

REAL ESTATE RESEARCH REPORT -2-

# THE GROWTH POTENTIAL OF THE HOUSING FINANCE SYSTEM

IN RELATION TO THE HOUSING NEED AND THE  
HOUSING DEMAND IN TURKEY

2015

**GYODER**

The Association of Real Estate Investment Companies



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**THE GROWTH POTENTIAL OF THE HOUSING FINANCE  
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**Dr. Can Fuat Gürlelel**

President, Institute for Strategic Studies

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## INTRODUCTION

The real estate sector in Turkey is entering a new phase of development. The most important factor that will shape up this developmental stage is the new housing finance system that is being established. While the new housing finance system basically aims to make consumers home owners by utilizing long term housing loans that offer adequate conditions, it will also contribute to the healthy development of the demand and supply in the housing sector under market conditions.

The new housing finance system will create an effective financial intermediary mechanism, similar to the international examples, and will shape the housing demand, the housing sector and real estate markets overall at an increasing rate. The housing need and the housing demand will mutually affect one another as a result of the new housing finance system.

Within this framework, in order to portray the development potential of the new housing finance system according to the housing need and housing demand, we have prepared the "Growth Potential of the Housing Finance System in relation to Housing Need and Housing Demand in Turkey 2015" study. The main objective of the study is to anticipate the financing possibilities that will be created by the establishment of the new housing finance system and their effects on housing demand until the year 2015.

The study comprises four chapters. The first chapter consists of predictions for the housing need and the demand for housing in Turkey. The second chapter portrays the housing finance system and its growth potential. The third chapter analyzes the mutual interaction between the housing finance system and the demand for housing and reflects projections until the year 2015. The last chapter depicts the development potential in the housing and construction sector and its effect on economic growth based on anticipations for the development of the housing finance system.

Our study, with its contents, presents a developmental foresight to the real estate sector, to the housing sector and to all parties – primarily banks - involved in the new housing finance system as well as to the related public organizations.

We hope that our study will be beneficial for all the players in the sector and will contribute to the institutionalization of the real estate sector.

**Dr. Can Fuat GÜRLESEL**  
President, Institute for Strategic Studies

## EXECUTIVE SUMMARY

The real estate sector in Turkey is entering a new phase of development. The most important factor that will shape up this new phase of development is the new financing system which is being established. This new housing finance system will lead to the housing need and the housing demand to mutually affect each other. Within this framework, we have prepared "The Development Potential of the Housing Finance System in relation to Housing Need and Housing Demand in Turkey 2015" study in order to display the development potential of the new housing finance system related to the housing need and the housing demand.

The main objective of the study is to anticipate the effects of the establishment of the housing finance system on the demand for housing until the year 2015.

The study comprises four chapters. The first chapter consists of predictions for the housing need and the demand for housing in Turkey. The second chapter portrays the housing finance system and its growth potential. The third chapter analyzes the mutual interaction between the housing finance system and the demand for housing and reflects projections until the year 2015. The last chapter depicts the development potential in the housing and construction sector and its effect on economic growth based on anticipations for the development of the housing finance system.

### The Housing Need and Housing Demand in Turkey

Predictions for the need and the demand for housing in Turkey are made in the first section of the study. Within this framework, the demography and population stipulations, the housing stock in Turkey, and the factors that influence the housing need and demand in Turkey are examined.

The total population of Turkey is predicted to be 81.65 millions in 2015 according to the current demographic process and population trends. The housing need and housing demand predictions are made for urban areas and urban households. Subject to the continuation of urbanization, the ratio of urbanization which was 65 percent in 2005 will increase to 75 percent by 2015. The urban population which was 49.3 millions in 2005 will rise to 61.24 millions in 2015. The number of urban households will increase from 11.52 millions in 2005 to 15.12 millions in 2015, thus an increase of 3.6 million households, as a result of the increase in urban population and the shrinking in the scale of the urban household. In addition to the migration from rural areas to cities that is evaluated within urbanization, migration from one urban residential area to another which will create a housing need is predicted to continue at a decreasing rate, and 1.05 million households are foreseen to migrate during 2006 – 2015.

Another important factor that affects the housing need and housing demand is the housing stock in Turkey. There are still constraints on creating healthy data pertaining to the stock of housing. The 2000 Turkish Statistics Association (TSA) Building Count constitutes a base for healthy data. According to this, there are 13.60 million buildings in urban areas in 2000, of which 62 percent have construction permits while 33 percent have building utilization permits. We estimate the housing stock in urban areas as 15.07 million in 2005, of which 5.2 million consist of low quality buildings below minimum standards and without construction permits.

There are four basic factors that influence the housing need in Turkey. These are; the increase in the number of households, migration between urban areas, the need for renewal and necessities that emanate from urban regeneration.

Subject to these factors, we foresee the housing need for 2006 – 2015 as 6.96 million. Of this need, 3.60 million emanates from the increase in the number of households, 1.05 million from migration between urban



areas, 805 millions from renewal, and 1.5 million from urban regeneration. The total need for housing excluding the need resulting from urban regeneration is 5.45 million. Nonetheless, assuming that 30 percent of the 5.2 million sub-standard buildings without construction permits scattered throughout Turkey would be renewed within 10 years as a result of urban regeneration, we assume that a need for 1.5 million buildings will arise on the basis of urban transformation.

There are two main factors that influence the housing demand in Turkey. These are; housing inclinations of households, and the incomes and savings of the households.

According to the data of the 2000 TSA Building Research and Population Census, 59.8 percent of the households in urban areas are home owners while 4.17 million households do not own homes. 2.76 million urban households own one or more homes, in addition to the ones they own or reside in. 51.9 percent of the households that own more than one home have acquired these for their own use or for that of the family members, while 40 percent bought them for investment purposes. 39.2 percent of home owners acquired their homes through purchasing. 37.4 percent had them built by subcontractors or builders. Savings take the first place in financial resources used in home purchases with 61.9 percent. The Turkish public can still purchase homes as a result of long-term savings, in addition to housing loans.

The second important factor that influences the demand for housing is the income, spending and savings structure of the households. There are a total of 17.1 million households in Turkey as of 2004 and their income, spending and savings structures are displayed by the TSA Households' Propensity to Consume and Budget Polls. Accordingly, the 2004 monthly average income of the households within the highest income group (3.42 million) was 2.462 YTL, while their monthly savings were 722 YTL. The average monthly income of the high income households (3.42 million) was 1.167 YTL while their savings were 158 YTL. Since the income distribution of Turkey is defective, only the very high and high income households have enough income and savings to create (a limited) housing demand.

### **The New Housing Finance System and the Growth Potential 2015**

The legal framework prepared for the establishment and operation of the New Housing Finance System contains; Housing Finance, Housing Finance Institutions, Primary Market Mortgages and their Utilization, Instruments of the Mortgage Capital Market, Mortgage Financing Institutions, The Protection of Consumers that Use Housing Finance, Accelerating the Follow Up Process of Mortgage Backed Credits, the Arrangement of the Persons and Establishments who will Execute Real Estate Valuations, Various Tax Arrangements, the Support to be provided to the System and the Arrangements that will be made by Other Institutions. This legal framework constitutes the organizational framework and financial mechanism of the new housing finance system at the same time.

The financial mechanism of the housing finance system consists of two major markets. The primary market is composed of housing finance institutions and the consumers (and home producers). The banks, financial leasing companies and finance companies which constitute the housing finance institutions grant mortgage loans to the consumers.

The primary function of the secondary market is to supply re-financing possibilities to the housing finance institutions that grant housing mortgage loans in the primary market.

In order to accomplish this function, the secondary market has housing finance institutions, capital market instruments, mortgage financing institutions and investors. The secondary market provides re-financing through three different methods. These are; the issuing of covered bonds by furnishing mortgaged housing loans as collaterals, the sale of mortgaged housing loan portfolios to mortgage financing institutions and the sale of mortgaged housing loan portfolios to self-established or other third party housing finance funds or to asset financing funds.





The institutions that furnish financing to the housing finance institutions through buying their mortgaged housing loan portfolios are primarily mortgage finance institutions, housing finance funds and asset financing funds. The mortgage financing institutions and the housing finance funds issue mortgage backed securities through the securitization of the mortgaged housing loan portfolios they purchase. Thus, both institutions create financial resources to be transferred to housing finance institutions (to allow the purchase of new mortgages) while offering investment alternatives to investors.

We envisage the mortgage financing institution as the institution that will display activity in the secondary market and play a central role and function within the system. Nonetheless, since the founding of the institution requires a high initial capital, the mortgage financing institutions will assume a limited role in the first stage.

Investors with a capacity to extend long term funds constitute one of the most important factors of the secondary market. The major characteristic that differentiates the housing finance system and its secondary markets from other systems and secondary markets is that the funds are long-term. Central Banks, Insurance Companies, Pension Funds and Investment Funds will be the important corporate investors.

The developments in international markets, the trends that come into being and the market sizes reached in housing finance constitute important examples for Turkey. We anticipate that the newly founded system in Turkey will be closer and more dependent on international funds in its initial phases, and think that the new system resembles that of Continental Europe more. If we examine the international markets we see that there are five important trends in housing finance. The volume of mortgaged loans is expanding rapidly.

In the 25 countries of the EU, 525 billion euros worth of loans were granted in 2005 alone; and the amount of mortgaged loans reached 5.2 trillion euros and 49 percent of the national income. The issuing of covered bonds in secondary markets is rapidly expanding. In 2005, 280 billion euros worth of covered bonds have been issued throughout the EU, while the securities stock of the EU as of the end of 2005 has reached 870.3 billion euros. The mortgaged housing loans in the secondary markets are increasingly financed through covered bonds. Although this ratio varies from country to country, it is 164.2 percent in Denmark. The issuing and investments in the secondary markets are more and more becoming cross-border activities of an international nature. The institutions that invest in covered bonds throughout Europe, as far as their share of the present stocks are concerned are as follows: 50 percent banks, 18 percent investment funds, 13 percent central banks, 8 percent pension funds, 7 percent insurance companies and 4 percent other institutions.

We anticipate the following to be the main characteristics for the housing finance system that is being established in Turkey;

- Banks will grant most of the mortgages in the primary market.
- Covered bonds will be the most widely used instruments in issuing securities and collecting resources in the secondary market.
- The use of overseas resources will predominate in the first stages of the secondary market in the issuance of securities and funding.
- The main investors of domestic bond issues in the secondary market will be corporate investors.

The environmental conditions that have to be evaluated are also specified in the assumptions of the resource creation potential of the new housing finance system. According to these; the size of the Turkish financial system, the size of the financial institutions and financial assets, the banking system, the resource and placing structures of the banks, housing loans, the credit ratings of the banks, their capital market issuances, their stocks and secondary market activities, Turkey's overseas resource utilization, foreign debts and foreign exchange reserves, the Turkey risks of the foreigners and the portfolio investments of corporate investors in Turkey are deemed important.



As of the end of 2005, the size of the assets of financial institutions in Turkey is 391.6 billion dollars and 108.8 percent of GNP, and the total of the financial assets is 535.6 billion dollars and 148.4 percent of GNP. The asset size of the banking sector is 295.8 billion dollars. The foreign resource utilization of the banks is 30.5 billion dollars, 10.3 percent of total resources.

The total loans are 119.1 billion dollars. The housing loans are 9.2 billion dollars, making up 7.7 percent of total loans, 3.1 percent of total assets and 2.6 percent of GNP. The credit ratings of the Turkish banks are sufficient for overseas loans in foreign currencies, however limitedly sufficient for YTL based long-term loans. In capital markets, private sector securities issuance is 5.5 billion dollars; total securities stocks are 209.2 billion dollars, of which government securities are 185.4 billion dollars; and the trading volume in the secondary markets is 788.6 billion dollars, 544.9 billion of which are government securities.

The overseas resource utilization (external debt stock) of Turkey is 185 billion dollars in the first quarter of 2006. The resource utilization of financial institutions is 36.7 billion dollars, which constitutes 19.8 percent of total foreign debt and 9.9 percent of GNP. The total of the Turkish risks of the foreigners is 122.7 billion dollars at the end of 2005, including the loans granted to financial institutions. The portfolio size of the corporate investors in Turkey is 24.1 billion dollars, most of which is invested in short-term and government securities. When we evaluate these figures we see that the Turkish Financial Sector is large enough to enable the development of the new housing finance system, but it has deficiencies in creating long-term funds and a lack of corporate investors.

We can make predictions about the resource creation potential of the new system depending on the basic findings about the legal and corporate frameworks of the new housing finance system as well as its financial mechanism, the volume of international markets and of the Turkish financial sector. While making these predictions, we assume that the legal framework will be established in 2006 and will be put into affect at the beginning of 2007, that economic stability will be maintained, that the inflation and interest rates will be one digit, and that the YTL will remain stable. Projections are made based on fixed prices, without taking into account the possible price and exchange rate increases and changes.

We anticipate that the GNP will reach 589 billion dollars in 2015 with a 5% economic growth, the housing loans/GNP ratio will reach 15 percent in 2015 and that the housing loans will be 88.4 billions in 2015.

We foresee the assets of the banking sector to grow faster than the economy and to reach 712.9 billion dollars or 121 percent of the GNP by 2015. Therefore the share of the housing loans is projected to be 12.4 percent of total assets and 24.8% of total loans which are expected to reach 356.5 billion dollars.

We anticipate the size of the mortgages to be 77.5 billion dollars between the years 2007 and 2015, of which 75.7 billion dollars will be granted by banks, 450 million dollars by financial leasing companies and 1.35 billion dollars by financial institutions. 27.5 billion dollars worth of funding will be created in the secondary markets of the new housing finance system until 2015, of which 19 billion dollars will come from the issue of mortgage backed securities, and respectively 4 and 4.5 billion dollars from the sale of loan portfolios to funds and to mortgage financing institutions.

The ratio of the mortgage backed securities of banks to their total assets will be 2.7 percent in 2015, which is considered to be an attainable and acceptable growth figure. We anticipate the issue of 4.25 billion dollars of securities by mortgage financing institutions and funds, in addition to the issue of 19 billion dollars worth of covered bonds by the banks in the secondary markets, bringing the volume of total securities issued up to 23.25 billion dollars. The foreign investors will invest 16.2 billion dollars and the domestic investors will invest 7.05 billion dollars in the 23.25 billion dollars worth of securities that will be issued between 2007 and 2015 in the new housing finance system. Consequently, we anticipate that 27.5 billion dollars or 31.1 percent of the total 88.4 billion dollars housing loans to be extended in 2015 will be re-financed in the secondary markets.

## Mutual Interaction between the Housing Finance System and the Housing Demand, and Predictions for 2015

The basic effect of the new housing finance system which is being founded in Turkey will be to shape the mortgaged housing loans and the housing demand. There are three variables that will define the interaction between the mortgaged housing loans that will be granted until 2015 and housing demand. The first one is the changes in the income and spending structures of the households, their savings capacities, and their possibility of using housing loans until 2015.

The second one is the volume of the mortgaged housing loans that can be granted by the financial sector, while the third one is the conditions of the loans, i.e. their volumes, maturities and interest rates.

As far as the first variable is concerned, we make predictions for the incomes, spending and savings of the households depending on our GNP growth projections up to 2015. Given fixed prices, we assume that the share of the disposable incomes of the households in the GNP will increase throughout years, and that the income distribution and expenditures will get better to a limited extent for the lowest, low and middle income groups (given economic growth and betterment in income distribution). Accordingly, we arrive at the following important conclusions about the housing loan utilization capacities of the household income groups within the housing finance system.

Despite the improvement of their incomes by 2015, the lowest, low and middle income household groups (11.95 million households in 2015) will not have the savings structure to enable them to benefit from the housing finance system. Although the incomes of the high income group (3.92 million households in 2015) will increase by 2015, these households will not have a significant change in their savings capacities and thus will only have limited benefits from the new housing finance system.

The households that constitute the highest income group (3.98 million households in 2015) will have the income, spending and savings structure to enable them to use housing loans from the new housing finance system. We further assume that these 3.98 million households that will be able to save an average of 902 YTL (in fixed prices) per month in 2015 will already have a high home ownership level, and will therefore have a low appetite for the housing finance system.

The second determinant is the loan capacity that can be created by the financial system. We foresee that a total of 77.5 billion dollars of additional mortgaged housing loans will be used between 2007 and 2015.

The third variable is the loan utilization sufficiency of the households in accordance with credit requirements. Taking into account the assumptions in the previous section about the incomes, savings structures and savings capacities of the households, we anticipate that

- 100 thousand YTL credits can be used with 1.10 interest and 240 months maturity, with 0.80 interest and 180 and 240 months, with 0.60 interest and 120, 180, 240 month maturities,
- 75 thousand YTL credits can be used with 1.35 interest and 180 and 240 months, and with 1.10, 0.80 and 0.60 interest and 120, 180 and 240 months maturities,
- 50 thousand YTL credits can be used with each interest rate and all maturities.

Accordingly, 2.18 millions of 50 thousand YTL credits, 1.45 millions of 75 thousand YTL credits, 1.09 millions of 100 thousand YTL credits and 725 thousand of 150 million credits can be granted between the years 2007 and 2015. We assume that under suitable conditions, mostly the 75 thousand and 100 thousand YTL credits will be utilized within the new housing finance system. The interaction between the housing finance system and housing demand within this framework and the basic findings are as follows:



- The mortgaged housing loans will become the most important determinant of the housing demand under the new system.
- Nonetheless, the housing demand to be created by the housing loans granted within the capacity limits of the new housing finance system will not be sufficient to meet the housing need.
- The additional demand for housing created by the system as a result of the use of the assumed 50 thousand, 75 thousand and 100 thousand YTL credits (2.18, 1.5 and 1 million units), will cover 15 to 30 percent of the housing need (6.5 millions).
- Therefore, we assume that purchasing methods and inclinations other than the use of housing loans (such as purchasing with savings, having houses built in return for land ownership, etc.) will prevail.
- The amount of households that will use the assumed amount of credits and who have the income and savings capacities to create housing demand is much larger than the amount of loans that are presumed to be granted. However, the income group that has the capacity to use these loans is the highest income households with a high level of home ownership and a limited housing need.
- Therefore there is a discrepancy between the households that need housing and those who have the capacity to use housing loans.
- The low and medium income groups who have a higher need for housing have very limited capacity to benefit from the housing finance system. Therefore, the housing needs of these households should be met by social housing policies.
- Taking into account the sizes of the housing loans, the demand for housing will overwhelmingly be for high quality B type housing worth 100 – 150 thousand dollars.

### **The Development of the Housing Sector with the New Housing Finance System and Contribution to Economic Growth**

We expect that the additional housing demand as a result of the new housing finance system will increase the production of housing, therefore will speed up the growth of real estate and construction sectors, affect a high number of industry and service sectors that provide inputs to the construction sector, and contribute to the economic growth by the expansion of the value added created. We can see that there is a close correlation between the development of the new housing finance system, the creation of resulting value added and economic growth. Accordingly, we make the following assumptions about the contribution of the growth of the construction sector to the economic growth until the year 2015 in relation to the new housing finance system.

- The construction sector will grow first at an accelerating pace, and then steadily, following the development tendencies anticipated in the housing finance system. Growth will be more consistent as a result of the housing finance system and will occur within the 6-8 and 8-10 percent bands.
- The contribution of the construction sector to economic growth subject to the growth rates foreseen will vary between 0.50 and 0.70 points throughout the years. The contribution to growth of the various sectors that will be influenced by the construction sector during the construction of the houses and afterwards will be between 0.30 and 0.40 points.
- We anticipate that the value added created by the construction sector, assumed as 16 billion dollars in 2007 according to growth projections, will increase steadily throughout the years and will reach 29.4 billion dollars in 2015. The total value added that will be created between 2007 and 2015 is expected to be 201.6 billion dollars.

## TURKEY HOUSING AND MORTGAGE MARKET STUDY

### The International Perspective

■ Hans-Joachim Dübel / Finpolconsult

The housing and mortgage market study presented by Professor Dr. Can Gürlelel in this book marks a promising start of a hopefully active public discussion about the residential real estate sector and the realization of development potential in Turkey.

A high level of housing market and construction activity is fundamental for the Turkish economy, not just through its strong contribution to growth and employment. The sector is also producing the single most important retirement asset – homeownership - and strengthening the social safety net by enabling a minimum housing quality for every Turkish citizen.

After a successful (re)launch of the Turkish mortgage market in 2005, which followed a long period of economic stress of the country, the two key questions going forward are how sustainable the current growth of the mortgage market is and how much a mortgage market can stimulate a better housing supply to fulfill the above social purposes.

#### Mortgage market potential

In order to assess the first question, a look at developments in Turkey's more advanced neighbors in Southern and Central Europe is insightful.

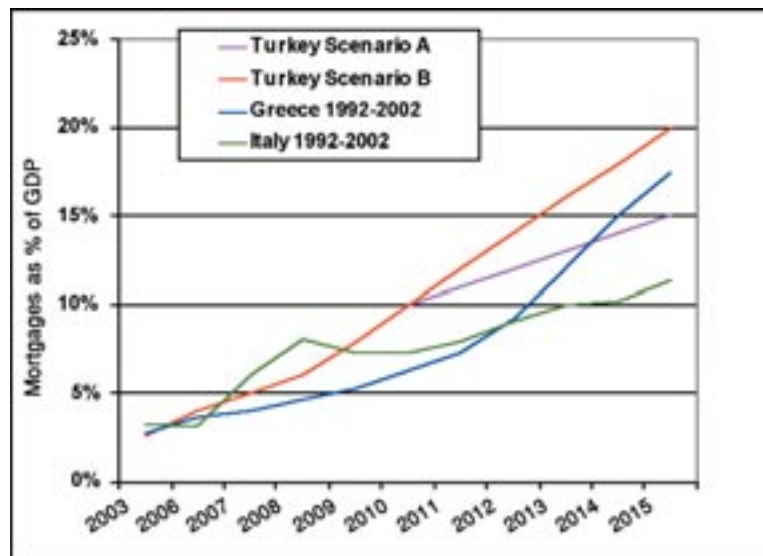
Let us start with the cases of Greece and Italy. Both countries are long-term members of the EU and EMU starting members. Therefore they benefit from a long history of convergence of macroeconomic policies. Yet, their mortgage market developments in the past were strikingly different, as figure 1 demonstrates:

- The Greek mortgage market benefited dramatically from EMU access, which brought about an elimination of the country's high risk premia and greater international capital flows. But even more so, greater competition among mortgage lenders – the National Bank of Greece had long been a quasi-monopolist - and a conversion of the product portfolio from fixed-rate mortgages to adjustable-rate mortgages decisively pushed interest rates down and mortgage volumes up.

