

The region is located in the northeastern part of the European side of Istanbul, across the Beykoz-Riva region. The three spots lies within the borders of Sarıyer municipality. Zekeriyaköy is an inland spot located to the north of Sarıyer. Rumeli Feneri is located by the coast near the junction of Bosphorus and Black Sea and to the north of Sarıyer. Kilyos is further to the northwest of Sarıyer by the Black Sea coast. Belgrad Forest also lies within this region.

This region is the closest suburban area to Maslak, a northern end of the CBD of the

European side. The region is within a 20-30 minute distance to the city center[34]. Public transportation is provided by buses mainly, with the absence of railway connection. However, public transportation is still somehow insufficient with private means being the major access to the region. Two routes to the region are through Kemerburgaz and Sarıyer respectively. These routes cut through Derbent-Baheköy road which is forest road with pure lighting and highly bended. Therefore, transportation to this region is not sufficiently safe and practical yet.

Development permits in the region are somehow problematic especially in Zekeriyaköy with the all the permits suspended temporarily. However, relevant authorities lit the signal to overcome the permit problems in the recent future. Most part of the region is preserved forest area with restrictions for development. Only villa type developments are permitted in the region. Infrastructure is poor in the region, with Zekeriyaköy being the most developed part of the region relatively. Although electricity and telecommunications infrastructures are satisfactory, natural gas and water supply infrastructures are insufficient, including Zekeriyaköy. As a result, artesian wells are searched and excavated for projects developed in order to insure sustainable water supply. Demirciköy, Bahçeköy and Rumelifeneri also have electricity and telecommunications problems as well. Newly developed projects have to deal with all those infrastructure problems.

For the social infrastructure in the region, there stands Koç Çarşısı as a shopping mall and supermarket chain Migros in Zekeriyaköy. There exists some horse riding clubs and some educational facilities like British International School and Yüzyıl Işık School Group. However, the social infrastructure in the region is still underdeveloped.

Major projects of the region are summarized below:

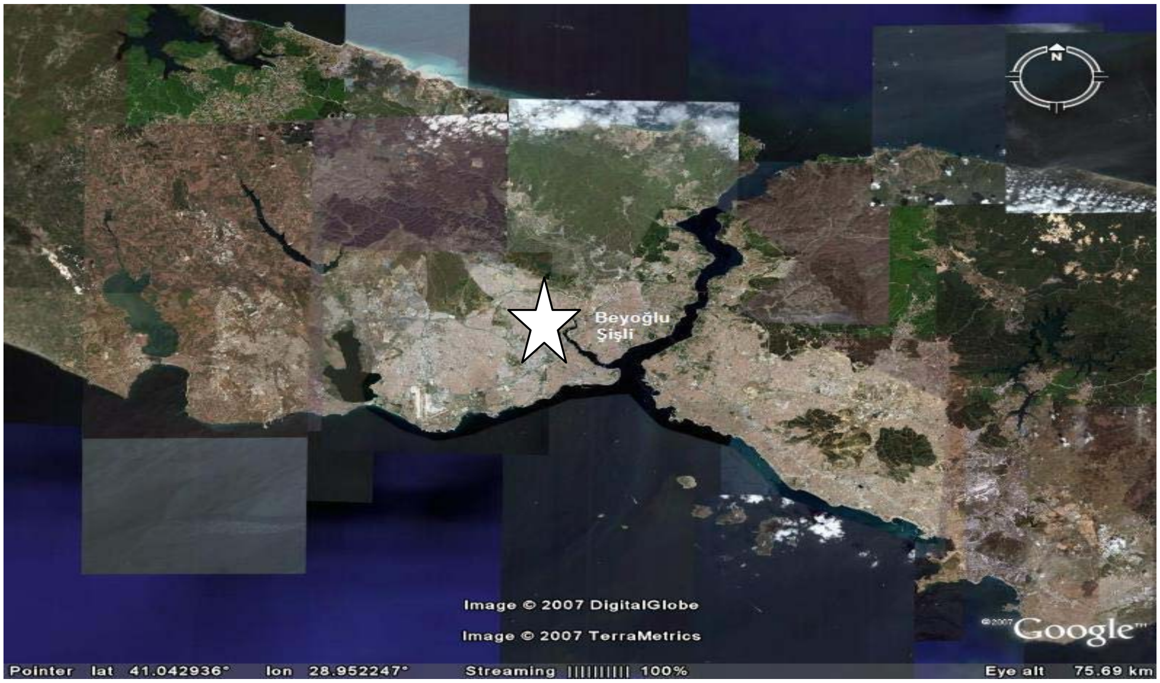
- Istanbul, in Rumelifeneri, developed by Dündar İnşaat, to be completed in 2007*, with 102 units in villa form with a price range of USD 1500 – 1700 per square meter
- Marenegro, in Kilyos, developed by Sinpaş, to be completed in 2006*, with 239 units in villa form, with a price range of USD 1400 – 2000 per square meter
- Sarıyer Evleri, in Zekeriyaköy, developed by Turyapı, to be completed in 2006*, with 460 units in apartment form with a price range of USD 1000 – 1100 per square meter

Increasing demand to this area paved the way to strong sales performance except that of Sarıyer Evleri. The region has some infrastructural problems including utilities and transportation however; this fact does not hamper the sales performance. Planned road construction may increase

[34] İstanbul: Real Estate Market Report, Colliers International, 2006

the attractiveness of Rumelifeneri and Kilyos in the future. Development of the infrastructure in the future will further boost the sales performance of the region. The area is under monitoring by many development companies, which do not have any presence here yet. Land investment made after the infrastructure developments in the region may yield high returns.

6. Beyoğlu - Şişli



Beyoğlu – Şişli- Source: Google Earth

Şişli and Beyoğlu districts are part of the metropolitan urban area of Istanbul. This region is located between Haliç (Golden Horn) and Bosphorus, and lies in the southeastern part of the European side of Istanbul[35].

The region, proximate to the Bosphorus Bridge is easily accessible through both E-5 and TEM Highway as well as two Bosphorus bridges. Distance to Ataturk International Airport is around 20 km. All means of public transportation is utilized in the region including commercial vans, buses, metro as well as easy access to maritime transportation through funicular system between Bosphorus and Taksim. Istanbul Metro starts in Taksim-Beyoğlu and major stations are located in Şişli. Being in the center of the urban part of the city, heavy traffic is one the major problem of this region. However, with the improvement of the public transportation infrastructure this problem is expected to overcome in the future. The utility infrastructure of the region is complete.

With the recent municipal laws, authority is centralized to Istanbul Metropolitan Municipality away from local municipalities, including development planning. However, local urban issues are still addressed and solved by district municipalities. Şişli Municipality is

[35] İstanbul: Real Estate Market Report, Colliers International, 2006

reputable for being highly effective in dealing with urban issues including infrastructure.