- In Italy, in contrast, banking sector competition and liberalization did not make it to the top the economic policy agenda for years. While benefiting from almost the same interest rate compression trend as Greece, the country resided with predominantly fixed-rate lending at a point time when long-term interest rates were still relatively high due to uncertainty about Italy's EMU access and its sustainability. The mortgage market as a result grew only sluggishly.

In the context of these two examples, Can Gürlelel's projections for Turkey seem to be on the optimistic side. In both scenarios they assume a fast disinflation process comparable to the one in Southern Europe in the 1990s, sustained foreign capital inflows as a result of lower country risk, a competitive

Figure 1: Mortgage market growth historic trends in Italy and Greece vs. Turkey projections



Source: Hypostat, computations by Finpolconsult.

banking sector and mortgage products suited to generate quick 'pass-through' of lower interest rates to consumer debt service payments - adjustable-rate mortgages.

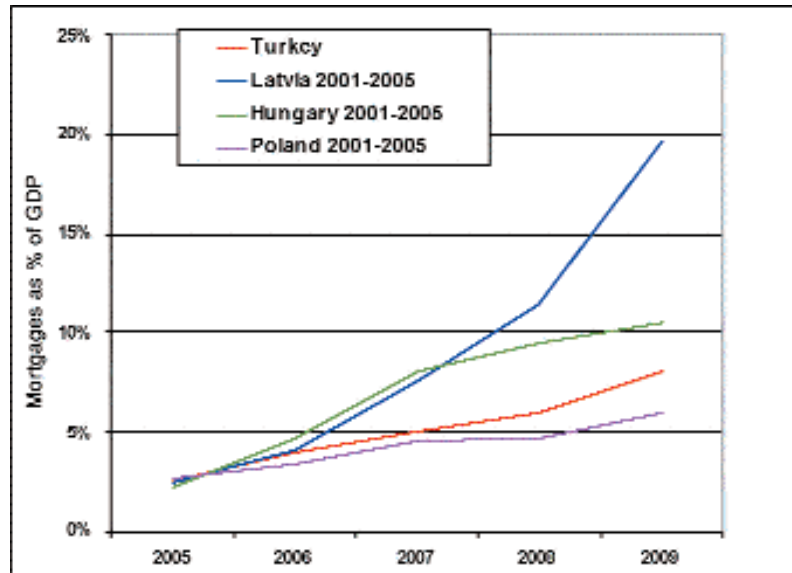
Yet, if the more recent experiences of Central and Eastern European transition countries are considered as benchmarks, Professor Gürlesel's projections could even be pessimistic. Consider the cases of Latvia, Hungary, and Poland, shown in figure 2. The mortgage markets in these countries started seriously ca 2000 and have since developed strongly.

As in Southern Europe, the key success factors in transition countries have been low interest rates – here often foreign-currency loans, as these countries are outside the EMU and domestic interest rates are quite volatile - and strong mortgage lender competition.

A number of differences between the three markets may hold lessons for Turkey. The fastest growing of the three – Latvia – relied exclusively on Euro-denominated lending (i.e. high interest 'pass-through' products) and similar to Greece saw strong lender competition early. The second, Hungary, in contrast remained dominated by a single lender and local currency fixed-rate mortgages - yet the market grew fast as long as the government was willing to subsidize mortgage lending; when the subsidies stopped due to fiscal pressure in 2004, the market in local currency loans collapsed. The slowest growing market, Poland, as Hungary remained until very recently dominated by a single lender distributing mainly local currency loans, which however were not subsidized. Only in 2004/5 competition in the Polish market increased noticeably; most of the lending today is in foreign-currency loans.

(1) It should be noted that the proposed Turkish housing finance laws will allow such products only under the condition that the lender states an interest rate cap, as a protective measure against potential interest rate risk for the consumer.

Figure 2: Mortgage market growth: historic trends in Central and Eastern Europe vs. Turkey projections



Source: Hypostat, computations by Finpolconsult.

### Interaction of mortgage markets with housing supply

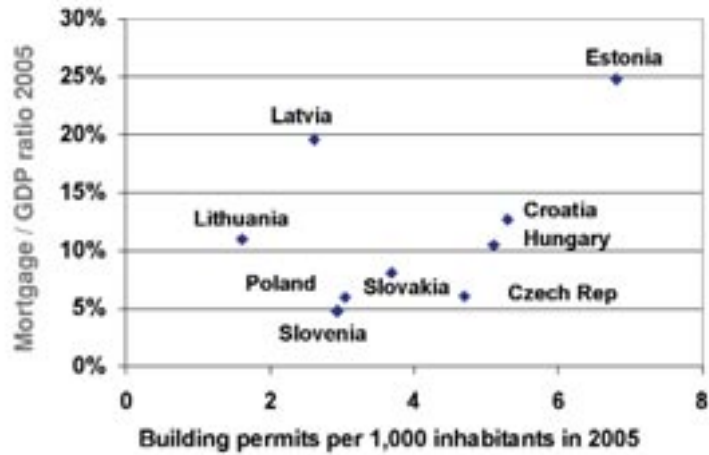
A growing mortgage market in Turkey will give rise to two different housing market outcomes: an increased housing production, which is desirable and growing prices for existing housing, land and construction services, which is undesirable.

Experience internationally has that if the mortgage market grows too fast or if new housing construction is slow and unresponsive to price signals, existing housing and construction prices may rise very fast. The result could be that households that are able to borrow will not be much better off and that households that are not able to borrow, because mortgage lenders do not serve them or their risks are too high, are actually worse off than without mortgage finance.

Figure 3 compares mortgage market size and construction activity in nine Central and Eastern European transition countries. It shows that by and large greater mortgage market size supports greater new construction activity. The best performers – Croatia, Hungary and Estonia – are reaching now high levels in European comparison, which is remarkable given the relative abundance of housing produced during socialism, a deep transition crisis of the construction industry, slow demographics and high emigration levels in these countries.

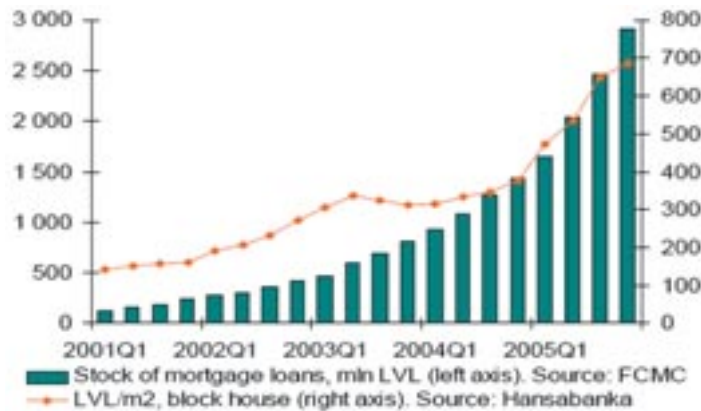
However, more interesting for Turkey is a look at a less successful performer in the sample. Consider Latvia, where a large mortgage market coincides with only very little new construction activity. As figure 4 below demonstrates, the mortgage market development there has been rather driving house prices, which more than tripled in only five years in an otherwise low-inflation country. What were the reasons?

Figure 3: Mortgage market size and construction permits in Central and Eastern European countries in 2005



Source: Hyposstat. Note: CAGR – cumulative average growth rate.

Figure 4: Mortgage market growth and price increases in an inelastic housing supply environment, the case of Latvia



Source: Hansabanka.

Latvia has interestingly comparable urban structural conditions to Turkey with a housing market that is heavily concentrated in one single metropolis, Riga. Riga enjoys strong migration, rents are 30% higher than in smaller cities and triple the level of rural areas – figures that are similar for Istanbul vs. Turkish regions.





A land planning, zoning and building permission system still struggling to overcome the Soviet legacy, land shortages in the main market Riga, and construction supply shortages lead to residential construction projects taking 8 years on average, of which 2 years are wasted typically prior to the start of the actual construction. The developer industry is not very competitive and funding constraints reduce its growth potential. Finally, the rapid economic growth of the country and emigration trends have led to shortage of qualified labor, construction costs in total rose 30% in 2005 alone. By the end of 2005 for an average Riga family affordability index was up to 11.5 years of income from about 6 years of income at the end of 2002, despite the existence of a mortgage market.

Many of the factors that limited the usefulness for mortgage lending in Latvia are also present in Turkey, and the country is well advised to address them. The Turkish planning, zoning and building permission system is very slow – witness is the fact that anywhere up from 30% of newly constructed housing are without proper building permits. This will raise the financing costs of such properties, which are not eligible for backing capital market instruments such as covered bonds or mortgage-backed securities.

Turkey also has a problematic land market with still large public land ownership, land that is often not mobilized through auctions but rather developed by government itself. The country's developer industry certainly suffers from financing problems, as the predominance of the practice of consumers buying unfinished construction demonstrates.

Finally, with a cost level of between 11 and 13%, Turkey has some of the highest public tax levels imposed on housing transactions, a factor that certainly helps generating price increases, or keeping housing informal and hard to finance.

### **Conditions of success for the Turkey residential housing sector**

How can Turkey avoid negative results and embark on a smooth and sustainable growth trend of the housing and mortgage markets?

First, the Turkish society – both public and private sectors - must grasp and accept the challenges arising from what is certainly the most dynamic housing demand situation in Europe.

The country's demographic profile alone generates ca 600,000 new households per year; triple the scale of Poland, which is second to Turkey in Europe. That number could easily rise to 1 million per year if the large numbers of households that are forced to live together would receive a chance to exercise their housing demand. If European experiences of the 1990s are any guidance, average household size in Turkey may easily decline by 15-20% in a single decade, meaning that millions of new households come to the market.

In addition, the country is uniquely challenged through its strong regional mismatch of the housing stock caused by migration from poorer regions to the cities and in particular to Istanbul. That issue can only be addressed in the long-term through infrastructure and business development programs. Finally, Turkey's housing quality mismatch is challenge of epic proportions, especially concerning the construction of earthquake-proof housing.

To handle these challenges, the country needs a housing market information system that allows public and private sectors to assess and accurately predict housing demand patterns and trends. It also, clearly, needs a well-formulated and executed housing policy at the national and metropolitan levels.



Second, the lesson from mortgage sector developments in Southern and Eastern Europe for Turkey should be to observe clear market-oriented principles in reforming banking and finance.

This means inter alia focusing on banking sector competition and liberalization, allowing for loan products that pass through reduced interest rates swiftly to consumers, and abstaining from distorting and unsustainable mortgage sector subsidies. Clearly it means passing the housing finance law, which at the time of writing of this comment still sits in Parliament – a year delayed from original time plans.

Thirdly, and perhaps most important from the perspective of Turkey's vast majority of the population, is the creation of land and housing supply conditions that actually allow building the large amounts of housing that are in demand, at reasonable cost levels.

Turkey must in that regard prioritize combating the structural inefficiencies of its land and infrastructure markets. This means refocusing public activity on where it belongs – infrastructure provision, not land banking and land development. It means overhauling the land planning, zoning and building permission system with the goal to limit the time process to a year and less and creating legal security for the development.

Rental sector deregulation and stimulation of rental supply for those unable to buy an own dwelling is an important part of the agenda. To reduce the absurdly high tax levels that force developers and their clients into informality and deprive the public sector from revenue, rather than adding to it through a vibrant construction and housing sector, is another. Helping developers to grow in this way is preferable to subsidizing the industry through distortive mortgage subsidies.

If a rational sector policy is designed and executed, Turkey has a good chance to realize the well-founded mortgage and housing sector projections that Professor Gürlel has presented us with.

## ■ Chapter I

# HOUSING NEED AND HOUSING DEMAND IN TURKEY

## INTRODUCTION

The real estate sector in Turkey will enter a more healthy and predictable growth process with the implementation of the new housing finance system. Especially housing supply and housing demand in the residential sector will become stabilized with the direction of the new housing finance system. In this context, the main objective of the study is to display the housing need in Turkey and portray the housing demand throughout Turkey related to the growth potential of the new housing finance system.

The factors affecting the housing need in Turkey and housing demand are evaluated in the first chapter, independent of the new housing finance system and projections are being made until 2015. In this first chapter of the study, we present the demography and population predictions, the housing stock and the housing need in Turkey as well as the factors that influence the housing demand in Turkey.

### I.1. DEMOGRAPHY AND POPULATION FORECASTS

The determining and primary factor for predicting the housing need and housing demand is the demography and population forecasts. Demography and population growth are the natural determinants of the housing need. The rate of population increase, the absolute population growth, the changes in the urbanization ratios and migrations, and changes in the number of households are the criteria used in demographic and population forecasts. In this context, the demographic transition process Turkey is undergoing and the main tendencies of this process are very important for the forecasts about the next period. Table.I presents the population increase rates and population growth in Turkey.

**TABLE.I THE GROWTH OF POPULATION IN TURKEY 1970 – 2005**

YEARS	POPULATION (000)	PERIODS	POPULATION GROWTH RATE
1970	35.605	1970-1975	25.01
1975	40.348	1975-1980	20.65
1980	44.737	1980-1985	24.88
1985	50.664	1985-1990	21.71
1990	56.473	1990-2000	18.28
2000	67.804	2000-2005	13.60
2005	72.530		

SOURCE: TSA, 2000 POPULATION CENSUS

The total population of Turkey has almost doubled from 35.6 million to 72.5 million in 2005 during the last 35 years. This period is marked in the demographic process by a rapid population increase (high fertility rate) between the years 1970 and 2000.

Turkey is starting a new second period in her demographic process characterized by the slow down in the population growth rate. Turkey has entered this phase as of year 2000. Demographically, the fertility rate and net renewal speed will slow down in the upcoming period and the population growth speed will continue to decelerate. These two new major tendencies are irreversible, indicating that we are entering a more stable population growth stage.

In making population forecasts until 2015 in Turkey, these two main tendencies and the deceleration in the population growth rate will be the determining factors.

In this context, we present forecasts about the population in Turkey until 2015 in Table.2. The population growth rate that was 16.60 per thousand in 2000 and 13 per thousand in 2005 will continue its deceleration and become 12 per thousand in 2010 and 11 per thousand in 2015. According to these forecasts, the population of Turkey will become 77.15 millions in 2010 and 81.65 millions in 2015.

**TABLE.2 POPULATION FORECASTS IN TURKEY 2015**

YEARS	POPULATION GROWTH 0. %	POPULATION (000)
2000	16.6	67.804
2005	13.0	72.538
2006	12.8	73.466
2007	12.6	74.392
2008	12.4	75.315
2009	12.2	76.234
2010	12.0	77.149
2011	11.8	78.059
2012	11.6	78.965
2013	11.4	79.865
2014	11.2	80.759
2015	11.0	81.647

Predictions for the absolute population of Turkey are necessary but not sufficient for determining the housing need. In order to be able to make calculations about the housing need and housing demand according to population growth, predictions are made for the numbers and sizes of households.

The sizes of households are different for urban and rural areas. Since the need for housing covers the urban areas, predictions are made for the urbanization ratio, the sizes of urban households and accordingly the number of households.

Table.3 presents predictions for urbanization, household sizes and number of households in Turkey. According to this, first of all, the urbanization ratio of Turkey will continue to rise. The rural population is predicted to decrease within the framework of rural development strategy of the EU process. The migrations from rural areas to cities will mostly be within the same city or towards city centers and in a more planned way. Therefore, the urbanization ratio that was 64.9 percent in 2000 and that is estimated to be approximately 65 percent in 2005 is predicted to be 72 percent in 2010 and 75 percent in 2015.

In connection to these urbanization ratios, the city population that is 49.3 million in 2005 will reach 61.24 million in 2015.

As a result of economic and social developments and the effects of the demographic process, the urban household sizes will continue to decrease. The household size that was 4.39 in 2000 decreased to 4.28

**TABLE.3 PREDICTIONS FOR THE URBAN POPULATION AND NUMBER OF HOUSEHOLDS IN TURKEY (in 000's)**

YEARS	TOTAL POPULATION	URBANIZATION RATIO	URBAN POPULATION	SIZE OF URBAN HOUSEHOLDS	NUMBER OF URBAN HOUSEHOLDS
2000	67.804	64.9	44.006	4.39	10.024
2005	72.538	68.0	49.326	4.28	11.525
2006	73.466	68.8	50.545	4.25	11.893
2007	74.392	69.6	51.777	4.23	12.240
2008	75.315	70.4	53.022	4.21	12.594
2009	76.234	71.2	54.279	4.18	12.985
2010	77.149	72.0	55.547	4.16	13.352
2011	78.059	72.6	56.671	4.14	13.689
2012	78.965	73.2	57.802	4.11	14.064
2013	79.865	73.8	58.940	4.09	14.410
2014	80.759	74.4	60.085	4.07	14.763
2015	81.647	75.0	61.235	4.05	15.120

in 2005, and is expected to decrease further to 4.16 in 2010 and 4.05 in 2015. According to the urbanization ratio, city population and number of household predictions, the number of households which are 11.52 million in 2005 will increase to 13.35 million in 2010 and 15.12 million in 2015. Consequently, the increase in the number of urban households will be 3.6 millions between 2005 and 2015. If urbanization is actualized at a faster rate, the urban population and number of urban households will increase more and this will result in a higher need for housing.

Another important factor in demographic developments which will influence the need for housing is the intercity migrations of the urban dwellers. The clear and absolute effects of migrations from rural areas to urban ones or the opposite are already being reflected in the urbanization ratio and the resulting number of household predictions. However the intercity migrations of the population that lives in urban areas naturally create an additional need for housing in the cities people migrate to (unless residences are vacated by an equal number of migrations from this city, which is possible according to migration tendencies of Turkey).

The total population that migrated from cities between the years 1995 and 2000 is 3.867.979. This amounts to almost 859.500 households, given a 4.5 average household size (the urban household size in 2000 was 4.39). An average of 171.910 households that migrate annually creates an additional housing need. Although this amount has somehow decreased between the years 2000 and 2005 and has been 160 thousand annually on the average, it is estimated to be 150 thousand in 2005.

The forecasts about intercity migrations from urban areas until 2015 are presented in Table.4.

The following assumptions are being used in these predictions.

- It is assumed that migrations from city to city in urban areas will decrease gradually in the next 10 years.
- It is further assumed that the sizes of the households that migrate will decrease from 4.5 in 2006 to 4.0 in 2016.
- The settlement ratio is assumed to increase until 2015, depending on economic and social developments as well as the development of new centers of attraction.

According to these predictions, while 675 thousand people and 150 thousand households migrate between cities in 2006, this figure will become 240 thousand people and 60 thousand households in 2015.

**TABLE.4 FORECASTS ABOUT THE NUMBER OF HOUSEHOLDS THAT MIGRATE BETWEEN URBAN RESIDENTIAL AREAS IN TURKEY 2015**

YEARS	MIGRATING POPULATION	NUMBER OF MIGRATING HOUSEHOLDS (in 000's)
2006	675.000	150
2007	630.000	140
2008	572.000	130
2009	528.000	120
2010	473.000	110
2011	430.000	100
2012	378.000	90
2013	336.000	80
2014	287.000	70
2015	240.000	60

A total of 1.05 million households will migrate between the years 2006 and 2015.

## I.2. HOUSING STOCK IN TURKEY

The second important determinant in the housing need and housing demand in Turkey is the housing stock throughout Turkey. The evaluation of the present housing stock has two important consequences that effect housing need and housing demand. These are:

- Determining whether or not there is a housing need or housing surplus at the present, in view of the present number of households
- Determining the number of housing that needs renewal as a result of the physical and legal status of the present housing stock.

The housing stock in Turkey is evaluated in accordance with these aims. The housing stock is defined as the total number of houses that are present and that are of a quality to meet the needs of the households and those who have met these qualifications in the past (the houses that are ruined and have to be pulled down nowadays).

Although the housing stock is an important variable, attaining current and healthy housing stock data throughout Turkey is an important problem. This problem emanates from the existence of housing that has been built and is being used without construction permits.

Healthy data throughout Turkey has been reached as a result of the Building Count made by the Turkish Statistics Agency in 2000. All kinds of buildings and housing, with or without construction permits, were counted in this census and the stock as of 2000 has been calculated. The housing stock data attained with this count are presented in Table.5.

According to this table, the number of housing (apartments) throughout Turkey was counted as 16.23 millions. The total number of housing in the urban areas of Turkey (cities and townships) was counted as 13.59 millions.

Throughout Turkey, only 62 percent of residential buildings in urban areas, namely 8.56 million have construction permits. Those who have building utilization permits are 4.52 million and their share is 33 percent.

While every 62 out of 100 residential units in the urban areas of Turkey have construction permits, and 33 of these have utilization permits, a total of 5 million unlicensed homes and 9 million homes without construction permits are included in the housing stock.

**TABLE.5 THE HOUSING STOCK IN TURKEY 2000**

INDICATORS	FIGURES
NUMBER OF BUILDINGS	7.838.675
NUMBER OF HOUSING	16.235.830
NUMBER OF HOUSING (CITIES- TOWN.)	13.597.676
CONSTRUCTION PERMITS (CITIES- TOWN.)	8.566.428
BUILDING UTILIZATION PERMITS (CITIES- TOWN.)	4.524.170
NUMBER OF CONSTRUCTION PERMITS / TOTAL NUMBER OF BUILDINGS	%62
BUILDING UTILIZATION PERMITS / TOTAL NUMBER OF HOUSING	%33
UTILIZATION PERMITS / CONSTRUCTION PERMITS	%54

SOURCE: BUILDING COUNT 2000, TSA

All of the housing stock in Turkey that was built without construction and utilization permits is unregistered illegal housing, and a significant part of these homes are unhealthy and do not conform to the minimum standards.

The absolute number of housing throughout Turkey is not sufficient to determine the housing sufficiency and housing need on its own. The unregistered and unhealthy housing stock is also a determining factor in the housing need. The need to renew these houses and the need to produce houses with minimum standards make up an important piece of the housing need.

No official data was produced about the housing stock in the years that followed the 2000 building count. The main reason for this is the continuation of the construction of buildings without permits. Nonetheless, a forecast study was prepared for the housing stock of Turkey as of 2005, depending on the following assumptions.

**TABLE.6 THE HOUSING STOCK FORECAST FOR URBAN AREAS IN TURKEY AS OF THE END OF 2005**

INDICATORS	TURKEY
HOUSING STOCK (CITIES – TOWN/2000)	13.597.676
CONSTRUCTION PERMITS (2000 – 2004)	1.289.998
HOUSING THAT HAS LOST ITS RESIDENTIAL QUALITY (2001 – 2005)	67.988
CONSTRUCTION OF BUILDINGS WITHOUT PERMITS (2001-2005)	250.000
TOTAL HOUSING STOCK	15.069.686

The forecast was prepared for the housing stock in urban areas. The number of construction permits and the predictions for unlicensed buildings for the years that followed were added to the 2000 housing stock figure, and the number of houses assumed to have lost their residential quality was subtracted to arrive at the 2005 housing stock forecast. Table.6 presents the housing stock forecast for Turkey for the year 2005. The number of construction permits granted for 2000 – 2004 was utilized, assuming that the building constructions were completed in one year and that all the buildings that have construction permits were completed.

According to the table, there were 13.59 million residential units in the urban areas of Turkey in 2000. This figure is expected to be 15.05 millions at the end of 2005. The number of construction permits issued for the housing in the urban areas between the years 2000 and 2004 is 1.289.998. 511.236 permits were issued in 2005. Only the permits received until the end of 2004 are included in the 2005 housing stock data.

The unregistered building construction was assumed to slow down, taking into consideration the economic conditions of the period as well as administrative and technical controls and limitations, and was predicted as 50 thousand pieces of housing annually, a total of 250 thousand residential units in five years. This prediction makes up approximately 20 percent of the housing units with construction permits during the same period.

Every year 0.1 percent of the housing stock was assumed to have lost its residential quality either because of the necessity to renew or since actual conditions did not permit their utilization, thus 67.988 units were subtracted from the qualified housing stock.

Within the framework of these predictions, the housing stock in the urban areas of Turkey as of the end of 2005 is forecasted as 15.07 millions.

We have reached the following findings about the housing stock in Turkey according to the final absolute data for the year 2000 and the data forecast for 2005.

- An important part of the housing stock in Turkey is composed of buildings without construction permits (34.6 percent and 5.2 million units).
- Therefore, the housing need is met by illegal, low quality housing that does not meet the minimum standards.

The data on the housing stock as well as the legal and actual condition of the housing stock are determinants of the housing need. Therefore, the actual condition of the housing stock in the urban areas of Turkey is being evaluated with the use of the 2000 Building Count of the TSA.

The actual condition of the housing stock in Turkey as of the year 2000 is presented in Table.7. According to this table, 61 percent of the housing stock in the urban areas of Turkey in the year 2000 does not need any repairs. Except for simple repairs and modifications, 72 percent need drastic repairs and modifications while 2 percent of the houses are not fit for use and need to be pulled down; these two categories amount to 952 thousand 272 houses. These findings are determining factors in the renewal based housing demand.

**TABLE.7 THE ACTUAL CONDITION OF THE HOUSING STOCK IN TURKEY**

INDICATORS	TURKEY	% SHARE
NUMBER OF HOUSING (CITIES- TOWN)	13.597.676	100.0
THOSE THAT DON'T NEED REPAIRS	8.294.582	61.0
THOSE THAT NEED SIMPLE REPAIRS AND MODIFICATIONS	3.943.326	29.0
THOSE THAT NEED DRASTIC REPAIRS AND MODIFICATIONS	951.837	7.0
IN RUINS AND PLANNED TO BE PULLED DOWN	271.953	2.0
	135.977	1.0

SOURCE: BUILDING COUNT 2002, TSA

According to this table, 11.32 percent of the buildings that are used as residences in Turkey, namely 760 thousand units were built before 1960 and are more than 60 years old. The physical lives of these buildings, which are 50 years, except for the historical ones, are being expired and a need for renewal arises.

The number of buildings that are 30 to 50 years old, meaning those that were built between the years 1960 and 1980 is 2 million and their share is 30.3 percent. Some of these buildings will have to be renewed as well. 57.7 percent or 3.89 million buildings are 30 years old and less.

**TABLE.8 THE CONSTRUCTION YEARS OF BUILDINGS IN TURKEY 2000**

COMPLETION DATE OF BUILDING	BUILDINGS THAT ARE COMPLETELY USED AS RESIDENCES	BUILDINGS WHOSE MAJORITY IS USED AS RESIDENCES	TOTAL	% SHARE
-1929	119.023	14.401	133.424	2.0
1930-1939	76.971	10.437	87.408	1.3
1940-1949	154.989	21.729	176.718	2.6
1950-1959	320.277	42.880	363.157	5.4
1960-1969	605.305	79.536	684.841	10.2
1970-1979	1189.578	164.873	1354.451	20.1
1980-1989	1606.456	242.989	1849.445	27.5
1990-2000	1757.572	277.033	2034.605	30.2
UNKNOWN	42.457	9.127	51.584	0.7
<b>TOTAL</b>	<b>5.872.808</b>	<b>863.005</b>	<b>6.735.813</b>	<b>100.0</b>

SOURCE: BUILDING COUNT 2000, TSA



### **I.3. THE HOUSING NEED IN TURKEY 2015**

After completing the evaluations of demography and population growth as well as the present housing stock, prognoses for the housing need throughout Turkey until the year 2015 are made. Prognoses for the housing need are important for the shaping of the housing demand and the measuring of the financial resource creation capacity of the new housing finance system.

Four basic factors and the data related to these factors are used in making the predictions for the housing need. These factors are;

- The increase in the number of households and the housing need
- Migration between urban areas and the housing need
- Housing need based on renewal
- Housing need based on urban regeneration

#### **1. Increase in the Number of Households and the Housing Need**

The most important factor that determines the housing need throughout years is the increase in the number of households. The increase in the urban households throughout Turkey between the years 2006 and 2015 is predicted as 3.59 million in total. Therefore, a total of 3.59 million houses will be needed until 2015 emanating from the increase in the number of households.

This need is distributed according to years and it may have small variations as a result of yearly changes in population growth, urbanization ratio and household sizes.

The housing need that arises from the increase in the number of households reflects;

- the need that results from absolute population growth,
- the need that results from the establishment of new families,
- the need that results from the increase in the urbanization ratios and migration
- But it does not include the migrations between urban areas. Therefore the housing need that results from migrations between urban areas is predicted separately.

#### **2. Migrations between Urban Areas and the Housing Need**

Another demographic development that influences the housing need is the migration that takes place between urban areas, for which predictions were previously made. According to these, we predict that migrations between urban areas will be at decreasing rate and that the housing need will be on a one-to-one basis with the number of migrating households. The total housing need that will be formed between 2006 and 2015 as a result of migration between urban areas is prognosed as 1.05 million units.

#### **3. Renewal Based Housing Need**

The renewal based housing need is defined as the housing need that arises as a result of the aging, depreciation and becoming obsolete of the houses.

The physical condition of the housing stock and the resulting housing stock decrease predictions are determinants in defining the renewal based housing need. The physical conditions of the housing stock in Turkey and the ages of the houses have been examined. The State Planning Organization is

using 0.5 percent of the total housing stock in the development plans to determine the renewal based housing need. Within this framework, the renewal based housing stock of Turkey is predicted as 0.5 percent of the total housing stock for each year. Accordingly, the renewal based housing need between 2006 and 2015 is predicted as 805 thousand.

#### 4. Urban Regeneration Based Housing Need

The fourth determining factor taken into consideration as a determinant of the housing need is the urban regeneration based housing need. In contrast to the other three sources, the housing need based on urban regeneration is influenced by different factors.

The factors that influence and determine the urban regeneration based housing need are as follows:

- The renewal, betterment and legalization of the 5.2 million unregistered housing below minimum standards which is included in the housing stock, with registered legal housing above minimum standards
- The construction of planned, standard and well-qualified housing by the local administrations in line with urban transformation and regeneration projects, in lieu of the unregistered and deformed housing stock
- Building of social housing to replace unhealthy buildings without permits in the context of social housing projects
- The production of earthquake resistant and well-qualified housing instead of the housing whose collapsing risk in case of an earthquake were ascertained, especially those in Istanbul (182.000 houses).

Within this framework, we predict that 30 percent of the 5.2 million unregistered housing below minimum standards throughout Turkey will be renewed between 2006 and 2015. Accordingly, a total of 1.5 million housing units will be needed as a result of urban regeneration between the years 2006 and 2015. Nevertheless, if the other conditions also become ripe within the framework of urban transformation (especially economic resources) the housing need is predicted to be much higher; for example, with a 50 percent renewal ratio the housing need will be 2.6 million units.

With the coming together of these four factors, the housing need throughout Turkey between the years 2006 and 2015 is predicted as 6.95 millions. Table.9 portrays these predictions in detail and for each year. The housing need is 5.45 million units excluding the urban regeneration based need.

**TABLE.9 PREDICTIONS FOR THE HOUSING NEED OF TURKEY 2015 (in 000's)**

YEARS	BASED ON INCREASE OF HOUSEHOLDS	MIGRATION BETWEEN URBAN AREAS	RENEWAL BASED	SUBTOTAL	URBAN REGENERATION BASED	TOTAL
2006	368	150	76	594	125	719
2007	347	140	77	564	130	694
2008	354	130	78	562	135	697
2009	391	120	79	590	140	730
2010	367	110	80	557	150	707
2011	337	100	81	518	155	673
2012	375	90	82	547	160	707
2013	346	80	83	509	165	674
2014	353	70	84	507	170	677
2015	357	60	85	502	175	677
<b>TOTAL</b>	3.595	1.050	805	5.450	1.505	6.955

## I.4. FACTORS THAT INFLUENCE THE HOUSING DEMAND IN TURKEY

Housing demand predictions make up the biggest part of the predictions for the housing sector. Housing need and housing demand are different from one another. In addition to the common factors that influence both, different factors also exist. Therefore the predicted or realized housing need and housing demand for each period may not overlap. The housing demand of the households arises in three ways;

### Housing Demand for Utilization Purposes

This is the demand caused by the increase in the number of new households and the households that migrate between urban areas. However, each new household and migrating household may not create a simultaneous housing demand. The incomes and savings affecting the housing demand and the home ownership preferences of households are the determining factors here. In addition, the present households who have a tenant status and wish to own a home also create housing demand for utilization purposes.

### Housing Demand Based on Renewal

This is the housing demand that results from the preferences and inclinations of households that are already home owners to renew their homes, purchase new and well-qualified housing, and change their place of residence.

### Investment Oriented Housing Demand

This is the housing demand that is created by households that purchase homes for future use, to sell or to rent, whether they own a house of their own or not. There are two determining factors for these three different types of housing demand. These are;

1. Housing inclinations and habits of households,
2. Household incomes and savings.

#### I.4.1. HOUSING INCLINATIONS AND HABITS OF HOUSEHOLDS

Evaluations and analyses are made about the housing inclinations and habits of the households in Turkey in regards to the housing demand, a this is the first factor that determines the housing demand.

**TABLE.10 HOME OWNERSHIP OF THE HOUSEHOLDS IN TURKEY**

HOME OWNERSHIP	HOUSEHOLDS	% SHARE
HOME OWNER	6.205.927	59.8
TENANT	3.282.853	31.6
LODGING DWELLER	228.085	2.2
NOT HOME OWNER / DOESN'T PAY RENT	568.192	5.5
OTHER	79.825	0.8
UNKNOWN	8.981	0.1
TOTAL	10.373.863	100.0

SOURCE: HOUSING STUDY OF TURKEY 1999, TSA

We first examine the home ownership of the present (urban) households. According to the findings of the 2000 General Population Census of the TSA, the home ownership of the households in Turkey are presented in Table.10 next.

59.8 percent of the urban households throughout Turkey are home owners. 3.28 million, namely 37.6 percent of households are tenants. 568 thousand households, making up 5.5 percent, do not own houses and do not pay rent either. The rest are those who live in lodgings, the unknowns and the others.

In light of this distribution of the households, the preferential group that needs to purchase housing in the future and would create potential housing demand is the 3.28 million households which are tenants. But it should be kept in mind that the tenants will only create actual housing demand if the appropriate conditions arise.

59.8 percent of the households in Turkey that is 6.2 million households are home owners. However, being a home owner does not mean that these households will not demand housing in the future. As a matter of fact, the households that hold home owner status today may demand housing for renewal, upgrade and investment purposes. In addition, these home owner households are also the owners of the housing units rented by the tenants. Households do own houses in addition to the ones they own and live in. The number of urban households in Turkey that own one or more homes in addition to the one they own and live in is 2.76 millions. The reasons for owning more than one home are presented in Table.11.

**TABLE.11 THE REASONS WHY HOUSEHOLDS IN TURKEY OWN ONE OR MORE HOMES IN ADDITION TO THE ONE THEY LIVE IN**

REASONS	NUMBER OF HOUSEHOLDS	% SHARE
TO RESIDE IN	489.584	17.8
TO BE USED AS SEASONAL OR OR WEEK-END/SECONDARY HOMES	250.186	9.1
TO RECEIVE RENT INCOME	663.160	24.1
FOR ONE OF THE HOUSEHOLD MEMBERS TO RESIDE IN	690.428	25.0
TO RENEW AND SELL	7.257	0.3
AS INVESTMENT	438.641	15.9
THROUGH INHERITANCE	179.436	6.5
OTHER	179.436	1.4
TOTAL	2.757.017	100.

SOURCE: HOUSING RESEARCH OF TURKEY 1999, TSA

According to these findings, there are two main reasons why households own homes in addition to the one day own and live in. One reason is for the occupancy of the home by the households or one of the household members continuously or for limited periods of time. 1.43 million households (51.9 percent) have purchased home/homes for this reason, apart from the one they own and live in. 1.1 million households (40 percent) have purchased other home/homes in addition to the one they own and live in as an investment or to receive rent income.

According to this, the rate of the households throughout Turkey who demand housing in addition to the ones they own and live in is quite high. This household inclination is one of the most important determinants in the housing demand predictions for Turkey. The method of home acquisition of the urban households throughout Turkey is also one of the major determinants of the housing demand, and is presented in Table.12.

According to this table, 39.2 percent of the households acquired their homes through straight-out purchasing. The financial resources used for purchasing housing are analyzed in a later chapter.

**TABLE.12 THE METHODS THROUGH WHICH HOUSEHOLDS ACQUIRE HOUSING**

METHODS OF ACQUISITION	NUMBER OF HOUSEHOLDS	% SHARE
COOPERATIVES	517.115	8.6
PURCHASE (FROM CONTRACTOR, THE OWNER, PUBLIC ORGANIZATION)	2.368.226	39.2
BUILT BY BUILDERS THROUGH SUBCONTRACTORS	2.255.863	37.4
BUILT ON BY CONSTRUCTOR IN RETURN FOR FLATS	228.541	3.8
INHERITANCE	609.030	10.1
OTHER	55.191	0.9
TOTAL	6.033.966	100.0

SOURCE: HOUSING RESEARCH OF TURKEY 1999, TSA

The method of having housing built by builders through subcontractors is a second way of home acquisition that is used as often as the direct purchasing method.

Becoming owners through cooperatives and receiving flats from contractors for land ownership are the other methods but their share is small. The financial resources utilized are also important in purchasing or building housing. According to this, the distributions of financial resources used excluding loans are presented in Table.13. The housing loans used during the year the research was made are very limited.

**TABLE.13 RESOURCES USED IN PURCHASING OR BUILDING HOMES, EXCLUDING LOANS**

RESOURCES USED	NUMBER OF HOUSEHOLDS	% SHARE
SAVINGSS	4.365.596	61.9
SALE OF THE PREVIOUS HOUSE	509.766	7.2
SALE OF OTHER REAL ESTATE	400.731	5.7
CONTRIBUTIONS OF THE FAMILY	725.976	10.3
LOANS FROM RELATIVES / CLOSE FRIENDS	867.731	12.3
SAVINGSS ACQUIRED WORKING IN A FOREIGN COUNTRY	83.411	1.2
OTHER	95.756	1.4
TOTAL	7.048.967	100.0

SOURCE: HOUSING RESEARCH OF TURKEY 1999, TSA

Therefore the resources used excluding loans cover almost all of the resources. The most important financial resource the households in Turkey use for purchasing homes or having them built is their savings. The households aim at home purchases in the medium to long run, save for this end and use their savings to purchase housing when the favorable conditions arise.

The contribution of the families and loans from relatives and close friends in purchasing housing are two other important sources. The sale of the previous home or other real estate also create funds for purchasing homes, but their share within the total is low.

These household inclinations and habits are very important for making predictions about housing demand. Households are predicted to continue to save money to purchase homes and to use these savings when favorable conditions arise.

As a matter of fact, the housing acquisition methods preferred by the households who contemplate purchasing homes, as displayed in the TSA Turkish Housing Study, confirm this prediction.

**TABLE.14 THE ACQUISITION METHODS PREFERRED BY THE HOUSEHOLDS WHO CONTEMPLATE HOUSING PURCHASES**

HOUSING ACQUISITION METHOD	NUMBER OF HOUSEHOLDS	% SHARE
THE NUMBER OF HOUSEHOLDS WHO CONTEMPLATE PURCHASING HOUSING	4.767.440	100.0
PURCHASING FROM THE MARKET WITH CASH	2.119.808	46.1
THROUGH COOPERATIVES	1.080.259	22.7
BUYING THE LAND AND HAVING HOUSING BUILT	1.416.473	29.7
OTHER	150.900	3.1
THE NUMBER OF HOUSEHOLDS NOT CONTEMPLATING HOUSING PURCHASE	5.263.693	
TOTAL NUMBER OF HOUSEHOLDS	10.031.133	

SOURCE: HOUSING STUDY OF TURKEY 1999, TSA



A total of 4.77 million households were contemplating the purchase of new housing in Turkey in the year the study was made. 2.12 million of these planned to purchase their homes with cash, which indicates that almost 21 percent of the households in Turkey have the savings and capacity for cash home purchase, or that they are aiming at it.

Acquiring homes through cooperatives is still seen as an important preference. The traditional method of purchasing the land and having the housing built is also preferred significantly.

The housing inclinations and habits of the households analyzed and evaluated up to now were formed until the year 2000. The economic and social conditions of the period were the determinants that formed these inclinations and habits. The economic conditions are especially influential.

The major inclination in the world for housing acquisitions is the use of long term housing financing to a large extent. The high rate of inflation and high interest rates that prevailed in Turkey for the past 30 years prevented home ownership via long term loans. Therefore, households save and accumulate their long term savings to purchase homes. This plays a limiting role on the housing demand while the age for home ownership with savings rises.

It is expected that the housing inclinations and habits in Turkey will change as a result of the economic stability and the establishment of the new housing finance system, and that the mortgaged housing loans will become the most important determining factor. As a matter of fact, the main goal of our study is to examine the effects of the new housing finance system on the housing demand.

#### **I.4.2. INCOMES AND SAVINGS OF THE HOUSEHOLDS**

The second factor that influences and determines the housing demand is the incomes and savings of the households. In the economical sense, demand is a function of income. Therefore the income sizes and income structures of the households are a determinant of the housing demand.

The income and expenditure structure of the households in Turkey is analyzed in this part of the study, making use of the Household Consumption Expenditures Inclination Study 2004 and the Household Budget Survey conducted by the TSA.

The main goal of these calculations is to establish the annual and monthly incomes, expenditures and savings capacities of the households according to their income groups. The income and spending structures and savings capacities of the households are direct determinants of the housing demand as well as determinants in the predictions for housing loan utilizations under the new housing finance system and the resulting housing demand.

The household consumption expenditure surveys and budget surveys of the TSA include both the urban and the rural areas. Therefore, the analyses and evaluations contain the total households, urban and rural. According to this data, there are 17.1 million households in Turkey in 2004.

The income, spending and savings structures according to 20 percent income groups are presented in Table.15. First of all, we realize that there are significant differences in the incomes and spending among the income groups. The shares of the income groups within the total incomes and spending are presented in Table.16.

**TABLE. 15 THE INCOME AND EXPENSE STRUCTURES OF THE HOUSEHOLDS ACCORDING TO INCOME GROUPS IN TURKEY 2004 (IN YTL)**

INCOME AND SPENDING INDICATORS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20	TOTAL
NUMBER O HOUSEHOLDS	3.419.367	3.419.367	3.419.307	3.419.307	3.419.307	17.096.535
ANNUAL INCOME PER HOUSEHOLD	3.863	6.840	9.735	13.999	29.539	12.795
ANNUAL SPENDING PER HOUSEHOLD	4.909	6.884	9.180	12.115	20.280	10.673
MONTHLY INCOME PER HOUSEHOLD	322	570	811	1.167	2.462	1.066
MONTHLY SPENDING PER HOUSEHOLD	409	574	765	1.009	1.690	889
ANNUAL SAVINGS PER HOUSEHOLD	-1.046	-44	555	1.884	9.529	2.122
MONTHLY SAVINGS PER HOUSEHOLD	-87	-4	46	158	772	177

SOURCE: HOUSEHOLD CONSUMPTION EXPENDITURES INCLINATION STUDY 2004, TSA

**TABLE. 16 THE SHARES OF THE HOUSEHOLD INCOME GROUPS IN THE TOTAL DISPOSABLE INCOME AND EXPENDITURES 2004**

	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
PERCENTAGE SHARE OF DISPOSABLE INCOME	6.0	10.7	15.2	21.9	46.2
PERCENTAGE SHARE OF EXPENDITURES	9.2	12.9	17.2	22.7	38.0

SOURCE: HOUSEHOLD CONSUMPTION EXPENDITURES INCLINATION STUDY 2004, TSA

The total consumption expenditures of the lowest and low 20 percent income groups are above their total incomes as of 2004. Therefore, both groups are unable to save and have to borrow to cover their savings deficit. The incomes and expenditures of the 20 percent medium income group households are close to one another, and their savings capacity is very limited.

As we evaluate the income and spending structures of the 20 percent high income group, we notice that the incomes of these households cover their expenditures and that they have a savings capacity. However the savings capacity of this group is not sufficient enough to make use of the housing financing system either.

The top 20 percent households that make up the highest income group have a significant savings capacity. The present income, spending and savings structure of this income group enables households to utilize the housing finance system. Controversially, this income group has a high rate of home ownership ratio at the same time, negatively affecting their housing demand despite of their income structure.

Nonetheless, our study includes predictions until the year 2015. Therefore, the developments in the income/expense structures and savings capacities of the households for the upcoming 10 years will be of greater importance. Such predictions are presented in the third chapter of our study.



## ■ Chapter II

# THE HOUSING FINANCE SYSTEM AND ITS GROWTH POTENTIAL 2015

## INTRODUCTION

The new housing finance system is examined in detail in this second chapter and its growth potential is revealed until the year 2015. To this end, the new housing finance system and its corporate mechanisms are evaluated before all else. Within this framework, we introduce the rationale and aim of the new housing finance system, examine its legal and corporate framework, evaluate its financial mechanism, analyze the international markets in housing finance and draw comparisons. Later, we examine the environmental conditions for the resource generating potential of the new housing finance system and make predictions.