In Şişli region, there are around 24,000 buildings, 54,000 offices/retail stores, 112.000 residential units and 2600 land plots[36]. The major problem in urban areas is the lack of available land for development pushing the land prices up, which is quite valid for Şişli and Beyoğlu being one of the oldest parts of the central city.

Another problem is getting construction permits in line with urban planning, social and infrastructural issues. Moreover, density of historical buildings is under extreme legal preservation also makes re-developments quite difficult. Many buildings in the region are built with terraced housing system and more than 30-40 years old especially in the inner parts of the region. Refurbishments are a viable option but multi-owner structure makes any transfer of ownership and permits difficult. Especially Beyoğlu, being a historical site is closely monitored by Anıtlar Kurulu (Architectural Protection Board). However, any project preserving the historical structure is approached sympathetically by the Beyoğlu Municipality.

Beyoğlu and Şişli region is the center of the social life of Istanbul. Retail stores, shopping malls, theatres, movie centers, restaurants, cafes, bars, clubs, concert halls, post offices, stadiums, foreign embassies and government offices are mostly located in this area. Many popular educational institutions like Lycee de Galatasaray, Itailian High School, and Austrian High School also lie within the region.

Furthermore, major hospitals like German Hospital, Florence Nightingale Hospitals, American Hospital, Şişli Etfal Hospital, and Taksim Ilkyardim Hospital all stand within these districts. The region is also the center of five star hotels including Hilton, Ritz Carlton, Hyatt Regency, The Marmara, Divan, Intercontinental as well as numerous smaller boutique hotels. Major shopping malls like Profilo and Cevahir are in this region. Ali Sami Yen Stadium, the home of Galatasaray Sports Club stands in the Mecidiyeköy part of Şişli.

Nişantaşı, home of highest income group as well as the center of high street type shopping and premium quality cafes and restaurants, is also a part of Şişli. İstiklal Caddesi, which is the heart of cultural activities of Istanbul, is in Beyoğlu. Cihangir, with a prominent panoramic view of Istanbul is also a rising star.

[36] 2007 Turkey Real Estate Market Review, Colliers International, 2007

In order to preserve the historical nature of Beyoğlu and to enhance the development 'Enchanting Beyoğlu Project' is started. Istiklal Caddesi, Sıraselviler, Tarlabaşı, Büyük Hendek, İnönü and Meşrutiyet area will be reorganized taking down air conditioners, billboards and other items distorting the visual harmony in the area.

Major development projects of the region are in the form of high-rise premium quality residences, also called as 'condominiums'. There are also numerous ongoing projects mostly in residence form. These are summarized below:

- Elysium Residence, in Bomonti/Şişli, developed by Ofton İnşaat and Mimgut İnşaat, to be completed in 2006*, with 202 units in apartment form with a price range of USD 1400 – 2500 per square meter
- Selenium Twins, in Fulya, developed by Aşçıoğlu İnşaat, to be completed in 2008, with 222 units in apartment form, with a price range of USD 3500 – 3700 per square meter
- Kempinski Residences Astoria, in Esentepe, developed by Astaş, to be completed in 2007, with 113 units in apartment form, with a price range of USD 4600 – 5000 per square meter
- Şişli Plaza, in Şişli, developed by Yapı Konut, to be completed in 2006*, with 183 units in apartment form, with a price range of USD 1700 – 3200 per square meter
- Terrace Fulya, in Fulya, developed by İnanlar İnşaat, to be completed in 2007, with 247 units in residence form with a price range of USD 2800 – 4300 per square meter

Bomonti, an older part of Şişli, has gained attraction recently due to the sales tender of an evacuated former brewery factory and related projects targeting culture, congress center and hotels by the prospective bidders. IC Group[37] and Global Holding[38] were the most aggressive bidders, with IC the winner of the tender. However, the tender was cancelled later by the Ministry of Tourism and Culture due to the realized price being below the expectations[39].

The high land prices due to lack of availability also drives the end-product prices higher. Therefore, an efficient mortgage system enabling a wider household base to benefit from these projects is necessary for further development. Recently the government has initiated an urban transformation project to clear unlicensed settlements in the region that can create vacated land parcels for mass housing projects. These parcels may be a good opportunity for residential

[37] Dünya Regional Appendices, December 2006
[38] Dünya Construction Magazine, October 2006
[39] Allocation of Bomonti Brewery Factory, Anadolu Agency, 22.09.2006

development.

Increased FDI is also translated into more office openings of incoming firms, which can result in the demand for high quality apartments for expatriate employees. The successful sales performance of projects like Selenium Residence, Kempinski Residences Astoria and Elysium Residence show the rising interest for this type of projects in the region. The demand for urban areas shows that there is a community that does not prefer the suburban regions due to inconvenience and choose the central regions of the city instead. Demand for high quality and affordable developments in the region will gain further popularity

6. Bahçeşehir - Hadımköy

Bahçeşehir – Hadımköy- Source: Google Earth

Bahçeşehir, on the European side and at a distance of 30 km to the city center and 25 km from the Ataturk International Airport is easily accessed by TEM. The extension of the light metro system up to Halkalı will also benefit Bahçeşehir being in the route.

Bahçeşehir was planned for a total of 16.000 residential units spread around a land of 4.7 million m2. As of now, there are 12.000 completed residences and another 4.500 under construction. The housing mix of Bahçeşehir consists of townhouses, villas and higher-density apartment buildings[40].

Esenkent is a neighboring spot of Bahçeşehir. Housing type of the area is mainly multi-

[40] 2007 Turkey Real Estate Review , Colliers International, 2007

storey apartment dwellings with a lower construction quality than that of Bahçeşehir. Another new area of development is Ispartakule, east of Bahçeşehir, is under development with large-scale mass housing projects. Some of the projects in this region include

- Eston Şehir with 303 units in villa and apartment format on a land of 600.000 m2, to be completed in December 2007,
- Koza Bahçeşehir Evleri with 262 units in apartment format on a land of 24.000 m2, to be completed in August 2008,
- Uphill Court with 682 units in villa and apartment format on a land of 66.000 m2, to be completed in May 2008.

Price range per square meter of Bahçeşehir region is between USD 1000 – 2300. The payback period of residential properties in Bahçeşehir vis-à-vis respective rental rates is 13 years and 8 months[41].

Bahçeşehir is a distinctive part of the metropolitan area of Istanbul with plenty of land stock for development opportunities and a completed infrastructure. The shopping centers being developed in this area also points at the high residential demand.

Hadımköy, located to the east of Büyükçekmece Lake and west of Bahçeşehir, is a region with accelerated industrial-commercial activity and a popular spot for social housing projects targeting low to mid income group. Two major social housing projects are developed by Kiptaş and TOKİ.

TOKİ project will consist of 638 apartments; the monthly payments for the housing finance of the project will be around 200 YTL, which is quite affordable by the aforementioned households in the specific income groups. Veterans and other socially supported groups will be rendered further loan facilities[42].