## II.1. THE NEW HOUSING FINANCE SYSTEM AND INSTITUTIONAL MECHANISMS

### II.1.1. THE RATIONALE AND AIM OF THE NEW HOUSING FINANCE SYSTEM

An effective and functional housing finance system responding to the households and consumers who need or demand housing has not been established in Turkey so far. There are various economic, social, legal and institutional reasons for this. The new housing finance system aims at establishing an effective and healthy platform for households and consumers that need and/or demand housing in this context.

The new housing finance system primarily intends to secure favorable financing conditions that will make it possible for the households to own housing with long-term payment conditions that are compatible with their incomes. The financing system is prepared for this purpose. With the new housing finance system, the financial system is becoming the leading factor in the housing sector, as is the case in international markets. Nonetheless the new financing system is related to the financing of the housing demand only. However the system is indirectly financing the housing supply as well.

The new housing finance system undertakes the function of acting as a bridge between the savers and home buyers. A legal and institutional mechanism that aims at transferring the longer term and cost-effective funds of the savings market to the home buyers that are in the need of long-term housing finance is being established. The financing system is planned to have a structure that is sensitive to personal necessities and resources, that constantly transfers cost effective funds to the housing sector, and that is compatible and integrated with the international financial markets. In this way the system will be able to create funds perpetually and in increasing amounts.

The maturity of the funds that will be created and used in the new financing system will be long dated. This structure will cause the system to reach equilibrium in the long term.

While the market actors in the financial system will work with long term projections, secondary effects on the financial sector will include the increase in the quality of the housing loans extended in the primary markets, the expansion of the housing loans, the development of the futures market, the development of institutional investors





who have long term investment needs like pension funds, the diversification of capital instruments, the deepening of the markets as well as the increase in insurance products (ownership, credit, life, calamity insurances) and premium production.

The new housing finance system aims at creating an effective financial model which will result in a healthy relation between the housing demand and the housing supply. This new system will function under competitive market conditions and will cause the housing supply and demand to be realized under market conditions. The housing prices will also be shaped in an effectively functioning market.

Consequently, the need for housing of quality and standards foreseen by the financing system will be met, while the new financing system will contribute to the production of healthy housing and healthy urbanization by making housing of such quality affordable.

The unfair competition caused by the elasticity in the unregistered functioning of the housing sector up to now will be curtailed and the housing sector will become a sector functioning in a registered manner. The establishment and activation of the new housing finance system will have a positive effect on economic growth as well. We anticipate that the creation of a sufficient housing supply of minimum standards to meet the housing demand that is backed by a healthy financing system will support the acceleration of economic growth by triggering the construction sector and other sectors triggered by the construction sector, creating a multiplier effect.

The necessity of the new system to work in a registered manner will cause an expansion in the tax bases of the construction and housing sectors and an increase in the tax revenues. The expansion of the construction sector in a steady and stable manner will result in an increase of the employment created by the sector.

#### **II.1.2. THE LEGAL AND INSTITUTIONAL FRAMEWORK OF THE NEW HOUSING FINANCE SYSTEM**

The Capital Markets Board has developed a model for the establishment of the new housing finance system, based upon long term studies with high participation, and a draft Law has been prepared. This draft anticipates several changes and supplements in the present laws and draws the legal and institutional framework for the new housing finance system. According to this draft Law the main factors that are included in the legal framework of the new housing finance system and that constitute the institutional structure and mechanisms are;

Housing Finance, Housing Finance Institutions, Primary Market Mortgaged Housing Loans and their Utilization, Instruments of the Mortgage Capital Market, Mortgage Financing Institutions, The Protection of Consumers who Use Housing Finance, The Acceleration of the Follow Up Process of Mortgage Backed Credits, The Arrangement of the Persons and Establishments who will Execute Real Estate Valuations, Various Tax Arrangements as well as The Supporting of the System and the Arrangements that will be made by Other Institutions.

##### **I. Housing Finance**

Housing finance within the new housing finance system is defined to include;

- Loans granted for acquiring housing (finished houses, houses that are in the project stage),
- Home rentals to consumers through financial leasing (alternative financing),
- Home equity loans extended using customer's own homes as collateral,
- Loans used for the re-financing of the loans included herein.

The use of resources to finance housing construction is also included in the context of the housing finance system. The draft that organizes the new system makes it possible for the housing finance institutions to use tax incentives and take advantage of the facilities of secondary markets through securitization in order to promote the financing of houses under construction or in the project stage.



Granting loans to the consumers to renew and strengthen their homes by collateralizing their existing home is also included in the framework of housing finance. (Supporting the home owners against earthquake risks, allowing urban transformation and regeneration projects to benefit from the system). The sale on credit terms of the housing constructors is not defined as housing finance.

## 2. Housing finance Institutions

The institutions that will grant loans to the consumers directly in the primary markets are defined as Housing Finance Institutions in the housing finance system. The Housing Finance Institutions are the following:

- Banks that grant loans to the consumers directly or through financial leasing for housing finance purposes,
- Financial leasing institutions that are deemed fit to deal in housing finance activities by the Banking Regulation and Supervision Agency,
- Financing companies.

Financial leasing institutions and financing companies will not be able to perform any transactions during the first 2 years. They will be allowed to take part in the system after the formulation arbitrage among them is overcome. These institutions will eventually extend the funds they obtained in the capital market to the use of consumers without collecting deposits, and will attract the domestic and foreign capital owners who wish to specialize in housing loans to the market.

The financing companies have a structure that is adequate to make it possible to enter the housing finance market for the domestic and foreign capital owners who wish to specialize in housing loans but do not wish to shoulder the responsibilities of becoming banks.

## 3. Primary Market Mortgaged Housing Loans and their Utilization

The new system brings new formulations for the granting of loans by the banks, financial leasing institutions and finance companies that are authorized to grant housing loans in the primary market. The main purpose of these new formulations is to have these institutions grant adequate loans that are compatible with the new housing finance system in the primary market. Accordingly, the use of mortgaged housing loans in the primary market within the framework of the new system will be as follows:

The consumer who wishes to purchase a home will, first of all, apply for a loan directly or through a real estate broker. The housing finance institution that will grant the loan measures the credibility of the consumer in the context of the preliminary loan application. The size of the credit that can be granted to the applicant as well as the interest rates and credit pay-back terms will be calculated and handed over as a 'pre-contract information form' to the loan petitioner. The repayment capacity of the consumer is usually calculated as 30 – 40 percent of his monthly income.

The consumer learns about his credit usage and repayment capacity from the document he receives from the housing finance institution and begins his search to buy housing accordingly, directly or through an agent. When he finds the appropriate house he reaches an agreement with the owner and makes a down payment. Then the consumer returns to the housing finance institution. He secures the title deed and technical information about the house and applies for the final loan.

At this stage, the financing institution examines the deed and technical information, decides on its appropriateness (whether it is a freehold flat), and appraises the price of the home in-house or through a specialized appraisal institution. The financial institution then composes the loan that will not exceed 70 – 80 percent of the home value and that is compatible with the repayment capacity and requests of the consumer related to the maturity, interest and pay-back plan, and informs the consumer that his loan application has been accepted.



The consumer whose loan application has been accepted signs a sales agreement with the home owner (the person selling the housing unit) and informs the housing finance institution. The final sales agreement is actualized by the financial institution. The financing institution places a lien on the title deed; the consumer who purchases the house pays the down payment (20 – 30 %) which is the loan balance to the owner; the financing institution pays the owner an amount equal to the loan and the sale with a mortgaged loan is completed.

While the consumer who uses the credit becomes a home owner, the financial institution includes the agreement that arranges the credit in its valuable papers portfolio and uses it as guarantee to obtain re-financing within the framework of the system.

#### **4. Instruments of the Mortgage Capital Market**

The mortgage capital market instruments within the framework of the Capital Market law are:

- Covered bonds,
- Asset backed securities,
- Housing financing fund,
- Asset financing fund.

##### **Covered Bonds (CB)**

CB's are certificates of debt issued against the assets in the pool of collaterals that have the characteristic of general obligation of the issuers. The CB's that are arranged within the new housing finance system are frequently used in the Continental European systems and capital markets. The arrangement is similar to those in developing countries whose housing finance systems are developed and are working on establishing an institutional housing finance system. The CB's can be issued by housing finance institutions and mortgage financing institutions. Their most important characteristics are:

- The claims that result from housing finance remain in the balance sheet of the issuer, and the issuer provides guarantees against credit risks.
- The assets that are used as collaterals for the securities can precisely be differentiated from other assets.

The issuers are responsible for monitoring the assets collateralized against the loan placed in a pool of collaterals created separate from other assets. The assets in the pool of collaterals cannot be sequestered in any way by the other creditors of the issuer, including the claims of public organizations.

The pool of collaterals consists of receivables put under cover by mortgaging houses and other real estate whose building utilization permits are taken, substitute assets and agreements made to protect them against risks. The shares of secondary and tertiary components in the pool of collaterals cannot exceed 15 percent separately. Assets and receivables that do not fall into these categories cannot be included in the pool of collaterals.

The receivables to be put under cover by mortgage cannot exceed 75 percent of the value of the related house whose construction permit is issued, and 50 percent of the value of other real estate whose residence licenses are issued. The substitute assets that can take place in the pool of collaterals are cash, government securities, securities issued with the guarantee of the treasury, securities issued by or guaranteed by the governments and Central Banks of the OECD countries.

The issuers can make contracts to protect the assets in the pool of collaterals against risks like interest rate, rate of exchange, credit and the like; such contracts are also included in the pool of collaterals. The issuers can assign a pool guarantee attendant upon the permission of the Capital Markets Board.



### **Asset Backed Securities (ABS)**

These are certificates of debt that have the characteristic of being general obligations of the issuers and that are issued against fixed assets.

The ABS are issued against receivables excluding housing finance and project credits. The Capital Markets Board will determine the institutions that can issue ABS, their issuing limits, their issuing conditions, the kinds of receivables and assets that can be used as collateral, the limitations about these assets, the procedures and basis to be used for the evaluation and reporting of the receivables and assets used as guarantee.

### **The Housing Financing Fund (HFF)**

These are the assets formed based on the fiduciary ownership of the mortgage backed security owners with the funds collected in return for the covered bonds that are issued.

The founders of the fund act as intermediaries in the payment of the credits and related transactions contained in the portfolio of the fund. All the procedures and basis related to the fund founding limits, the kinds of assets that can be included in the fund portfolio including the contracts made to protect the portfolio against risks or those aimed at increasing the credit worthiness, limitations about the portfolios, the issuing and registration of asset based mortgages are to be determined by the Capital Markets Board. The founders may guarantee the covered bonds that are issued. It is anticipated that the HFF will create funds in the capital markets by bounding the receivables that emanate from housing finance to securities.

The HFF will be funds that have a special structure that the issuers will create outside their balance sheets. The HFF will create liquidity through the buying and selling of the covered bonds that they will issue and that will be given share rights in the fund portfolio and will finally ensure resources with lower costs for the financing of housing. The main purpose for developing HFF is the detachment of the related assets from the assets of the founder and the protection of these assets in case the founder goes bankrupt. The HFF will be funds of a special structure that will be created outside the balance sheet of the issuers. The HFF assets will only be used to pay off the investors that invest in the covered bonds issued by the related housing financing fund.

The HFF does not have an incorporated body, but its assets are separate from the assets of the founder. Their design is similar to Securities Investment Funds, but while the SIF issue participation certificates the HFF will issue covered bonds. These bonds can be traded in secondary markets. The HFF can issue covered bonds of different classes for certain parts of their receivables. There could be security issues of different types in the same pool of collaterals. A mortgage backed loan or the receivables that result from a financial leasing contract whose subject is real estate can be included in the portfolio of the fund.

The assets of the fund cannot be used for other purposes, cannot be hypothecated, cannot be lodged as security, cannot be sequestrated even for public claims, cannot be granted injunctions and cannot be included in the bankruptcy assets until the securities issued are redeemed.

### **Asset Financing Fund (AFF)**

These are the assets formed based on the fiduciary ownership of the asset backed security owners with the funds collected in return for the asset backed securities that are issued. The assets that can be included in the AFF portfolios will be specified by the Capital Markets Board.

AFF will also be an asset that can be used for securitization purposes. But unlike the HFF, there will be a mechanism that will transfer the earnings to the investors without holding the earnings in the fund.

### 5. Mortgage Financing Institutions (MFI)

These are secondary market institutions that will play a central role in the new housing finance system by providing direct financing to the consumers -including banks- and resources to the housing finance institutions.

The MFI will be incorporated companies that have the attributes of capital market institutions founded to secure resources by exclusively taking over the receivables emanating from the financing of housing, their transfer, the management of the assets that are taken over, and the putting under cover of the receivables. MFI will provide a liquidity function through the buying of credit portfolios and purchase and sale transactions and may issue securities by the taking over of credit portfolios.

The basis of the founding permits, the activities, and the liabilities they will be subjected to will be arranged by the CMB depending on the opinions of the BRSA. If a bank has a 51 percent or larger share among the founders of the MFI, the founding permit will be given by the BRSA. The initial capital of the MFI will be the same as the initial capital for the Investment and Development Banks determined by the Banking Law numbered 5411. This amount is 20 million YTL for the time being.

In case assets are acquired from mortgage financing institutions by using the receivables and other assets that emanate from housing finance as collateral, these assets cannot be used for other purposes, cannot be hypothecated, cannot be lodged as security, cannot be sequestrated even for public claims, cannot be granted injunctions and cannot be included in the bankruptcy assets.

### 6. The Protection of the Consumers who use Housing Finance

Arrangements are being made for the expansion of the facilities offered to the consumers in the new housing finance system and for their maximum protection. The consumer protection code issued by the EU in the year 2001 is taken as a basis. According to this, amendments that will be made in the law about the protection of the consumers are aimed;

- To make the use of variable-interest rate housing loans possible,
- To make it possible for the party that grants the loan to receive an early payment fee in fixed-interest housing loans,
- To make it possible for the consumers who receive housing finance through financial leasing to be subject to formulations similar to the consumers who use credit,
- To make the use of the "pre-contract information form" that will be given by the housing finance institution to the consumer obligatory and standard,
- To revert to execution procedures in the pay-back of loans if the consumer fails to make payments for at least two consecutive months by informing him one month in advance.

The housing financing institutions will be jointly responsible to the consumer up to the amount of the loan they granted for 1 year after the date of delivery of the house, together with the seller and other responsible parties, in case the "house is defective".

The housing financing institutions will be jointly responsible with other related parties for one year after the delivery of the house, up to the amount of the loan they granted, in case the house is delivered late or not delivered at all, if they granted the loan for the purchasing of a specific house or with the provision that a sales contract is drawn with a specific seller. The investors who invest in the securities whose issuing is arranged with the housing finance system will also be protected. In relation to the securities the investors have invested in, the investor protection fund will step in and the investors will be compensated under optimum conditions in case the issuer of the securities goes bankrupt, or the payout is delayed or not made at all.



### **7. Accelerating the Follow Up Process of Mortgage Backed Credits**

In case the resources provided to consumers for housing finance against mortgages are not paid back, the period for converting such mortgages into cash is aimed to be shortened as a result of some changes that will be made in the execution and bankruptcy law. To quicken the process, it is made possible to use the direct sequestration option before following up the pledge realization procedures. The two options will not be used together.

### **8. The Arrangement of the Persons and Establishments who will Execute the Real Estate Valuations**

Real estate valuation is needed in two stages of the housing finance system.

- For evaluating the value of the real estate and its sales ability correctly when granting the loan,
- At the foreclosure stage when the loans are not paid back, a valuation should be made on the real estate before it is put out to tender for sale.

In this context, the job of preparing and publishing regional and country-wide statistics about real estate prices was added to the duties of the Union of Turkish Evaluation Experts.

### **9. Various Tax Incentives and the Supporting of the System**

Various tax incentive arrangements will be made to support the effective functioning of the housing finance system:

- The earnings of the housing financing funds and the asset financing funds will be exempt from corporate tax and income withholding tax.
- The tax deductions on the revenues generated by the mortgaged capital market instruments that are issued by mortgage financing and housing financing institutions will be actualized according to the 94th article of the Income Tax Law. The present deduction rate is 25 percent according to the 94th article, and the Cabinet has the authority to pull it down to zero.
- The tax deductions on the portfolio management revenues of housing financing funds and asset financing funds will be 15 percent. In order to avoid double taxation, the interest paid on the securities issued by housing financing funds and asset financing funds will not be filed, and no withholding tax will be deducted from their periodic yields.
- The revenues the mortgage financing institutions obtain from the securities they issue during their foundation or they obtain from the emission premiums during recapitalization will be exempt of bank and insurance turnover tax.
- All the housing finance transactions made by the housing financing institutions and mortgage financing institutions, as well as by financial leasing institutions in the context of housing finance will be exempt of land registry charges.
- Records about housing financing transactions of the housing financing institutions and all sorts of records of mortgage financing institutions and housing financing funds, including their establishment, will be exempt of stamp tax.

Apart from these arrangements, two important tax incentives have not been included in the system. These are:

- The deduction of the interest repayments from the income tax base of the mortgagees,
- The tax exemption on the revenues from the mortgaged capital market tools.

### **10. The Arrangements that will be made by Other Institutions**

There are some arrangements other institutions have to make so that the new housing finance system will work effectively. These are:

#### **a. BRSA**

The arrangement about the 2 years transition period needed for financial leasing companies and financing companies to remove the arbitrage differences among the housing finance institutions. The arrangement in the capital adequacy regulations of the banks about the weighted risk burdens of the mortgaged loans.



**b. Under Secretariat of Treasury**

Defining the procedures and basic principles for the new kinds of insurances necessitated by the housing finance system.

**c. Central Bank**

The procedures and basic principles about the indices to be used for variable rate housing loans. Necessary amendments about the general availability and statutory provisions communiqués of the banks that grant housing loans.

**d. Ministry of Industry and Trade**

Preparing the standards for the pre-contract information form and the information form about the variable rate loans to be given to consumers.

**e. Registration and Fees Administrations**

Updating the land registries in the necessary regions, making the transfer of mortgages easier, centralizing the records of the land registries.

**f. Ministry of Public Works**

Minimizing the bureaucracy to receive building utilization permits on and establishing an effective infrastructure. Working in cooperation with local administrations.

**g. Ministry of Internal Affairs**

Establishing the necessary capacity and infrastructure for procuring the speedy and reliable transfer of the information from local authorities for use in legal proceedings for housing financing claims and for valuations prior to the granting of the loan by housing financing institutions.

**II.1.3. THE FINANCIAL MECHANISM OF THE NEW HOUSING FINANCE SYSTEM AND EVALUATION**

The basic targets of the new housing finance system that is established in Turkey are: the establishment of primary and secondary markets, the effective working of the housing finance institutions in these markets, and the establishment of financial flows between the resources of the savers and the consumers that will use housing credits through the use of credits and capital market tools. This structure constitutes the financial mechanism of the new housing finance system.

**II.1.3.1. The Financial Mechanism of the Housing Finance System**

The financial mechanism of the housing finance system consists of two prime markets. These are the primary market and the secondary market.

**Primary Market, Institutions and Financial Flows**

There are the housing finance institutions and consumers (and housing constructors) in the primary market. The banks, financial leasing institutions and financing companies that make up the housing finance institutions grant mortgaged housing loans to the consumers. The institutions that grant direct housing loans to consumers are limited to these three. The only financial flow in the primary market is the mortgaged housing loans that the housing finance institutions grant to the consumers.

**Secondary Market, Institutions and Financial Flows**

The basic function of the secondary market is to allow housing finance companies that grant mortgaged housing loans in the primary market to have re-financing opportunities.



In order to execute this function, the secondary market contains housing financing institutions, capital market instruments, mortgage financing institutions and investors. The housing finance institutions in the secondary market which consist of banks, financial leasing institutions and financing companies provide re-financing through three different methods. These are:

- Issuing covered bonds using the mortgaged housing loans as collateral,
- Selling the mortgaged housing loan portfolios to the mortgage financing institutions,
- Selling the mortgaged housing loan portfolios to the housing funds founded by themselves or third parties as well as to asset financing funds.

Issuing covered bonds, against the collaterals of the mortgaged housing loans the housing finance institutions granted themselves, is the most widely used method in Continental Europe and in the international markets. We anticipate that this will be the most widely used method in Turkey in the secondary markets and in the new housing finance system. The covered bonds are the investment tools that are preferred the most by the investors in the housing finance system. The selling of the mortgaged housing loan portfolios by the housing finance institutions is part of the securitization process in the secondary markets. While the housing finance institutions acquire the possibility of re-financing through this method, they also transfer all their liabilities to the institutions that buy their receivables portfolios.

The institutions that buy the mortgaged housing loan portfolios of the housing finance institutions and that provide re-financing for them are primarily the mortgage financing institutions, the housing financing funds and the asset financing funds.

The mortgage financing institutions and housing financing funds securitize the mortgaged housing loan portfolios they have purchased and issue asset backed securities. While both institutions offer investment alternatives to the investors in this way, they are also creating financial resources for the housing financing institutions that they can transfer (to buy new mortgaged housing loan portfolios). The asset financing funds also create financial resources by issuing securities backed by other assets to be used for the purchasing of the mortgaged housing loans of the housing financing institutions.

The mortgage financing institution is foreseen as the institution that will function in the secondary market and that will assume a central role and function in the system. Nonetheless, since their initial capital is high, the mortgage financing institutions will play limited roles in the first stage.