KİPTAŞ project will consist of 1012 apartments and all the apartments will be uniform with 75 square meters. The unit price for each apartment is YTL 50.000 and the right to purchase has been granted through a lottery system due to excess demand in November 2006.

The households in the targeted segments demonstrated very active interest in the projects with a demand four times the residential supply in TOKİ project where a lottery system was

[41] Referans Property Index, Referans Newspaper, 05.06.2007
[42] Referans Newspaper, 08.05.2007

developed to spot the households to benefit from the project[43].

Hadımköy is also popular for land investment, with recently prepared development plans and rapidly developed infrastructure[44]. One advantage of Hadımköy regarding the commercial potential is proximity to Ambarlı Port, which is becoming the major handling port of Istanbul. Through the planned metro system which will be extended to west of the European side, Hadımköy's accessibility via public transportation will also be enhanced. Istanbul Chamber of Commerce (ITO) recently announced that, Hadımköy is a possible spot to build a campus for ITO University in recent future, thus enhancing the social life of the region[45].

TURKISH REAL ESTATE MARKET FORECAST

With stabilized economy and EU accession themes, Turkey offers unique investment potentials in the real estate industry as well as other industries. To derive a forecast for real estate markets of Turkey, the cases of countries recently accessed to EU can be investigated. With similar economic and demographic structures, the development of FDI and economic activities can give an insight about the recent future of Turkey's markets.

FDI AND REAL ESTATE INVESTMENTS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

Last 15 years' period was an era of dramatic change and transformation for Central and Eastern European Countries (CEEC). The main ingredients of the transition process are liberalization, macroeconomic stabilization, restructuring and privatization and legal and institutional reforms[46]. The best examples are new EU members, such as Poland, Hungary and Slovakia. In addition, Romania had FDI totaling $900 million in 2001, $2.3 billion in 2003 and $ 3.7 billion in 2004[47].

In the early stages of the transition period, most external liabilities in CEECs were in the form of external debt—total equity liabilities (including FDI and portfolio equity) exceeded 10 percent of GDP at the end of 1994 only in Hungary (17 percent), Czech Republic and Estonia (both around 13 percent). For the region as a whole, the share of equity in total liabilities was

[43] Vatan Newspaper, 25.05.2007
[44] Para Magazine, December 2006
[45] ITO Newspaper, October 2006
[46] Transition Economies: An IMF Perspective on Progress and Prospects, 2000
[47] Land Statistics fir Turkey and Istanbul 2005, National Real Estate Administration

around 10 percent.

During the past decade, this share has increased very rapidly, fueled by large inflows of foreign direct investment, and now stands at close to 50 percent of total external liabilities, in line with the average in other emerging markets and developing countries, and well above the average in the EU-15 group.

According to European Bank for Reconstruction and Development, for six selected transforming/developing countries of the 'new' Europe, namely Czech Republic, Hungary, Poland, Slovenia, Bulgaria and Romania, total share of FDI in overall World FDI jumped to 3.8% in 2005, from 0.5 in 1990[48].

Apart from the economic climate as a driving force for the promotion of these countries, enhanced legal framework, which enabled foreign ownership in assets, made investments more feasible. The general regimes were progressively complemented with laws regulating specific activities (banking, insurance, securities exchange, intellectual property rights, free economic zones and industrial parks, etc.) that brought them further in line with FDI norms in advanced market economies[49].

A significant portion of FDI to CEE countries were real estate investments in this period. Supra-governmental agencies also focus on the real estate investment potential of this region by pioneering or contributing to institutional type investment instruments like SICAV funds with an objective to realize property investments in different segments. For example, Accession Fund with an initial size of 300 million Euro was established in 2003 by anchor investor Assicurazioni Generali Group Generali and contributor EBRD, focusing on retail segment in EU accession countries like Hungary, Poland, Czech Republic, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Romania and Bulgaria.

Being a major input into production activities and into consumption by households of residential needs, land and real estate assets account for 45-75% of the wealth of developing countries[50]. Examined country wise, real estate investments play a major role in overall FDI activity in the respective countries. In Bosnia and Herzegovina, real estate investment make %19 of FDI stock accumulated in the period 1994-1999, and ranks second well above finance, food

[48] UNCTAD statistics
[49] World Investment Directory Volume VIII – Central and Eastern Europe, UNCTAD, 2003
[50] Reforming Land and Real Estate, A. Galal, O. Razzaz, Policy Research Working Paper, the World Bank, 2001

and chemical industries[51]. In Poland, together with construction, real estates servicing and rental activities comprised 6% of FDI inflows in 1998[52].

COMPARISONS TO TURKISH REAL ESTATE MARKET

The potential of Turkey and Istanbul can be better analyzed by comparing its real estate market to Spain and Romania. These countries share similar characteristics with Turkey and provide the best comparison in Europe.

According to Business week, property experts compare Turkey to the Spanish property market in the late 1970s. Also, London-based Global Property Guide (GPG), a consultancy group, has reported that Turkey, Romania, Slovakia, Bulgaria and Hungary as the most attractive property markets in Europe, due to their economic growth and investment potential. Another international study prepared by Cushman, Wakefield Healey & Baker in 2005 ranked Turkey (13th) and Romania (9th). In 2004, the ranking was Turkey (13th) and Romania (12th).

This study will compare Spain and Romania to Turkey. Spain will provide how being a part of EU and receiving solid FDI in the past 2 decades have improved their real estate value. Romania will provide how a developing country can change their real estate sector with growing economy, stable political environment and EU accession.

The table below provides a comparison of country data:

	Turkey	Spain	Romania
Population	71,158,647	40,448,191	22,276,056
Land size (sq km)	780,580	504,782	237,500
Literacy	87%	97%	97%
GDP (billion)	$635.6	$1.109	$202.2
GDP real growth rate	5.30%	3.90%	7.70%
GDP per capital	$9,000	$27,400	$9,101

CIA World Factbook, 2006 Data, Country Information – Source: World Factbook

[51] Progress in Policy Reform in South East Europe Monitoring Instruments, South East Europe Compact for Reform, Investment, Integrity and Growth in Co-operation with OECD , 2002

[52] Foreign Direct Investment Impact on the Polish Economy, E.Sadowska-Cieslak, Case Foundation Center for Social and Economic Studies, 2000

CASE OF SPAIN

As one of the fastest growing economies of EU, Spain experienced a housing boom during 1990s, which was an important factor for their economic development. The Spain housing boom experience has to be investigated in depth to deduce lessons for Turkey market.

The housing market in Spain is traditionally quite different from other housing markets in Europe, because of the high ownership rate compared to the share of rented dwellings. Spain ranks the second in terms of owner occupation in share in housing stock by tenure with 78%, right after Ireland with 81% of owner occupation share[53].

Country	Owner occupied	Social rented	Private rented	Other
Belgium	65	6	28	1
Denmark	52	24[1)]	18	6
France	54	17	20	9
Germany	38	15	43	4
Greece	77	0	23	-
Ireland	81	11	8	-
Italy	67	7	21	5
Luxembourg	68	1	30	1
Netherlands	45	40	15	-
Portugal	58	4	35	3
Spain	78	2	16	4
UK	67	26	7	-
Austria	50	18	21	11
Finland	71	14	13	2
Sweden	43	36[2)]	21	-

Notes: 1) Includes 7 % of the stock managed by cooperatives.
2) Includes 15 % of the stock managed by cooperatives.

Housing stock by tenure, European Union, about 1990 (estimated percentage of stock in given tenure groups)- Source: Social Housing in Europe 2000, International Workshop Prague, Ministry for Regional Development of the Czech Republic

In recent years, Spain has gone through key demographic and socioeconomic changes, mainly attributable to EU integration after accession in 1986. These changes include higher income levels, increase in educational levels, more households living on at least two incomes,

[53] Social Housing in Europe 2000, International Workshop Prague, October 6th – 7th 2000 by Ministry for Regional Development of the Czech Republic

declining birth rates, higher standards of living, higher life expectancy, increased presence of multinational corporations and increased tourism. These changes have affected the overall housing demand in a positive way and affected specific demands for primary & secondary dwellings. For instance, increases in income and wealth fostered by EU accession enabled households to overcome the down payment constraint to purchasing homes[54].

The real estate prices in Spain increased by 75% in real terms between 1997 and 2003, from €684 per square meter in 1997 to €1.428 in 2003. This growth in real estate value has outpaced the drop in interest rates and the increase in personal income to the extent that between 1997 and 2003. The ratio of annual mortgage repayments to the annual per capita income has increased by approximately 20%. Within the same time horizon, mortgage interest rates have fallen while personal income levels have moved upward.[55].

According to the Economist, Spain is the real estate price appreciation champion across Europe between 1980-2001, with a real increase of 124% in the period, followed by Ireland with 95% in real terms and Britain with 89% in real terms where the global real price increase was 19% for the same period[56].

	% change 1980-2001	
	Nominal	Real
Spain	726	124
Ireland	451	95
Britain	389	89
Netherlands	181	66
Belgium	140	23
US	158	20
France	155	15
Japan	52	15
Canada	152	13
Italy	343	13
Australia	213	10
Sweden	183	6
Germany	33	-21
Global Index	148	19

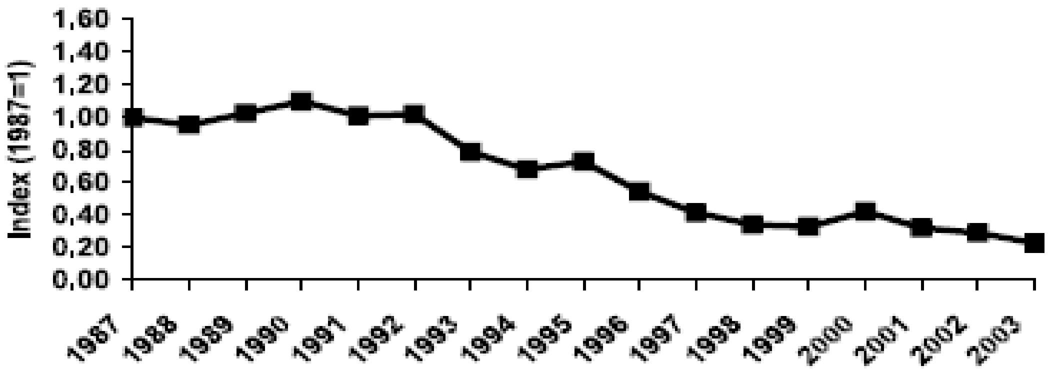
House Price Indices- Source: The Economist, 28.03.2002

[54] The Demand for Housing in Spain: An Endogenous Switching Regresssion Analysis, J. Manrique and K. Ojah, Applied Economics, 2003, Issue: 35, pg: 323-336

[55] A Cross-Section Analysis of the Income Elasticity of Housing Demand in Spain: Is There a Real Estate Bubble?, D. Fernandez-Kranz, M. T. Hon, The Journal of Real Estate Finance and Economics, Volume 32, Number 4, June 2006 , pp. 449-470

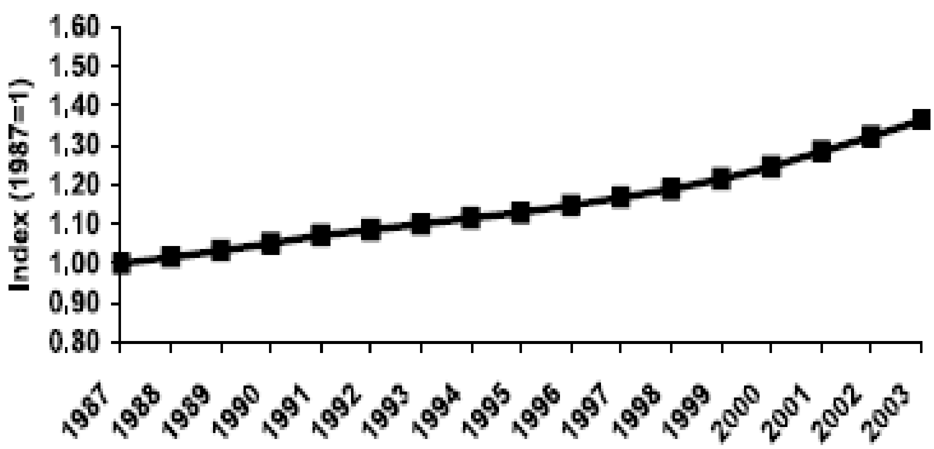
[56] The Economist, 28.03.2002

The real estate market of Spain demonstrated three consecutive trends since 1987: The real estate prices (measured as the average price per square meter) increased 60% in real terms between 1987 and 1991, decreased 17% in real terms between 1991 and 1997 and increased 75% in real terms between 1997 and 2003.



Mortgage Interest Rates in Spain (Indexed to 1987 level) - Source: Fernandez-Kranz and Hon (2006)

The stock of houses enjoyed an uninterrupted increase over the entire period. The per capita growth is however stronger during the first and the second housing booms (7% and 8% respectively) compared to the period of "soft landing'' of real estate prices where accumulated growth was only 4%[57].



Stock of Houses in Spain (Indexed to 1987 level)- Source: Fernandez-Kranz and Hon (2006)

[57] The Spanish Economy Monthly Report, la Caixa, April 2006

The reasons for the increasing prices in Spanish real estate market are cited as follows[58]:

Very low real interest rates: Real interest rates in Spain are extremely low by historical standards and have even been negative recently. This makes the cost of buying Spanish property with a mortgage cheaper than it has been in the past.

Structural changes in the Spanish mortgage market: Deregulation, innovation, and competition in the Spanish mortgage market mean that lenders are prepared to lend more money, for longer periods, to more people than ever before.