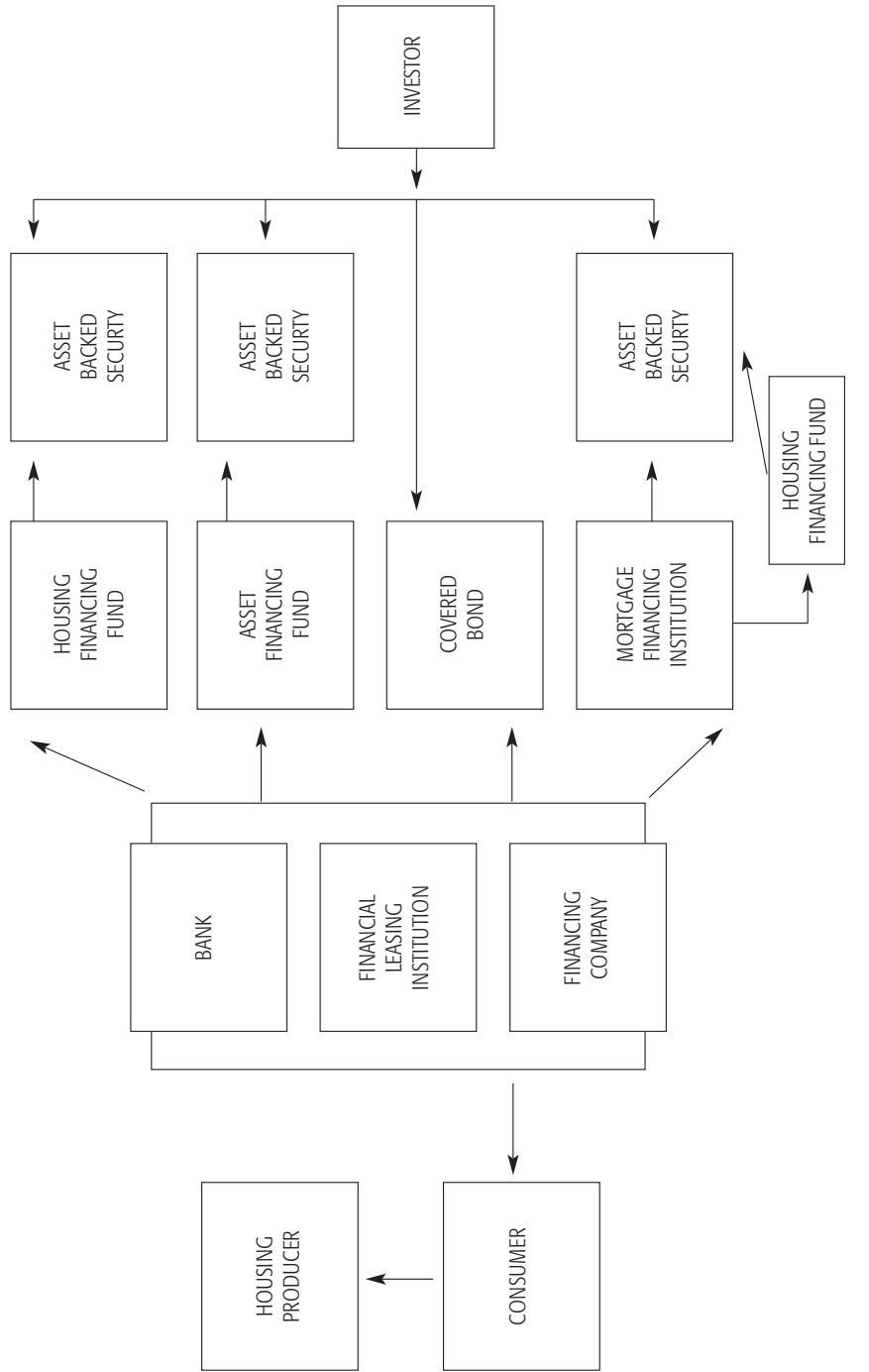
One of the most important components of the secondary markets is the investors that have the capacity to grant especially long-term funds. The most important characteristic that differentiates the housing finance system and its secondary markets from other systems and their secondary markets is that the funds are long term. Therefore, corporate investors with long-term funds who will make long-term investments gain importance in the secondary markets. Central Banks, Insurance Companies, Pension Funds and Investment Funds will become the most important corporate investors. It will be important for the corporate investors that the tools they invest in be purchasable and sellable; meaning that the existence of liquid markets that work effectively and that have a depth will also be important.

### **II.1.3.2. Evaluation of the New Housing Finance System and its Financial Mechanism**

We are evaluating the new housing finance system and its financial mechanism. The main purpose of this evaluation is to foresee the restrictions, limitations, and shortcomings that will keep the system from functioning



**THE FINANCIAL MECHANISM OF THE NEW HOUSING FINANCE SYSTEM**





and to prepare a healthy study in order to calculate and predict the resources the system might create until the year 2015. We gather the evaluations under three headlines.

#### **The Financing System and Financial Mechanism**

- The housing finance institution that will direct the housing finance system and secure its development will be the banks. The transactions of the financial leasing institutions and financing companies will be limited.

- The banks will prefer to grant mortgage housing loans in YTL in the primary market. They will grant mortgaged housing loans in foreign currencies depending on the re-financing possibilities. But the preferences of the consumers will be towards YTL loans.

- The preference for YTL credits in primary markets within the housing finance system will increase the long-term YTL fund needs of the banks, and will cause the transactions in the secondary market to be predominantly in YTL.

- In this context, the issues of covered bonds and asset backed securities in the secondary market will predominantly be in YTL. Banks will choose to avoid foreign exchange risk in the primary and secondary markets. Nonetheless, securities will also be issued in hard currency.

- In the first stage, the system will create funds through the issue of securities, especially through covered bonds issued by banks.

- We predict that in the first stages the system will create long-term funds primarily from foreign investors. In this case the banks will issue securities abroad and at home or directly aimed at investors abroad.

- The currency in which securities are issued becomes important. In case of long-term issuing in YTL, we observe that the credibility of Turkey and of the banks are suitable for using long-term resources, subject to restrictions, and that the banks do not have any difficulty in obtaining foreign exchange credits from international markets, however restrictions in obtaining YTL funds exist.

There are restrictions in reaching the long-term funds needed for the housing finance system as well. Nonetheless, the YTL issuing of especially foreign banks abroad that amount to 9 million YTL is an important indicator.

- Nonetheless, because of the (warranty promise) attributes of the securities that will be issued in the housing finance system, funds that have a superior grade than the country risk (credit rating) of Turkey will be provided.

- In domestic issuing, the long-term fund creating capacities of the corporate investors in Turkey and the investment appetite of the investors for the financial tools of the housing finance system will be the determining factors. The limits of the fund raising capacities of corporate investors in Turkey are definite. Foreign investors will most probably also participate in domestic issuing (in YTL).

- The interest rates the securities will bear will determine both the costs of the issuing institutions and the yields of the investors. The interest rates of the covered bonds in the international arena are usually above those of the public securities and below those of the private sector securities. The yield curve gains importance as the securities are long-term.

- The public securities and the public securities market in Turkey is the most important competitor in procuring the liquidity for these tools and their trading in the secondary market. The private sector securities market has not yet come into being in Turkey. Therefore domestic investment and the creation of the secondary market will be constrained. But according to the advantages of the investment and yield curves, the corporate investors will invest in these long-term tools.

- There is no tax exemption on the earnings that result from investing in these tools according to the present tax arrangements. This tax hurdle will limit the domestic investment in covered bonds and the development of the secondary market and the issuing and investments will mostly shift abroad.

- The amendments related to banks will be effective on expanding the credit volume of especially the primary market and the re-financing possibilities from the secondary markets. The risk weight of the mortgaged housing loans (it will be 50 percent) will be important for the banks in the arrangement of capital adequacy. The



restrictions on the foreign exchange position arrangements which determine the balance between foreign exchange assets and liabilities will determine the preferences of the banks for the currency used in issuing mortgaged housing loans and mortgage backed securities, or size and currency preferences in selling their mortgaged housing loan portfolios.

- The forming and the issuing of covered bonds that are supposed to be the most important tools of the secondary market within the housing finance system, acting as intermediaries for issuers, creating and selling the intermediary collaterals as well as reaching the investors are new fields for Turkey that require specialization. We observe that the leading banks in the international arena are going into operation in Turkey in order to act as intermediaries in the issuing of especially covered bonds within the housing finance system and to canalize the foreign investors to invest in Turkish securities. We predict that the Turkish institutions will become specialized in this matter in time, but that the foreign institutions will act as intermediaries in the issuings abroad, especially at the preliminary stage. We also foresee that the issuing will predominantly be in the form of public offering and will also entail private placements. Their issuing sizes and coupons will be in smaller scales.

- The credit ratings of the Turkish banks are not very favorable for long-term YTL based direct borrowing. However the Turkish banks are able to securitize their credit card claims to gather foreign exchange resources abroad and convert them into YTL. The banks that do not wish to shoulder foreign exchange risks engage in swap tradings with the banks that have the capacity to shoulder these risks and turn their foreign exchange borrowing risks into YTL. The trading volume of the long-term swap market in YTL has reached a volume of 5.6 billion dollars as of the end of 2005. However, the swap tradings the banks perform for the financing of especially housing loans are approaching their limit and it may not be possible to use this method for borrowing any more.

- It is not very attractive to establish mortgage financing institutions under the present market conditions. Their initial capital is very high and they will probably be established by banks or finance holdings. Since it is possible for the banks to borrow directly in the secondary markets, it is not attractive for foreigners to establish such an institution in Turkey in the short and medium term and pay high corporate taxes. The foreigners will also prefer to make use of financing in places where tax advantages exist. The banks also have the possibility of selling their mortgaged housing loan portfolios directly abroad.

- We anticipate that the main development in the housing finance system will be as follows during the upcoming 10 years:

- The mortgaged housing loans of the banks will expand while other housing financing institutions will have a limited growth,

- The issuing of the covered bonds of the banks will expand,

- Mortgage financing institutions will be established in the medium term with the collaboration of the banks and the participation and partnership of foreigners.

- The issuing of covered bonds will also be predominantly abroad at the preliminary stage. The investment feasibility for the foreign investors thus becomes important.

- The quality of the mortgage loans portfolio that holds the securities and their risks will determine the credit rating of the securities issued, rather than the risk of the issuer (the country). In this context, while Turkey's credit rating is BB, the issues may be BBB+ or even higher. Institutions in Turkey will be able to find YTL funds abroad at a credit risk spread close to those of the developed countries.

- In issuings to abroad, the covered bonds market is growing rapidly especially in Europe. Many different issuings are made. In order for them to prefer Turkish securities, their yield/risk/maturity terms should be advantageous.

- We predict that among the housing finance institutions, the banks will use their low risk mortgage credits as collaterals for the issuing of covered bonds, and a high percentage of them will be issued to abroad, and that they will sell their credit portfolios consisting of mortgaged loans with a higher credit risk domestically and to the mortgage financing institutions.



● In the housing finance system, at the preliminary stage and in the medium term (the first 5 years) issuing to abroad, foreign funds and foreign investors will be more effective and determining. But to work in an effective and healthy manner and to be sustainable, the system should depend on YTL based local resources in the medium-long term.

#### **The Structure of the Housing Sector and the Need for Change**

- There will be limitations on the supply and construction of houses suitable to meet the qualification requirements of the mortgaged housing loans.
- As a result of the developments in the financing of the housing demand within the context of the housing finance system, a large volume financing will be needed for housing supply and construction. This may restrict the housing supply.
- There might be a discrepancy between the present unregistered structure of the housing sector as well as the preference to remain unregistered, and the necessity of the housing finance system to work in a registered manner.
- The valuation of the housing units that will be subject to mortgaged housing loans, their registration, their mortgage values, and taxation based on these values are dissuasive factors.
- While the houses have to have legal flat ownership in the case of mortgaged housing loans, the housing units that were built in return for the land they are built on, without zoning plans nor construction permits, which have floor easement will not qualify for housing loans. This will constrain the housing sector to conform to legal and technical standards.

#### **Economic Stability**

Economic stability is an unavoidable and unconditional necessity for the establishment of a healthy housing finance system, and for obtaining the desired benefits as a result of the effective functioning of the system. If economic stability disappears the system will not function and it will not yield the intended gains.

- Price stability and low inflation rates (3-4 percent) constitute the bases for economic stability.
- The value of the YTL in the economy should be stable and predictable; the fluctuations in the exchange rates should be temporary and limited.
- The nominal and real interest rates in the economy should be close to the international acceptable rates.
- The possibilities for making medium and long term predictions in the economy should be expanded, the economic activities and especially financial operations should be shifted from being short term to being medium-long term.
- The risks and risk premiums should decrease together with economic growth and stability, and the credit ratings of Turkey and her institutions should reach a grade favorable for investments (BBB).

#### **Evaluation of the Tax Incentives**

The new housing finance system contains various financial transactions, flows and earnings and these are subject to various taxes. In order for the housing finance system to grow and function effectively, tax arrangements and tax incentives are of high importance especially during the initial phases of the system.

In its present form, there are three important areas within tax arrangements pertaining to the housing finance system where the tax incentives are necessary but insufficient.

- The interest payments on the loan repayments of consumers who use mortgage credits are not deducted from their income tax. Thus, there are no incentives to mortgagees. Tax incentives are crucial, at least up to a certain point for first-time home purchases.



- There are no exceptions in the taxation of the earnings on securities issued in secondary markets. As such, the investors who will invest in these tools are not being promoted. Investments in these tools should be encouraged through tax exemptions.

- No tax exemptions or deductions are offered for the activities of housing finance institutions and mortgage financing institutions either.

Taking this structure into consideration, there is a high probability and risk that issuings, investments and activities will concentrate abroad where there are taxation advantages.

#### II. I. 4. INTERNATIONAL MARKETS IN HOUSING FINANCE

The basic aim of this study is making predictions for the financial opportunities the new housing finance system being established in Turkey will generate until the year 2015 and their effects on housing demand.

In this context, the developments and trends in the international markets and the market sizes reached in housing finance will set a pattern for Turkey.

The new system that is being established in Turkey is closer to the system in Continental Europe. Therefore, the European markets are given priority in our analysis within international markets.

As the new system in Turkey is predicted to be more dependent on and closer to international funds at the preliminary stage, the study of international markets becomes important. We observe four trends related to housing finance in international markets.

- The volume of the mortgaged housing loans is growing rapidly.
- The issuing of covered bonds in the secondary markets is expanding rapidly.
- The mortgaged housing loans in the primary market are being financed by covered bonds at an increasing rate.
- The issuings and investments in the secondary markets are gradually turning into cross-border activities of an international character.

In light of these trends, the developments in the international markets in Europe in housing finance are as follows:

##### **The Mortgaged Housing Loans Market**

The utilization of mortgaged housing loans in Europe is expanding rapidly. Between the years 1994 and 2004, the utilization of mortgaged housing loans has increased by 8 percent annually in the EU in general (EU-25). Compared to the average annual growth of 2.1 percent in the EU-25 during the same period, we observe that the volume of housing loans is growing rapidly in real terms.

The important reasons for this growth are the developments in the housing finance systems, the decrease in interest rates and the expansion of cross-border funding possibilities. The mortgaged housing loans in the EU-25 countries have reached a total of 4.67 quintillion euros in 2004, which constitutes 45 percent of the national incomes of the EU-25 countries. The new credit usage in 2005 was 525 billion euros, amounting to total mortgaged housing credits of 5.2 quintillion euros which consisted 49 percent of national income.

Table.17 displays the 2004 data about the mortgaged housing loans for the EU-25 countries. According to this table, Spain is the most rapidly growing country in the last 10 years following Germany, France and Holland; these countries are followed by Italy, Denmark with an especially effective system and Sweden with the largest credit stocks. The largest markets in terms of the ratio to GNP are Holland and Denmark.

**TABLE.17 EUROPEAN UNION MORTGAGED HOUSING LOANS 2004**

COUNTRIES	CREDITS BILLION EURO	GROWTH % 2004	CREDIT STOCK / GNP %	PER CAPITA CREDIT EURO
BELGIUM	88.4	8.2	31.2	8.506
CZECH REPUBLIC	6.6	34.9	7.6	644
DENMARK	174.3	6.0	89.7	32.292
GERMANY	1157.0	0.1	52.4	14.019
ESTONIA	1.5	57.3	16.6	1.110
GREECE	34.1	28.3	20.6	3.084
SPAIN	384.6	22.9	45.9	9.083
FRANCE	432.3	12.2	26.2	7.217
IRELAND	77.0	29.8	52.7	19.125
ITALY	196.5	13.4	14.5	3.395
CYPRUS	2.2	4.6	17.6	2.988
LATVIA	1.3	67.5	11.5	549
LITHUANIA	1.3	88.3	7.0	365
LUXEMBURG	8.8	12.3	34.3	19.480
HUNGARY	7.8	35.1	9.6	768
MALTA	1.3	20.6	28.6	3.090
HOLLAND	518.1	14.3	111.1	31.868
AUSTRIA	48.1	20.9	20.3	5.905
POLAND	10.7	22.9	5.5	280
PORTUGAL	70.8	6.9	52.5	6.762
SLOVENIA	0.4	30.3	1.5	194
SLOVAKIA	2.0	82.3	6.1	380
FINLAND	56.5	10.8	37.8	10.829
SWEDEN	147.2	10.0	52.7	16.396
ENGLAND	1243.3	11.1	72.5	20.835
EU-15	4566.2	9.6	46.4	11.931
EU-25	4670.7	9.7	45.3	10.223

SOURCE: EUROPEAN MORTGAGE FEDERATION

These two countries rank first in per capita loans as well. Except for Germany, Portugal, Belgium and Denmark that is reaching saturation, the credit volumes are growing very fast on a yearly basis. The growth rates of the newly established systems in the 10 new member countries are even higher.

We expect that the mortgaged housing loans market that has been growing rapidly during the last ten years as a result of the decrease in interest rates in Europe in general and the effective functioning of the systems will continue its growth. The interest rates that may rise as a result of inflationary pressures might limit the rate of growth.

Approximately 85 percent of the mortgaged credits granted in Europe are granted by banks while 15 percent of the loans are granted by specialized institutions. 70 percent of these loans are fixed-interest loans. The average maturity of these loans is longer than 10 years.

62 percent of the mortgaged housing credits granted in Europe are financed by deposits, 19 percent by covered bonds, 5 percent by direct savings, 12 percent by other covered bonds, and 13 percent are financed by other sources. Covered bonds have become the most important source of finance following traditional deposits.

#### The Covered Bonds Markets

Among international markets in general and European markets in particular, the fastest growing markets of the housing finance markets are the covered bonds markets.

Banks and other competent bodies that extend mortgaged housing loans provide re-financing by issuing covered bonds in increasing ratios. The maturities of the CB's are as long as 20 to 30 years. As a result of their high backing, these securities have become the most demanded and secure long term investment tools. Since they are guaranteed by collaterals which exceed their total value and since they provide mortgaged housing loan guarantees directly, the credit ratings of these securities may be higher than the credit ratings of the countries and the institutions that issue them. 90 percent of the CB's issued have an AAA credit rating, 7-8 percent have an AA rating and the rest have A and BBB credit ratings.

The CB's are issued mostly in cross-border and international markets and they are marketed in international markets in general. Specialized institutions act as intermediaries in their issuing. The financing that is provided with longer maturity terms is used for re-financing the mortgaged housing loans in the primary markets at lower costs.

The yields of the covered bonds that are issued in international markets are determined by the spreads that are added to the interest rates. But since the credit ratings and risks are close to each other, the yields are getting closer to each other gradually. In the issuings in the USA, spreads of 3/16 – 8/16 intervals (with at least 10 years maturity) are added to 6 months maturity LIBOR. In Eurobond quality issuings, spreads of 0.20 – 0.50 intervals (4 – 10 years maturity) are added to 3 months maturity LIBOR. Moreover, funding costs (0.25), insurance costs (0.25) and administrative expenses (0.25) are also added to the prices.

Issuings in the European market are predominantly in euros. Type A or benchmark covered bonds (the best bonds that are indicators of the market), with 5 – 10 years maturity (the market for 15 – 20 years maturity bonds is developing faster recently), with fixed annual coupon payments and jumbo type (1 billion euros and higher) are issued. In the European market, almost two thirds of the covered bonds (600 billion euros) are Type A bonds which have the most liquid secondary market investments in Europe following the public securities.

In Poland where the covered bonds market is newly established and developing, 5 year maturity bonds with BBB and A3 credit ratings are issued in euros, dollars and the local currency for private placement purposes mostly.

**TABLE.18 STOCKS OF COVERED BONDS (IN BILLION EUROS)**

COUNTRIES	2003	2004	2005
DENMARK	226.2	249.7	286.2
GERMANY	256.0	246.6	237.5
SPAIN	58.5	96.0	153.9
FRANCE	21.1	26.8	32.1
IRELAND	0.0	2.0	4.1
ITALY (1)	0.0	0.0	0.0
LITHUANIA	0.0	0.1	0.1
LUXEMBOURG (1)	0.0	0.0	0.0
HUNGARY	3.6	4.9	5.1
HOLLAND	0.0	0.0	2.0
POLAND	0.2	0.2	0.6
FINLAND	0.0	0.3	1.5
SWEDEN	81.6	81.4	92.8
ENGLAND	5.0	15.7	25.4
SWITZERLAND	30.3	28.7	29.0
TOTAL	682.5	752.4	870.3

SOURCE: EUROPEAN COVERED BOND FACTBOOK, ECBC 2006  
(1) They have Government Backed Security Stocks

**TABLE.19 COVERED BONDS ISSUINGS (IN BILLION EUROS)**

COUNTRIES	2003	2004	2005
DENMARK	99.7	95.0	149.7
GERMANY	57.6	40.8	33.7
SPAIN	30.4	37.6	57.8
FRANCE	6.2	5.7	6.4
IRELAND	0.0	2.0	2.0
ITALY (1)	0.0	0.0	0.0
LITHUANIA	0.0	0.1	0.0
LUXEMBOURG (1)	0.0	0.0	0.0
HUNGARY	3.0	2.4	0.8
HOLLAND	0.0	0.0	2.0
POLAND	0.1	0.1	0.2
FINLAND	0.0	0.3	1.2
SWEDEN	10.4	0.0	12.8
ENGLAND	5.0	10.7	9.7
SWITZERLAND	3.2	2.9	3.7
TOTAL	215.6	197.6	280.0

SOURCE: EUROPEAN COVERED BOND FACTBOOK, ECBC 2006  
(1) They have Government Backed Security Stocks

**TABLE.20 ISSUING CHARACTERISTICS OF THE COVERED BONDS 2005 (IN BILLION EUROS)**

COUNTRIES	JUMBO	NORMAL	EURO	LOCAL	OTHER	MATURITY YEAR
DENMARK	-	149.7	8.9	142.3	0.4	13
GERMANY	-	-	-	-	-	-
SPAIN	58.8	0.7	59.5	-	-	-
FRANCE	7.2	8.3	20.6	0.2	11.2	9
IRELAND	6.9	0.1	10.7	-	5.0	-
ITALY	-	-	-	-	-	-
LITHUANIA	-	0.1	-	0.1	-	-
LUXEMBOURG	-	9.6	2.5	0	7.1	21
HUNGARY	-	0.8	0.6	0.2	0	3
HOLLAND	2.0	-	2.0	-	-	-
POLAND	-	0.2	-	0.2	-	6
FINLAND	1.0	0.3	1.3	-	-	-
SWEDEN	-	-	-	-	-	-
ENGLAND	9.0	0.7	9.0	0.7	-	-

SOURCE: EUROPEAN COVERED BOND FACTBOOK, ESBC 2006

The covered bonds stocks in the EU in general are presented in Table.18. According to this table, the stock has reached 870.3 billion euros at the end of 2005. An important portion of the stocks are in Denmark and Germany. Spain is the country that is developing fastest in this area. France, Sweden and England are important countries as well. We can see that the stocks of the other countries are low since their systems are limited.