Real incomes have been rising steadily in Spain: Spain's entry into the EU, labor market deregulation and general improvements in its economy have made Spain much richer than it was 20 years ago.

Changing demographics and lifestyles in Spain: Including a greater number of divorces and children leaving home earlier, mean that more people need a home than before.

Property as a good investment: Spanish property has proven itself to be an excellent investment over the long term. People believe that property is less risky than shares because even in the worst scenario of drastic price collapse you still have a tangible asset.

Foreigners buying in Spain: Due to its climate, appealing culture and surroundings Spain is becoming the California of Europe. Large numbers of wealthy Northern Europeans are buying real estate in Spain, especially in coastal areas. In January 2005, foreigners living in Spain numbered close to 3,700,000, twice that in 2002. They are expected to continue to do so in increasing numbers as the baby boomers retire. Another aspect of special importance is the increase in the number of foreigners who reside temporarily in their own homes when holidaying in Spain. Some estimates put this number today at around two million persons, a figure well above that some years ago. As a result, tourist regions like Murcia, Andalusia, Valencia Community and Canary Islands attract biggest growth in housing[59].

An analysis of the recent developments in the real estate market of Spain shows that foreign interest in especially Madrid and Barcelona continues accompanied by large corporate deals by real estate companies. Some of Madrid's greatest assets include ease of access to markets, reasonable labor costs, efficient public transportation, a reasonable quality-price ratio for office space, and greater availability of this space. The popular coastal locations for real estate

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[58] Asset Pricing and the Spanish Housing Market, L. G. Garcia, C. I. Giannikos, H. Guirguis, S. Roulac, European Real Estate Society Conference, Weimar, 2006
[59] The Spanish Economy Monthly Report, la Caixa, April 2006

investments include Costa del Sol region cities like Malaga, Marbella, Estepona, Torremolinos or Granada, all well known for tourist attractions as well as residential demand [60].

A cross analysis of the Spanish and Turkish real estate markets reveals some similarities which can shed light on the prospects of Turkish market. Major similarities are the EU accession and integration, fast economic growth accompanied by stabilization and convergence, lower interest rates decreasing the cost of financing and facilitating affordability, introduction of the mortgage system and strong demand from northern European countries and permanent housing for the retirement period or vacation housing, both in the coastal areas. Furthermore, the similarity in the home ownership culture and its preference over rental usage draws attention to the residential market of Turkey especially after the introduction of the mortgage system, which can enable more households to afford home ownership.

CASE OF ROMANIA

Recently accessed to EU, Romania offers wide opportunities in the real estate market. With its similar characteristics to Turkey, in terms of size, phase of growth and stabilization, EU accession and risk structure, Romanian real estate market can also be a good proxy for expectations in Turkish real estate market.

Romania, on 1 January 2007, officially joined the EU as a result of acknowledged structural reforms and progress undertaken in the last decade. Investment activity is expected to gain further ground sustained by new large infrastructure projects and continued high FDI inflow. Foreign investors are attracted by the potential offered by the Romanian market. Since 2004 Romania has become one of the most important beneficiaries of FDI in the region, reaching a record FDI level of 9.3% of GDP in 2006, due to huge inflows connected to some very large privatizations in the oil, banking and energy sectors. The improved business prospects based on EU membership and the appealing tax system create the prerequisites for a sustained inflow of FDI, expected to be around EURO 5.7 billion on average over the 2007-2009 period[61].

EU membership was achieved subject to the implementation of reforms concentrated on fighting corruption and enhancing the legal system. These reform measures should also have a positive effect on the transparency of the real estate market in the future. In the annual real estate

[60] Spain: Leading the Way in Europe, Europe Real Estate Yearbook, 2007, Europe RE
[61] Real Estate Country Facts – Romania: Real Estate Markets Catch Up, Bank Austria Creditanstalt Real Estate Research - Unicredit Group New Europe Research Network, May 2007

transparency index published by Jones Lang LaSalle, Romania has remained in the category of low transparency. Despite the lack of transparency, international interest in the Romanian real estate market is high and foreign capital contributes significantly to market development, although the market is still underperforming its potential.

The real estate sector remains constrained by a lack of attractive properties. Risk averse property developers looking for guaranteed returns and a quick exit, coupled with a complicated land-ownership structure and ongoing restitution, are slowing down new development.
Property market bulls forecast enormous growth in the next few years, especially for Bucharest, which has already attracted two landmark projects – Baneasa and Esplanada – each worth more than €1 billion[62]. Romanian real estate market already shows an annual return in terms of capital appreciation of over 25 to 35 per cent, depending on the type of property[63].

Over the last years, real estate has become a well-established investment category. Prices for land have gone up drastically during the last few years and are now around EURO 2,500/m2 in central locations. North of the city, prices are between EURO 1,000/m2 and 1,700/m2 (depending on zoning and development requirements), approximately three times what they were in 2002[64].

In residential segment, prices have continued their bumpy ride upwards with a large gap between asking and transaction prices recorded in residential sales and rentals. Prices averagely climbed by 300%. One possible explanation is the increase in mortgage credit popularity. Cheap and less bureaucratic credits have allowed more and more Romanians to have access to the residential market consequently increasing the demand. The inelastic supply and other market imperfections have determined a rapid increase in prices[65]. Another important price driver is the arrival of large international funds from saturated East European capitals, like Prague, Budapest and Warsaw. They hope that burgeoning demand, higher economic development and more accessible mortgage finance will help to bring attractive profits[66].

According to data provided by the Romania National Institute of Statistics, some 30,000 houses and apartments were completed as of 2004, with a total construction value of EURO 3.2 billion. State-financed housing development accounted for 17% of all residential development,

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[62] Emerging Romania 2006, Oxford Business Group, 2006
[63] Cyprus and the Romanian Property Market, A. Loizou, Cyprus Mail, 2007
[64] Real Estate Country Facts – Romania: Real Estate Markets Catch Up, Bank Austria Creditanstalt Real Estate Research - Unicredit Group New Europe Research Network, May 2007
[65] House Prices Between Rationality and Irrationality, B. Gogoneață, 2007
[66] Emerging Romania 2006, Oxford Business Group

adding some 5000 new properties to the total stock.

According to Bogdan Georgescu, managing partner in Colliers International, as of 2005 the real estate markets prospects were to double in two years. By 2007, its value was expected to be equivalent to half of the Polish market or two-thirds of the Czech and Hungarian real estate markets[67].

The challenge for property developers is to find plots of land at the right price. There are, according to industry insiders, a significant number of "blockers" who are pricing out valuable plots of land in anticipation of higher prices in the near future. Land prices in some parts of Bucharest are as high as EURO 20/m2, the same as in Munich, and that the average prices for the city as a whole is 60-70% of the EU average. However, "there are signs of a new phase in property development, with smarter and more quality focused developers driving out the speculators looking for unreasonably high returns[68].

Among the new challenges facing the real estate market is currency appreciation and the redenomination of the leu. Whereas the last currency-linked property price hike was due to a switch from the dollar to the euro as the reference currency, the current pressure comes from the strengthening leu. With nearly all rental and sale prices still quoted in euros, owners were beginning to fear that an appreciating local currency would wipe out their local purchasing power. Redenomination, which came into force in 2005, provides a fresh opportunity to switch to local currency in order to eliminate the exchange-rate risk[69].

Lack of affordable capital used to be held responsible for the slow pace of property development. Now, with a sharp decrease in interest rates and stable economic situation, the banks are willing to lend more, with fewer eligibility barriers, lower interest rates and longer repayment periods. There are now 30-year mortgage loans available on the market, with interest rates as low as 8.75% and all the major banks consider mortgage finance as one of the most promising business loans. Meanwhile, construction firms and developers, too, can obtain working capital at much more affordable rates and use the construction site as collateral[70].

Thanks to 2 million economically active citizens and a healthy flow of foreign investment,

[67] Emerging Romania 2006, Oxford Business Group
[68] Real Estate Country Facts – Romania: Real Estate Markets Catch Up, Bank Austria Creditanstalt Real Estate Research - Unicredit Group New Europe Research Network, May 2007
[69] Real Estate Country Facts – Romania: Real Estate Markets Catch Up, Bank Austria Creditanstalt Real Estate Research - Unicredit Group New Europe Research Network, May 2007
[70] Emerging Romania 2006, Oxford Business Group

Bucharest has naturally enjoyed a comparatively mature and liquid real estate market. With these developments mainly addressing the luxury end of the residential market, fresh demand from the office, retail and industrial segments has also driven construction to new areas in the capital, which offer lower prices and more scale. The biggest multi-user projects, Baneasa and Esplanada, will be located in the premium northern and downtown areas.

Recent analysis reveals that the real estate market in Romania is following the trend of 2006, a record year for the number and value of transactions. Things are moving full speed ahead and it is estimated that up to 2008 development in Bucharest will experience as much change as occurred in the other ex-communist countries over a period of more than 10 years. The residential sector aims to become the star business of the 2007-2008 periods. Residential sector investor will see that the sector is undergoing a real explosion with the completion of thousands of units. Up until 2005, only a few hundred new houses were sold in Bucharest each year. However, in 2006, projects involving a total number of 10,000 units were launched, 3,000 units of which were sold before completion. More land has been purchased by various developers who are preparing projects totaling over 20,000 units annually[71].

Demand will continue to grow and could reach 10,000 units per year in 2010 due to several factors such as the continued rise in real salaries in Romania that are expected to double by 2010; recent EU accession and increased foreign investment and more flexible range of mortgage products from the banking sector. The apartment prices are forecasted to increase at a rate around 15% per year for several years[72].

FUTURE OF TURKISH RESIDENTIAL REAL ESTATE

Future of residential real estate will be depending on several factors. Stable economy, increasing per capita GDP, improving legal transparency and potential accession to European Union are all important factors are all important factors will effect the future of Turkish residential RE market. However, the mortgage market and foreign investment are the two factors that will have the biggest impact on this segment.

[71] Romania: 2007, The Year of Retail and Residency, Europe Real Estate Yearbook 2007, Europe RE
[72] Real Estate Review: Romania 2007, Colliers International

DEVELOPMENT & POTENTIAL OF MORTGAGE MARKET

Amount of residential loans increased steadily and exponentially since 1999. The CAGR of loan amount has been 95% between 1999-2006, reaching USD 15 billion by the end of 2006, majority of the growth coming after 2004. In addition, number of people drawing loans increased to 491,455 from 42,000 in 2003, implying a ten-fold increase in just 3 years. Average loan size also reached USD 31,000 from a mere USD 8,000 in 2004[73].

	Loan Amount (USD million)	# of users	Average Loan Size
1999	140	17,070	8
2000	910	81,610	11
2001	287	43,600	7
2002	203	29,346	7
2003	534	42,004	13
2004	1,707	218,789	8
2005	9,195	315,780	29
2006	15,394	491,455	31

Residential Loans- Source: TBB

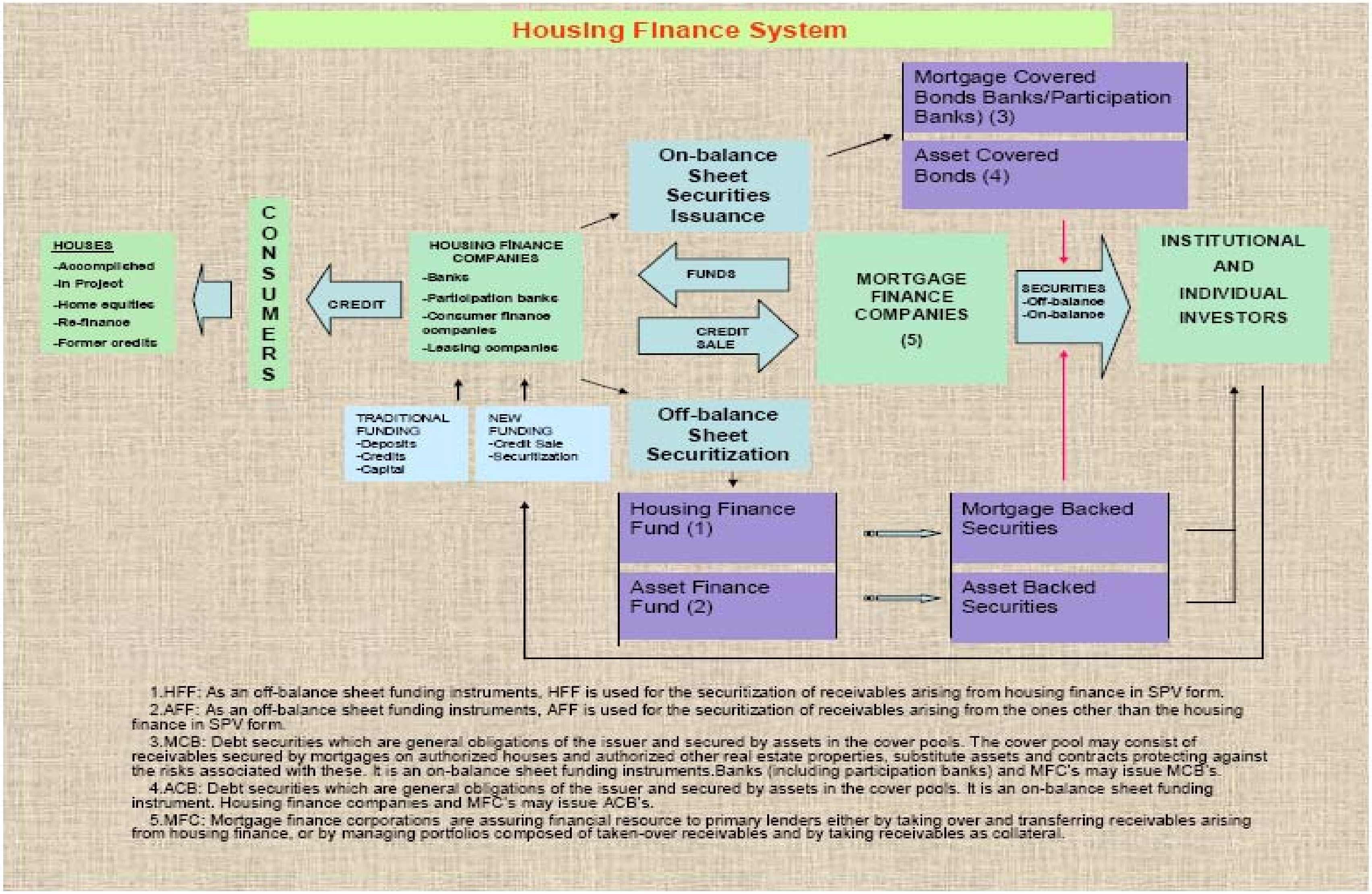
This extensive growth in the demand and supply of residential loans has been attained even in the absence of a mortgage system. With this structure, rendered through the conventional deposit-loan mechanism of commercial banks, the growth cannot be sustainable due to shortcomings of funding and the related duration mismatch risks in bank balance sheets.