The issuing of covered bonds in Europe in general is presented in Table.19 and their characteristics are portrayed in Table.20. We can see that the most important portion of the issuings is made in Denmark, Spain and Germany. England, Sweden and France are following these three countries. It is observed that covered bonds markets are concentrated in Denmark, Germany, Spain, England, France and Sweden.

The issuing of covered bonds and the re-financing of mortgaged housing loans is expanding in Europe in general. Table.21 displays the mortgage housing loans in Europe that are financed with covered bonds as of the end of 2004.



**TABLE.21 THE ISSUING OF COVERED BONDS IN EUROPE 2005 (IN BILLION EUROS)**

COUNTRIES	STOCK OF MORTGAGED HOUSING CREDIT	STOCK OF COVERED BONDS	RE-FINANCING RATIO %
DENMARK	174.3	286.2	164.2
GERMANY	1157.0	237.5	20.5
SPAIN	384.6	153.9	40.0
FRANCE	432.3	32.1	7.4
IRELAND	77.0	4.1	5.3
LITHUANIA	1.3	0.1	7.7
HUNGARY	7.8	5.1	65.4
HOLLAND	518.1	2.0	0.4
POLAND	10.7	0.6	5.6
FINLAND	56.5	1.5	2.7
SWEDEN	147.2	92.8	63.1
ENGLAND	1243.3	25.4	2.0
SLOVAKIA	2.0	1.0	50.0
CZECH REPUBLIC	6.6	2.0	30.3
PORTUGAL	70.8		
GREECE	34.1		

SOURCE: EUROPEAN COVERED BOND FACTBOOK, ECBC 2006

According to this, the mortgage backed security issuing and re-financing ratios of Denmark, Sweden, Spain and Germany that have developed markets and of Hungary, Slovakia and the Czech Republic that have developing markets are pretty high.

Cross-border and foreign investments in covered bonds in international markets and Europe are expanding. It is known that Central Banks of 75 countries invested in long term covered bonds. (BIS, 2005)

The market shares within the total stocks of the institutions that invest in covered bonds of high credit quality which constitute preferred and attractive investment tools with their market liquidity, maturity differentiations and choices that expand internationally (diversification) and in Europe, are as follows: Banks 50 percent, investment funds 18 percent, Central Banks 13 percent, pension funds 8 percent, insurance companies 7 percent, and other establishments 4 percent.

We observe that the investors are corporate investors who own especially long term funds and who prefer long term investments. Approximately 600 corporate investors in Europe are investing in covered bonds.

Some European banks have become specialized in investing in these securities and investment management. These banks are establishing investment funds that invest in covered bonds only.

The serious expansions in the foreign exchange reserves of the Central Banks of Asian countries lately, the expansion of fuel – dollar reserves of the gulf countries that export fuel as a result of the increase in fuel prices, and the fact that the Yen interest rates are very low in Japan are the major reasons that caused the international expansion in covered bond investments.

#### **The Credit Rating of Securities**

The covered bonds that are especially exported to international markets and extended to foreign investors receive a credit rating upon their credit evaluation.

There are two separate methods of credit evaluation for two different types of securities. In the case of covered bonds, the risk lies on the bank itself. But the credit rating of the bond is determined independently of

the credit rating of the issuer; the quality of the loans that are used as collateral and other circumstances are the determining factors in the credit ratings, and the credit rating of the securities issued may be higher than that of the issuing institution. There are two rights of recourse for these securities. Recourse is taken against the issuing institution and the consumer who receives the mortgaged housing loan.

In the case of asset backed securities that are issued by authorized institutions which buy and securitize mortgaged housing loan portfolios sold by housing finance institutions, the credit evaluation is again made independently of the credit rating of the issuer. In these securities recourse is against the issuing institution and the consumer who uses the mortgaged housing loan. The credit rating of the security may be higher than the credit rating of the issuer.

For both types of securities, the sufficiency of guaranties, the quality of the loans, the cash flows of the loans, their maturity consistency, their exchange rate – interest – liquidity risks, loan – guarantee ratios (LTV ratios), the additional collaterals, legal efficiency in cases of bankruptcy and default (bankruptcy procedures), the measurability of potential default and loss risks (the risks of the portfolio that constitutes the collateral), the redeemability of the collaterals and their loss potential, the value of the collaterals, the existence of liquid secondary markets and the legal framework criteria are evaluated in relation to the mortgaged credits that constitute the collateral.

Additional guarantees are provided to raise the credit rating of the securities issued. These guarantees are: over indemnification, insurances against default and bankruptcy, the guarantees of tertiary institutions, bank guarantees, and the guarantees given by the institutions that act as intermediaries in the issuing. The credit ratings of the securities that will be issued are increased with these additional guarantees and assurances.

The credit worthiness of the securities is also increased by the custom made arrangement of the mortgaged housing loan portfolios that will act as collateral for the securities that will be issued. As a result, different securities with different guarantee bases are created. Securities with different risk/price combinations can be created and issued.

**TABLE.22 THE RISKS IN INTERNATIONAL MARKETS**

TYPE OF RISK	THE MARKET WHERE RISKS ARE PRESENT		
	PRIMARY MARKET	SECONDARY MARKET	BOTH MARKETS IN DIFFERENT WAYS
<b>LEGAL RISKS</b>			
Credit Contracts	+		
The Applicability of the Agreement			+
Ownership	+	+	
Consumer Protection	+		
Corruption and Forgery			+
<b>BORROWING RISKS (DEFAULT)</b>			
Payback	+	+	
Guarantee (Ownership)	+	+	
<b>INTEREST RATES</b>			
Advance Payment	+	+	
Mortgage Credit Process			+
<b>ACTIVITIES</b>			
LIQUIDITY			+



The risks are decreased, the credit ratings are increased and the values of the securities can be increased with a better quality credit portfolio and collateral structure. Thus investors with different risk/yield demands are presented with alternative investment possibilities. The general risks in international markets related to the covered bonds are presented below.

## **II.2. THE POTENTIAL OF THE NEW HOUSING FINANCE SYSTEM TO CREATE RESOURCES**

The main function of the new housing finance system that is being established in Turkey is to make consumers home owners with favorable conditions with the use of resources that will be created within the financial system, and to have the housing finance institutions act as intermediaries in the primary and secondary markets for financial resources.

In this context, you will find in this part of the study, our analysis and evaluations as well as our predictions about the resource creation potential of the housing finance system to create resources.

### **II.2.1. THE ENVIRONMENTAL CONDITIONS FOR THE NEW HOUSING FINANCE SYSTEM**

We evaluate the environmental conditions for the new housing finance system to use as a basis for our predictions for the potential of the new housing finance system to create resources.

We foresee the basic characteristics of the new housing finance system to be as follows;

- The finance system will act as an intermediary for the resources in the financial markets and the mortgaged housing loans will be granted mostly by the banks in the primary market.
- Capital market instruments are used in the secondary market of the financial system. Resources are gathered in the secondary market by issuing securities. Covered bonds will be the tools issued the most.
- Foreign resources will predominantly be used as in the secondary market issuings in the initial stages of the financial system.
- Corporate investors will invest more in the domestic issuings in the secondary markets of the financial system.

These characteristics of the new housing finance system determine the environmental conditions that have to be evaluated for predicting the creation of resources.

Therefore, we are evaluating the size of the Turkish financial system, the sizes of the financial institutions and financial assets, the banking system and the resource and placing structures of the banks, housing loans, the credit ratings of the banks, the issuings, stocks and second hand transactions of the capital market, Turkey's foreign resource utilization, foreign debts and foreign reserves, as well as the risks of foreigners in Turkey and the portfolio investments of corporate investors in Turkey.

#### **I. The Size of the Financial System in Turkey**

The housing finance system will be a part of the financial system of Turkey, and therefore, the numeric size of the housing finance system and the Turkish financial sector will be mutually dependant.

Therefore, the size of the Turkish financial system makes up an important environmental condition. In this context, Table.23 displays the Asset Sizes of the Financial Institutions in Turkey. As of the end of 2005, the size of the assets of financial institutions in Turkey has reached 391.6 billion dollars and 108.8 percent of the national income. The size of the assets of the institutions which act as intermediaries for savings, other than the central bank which is the monetary authority, has reached 323 billion dollars and 89.7 percent of the national income.

**TABLE.23 THE SIZE OF THE ASSETS OF FINANCIAL INSTITUTIONS IN TURKEY**

FINANCIAL INSTITUTIONS	2004		2005	
	BILLION DOLLARS	% GNP	BILLION DOLLARS	% GNP
BANKS	228.3	75.9	295.8	82.2
PARTICIPATION BANKS	5.5	1.8	7.2	2.0
INSURANCE COMPANIES	5.4	1.8	8.6	2.4
FINANCIAL LEASING	3.6	1.2	4.7	1.3
FACTORING	3.1	1.0	3.9	1.1
SECURITIES COMPANIES	0.8	0.3	1.2	0.3
CONSUMER FINANCING	1.1	0.2	1.6	0.4
CENTRAL BANK	58.8	19.6	68.6	19.0
TOTAL	306.5	101.8	391.6	108.8

SOURCE: TR CENTRAL BANK

We observe that banks have the largest share, 82.2 percent, among the financial institutions. Excluding the CB, the share of the banks is 91.6 percent. Therefore, the banks constitute the main determinants in the financial sector and will thus be the main determinants in the housing finance system.

The second important indicator regarding the size of the financial sector is the financial assets. Table.24 presents the sizes of the financial assets. According to the table, as of the end of 2005 the total financial assets are 535.6 billion dollars and 148.4 percent of national income. The share of marketable securities in the financial assets is 347.3 billion dollars and 68.9 percent. The share of the monetary assets is 172.2 billion dollars and 32 percent.

**TABLE.24 FINANCIAL ASSETS OF TURKEY (IN BILLION DOLLARS)**

FINANCIAL ASSETS	2003	2004	2005
MONETARY ASSETS	119.0	151.1	172.2
TURKISH LIRAS	69.5	94.2	115.2
FOREIGN CURRENCY	49.5	56.0	57.0
SECURITIES	206.1	264.7	347.3
SHARES	70.0	96.7	162.7
BONDS	136.1	168.0	184.6
FUNDS	9.3	12.4	16.1
TOTAL	334.4	428.2	535.6
% GNP	139.9	142.7	148.4

SOURCE: TR CENTRAL BANK

While bonds and stocks comprise 53.2 percent of the marketable securities, the share of the stocks is increasing. The share of the Turkish Lira assets in monetary assets is expanding. The effect of the inverse dollarization observed during the last years is apparent here. Lastly, the share of the funds is 16.1 billion dollars and 3 percent.

## 2. The Resource and Placing Structure of the Banking Sector, Housing Loans and Credit Ratings

Banks will be the most important housing financing institutions in the new housing finance system. Therefore the indicators of the banks are gaining importance as far as the environmental conditions are concerned.

Banks will be the main institutions that will grant mortgaged housing loans in the primary market, maintaining their current position. The banks have been financing the housing loans they granted as consumer loans with

their deposits and foreign syndicated loans up to now. But their re-financing methods will change and will be diversified with the new system. In this context, the resources and resource utilizations of the banks are examined first. The structure of the bank resources as of the end of 2005 is displayed in Table.25.

According to this table, 40 billion dollars, 13.5 percent of the 295.8 billion total resources of the banks consist of equities. The savings amount to 189 billion dollars and have a 63.9 percent share. Savings deposits are 131.5 billion dollars and have a 44.5 percent share.

**TABLE.25 THE RESOURCES OF THE BANKING SYSTEM AND THEIR FOREIGN RESOURCE UTILIZATION 2005 (IN BILLION DOLLARS)**

INDICATORS	2005
TOTAL RESOURCES	295.8
EQUITIES	40.0
SAVINGS	189.0
SAVINGS DEPOSITS	131.5
FOREIGN RESOURCE UTILIZATION	30.5
SECURITIES ISSUED	0.0
SAVINGS/TOTAL RESOURCES %	63.9
FOREIGN RESOURCE UTILIZATION / TOTAL RESOURCES %	10.3

SOURCE: TURKISH BANKS ASSOCIATION

The total foreign resource utilization of the banks as of the end of 2005 is 30.5 billion dollars, which makes up 10.3 percent of the total resources. We observe that the banks do not create resources with the securities issued. This is an important indication for the new housing finance system.

**TABLE.26 THE ASSETS OF THE BANKING SYSTEM 2005 (IN BILLION DOLLARS)**

INDICATORS	2005
TOTAL ASSET SIZE	295.8
LOANS	119.1
COMMERCIAL LOANS	97.9
CONSUMER LOANS	21.2
HOUSING LOANS	9.2
LOANS/ASSETS %	40.3
HOUSING LOANS/LOANS %	7.7
HOUSING LOANS/ASSETS	3.1
HOUSING LOANS/GNP %	2.6

The assets and placings of the banks are presented in

Table.26. Accordingly, the banks are using 40.3 percent of their total resources amounting to 295.8 billion dollars as loans, which equal 119.1 billion dollars. While the ratio of commercial loans to the total loans is 82.2 percent, the share of the consumer loans is increasing rapidly. Of the total 21.2 billion dollars consumer loans, only 9.2 billion dollars are housing loans. The ratio of housing loans to total loans is 7.7 percent, their ratio to total assets is 3.1 percent and their ratio to GNP is 2.6 percent.

We observe that the housing loans granted by banks are limited and that they will have a rapid growth potential once favorable re-financing requirements are attained. Banks, security issuings, issuings abroad and investments will be important components in the new financing system. In connection to these, the credit evaluations and credit ratings will become important.

The covered bonds, probably issued by banks, will have an important priority and weight in the system. The credit ratings of the issuers and the securities to be issued will be determining in the sizes of the issuings and the resources generated with this method.

The credit ratings of the securities that will be issued in the housing finance system will be independent of the credit rating of the issuer. Nonetheless, the present credit ratings of the Turkish banks are an important indicator as far as environmental conditions are concerned.

**TABLE.27 CREDIT RATINGS OF TURKISH BANKS (JULY 2006)**

BANKS	FOREIGN EXC. DEPOSITS	FINANCIAL POWER	YTL DEPOSITS	OUTLOOK
AKBANK	B1/NP	D+	A3/P-2	Positive
ANADOLUBANK	B1/NP	D-		Stagnant
DENIZBANK	B1/NP	D+	Baa3/P-3	Stagnant
FINANSBANK	B1/NP	D+	Baa3/P-3	Stagnant
HSBC	B1/NP	D+	A3/P-2	Stagnant
KOÇBANK	B1/NP	D		Negative
OYAKBANK	B1/NP	D+	Baa3/P-3	Stagnant
ZIRAAT BANKASI	B1/NP	E+		Stagnant
TEKFENBANK	B1/NP	E+		Stagnant
FORTIS	B1/NP	D+		Stagnant
TEB	B1/NP	D+		Stagnant
GARANTI BANKASI	B1/NP	D+	A3/P-2	Pozitive
İŞ BANKASI	B1/NP	D	A3/P-2	Pozitive
TSKB	B1/NP	D+		Stagnant
VAKIFLAR BANKASI	B1/NP	D-	Baa1/P-2	Stagnant
YAPI VE KRED BANKASI	B1/NP	E+	Baa1/P-2	Pozitive
EXIMBANK			Ba1	Stagnant

Table.27 shows the credit ratings given by Moody's, the international credit rating institution, to the Turkish banks as of July 2006.

According to this table, there is a transition from stagnant to positive in the medium term outlook of the banking sector, following the 2001 crisis. This indicates that the banking sector is growing stronger in the general outlook.

In reference to the housing finance system, the credit ratings of the banks' YTL and foreign currency borrowings are getting better, they have adequate ratings especially for foreign currency borrowings (better ratings are necessary for the long run), and adequate ratings for YTL borrowing.

### 3. Capital Markets Issuings, Stocks and Secondary Market Transactions

The new housing finance system is designed to function to a large extent within the capital markets. The secondary markets of the housing finance system are for issuing capital market instruments and creating resources in the system. Funds will accumulate in the secondary markets as a result of the issuing of covered bonds and asset backed securities.

Therefore, the indicators of the capital market, issuings, stocks and secondary market transactions are important environmental conditions. The indicators about the capital market are presented in Table.28.

According to this table, the issuing volumes of the private sector per years are limited within the total issuings of the capital market. 8.0 billion dollars and 5.5 billion dollars worth of issuings were realized in 2004 and 2005 respectively. Share certificates and investment funds make up an important part of the issuings. Additionally, there are the issuings of pension investment funds deeds of adherence. An important fact for the housing finance system is that there is no private sector fixed yield securities issuing. (The first issuings were made in 2006).

The stock of securities has reached 209.2 billion dollars at the end of 2005. This is an important volume. However, 185.4 billion dollars of this stock, equal to 88.6 percent, are public securities. The weight and role of

**TABLE.28 SECURITY ISSUINGS, STOCKS AND SECONDARY MARKET TRADING VOLUMES IN TURKEY (IN MILLION DOLLARS)**

CAPITAL MARKET INSTRUMENTS	2003	2004	2005
ISSUING OF SECURITIES	5.656	8.004	5.462
SHARE (1)	1.255	2.863	2.975
PRIVATE SECTOR BONDS			10
FINANCIAL BONDS			
ASSET BACKED SECURITIES			
PROFIT AND LOSS PARTNERSHIP CERTIFICATES			
SECURITY INVESTMENT FUNDS DEEDS OF ADHERENCE (1)	4.391	5.141	1.781
PENSION INVESTMENT FUNDS DEEDS OF ADHERENCE (1)			692
FOREIGN INVESTMENT FUNDS	10		4
(1) On their issuing values			
SECURITY STOCKS	153.601	189.031	209.188
PRIVATE SECTOR	12.925	18.848	23.786
SHARE	12.925	18.848	23.786
BONDS			
FINANCIAL BONDS			
ASSET BACKED SECURITIES			
BANK BONDS			
PROFIT AND LOSS PARTNERSHIP CERTIFICATES			
PUBLIC SECTOR	140.676	170.183	185.402
GOVERNMENT BONDS	121.275	145.334	169.149
TREASURY BONDS	18.239	22.654	13.278
REVENUE SHARING CERTIFICATES			
FOREIGN CURRENCY INDEX-LINKED BONDS			
PRIVATIZATION BONDS	1.162	2.195	2.975
SECONDARY MARKET TRANSACTIONS	434.669		788.589
PRIVATE SECTOR	105.249	155.969	243.705
SHARE	105.249	155.969	243.705
PUBLIC SECTOR	329.420		544.884
GOVERNMENT BONDS	261.812		467.384
TREASURY BONDS	67.608		77.500

SOURCE: CAPITAL MARKETS BOARD

the public is very high in the use of the capital market resources. The private sector funds utilization is being limited.

Markets are pretty liquid in the secondary market transactions. A 788.6 billion dollar trading volume was materialized in the secondary markets in the year 2005. 243.7 billion dollars, a 30.9 percent share of this trading volume, was materialized in share certificates and the rest in public securities. Since there are no fixed yield instruments of the private sector, no trading occurs in the secondary markets.

#### 4. Turkey's Foreign Resource Utilization and the Risks of the Foreigners in Turkey

The new housing finance system foresees the use of foreign resources and has been designed accordingly. The participation of foreign investors and institutions is expected in the issuing of securities in the secondary markets and in the sales of mortgaged housing loan portfolios.

The participation of the foreigners in the housing finance system and the use of their savings will indicate Turkey's foreign resource utilization and these will comprise the risks of foreigners in Turkey. Therefore, the

indicators about Turkey's foreign resource utilization and the risks of foreigners in Turkey constitute one of the environmental factors of the housing finance system.

Table.29 displays Turkey's Foreign Debts and Foreign Exchange Reserves and Table.30 displays the Risks of Foreigners in Turkey within this context.

**TABLE.29 FOREIGN DEBTS AND FOREIGN EXCHANGE RESERVES OF TURKEY (IN BILLION DOLLARS)**

FOREIGN DEBT	2003	2004	2005	2006/Q1
TOTAL	145.4	162.2	170.1	185.0
MEDIUM LONG TERM	122.3	129.7	131.9	143.8
PUBLIC				
CENTRAL BANK	69.6	73.8	67.7	69.0
PRIVATE SECTOR	21.5	18.1	12.6	12.8
NON-FINANCIAL SECTOR	31.2	37.7	51.5	62.1
FINANCIAL INSTITUTIONS	26.3	29.4	36.3	45.7
SHORT TERM	4.9	8.3	15.2	16.4
PUBLIC	23.0	32.6	38.2	41.2
CENTRAL BANK	2.9	3.3	2.8	2.8
PRIVATE SECTOR	20.1	29.3	35.4	38.5
NON-FINANCIAL SECTOR	9.7	14.8	17.7	18.2
FINANCIAL INSTITUTIONS	10.4	14.5	17.8	20.3
FINANCIAL INSTITUTIONS	15.3	22.8	33.0	36.7
FINANCIAL INSTITUTIONS / FOREIGN DEBT %	10.5	14.0	19.4	19.8
FINANCIAL INSTITUTIONS /GNP %	6.4	7.6	9.2	9.9
INTERNATIONAL FOREIGN	48.5	57.1	73.1	80.0
EXCHANGE RESERVES	33.6	36.0	36.0	58.3
CENTRAL BANK RESERVES	14.9	21.1	22.6	21.7
COMMERCIAL BANK RESERVES	33.3	35.2	43.0	43.3

RESOURCE: TURKISH TREASURY, TRCB

Turkey's utilization of foreign resources is increasing every year. The foreign debt stock which indicates the utilization of foreign resources has reached 185 billion dollars as of the end of the first quarter of 2006. This increase implies the expansion of Turkey's foreign resource utilization capacity and an increase in her borrowing credibility.

Another important development in the utilization of foreign resources is the expansion of private sector usage, while the usage of the public remains the same. Both the financial sector and the non-financial sector are using more foreign resources. The foreign resource utilization of financial institutions, which was 15.3 billion dollars in 2003, has become 36.7 billion dollars in the first quarter of 2006, making up 19.82 percent of total foreign resource utilization and 9.9 percent of the GNP. The resource utilization capacities of financial institutions are increasing in the short/long term.