A sustainable residential loan system requires a mortgage mechanism, which consists of two complimentary loan markets: primary and secondary. The primary market is conventional residential loan system whereas secondary market is the place where loans extended by commercial banks and other ‘hosing finance institutions’ are transferred to ‘mortgage finance institutions’ to issue mortgage back securities in which residential loans are used as collaterals. The so-called securitizations can also be done at the bank level as well[74].

[73] Turkish Bank Associations, 2007

[74] Housing Finance Sysyem, İbrahim Dönmez, CMB

The legal framework for mortgage system in Turkey is consists of housing finance, housing finance institutions, primary market mortgage loans & their extensions, mortgage backed capital markets instruments, mortgage finance institutions, preservations of the rights of users of housing finance, acceleration of the liquidation of mortgage loans, regulation of real estate appraisal firms and experts, various tax regulations topic headlines.



Recently Introduced 'Housing Finance System' in Turkey- Source: CMB

Main features of Turkish mortgage system will include the following:

- Mortgage loans will be extended mainly by banks in the primary market
- Mortgage backed securities will be the main source of refinancing of mortgage loans in the secondary market
- Funds from abroad will be the major sources for the secondary market

Demand for domestic issues of mortgage-backed securities in the secondary market will come from institutional investors mainly. An examination of European mortgage markets reveals that total amount of loans extended for 2005 only is EURO 525 billion and total stock of loan has reached EURO 5.2 trillion and 49% of GDP. Parallel with this progress, mortgage back security issues are also expanding. 2005 issues amount to € 280 billion in EU and total mortgage back security stock has reached € 870 billion[75].

A study for the forecast of mortgage market in Turkey executed by GYODER reveals that residential loans will reach 15% of GNP and amount to USD 88 billion. According to the same study, a total of USD 77.5 billion residential loans will be extended between 2007-2015, most of them raised via commercial banks. The secondary markets are expected to raise USD 27,5 billion of funds until 2015, of which USD 19 billion coming from issuing mortgage backed securities, USD 4 billion sales of loan portfolio to funds and USD 4,5 billion from sales of loan portfolio to mortgage financing institutions[76].

Demand for mortgage system is dependent on household income saving patterns. According to forecasts, lowest, lower and middle-income group households, which are expected to reach 12 million by 2015, will not still afford using the housing finance system despite improvement in household incomes. Higher income group households, which are forecasted to reach 4 million by 2015, will not experience a major shift in their saving capacities so their ability to benefit from the system will be limited[77].

Highest income group households, which are expected to reach 4 million by 201, will have an income and savings structure that can enable them to benefit from the system. Unfortunately

[75] Emerging Trends in Real Estate - Europe, ULI and PWC, 2007
[76] Development Potential of Housing Finance System According to Residential Demand and Supply in Turkey – 2015, GYODER, 2006
[77] Development Potential of Housing Finance System According to Residential Demand and Supply in Turkey – 2015, GYODER, 2006

current house ownership level of these households, which will be able to save 902 YTL in constant prices by 2015, is also high putting a limit on their demand from the system.

Putting together the demand and supply of residential loans, the maturity and interest terms of these loans will be the final determinant to have an idea of the future of the housing system. Using household income, consumption and savings pattern assumptions, the possible size, maturity and interest rate combinations to be offered in the system as follows[78]:

- YTL 100.000 size loans for 240 months with 1.1% monthly interest, for 180 and 240 months with 0.8% monthly interest, for 120, 180 and 240 months with 0.6% monthly interest
- YTL 75.000 size loans for 180 and 240 months with 1.35% monthly interest, for 120, 180 and 240 months with 1.1%, 0.8% and 0.6% monthly interest.
- YTL 50.000 size loans for all maturities with all aforementioned interest rates months with 1.1%, 0.8% and 0.6% monthly interest

Between 2007-2015, 2.2 million loans of YTL 50.000 size, 1.5 million loans of YTL 75.000 size, 1.1 million loans of YTL 100.000 size and 725.000 loans of YTL 150.000 size can be extended on a mutually exclusive basis. Majority of the loans will be in YTL 75.000 and YTL 100.000.

The new system, with its funding capabilities is the major determinant of the future of housing finance market. However due to saving patterns of households, the capacity of the system will not be sufficient for the aggregate housing demand. Aforementioned numbers on extendible loans (between 725.000 and 2.2 million) can only satisfy 12% - 30% of total housing demand that is estimated as 6.5 million up to 2015. Total number of households, which are able to afford using the system, is far below total number of households that are expected to be introduced to the system, revealing a mismatch between demand and capability. Therefore, despite introduction of the fully operational mortgage system, traditional housing financing methods like ownership through savings and development on land will continue to be in effect.

Ability of lower and middle-income groups to use the system is very limited. So social housing projects and related policies have to be developed to satisfy the housing demand of these segments. Parallel with the average size of loans to be extended which are in line with the saving

[78] Development Potential of Housing Finance System According to Residential Demand and Supply in Turkey – 2015, GYODER, 2006

patterns of households, the demand of houses will be towards B type qualified houses with a maximum value of USD 100.000-150.000[79].

FOREIGN RESIDENTIAL REAL ESTATE OWNERSHIP IN TURKEY

Real estate market has come into attraction for foreign investors in Turkey. Real estate investment inflows have tripled from USD 998 million in 2003 to USD 2.9 billion in 2006[80]. Total revenue from property sales to foreigners has exceeded USD 7 billion by February 2007. 30,000 units of property have been sold since the enacting of the new law enabling foreigners to own property[81].