The expansion in the foreign exchange reserves increases the foreign debt servicing ratio of foreign exchange reserves. This increase strengthens the foreign resource utilization capacity as well.

Foreign resources are utilized through direct intraorganizational borrowings and the investments of foreign investors made in Turkish financial instruments as well. These investments also show the risks foreign investors are shouldering in Turkey. The volume of these risks is an important indicator regarding the foreign investments in the financial tools which will be issued in the context of the housing finance system and the risks that will be taken.



Table.30 shows the corporate and non corporate total risks of the foreigners as of the end of 2005. In this context, the total risk of the foreigners in Turkey is 127.7 billion dollars, of which 58.1 percent are portfolio investments. The loans given to financial institutions are 33 billion dollars. The total of the Eurobonds issued by the public is 31.6 billion dollars. We can see that residents also invest in Eurobonds.

**TABLE.30 THE RISKS OF FOREIGNERS IN TURKEY 2005 (IN BILLION DOLLARS)**

RISKS IN TURKEY	2005
PORTFOLIO INVESTMENTS	58.1
SHARE	33.8
SECURITIES, BONDS	20.4
DEPOSITS	3.9
LOANS GIVEN TO FINANCIAL INSTITUTIONS	33.0
BONDS ISSUED BY THE PUBLIC (EUROBOND)	31.6
TOTAL	122.7

SOURCE: TURKISH TREASURY, TRCB

According to this, the foreigners can shoulder a risk above 120 billion dollars in Turkey. We anticipate that this risk will expand upon the strengthening of economic stability in Turkey.

#### 5. Institutional investors in Turkey and their Portfolios

The funds used in the housing finance system are medium and long term. Therefore, the existence of investors who have long term funds or who invest long term becomes important in the secondary markets. These institutions which are mostly corporate investors provide long term funds to the system. Therefore, the portfolio investments of corporate investors in Turkey constitute one of the environmental conditions of the housing finance system.

Table.31 displays the portfolio sizes of the institutional investors in Turkey and the distribution of their portfolio investments. There are 4 institutions in Turkey with a institutional investor's identity. These are the securities investment funds (mutual funds), security investment partnerships, pension investment funds and insurance companies.

The total of the institutional investments of these four institutions as of the end of 2005 is 24.1 billion dollars, of which 21.9 billion dollars belong to securities investment funds with a short term investment outlook. The portfolios of the investors that make longer term investments are still small. We observe that portfolio investments are made to public securities to a large extent.

**TABLE.31 THE PORTFOLIO INVESTMENTS OF INSTITUTIONAL INVESTORS IN TURKEY 2005 (IN MILLION DOLLARS)**

PORTFOLIO INVESTMENTS	SECURITY INVESTMENT FUND	SECURITY INVESTMENT PARTNERSHIPS	PENSION INVESTMENT FUND	INSURANCE COMPANIES
TOTAL	21.891	364	908	956
SHARE	552	194	101	44
PUBLIC BORROWING BILLS	15.383	115	730	864
PRIVATE SECTOR SECURITIES				
REVERSE REPO	5.698	47	49	
MONEY MARKET TRANSACTIONS	250	8	8	
FOREIGN SECURITIES	8		7	
OTHERS			13	48

SOURCE: CAPITAL MARKETS BOARD



## 6. General Evaluation of the Environmental Conditions of the Housing Finance System

We have examined the environmental conditions of the housing finance system in detail above. The basic findings about the resource creation potential of the housing finance system are grouped below.

### THE BASIC COMPONENTS THAT AFFECT THE ENVIRONMENTAL CONDITIONS AND THE POTENTIAL OF THE HOUSING FINANCE SYSTEM TO CREATE RESOURCES

FINANCIAL SECTOR	Corporate assets are growing rapidly Financial assets are growing rapidly Banks are the dominant institutions The share of YTL assets is increasing
BANKING SECTOR AND BANKS	Assets are growing rapidly Deposits (short term) are the main resources Utilization of foreign resources (short-long) is expanding There is no borrowing with the issuing of securities Share of credits and housing credits (within the total assets) is small, but with a growth potential Credit ratings are sufficient for foreign exchange borrowing, limitedly sufficient for YTL borrowing Foreign specialized banks are interested and rapidly participating Capital adequacy and foreign exchange position requirements have a limiting effect
CAPITAL MARKET ISSUINGS, STOCKS, SECONDARY MARKET TRANSACTIONS	Private sector security issuings are limited No private sector fixed-income securities are issued or stocked Government securities dominate security stocks Public dominance limits funds for private sector Liquidity is high in the secondary market, transactions are predominantly in securities and government securities
FOREIGN RESOURCE UTILIZATION AND THE RISKS OF FOREIGNERS IN TURKEY	Foreign resource utilization capacity of the private sector is increasing Foreign resource utilization capacity of financial institutions (short – long) is increasing Increase in foreign exchange reserves to foreign debt ratio strengthens the borrowing capacity Risks of foreigners in Turkey is expanding
CORPORATE INVESTORS	Portfolio sizes of corporate investors are limited Portfolios are short term and dominated by government securities Corporate investors with a long term investment outlook are limited

### II.2.2. PREDICTIONS FOR THE POTENTIAL OF THE NEW HOUSING FINANCE SYSTEM TO CREATE RESOURCES

The main aim of the study is to make predictions for the potential of the new housing finance system that is being established in Turkey to create resources and to calculate its effects on the housing demand. To this end, we have so far analyzed and evaluated the new housing finance system, international financial markets, housing finance and the financial sector in Turkey in detail.

At this stage, we use the basic findings of these analyses and evaluations and make assumptions about the potential of the new housing finance system to create resources. Some assumptions and methods we used for making predictions are especially important and are given below.

- We assume that the legal arrangements about the new housing finance system will be completed by the end of 2006 and that the system will be functional as of the beginning of 2007.

● We foresee that economic stability will be maintained and the inflation and interest rates will attain reasonable one-digit figures until the end of 2007. We further presume that the Turkish Lira will remain stable as a result.

● The predictions are made for each year, for the period between 2007 and 2015. The 2005 data is factual while the 2006 data is estimated.

● "Fixed prices" are used in calculating the predictions. In other words, the price increases and exchange rate changes that will take place until 2015 are not taken into consideration. Therefore, the predicted data for the coming years are data that have been detached from increases in prices and exchange rates.

In this context, our predictions for the resource creation potential of the housing finance system until the year 2015 are presented below. The foundation of the new housing finance system consists of the mortgaged housing loans that the housing finance institutions will grant to the consumers in the primary market and the creation of re-financing opportunities in the secondary market that depend on mortgaged housing loans (guarantee or sales).

In this framework, harmony has to be established between the mortgaged housing loans that will be granted in the primary market and their re-financing in the secondary market. If the secondary markets do not function effectively enough, it will not be possible to grant sufficient mortgaged housing loans in the primary market. The mortgaged housing loans will only be created and granted to consumers depending on the degree of effective functioning of the secondary market and the creation of appropriate re-financing possibilities.

#### I. Predictions for the Mortgaged Housing Loans

First, we make predictions for mortgaged housing loans in the new housing finance system. (These predictions are consistent with the findings of GYODER, the Association of Real Estate Investment Companies: The Real Estate Sector and Prognoses for Istanbul 2015, May 2006 study.)

The main variables in the predictions for the mortgaged housing loans are economic growth and the ratio of mortgaged housing credits volume to GNP, therefore predictions are made for these variables. The predictions for the mortgaged housing loans prepared according are displayed in Table.32.

Economic growth was assumed as 5 percent on dollar basis and in fixed prices for 2006 and for subsequent years. Accordingly, the GNP which was 361 billion dollars in 2005, and which is estimated to be 380 billion dollars in 2006 will reach 589 billion dollars in 2015 with fixed prices.

**TABLE.32 HOUSING LOAN PREDICTIONS AND RATIOS 2005 – 2015 (IN BILLION DOLLARS)**

YEARS	SCENARIO A		SCENARIO B			
	GNP GROWTH %	GNP BILLION DOLLAR	HOUSING LOAN /GNP	HOUSING LOAN	HOUSING LOAN / GNP	HOUSING LOAN
2005	7.6	361	2.6	9.2	2.6	9.2
2006	5.0	380	4.0	15.2	4.0	15.2
2007	5.0	399	5.0	20.0	5.0	20.0
2008	5.0	419	6.0	25.0	6.0	25.0
2009	5.0	440	8.0	35.0	8.0	35.0
2010	5.0	462	10.0	46.2	10.0	46.2
2011	5.0	485	11.0	53.4	12.0	58.2
2012	5.0	509	12.0	61.1	14.0	71.3
2013	5.0	534	13.0	69.4	16.0	85.4
2014	5.0	560	14.0	78.4	18.0	100.8
2015	5.0	589	15.0	88.4	20.0	117.8

**TABLE.33 PREDICTIONS ABOUT THE SHARE OF HOUSING LOANS WITHIN THE BANKING SYSTEM 2005 – 2015 (IN BILLION DOLLARS AND % SHARES)**

YEARS	GNP BILLION DOLLAR	BANK ASSETS / GNP %	BANK ASSETS	SCENARIO A		SCENARIO B	
				HOUSING LOANS	LOANS / ASSETS	HOUSING LOANS	LOANS / ASSETS
2005	361	82.2	295.8	9.2	3.1	9.2	3.1
2006	380	84.0	319.5	15.2	4.8	15.2	4.8
2007	399	86.5	345.0	20.0	5.8	20.0	5.8
2008	419	88.9	372.6	25.0	6.7	25.0	6.7
2009	440	92.3	406.1	35.0	8.6	35.0	8.6
2010	462	95.8	442.7	46.2	10.4	46.2	10.4
2011	485	100.4	486.9	53.4	11.0	58.2	12.0
2012	509	105.2	535.6	61.1	11.4	71.3	13.3
2013	534	110.3	589.2	69.4	11.8	85.4	14.5
2014	560	115.7	648.1	78.4	12.1	100.8	15.6
2015	589	121.0	712.9	88.4	12.4	117.8	16.5

Two scenarios are used about the ratios of mortgaged housing loans to GNP. The mortgage credits to GNP ratio reaches 15 percent in scenario A in 2015, and 20 percent in scenario B. In the context of these predictions, the total mortgages will become 88.4 billion dollars in scenario A, and 117.8 billion dollars in scenario B.

Taking into consideration the growth examples of the new housing finance systems established in other countries and the loan/GNP ratios of the countries in which the system functions effectively, we find out that the scenario A is attainable and could be used as the main scenario. Accordingly, the mortgaged housing loans volume reached in 2015 with the new housing finance system will be 88.4 billion dollars.

International studies on this subject came up with similar predictions. In the study "Turkish Banking: Can the Funding Tortoise Catch Up with the Mortgage Hare, 10 May 2006", conducted by Merrill Lynch, an international investment bank, GNP was predicted as 821 billion dollars for 2015 (calculations are in current prices and price increases are included). The mortgaged housing loans/GNP ratio was predicted as 12 percent and the mortgaged housing loan stock in 2015 was predicted as 98.5 billion dollars.

We foresee that the banking system and the banks will grant the majority of the mortgaged housing loans in the new housing finance system. Harmony is also necessary between the mortgaged housing loans and the sizes of the banking sector for the predictions made in this context.

The harmony between the housing credit predictions and the sizes of the assets of the banks are examined in this context. The total assets of the banking sector have reached 295.8 billion dollars at the end of 2005 and consist 82.2 percent of GNP. We predict that the banking sector assets will grow at an increasing rate with the increase in economic and political stability (as a result of the EU process). We thus predict that growth rates will be 8 percent for three years including 2006, 9 percent between the years 2009 and 2010, and 10 percent for the five years that follow until 2015. We are taking into consideration that the increased stability will contribute to the appetites of foreign banks to participate in the sector.

With these assumptions, the total assets of the banking sector will reach 712.9 billion dollars in 2015; 121 percent of the GNP. In light of such asset size, the mortgaged housing loans in scenario A will reach 88.4 billion dollars and 12.4 percent of the total banking assets in 2015. This is an acceptable and attainable rate.

The harmony between the total credit sizes of the banks and the mortgaged housing loans that are compatible with the asset sizes of the banking sector is also observed.

According to this, we first make assumptions about the growth of the bank loan volumes. The total loans granted by the banks at the end of 2005 are 119.1 billion dollars and their ratio to the total assets is 40.3 percent. We foresee the financial intermediation function of the banking sector to expand in the coming years.

We expect that the banks will invest in loans instead of government securities, along with decrease in the borrowing need of the public sector. Depending on these assumptions, the ratio of the banks' total loans to their total assets will increase 1 percent annually and will reach 50 percent by 2015. The total loan volume of the banks will reach 356.5 billion dollars according to these predictions.

The share of the 88.4 billion mortgaged housing loans in the total credits is predicted as 24.8 percent in 2015 in scenario A. While this ratio is quite high as compared to the current 7.7 percent share, it indicates that an important change will take place in the credit policies and portfolios of the banks with the contributions of the new housing finance system.

The new housing finance system has designated the institutions that will grant mortgaged housing loans as banks, financial leasing institutions and finance companies. Accordingly, the financial leasing institutions as well as finance companies may grant mortgaged housing loans in addition to the banks. However, banks are assumed to have the biggest weight in the system.

In this context, the predictions for the total mortgaged housing loans that will be granted annually from 2007 until 2015 are presented below. We assume that of the total 15.2 billion dollar housing loans as of the end of 2006, an amount equal to 2.5 billion dollars will turn into mortgaged housing loans. The total mortgaged housing loans that will be granted by the banks according to scenario A during 2007 – 2015 will be 75.7 billion dollars (including the 2.5 billion dollars of transformed loans).

We predict that, given the system will be functional in 2007, the loan volume of the banks will expand rapidly during 2009 and 2010 (as a result of the settling of the system, strong demand and the procurement of re-financing), and that it will slow down afterwards and follow a more stable increase pattern. We also estimate that the financial leasing institutions and finance companies will grant 450 million dollars and 1.35 billion dollars worth of credits respectively until the end of the year 2015.

As a result of these predictions, the total mortgaged housing loans that will be granted from 2007 to 2015 will be 77.5 billion dollars.

**TABLE.34 PREDICTIONS FOR THE SHARE OF THE HOUSING LOANS IN TOTAL CREDITS 2005 – 2015 (IN BILLION DOLLARS AND % SHARES)**

YEARS	BANK ASSETS	BANK LOANS	LOANS / ASSETS	SCENARIO A		SCENARIO B	
				HOUSING LOANS	LOANS / LOANS	HOUSING LOANS	LOANS / LOANS
2005	295.8	119.1	40.3	9.2	7.7	9.2	7.7
2006	319.5	131.0	41.0	15.2	11.6	15.2	11.6
2007	345.0	144.9	42.0	20.0	13.8	20.0	13.8
2008	372.6	160.2	43.0	25.0	15.6	25.0	15.6
2009	406.1	178.7	44.0	35.0	19.6	35.0	19.6
2010	442.7	199.2	45.0	46.2	23.2	46.2	23.2
2011	486.9	224.0	46.0	53.4	23.8	58.2	26.0
2012	535.6	251.7	47.0	61.1	24.3	71.3	28.3
2013	589.2	282.8	48.0	69.4	24.5	85.4	30.2
2014	648.1	311.1	49.0	78.4	25.2	100.8	32.4
2015	712.9	356.5	50.0	88.4	24.8	117.8	33.0

**TABLE.35 PREDICTIONS FOR THE GRANTING OF MORTGAGED HOUSING LOANS 2015 (IN MILLION DOLLARS)**

YEARS	BANKS	FINANCIAL LEASING INSTITUTIONS	CONSUMER FINANCE COMPANIES	TOTAL
PRESENT STOCK TRANSFORMED INTO MORTGAGED LOANS	2.500	-	-	2.500
2007	4.800	50	150	5.000
2008	5.000	50	150	5.200
2009	10.000	50	150	10.200
2010	11.200	50	150	11.400
2011	7.200	50	150	7.400
2012	7.700	50	150	7.900
2013	8.300	50	150	8.500
2014	9.000	50	150	9.200
2015	10.000	50	150	10.200
TOTAL	75.700	450	1.350	77.500

## 2. Predictions for Re-financing Possibilities in Secondary Markets

The basic characteristic of the new housing finance system is that the loans granted in the primary and secondary markets are re-financed in the secondary markets under suitable conditions. The mortgaged housing loans granted to the consumers in the primary markets will expand as a result of the effective functioning of the secondary markets and the expansion of their financing possibilities.

Therefore, there is a direct relationship between the predictions made for the mortgaged housing loans in primary markets and those made for the re-financing possibilities in the secondary markets.

Re-financing in the secondary markets will be realized through two main methods within the new housing finance system: covered bonds issued by the institutions that grant mortgaged housing loans, and the sale of mortgaged housing loan portfolios to funds and mortgage financing institutions.

The predictions we made accordingly for the re-financing that will be created in the secondary markets until the year 2015 are presented in Table.36. A total of 27.5 billion dollars of re-financing will be created in the secondary markets until 2015.

**TABLE.36 PREDICTIONS FOR THE FINANCING POSSIBILITIES OF THE SECONDARY MARKETS 2015 (IN MILLION DOLLARS)**

YEARS	RE-FINANCING FROM SECONDARY MARKETS				TOTAL
	MORTGAGED HOUSING CREDITS GRANTED	ISSUING OF COVERED BONDS	SALE OF LOAN PORTFOLIOS TO FUNDS	SALE OF LOAN PORTFOLIOS TO MORTGAGE FINANCING INSTITUTIONS	
2007	7.300	1.500			1.500
2008	5.200	1.500	500		2.000
2009	10.200	2.000	500		2.500
2010	11.400	2.000	500	500	3.000
2011	7.400	2.000	500	500	3.000
2012	7.900	2.500	500	750	3.750
2013	8.500	2.500	500	750	3.750
2014	9.200	2.500	500	1.000	4.000
2015	10.200	2.500	500	1.000	4.000
TOTAL	77.500	19.000	4.000	4.500	27.500

- The issuing of covered bonds will be the preferential and most important tool in financing. We predict that a total of 19 billion dollars worth of covered bonds will be issued, primarily by banks between 2007 and 2015. The general tendencies in international markets, issuing and marketing conveniences, the arrival of many important foreign banks to Turkey to provide such services as well as the interest and expectations that are being formed in the international markets for the covered bonds that will be issued in Turkey show that mostly covered bonds will be issued in the secondary markets and that financing will be obtained through these issuings.

We expect that after a two year beginning period for the covered bonds issuing, demand and supply will increase in the subsequent years depending on the expanding loan portfolio, and that a more stable period will follow as a result of the stepping in of new instruments (by mortgage financing institutions).

- In creating re-financing possibilities in the secondary market, the second prioritized source will be the selling of the mortgaged loan portfolios of the housing finance institutions that grant these loans to mortgage financing funds and asset financing funds.

However, the founders and developers of this second resource will most probably be the banks as well. The banks will create mortgage financing funds or asset financing funds in order to sell the loan portfolios whose risks they do not want to carry and remove them from their balance sheets. These funds could also be established by other parties in addition to the banks. We also predict that the banks will sell their loan portfolios to similar funds that are created abroad.

In this context, we anticipate the selling of the loan portfolios to the funds in the secondary markets to start beginning with 2008, and to create a financing of 500 million dollars annually until 2015, thus a total of 4 billion dollars.

- The third source for creating finance opportunities in the secondary markets is the selling of the loan portfolios of the housing finance institutions that grant loans to consumers to mortgage financing institutions.

Mortgage financing institutions are attributed big importance in the new housing finance system. They are designed as the most important institution and resource in the secondary markets of the system. However, taking into consideration the present structure of the financing sector, we predict that the mortgage financing institutions will be established and operational in 2010 the earliest.

**TABLE.37 PREDICTIONS FOR THE COVERED BOND ISSUING STOCKS OF BANKS AND THEIR SHARE IN TOTAL ASSETS 2015 (IN BILLION DOLLARS)**

YEARS	BANK ASSETS	COVERED BONDS	% SHARE
2007	345.0	1.5	0.4
2008	372.6	3.0	0.8
2009	406.1	5.0	1.2
2010	442.7	7.0	1.6
2011	486.9	9.0	1.9
2012	535.6	11.5	2.2
2013	589.2	14.0	2.4
2014	648.1	16.5	2.6
2015	712.9	19.0	2.7



In this context, these institutions will create resources at an increasing rate in the secondary markets after 2010. We foresee that these institutions will create 4.5 billion dollars of resources between the years 2010 and 2015.

As a result, the amount of total resources that will be generated in the secondary markets between 2007 and 2015 will be 27.5 billion dollars.

The most important finance generating tool in the secondary markets of the new housing finance system will be the covered bonds issued by housing finance institutions and predominantly banks.

We have made predictions for the covered bonds that will be issued by the banks and have foreseen 19 billion dollars of issuing until 2015. This issuing prediction has to be compatible with the issuing capacities of the banks.

In this context, the covered bond issuing stocks of the banks and the volume of their total assets are compared year by year until 2015. The increase in the issuings will increase their respective share within the assets of the banks. In 2015, the ratio of the total issuings to the bank assets reaches 2.7 percent.

This is an acceptable ratio and indicates that the banks have the capacity for such volume of issuings within their size and volume criteria.

Resources in the new housing finance system are put into motion with capital market issuings. The most important part will be the covered bond issuings of the banks. In addition, mortgage financing funds and asset financing funds that will provide financing for the housing finance institutions, mainly banks, by buying their loan portfolios, will issue securities backed by the assets they bought and other assets and will provide financing in the secondary markets.

In this context, we are making predictions for the asset backed securities that will be issued by funds and mortgage financing institutions in addition to covered bonds that will be issued by housing finance institutions in the secondary markets until 2015.

We anticipate the issuing of asset backed securities to begin in 2008 with 250 million dollars, to increase annually parallel to the development of the funds and institutions, to reach 750 million dollars in 2015 and to total 4.25 million dollars.

Within the framework of these predictions, the total security issuings between the years 2007 and 2015 will be 23.25 billion dollars, including the 19 billion dollars worth of covered bonds.

The effective functioning of secondary markets and the creation of re-financing for the mortgaged housing loans granted in the primary market is crucial for the new housing finance system. In order for the secondary markets to function effectively, not only the issuing of related securities but also the existence of investors investing in these securities to provide long-term resources is necessary. We make the following predictions for the securities that will be issued until 2015.