According to Reuters, between 2003- 2005, 15842 parcels of property (2931 among these being un-built land lots) have been acquired by non-Turkish legal or private persons in Turkey. The purchasers constituted a total of 18959 legal or private owners or co-owners from a total of 58 different countries. In the forefront came British nationals (8625 persons acquiring 6333 parcels), who were followed by Germans (3482 persons for 3210 parcels), with Dutch nationals, Danes, Norwegians, Greeks, Irish nationals, Swedes and Belgians respectively occupying the next places.

According to title deeds, foreigners prefer tourist sites for real estate purchases. Antalya ranks first with 14,600 properties in the top ten list for foreign real estate purchases. Foreigners purchased 10,600 properties in Istanbul, 8,200 properties in Muğla, 5,800 properties in Aydın, 4,500 properties in Izmir, 4,300 properties in Bursa, 3,800 properties in Hatay, 1,700 properties in Mersin, 1,034 properties in Ankara and 1,013 properties in Gaziantep[82].

In 2005, according to the Central Bank, foreigners invested $1.8 billion in real estate in Turkey. However, this figure includes six months when foreign purchases were impossible because of a gap in the law. And it does not allow for the traditional under-reporting of house purchase prices. IBS, research & consultant firm, reported that the real figure may have been $3-4 billion. This is equivalent to around $10 million each day, which translates into 80-100 houses or apartments every working day.

[79] Development Potential of Housing Finance System According to Residential Demand and Supply in Turkey – 2015, GYODER, 2006
[80] Undersecretariat of Treasury, Republic of Turkey
[81] Vatan Newspaper, 21.02.2007
[82] Vatan Newspaper, 21.02.2007

RESIDENTIAL REAL ESTATE MARKET FORECAST

The forecast study was based on a Real Estate Index prepared by Bileşim Araştırma Firm for Referans Newspapaper. The above mentioned index was prepared for Istanbul, which is the only city in Turkey that can allow such a study due to avaliability of data. The last index prepared was calculated between April 2006 and May 2007.

The study divided the residential real estate into 7 categories based on YTL/m2:

a. 0-49 m2
b. 50-99 m2
c. 100-149 m2
d. 150-199 m2
e. 200-249 m2
f. 250-499 m2
g. 500+

The index is the average of the YTL value per squared meter. The study done for this paper did an analysis for categories between "b" and "g", with weights given according to several real estate broker inputs. The study founded that the limited time frame (April 2006- May 2007) did provide adequate date to do a projection until year 2013.

	Regression Output:		
Constant			7,60562986965356
Std Err of Y Est			0,0457464378651396
R Squared			0,0251356531215372
No. of Observations			14
Degrees of Freedom			12
X Coefficient(s)		0,00168705871819341	
Std Err of Coef.		0,00303295929716139	

The highest regression (R2) founded was 0.025, which quite low and meaningless.

After this, another study was based on Referans Newspaper research which was focused on cement, the main component of real estate. The cement prices were analized from 1991 to 2007 in three month periods. This study's regression was 0.087, which was a relatively high number.

	Regression Output:		
Constant			-12430,7217261905
Std Err of Y Est			6224,74744851631
R Squared			0,871386335499943
No. of Observations			64
Degrees of Freedom			62
X Coefficient(s)		863,282783882784	
Std Err of Coef.		42,1206843626951	

Finally, to be relevant another cement price analysis was done between 1999 and 2007. The eight year (32 period) data set provided a more relevant study with a regression(R2)= 0.099

	Regression Output:		
Constant			-42309,0203445751
Std Err of Y Est			1473,90385722397
R Squared			0,989249203005423
No. of Observations			32
Degrees of Freedom			30
X Coefficient(s)		1482,65505865103	
Std Err of Coef.		28,2193478137538	

To create a forecast model until year 2013, using Referans Newspaper data, the following projection guidelines was assumed:

a. The Residential Real Estate Price Index for Istanbul was converted into 3 month period values to be comprable with Cement Price Index
b. Secondly, the cross calculation between Residential RE Price Index and Cement Price Index was done in a 3 month basis
c. The trend analysis for Residential RE price until year 2013 was calculated is using Cement Price Index.
d. Finally, the 3-month Residential RE Price Index was converted into yearly basis (exchange rate ($/YTL)= 1.3).

Year	**Annual Index**	**3-Month Index**	**Annual Index**	**3-Month Index**	**Annual Change**
	(YTL/m2)	**(YTL/m2)**	**($/m2)**	**($/m2)**	
2006	1947	1745	1498	1342	
		2056		1582	
		2038		1568	
		1948		1498	
2007	2135	2080	1642	1600	10%
		2075		1596	
		2218		1706	
		2166		1666	
2008	2393	2305	1841	1773	12%
		2434		1872	
		2448		1883	
		2385		1835	
2009	2621	2533	2016	1948	10%
		2669		2053	
		2679		2061	
		2605		2004	

2010	2850	2761	2192	2124	9%
		2904		2234	
		2910		2238	
		2824		2172	
2011	3078	2988	2368	2298	8%
		3138		2414	
		3140		2415	
		3044		2342	
2012	3306	3216	2543	2474	7%
		3373		2595	
		3371		2593	
		3263		2510	
2013	3534	3444	2718	2649	7%
		3608		2775	
		3602		2771	
		3483		2679	

**The study above does not consider the possibility of Turkey enterance ot European Union and the impact it would have into Turkish RE market.*

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LIST OF ABBREVIATIONS

CAGR	:	Compounded annual growth rate
CBD	:	Central business district
CEE	:	Central and Eastern Europe
CBRT, TCMB	:	Central Bank of Republic of Turkey
CMB, SPK	:	Capital Markets Board
CPI	:	Consumer price index
EBRD	:	European Bank for Reconstruction and Development
EU	:	European Union
FDI	:	Foreign Direct Investment
FX	:	Foreign Exchange
GDP	:	Gross Domestic Product
GNP	:	Gross National Product
GSM	:	Global System for Mobile Communications
GYODER	:	Association of Real Estate Investment Trusts, Turkey
IMF	:	International Monetary Fund
IPO	:	Initial Public Offering
ITO	:	Istanbul Chamber of Commerce
PSBR	:	Public Sector Borrowing Requirement
PWC	:	PriceWaterhouseCoopers
REIT	:	Real Estate Investment Trust
SEE	:	State Economic Enterprise
SIS	:	Statistical Institute of Turkey (Türkiye İstatistik Kurumu)
SPO	:	Secondary Public Offering
TBB	:	Turkish Banks' Association
TEM	:	Trans European Motorway
TIM	:	Telecom Italia Mobile
TOKİ	:	Mass Housing Administration (Toplu Konut İdaresi)
TÜİK	:	Statistical Institute of Turkey (Türkiye İstatistik Kurumu)
UK	:	United Kingdom
ULI	:	Urban Land Institute
UNCTAD	:	United Nations Conference on Trade and Development
USD	:	United States Dollar
YTL	:	New Turkish Lira
y-o-y	:	Year on year
y-t-d	:	Year to date