- A larger part of the security issuings will be abroad (60 – 70 %), and the rest will be for the domestic market (30 – 40 %).
- The interest (need) of the foreign investors in these securities will be higher.



**TABLE.38 FINANCING PREDICTIONS FOR THE HOUSING FINANCE SYSTEM WITH CAPITAL MARKET INSTRUMENTS 2015 (IN MILLION DOLLARS)**

YEARS	ISSUING OF COVERED BONDS	ISSUING OF ASSET BACKED SECURITIES	TOTAL
2007	1.500		1.500
2008	1.500	250	1.750
2009	2.000	250	2.250
2010	2.000	500	2.500
2011	2.000	500	2.500
2012	2.500	625	3.125
2013	2.500	625	3.125
2014	2.500	750	3.250
2015	2.500	750	3.250
TOTAL	19.000	4.250	23.250

- The issuings in Turkey and abroad will be in YTL first, and then in foreign exchange and YTL. The foreigners will have an investment appetite for YTL securities, but the issuing of these will remain at the 60 – 70 percent level.

- Those who will invest in securities will be corporate investors mostly. There will also be issuings and sales aimed at mortgaged security funds (private placements).

- The issuings will be abroad initially while there will be demand from foreign investors in domestic issuings. But with the development of corporate investors (pension funds, insurance companies) that create long-term funds in Turkey, the participation of domestic investors will increase and catch up with the foreign investors (on a yearly basis).

The participation of the domestic and foreign investors in the housing finance system in this context is presented below. We predict that 16.2 billion dollars of the total 23.25 billion dollar investment in securities will be realized by foreign investors.

The basic function of the new housing finance system is to establish primary and secondary markets that function efficiently, to create long term re-financing opportunities in especially the secondary markets so that the housing credits granted to the consumers in the primary markets are financed and expanded, their

**TABLE.39 PREDICTIONS FOR THE PARTICIPATION OF THE DOMESTIC AND FOREIGN INVESTORS IN THE HOUSING FINANCE SYSTEM 2015 (IN MILLION DOLLARS)**

YEARS	TOTAL ISSUE OF SECURITIES	FOREIGN INVESTORS	DOMESTIC INVESTORS
2007	1.500	1.000	500
2008	1.750	1.250	500
2009	2.250	1.500	750
2010	2.500	1.750	750
2011	2.500	1.750	750
2012	3.125	2.225	900
2013	3.125	2.225	900
2014	3.250	2.250	1.000
2015	3.250	2.250	1.000
TOTAL	23.250	16.200	7.050

**TABLE.40 THE RE-FINANCING OF THE MORTGAGED HOUSING LOANS IN SECONDARY MARKETS (IN MILLION DOLLARS AND % SHARES)**

YEARS	MORTGAGED HOUSING LOAN	RE-FINANCING	RE-FINANCING RATE %
2007	20.000	1.500	7.5
2008	25.000	3.500	14.0
2009	35.000	6.000	17.2
2010	46.200	9.000	19.5
2011	53.400	12.000	22.5
2012	61.100	15.750	25.6
2013	69.400	19.500	28.1
2014	78.400	23.500	30.0
2015	88.400	27.500	31.1

maturities are lengthened, and their utilization costs are decreased. In this context, the mortgaged housing loans granted by the banks, their re-financing and re-financing rates are displayed below. The re-financing rates of the banks are foreseen to reach 31.1 percent in 2015.

### ■ Chapter III

## **THE MUTUAL INTERACTION BETWEEN THE HOUSING FINANCE SYSTEM AND THE DEMAND FOR HOUSING AND PREDICTIONS 2015**

### INTRODUCTION

The main effect of the housing finance system which is being established in Turkey will be the shaping up of the housing demand as a result of the mortgaged housing loan capacity it will create. Within this framework, we evaluate the mutual interaction between the new housing finance system and the housing demand in this chapter and make predictions for the housing loan capacities and housing demand until the year 2015.

#### **III.1. PREDICTIONS FOR THE INCOME AND SAVINGS STRUCTURES OF THE HOUSEHOLDS AND THEIR LOAN UTILIZATION CAPACITIES**

The new housing finance system will create the opportunity of using long term mortgaged housing loans with more favorable repayment conditions for the consumer.

However, in order to make these predictions for the loans that will be granted within the housing finance system until 2015, first of all, we examine the income, spending and savings structures of the households to reveal their loan utilization capacities, so that we can predict how many households will utilize how much credit in the new housing finance system.

The most important assumption we used in all the calculations and predictions in this section is the utilization of the "fixed prices" method. Therefore, the increases in prices and the exchange rate are not taken into consideration in the calculations and predictions for the next ten years, and all the growth in the indicators are calculated and predicted in fixed prices.

For this purpose, we make predictions for the income, spending and savings structures of the households until 2015 on a yearly basis at the preliminary stage.

We are using the following assumptions in the predictions for the income, spending and savings structures of the households.

- The growth in GNP until 2015 is taken as 5 percent in dollars. This assumption has also been used in the previous chapters of the study.
- In the YTL based GNP calculations until 2015, the YTL dollar exchange rate of 1.45 has been used (the average exchange rate for 2006) to calculate GNP in YTL.

- The 2004 and 2005 factual realizations have been used in the volumes of the income and spending of the households. The household propensities to consume and budget surveys of TSA data have been used.

- According to this, the ratio of the total disposable incomes of the households to GNP is 53 percent in 2005, in relation to the economic growth and increase in domestic demand (in expenditures) and the ratio of the household spending to GNP is 47.3 percent. Thus, the total income of the households in 2005 is 258 billion YTL, their spending is 230 billion YTL and their total savings is 28 billion YTL.

- We make predictions for the household incomes and spending until 2015 depending on these realizations. Depending on the economic upturn and development, decrease in the share of the public (incomes) and increase in productivity assumptions, we predict that the incomes of the households will increase yearly and will reach 58 percent of GNP by 2015. The spending of the households will also increase as a result of the increase in incomes. We predict that the ratio of the spending of the households to GNP will reach 52 percent by 2015.

- Accordingly, we predict the total incomes of the households in 2015 as 495 billion YTL in fixed prices, their total spending as 444 billion YTL and their total savings as 51 billion YTL, again in fixed prices.

- The household incomes and spending includes the total number of households in the urban and rural areas. Therefore, from now on, total household data will be used without differentiating between the urban and rural households.

**TABLE.41 PREDICTIONS FOR INCOMES AND SPENDING OF HOUSEHOLDS 2015**

YEARS	GNP BILLION		HOUSEHOLD INCOMES		HOUSEHOLD SPENDING	
	DOLLAR	YTL	% GNP	BILLION YTL	% GNP	BILLION YTL
2004	300	429	51.0	218	42.5	182
2005	361	486	53.0	258	47.3	230
2006	380	550	52.0	286	46.0	253
2007	399	577	52.0	300	46.0	265
2008	419	606	53.0	321	47.0	285
2009	440	637	54.0	344	48.0	306
2010	462	668	54.0	367	48.0	321
2011	485	702	55.0	386	49.0	344
2012	509	737	56.0	413	50.0	368
2013	534	774	56.0	433	50.0	387
2014	560	813	57.0	463	51.0	415
2015	589	854	58.0	495	52.0	444

We have made predictions primarily for the total incomes, spending and savings of households until 2015 in order to portray the housing loan utilization capacities of the households.

However, these incomes, spending and savings are not distributed equally among the households. Therefore, in order to predict the housing loan utilization capacities of the households more precisely, we have to analyze and evaluate the household income groups.

The household income groups are formed according to the data of TSA. According to this, there are a total of 17.1 million households in 2005, and each of the 5 groups consisting of lowest, low, medium, high, highest income groups include 3.42 million households.

The main aim at this stage is to predict the income, spending and savings capacities of each household income group on a monthly and yearly basis for each year until 2015. As a result, we will be able to

predict the number of households that will have the capacity to utilize housing loans in the new housing finance system in a healthier way.

We are predicting the annual and monthly income, spending and savings structures of the household income groups until 2015 with the use of complementary Tables.

First of all, we make predictions related to the assumptions about the shares of household income groups within the total income and total expenditures. The main reason for this is the fact that these shares are changing over time. Accordingly, an important assumption made about the shares of the total household income groups in the total income and spending until 2015 is that the shares of the lowest, low and medium income groups in the total income and savings is increasing while the shares of the high and highest income groups is decreasing.

The most important criterion behind this assumption is the continuous but limited improvement in the distribution of income starting primarily from 2008 until 2015 as a result of the upturn of the economy, the effects of the EU process and urbanization. We assume that the shares in 2005 will change in 2006, will reach the same level once more in 2007 and will start improving as of 2008.

The predictions for the shares of the household income groups in the total income and savings are presented in Table.42 and Table.43. Depending on these predictions, the total income and spending of the household income groups for every year until 2015 are presented in Table.44 and Table.45. These tables reflect the total figures for the household income groups.

**TABLE.42 PREDICTIONS FOR THE SHARES OF THE HOUSEHOLD INCOME GROUPS IN TURKEY IN TOTAL DISPOSABLE INCOME 2015**

YEARS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
2004	6.0	10.7	15.2	21.9	46.2
2005	6.1	10.8	15.3	21.8	46.0
2006	6.0	10.7	15.2	21.9	46.2
2007	6.1	10.8	15.3	21.8	46.0
2008	6.3	11.0	15.5	21.8	45.4
2009	6.5	11.3	15.7	21.7	44.8
2010	6.8	11.5	15.8	21.6	44.3
2011	7.3	12.8	16.0	21.5	43.5
2012	7.7	12.0	16.1	21.4	42.8
2013	8.2	12.1	16.2	21.3	42.2
2014	8.6	12.3	16.3	21.2	41.6
2015	9.0	12.5	16.5	21.0	41.0

The more important are the predictions for the income and spending per household in the household income groups and the average savings capacity of each household. Therefore, we anticipate the yearly totals per the number of households that fall into each household income groups as presented in Table.46.

We anticipate the total number of households and the number of households that will take part in the household income groups until 2015 according to predictions for population increase and household size. The number of households that is 17.1 million in 2005 is foreseen to be 19.9 million in 2015 while the number of households in income groups will increase from 3.42 million to 3.98 million.

**TABLE.43 PREDICTIONS FOR THE SHARES OF THE HOUSEHOLD INCOME GROUPS IN TURKEY IN TOTAL EXPENDITURES 2015**

YEARS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
2004	9.2	12.9	17.2	22.7	38.0
2005	9.3	13.0	17.3	22.6	37.8
2006	9.2	12.9	17.2	22.7	38.0
2007	9.3	13.0	17.3	22.6	37.8
2008	9.4	13.1	17.4	22.5	37.6
2009	9.4	13.2	17.5	22.5	37.4
2010	9.5	13.3	17.6	22.4	37.2
2011	9.6	13.4	17.7	22.4	36.9
2012	9.7	13.5	17.8	22.3	36.7
2013	9.8	13.6	17.9	22.3	36.4
2014	9.9	13.7	18.0	22.2	36.2
2015	10.0	13.8	18.2	22.0	36.0

**TABLE.44 TOTAL INCOME PREDICTIONS OF THE HOUSEHOLD INCOME GROUPS IN TURKEY YEARLY 2015 (IN MILLION YTL)**

YEARS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
2004	13.080	23.326	33.136	47.742	100.716
2005	15.738	27.864	39.474	56.244	118.680
2006	17.160	30.602	43.472	62.634	132.132
2007	18.300	32.100	45.900	65.400	136.500
2008	20.223	35.310	49.755	69.978	145.734
2009	22.360	38.878	54.008	74.648	154.112
2010	24.956	42.205	57.986	79.272	162.581
2011	27.792	45.548	61.760	82.990	167.910
2012	31.801	49.560	66.498	88.382	176.764
2013	35.506	52.393	70.146	92.229	182.726
2014	39.818	56.249	75.469	98.156	192.608
2015	44.550	61.875	81.675	103.950	202.950

**TABLE.45 TOTAL SPENDING PREDICTIONS OF THE HOUSEHOLD INCOME GROUPS IN TURKEY YEARLY 2015 (IN MILLION YTL)**

YEARS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
2004	16.744	23.478	31.304	41.314	69.160
2005	21.390	29.900	39.790	51.980	86.940
2006	23.276	32.637	43.516	57.431	96.140
2007	24.645	34.450	45.845	59.890	100.170
2008	26.790	37.375	49.590	64.125	107.160
2009	28.764	40.392	53.550	68.850	114.444
2010	30.495	42.693	56.496	71.904	119.412
2011	33.024	46.096	60.888	77.056	126.936
2012	35.696	49.680	65.872	82.064	135.056
2013	37.926	52.632	69.273	85.914	140.094
2014	41.085	56.855	74.700	92.130	150.230
2015	44.400	61.272	80.808	97.680	159.840

**TABLE.46 PREDICTIONS FOR THE TOTAL NUMBER OF HOUSEHOLDS AND THE HOUSEHOLDS THAT WILL TAKE PART IN THE HOUSEHOLD INCOME GROUPS 2015**

YEARS	TOTAL POPULATION (000)	SIZE OF HOUSEHOLD	NUMBER OF HOUSEHOLD (000)	NUMBER OF HOUSEHOLD IN THE INCOME GROUPS
2005	72.538	4.25	17.096	3.419
2006	73.466	4.23	17.368	3.474
2007	74.392	4.22	17.628	3.526
2008	75.315	4.21	17.889	3.578
2009	76.234	4.19	18.195	3.639
2010	77.149	4.18	18.457	3.691
2011	78.059	4.16	18.764	3.753
2012	78.965	4.14	19.074	3.815
2013	79.865	4.13	19.338	3.868
2014	80.759	4.11	19.649	3.930
2015	81.647	4.10	19.913	3.983

The average income, spending and savings predictions for each household in the household income groups is reached based on annual income and spending projections of the household income groups until 2015 as well as the forecasted data about the number of households that constitute the household income groups every year until 2015.

The most important indicators that show the housing loan utilization capacities of the households within the new housing finance system are the average income, spending and especially savings capacities of the household income groups. Tables.47, 48 and 49 present these predictions.

**TABLE.47 AVERAGE MONTHLY INCOME PREDICTIONS ACCORDING TO HOUSEHOLD INCOME GROUPS IN TURKEY 2015 (IN YTL)**

YEARS	LOWEST % 20	LOW % 20	MEDIUM % 20	HIGH % 20	HIGHEST % 20
2004	322	570	811	1167	2462
2005	384	679	962	1371	2892
2006	412	734	1043	1503	3170
2007	433	759	1085	1546	3226
2008	471	822	1153	1630	3394
2009	512	890	1237	1709	3529
2010	564	953	1305	1790	3671
2011	617	1011	1371	1842	3728
2012	695	1083	1453	1931	3861
2013	765	1129	1513	1987	3937
2014	844	1208	1600	2081	4084
2015	932	1295	1709	175	4246

We have reached the following important conclusions on the housing loan utilization capacities of household income groups within the housing finance system.

- We predict an improvement in the income and spending structures of the lowest, low and medium income household groups until 2015. However, this improvement is not sufficient to allow the 11.95 million households to reach a savings capacity which will enable them to use housing loans. We expect that the gap between the incomes and spending of these three groups will zero out until 2015 and allow incomes to meet spending levels.

**TABLE.48 AVERAGE MONTHLY SPENDING PREDICTIONS ACCORDING TO HOUSEHOLD INCOME GROUPS IN TURKEY 2015 (IN YTL)**

YEARS	LOWEST	LOW	MEDIUM	HIGH	HIGHEST
	% 20	% 20	% 20	% 20	% 20
2004	409	574	765	1009	1690
2005	521	729	970	1267	2119
2006	558	783	1044	1378	2306
2007	582	814	1084	1415	2368
2008	624	870	1136	1493	2496
2009	659	925	1209	1577	2621
2010	689	948	1275	1623	2696
2011	733	1007	1352	1711	2819
2012	786	1085	1439	1793	2950
2013	817	1134	1493	1851	3018
2014	871	1206	1584	1954	3186
2015	929	1282	1691	2044	3344

**TABLE.49 AVERAGE MONTHLY SAVINGS CAPACITIES ACCORDING TO INCOME GROUPS IN TURKEY 2015 (IN YTL)**

YEARS	LOWEST	LOW	MEDIUM	HIGH	HIGHEST
	% 20	% 20	% 20	% 20	% 20
2004	-87	-4	46	158	772
2005	-137	-50	-8	104	773
2006	-146	-49	-1	125	864
2007	-149	-55	1	131	858
2008	-153	-48	23	137	898
2009	-147	-35	28	132	908
2010	-125	5	34	167	975
2011	-116	4	19	131	909
2012	-91	-2	14	138	911
2013	-52	-5	20	136	919
2014	-27	2	16	127	898
2015	3	13	18	131	902

● The incomes and spending of the high income household groups that are in between the medium and highest income groups are expected to increase proportionally until 2015, leaving their savings capacity the same. Although defined as the high income group, the average monthly income of these households in 2005 is 1.371 YTL. The proportional increase of the income and savings of this group will limit their savings capacity. As a result, the credit utilization potential of this income group within the housing finance system will remain limited.

● The households that make up the highest income group will have the income, spending and savings structure that will enable them to use housing loans within the housing finance system.

Although their share in the total income and spending is decreasing to the benefit of other income groups, the savings capacity of the highest income group will increase regularly.

There will be 3.98 million households that will be able to save 902 YTL monthly (in fixed prices) in 2015, and these households will create the housing loan utilization potential. However, it is also assumed that the home ownership ratio of this highest income group is already quite high, which will lead to a limited appetite for utilizing the housing loans system.



### III.2. THE LOAN UTILIZATION CAPACITY OF THE NEW HOUSING FINANCE SYSTEM AND ITS EFFECTS ON THE HOUSING DEMAND

At this stage, we analyze and evaluate the loan utilization capacity of the new housing finance system in detail so that we can make predictions for its effects on the housing demand.

The determining factors for the loan utilization capacity of the new housing finance system are as follows:

- The loan capacity that will be created by the financial system
- The loan utilization capacity of the households
- The conditions of the loans, the sizes of the loans that will be granted and the interest rates.

Predictions for total loan volumes that can be created by the new housing finance system until 2015 have already been displayed in previous chapters. The total mortgaged housing loans to be granted by 2015 were anticipated to be 75 billion dollars in fixed prices. The YTL equivalents of the mortgaged housing loans that will be granted by 2015, in fixed price and fixed interest rate assumptions, is 108.75 billion YTL.

In order to be able to predict the effects of the total loans to be utilized on the housing demand, we have to make assumptions about the sizes of the loans to be granted. There will be three important factors that will effect these assumptions.

- The present tendencies in housing loan utilization
- Loan pay-back and the payment capacity of the households according to the sizes of the loans and interest rates
- The values of the homes demanded

Banks have been granting collateralized housing loans as consumer loans, prior to the inception of the new housing finance system and mortgage loans.

The data about the utilization of housing loans are presented in Table.50. The utilization of housing loans has increased especially in 2005 and a total of 11.64 billion YTL of housing loans were utilized. Almost all of the housing loans are in New Turkish Liras. In 2005, 242.582 people have utilized housing loans and the average loan size is 47.965 YTL.

This average loan size leads to two important conclusions. First, consumers are using their own savings in home purchases while the housing loans utilized constitute 40 – 50 percent of the value of the purchased homes. Second, the homes that are purchased using housing loans are mostly B quality housing with a value of 100 – 150 thousand dollars.

In the new housing finance system, the amounts of the mortgaged housing loans that will be granted will be up to 70 percent of the value of the homes purchased. The ratios that will be preferred by the consumers and the housing financing institutions will affect the sizes as well as the number of loans that will be granted, and this will, in turn, determine the housing demand.

The most important factors in determining the loans that will be utilized by the consumers will be the loan sizes, the interest rates and the maturity of the loans which will determine their loan repayment capacities.

**TABLE.50. HOUSING LOANS GRANTED**

YEARS	CURRENCY AND TOTAL	LOANS MILLION YTL	NUMBER OF PERSONS	AVERAGE LOAN SIZE YTL
2000	YTL	519.3	55.859	9.291
	FC	153.9	2.756	55.842
	T	673.2	58.615	11.482
2001	YTL	177	2.457	7.205
	FC	30.4	454	66.960
	T	48.1	2.911	16.525
2002	YTL	132.5	9.767	13.565
	FC	125.5	1.148	109.320
	T	258.0	10.915	23.637
2003	YTL	524.0	24.298	21.603
	FC	281.0	2.694	104.306
	T	805.0	26.992	29.825
2004	YTL	2.225.8	96.678	23.022
	FC	486.8	3.771	129.090
	T	2.712.6	100.449	27.005
2005	YTL	11.635.3	242.58	47.966
	FC	0.3	2	150.000
	T	11.635.6	242.582	47.965

YTL: New Turkish lira, FC: Foreign Currency, T: Total  
SOURCE: TURKISH BANKS ASSOCIATION

Within this framework, the monthly and total pay-back amounts (principal + interest repayment) for 50, 75, 100 thousand YTL loans with 0.60, 0.80, 1.10 and 1.35 monthly interest rates and 60, 120, 180 and 240 months maturities are presented below in Table.51.

Taking into consideration the predictions in the former chapter for the incomes, spending structures and savings capacities of the households, we foresee that

**TABLE.51. PAY-BACK FOR 100.000, 75.000 AND 50.000 YTL HOUSING LOANS**

MATURITY OF LOAN	MATURITY INTEREST RATES AND INSTALLMENT AMOUNT					TOTAL PAYMENTS		
	1.35	1.10	0.80	0.60	1.35	1.10	0.80	0.60
<b>100.000 YTL</b>								
60 MONTHS	2.486	2.320	2.129	2.007	149.148	139.174	127.719	120.399
120 MONTHS	1.739	1.470	1.326	1.190	208.633	176.353	159.113	142.818
180 MONTHS	1.540	1.239	1.080	930	277.148	223.027	194.311	167.477
240 MONTHS	1.468	1.143	970	809	352.215	274.367	232.879	194.224
<b>75.000 YTL</b>								
60 MONTHS	1.865	1.740	1.597	1.505	111.861	104.381	95.789	90.229
120 MONTHS	1.304	1.103	995	893	156.475	132.265	119.335	107.115
180 MONTHS	1.155	929	810	698	207.861	167.270	145.733	125.608
240 MONTHS	1.101	857	727	607	264.161	205.775	174.659	145.668
<b>50.000 YTL</b>								
60 MONTHS	1.243	1.160	1.065	1.004	74.574	69.587	63.860	60.200
120 MONTHS	870	735	663	595	104.317	88.177	79.557	71.409
180 MONTHS	770	620	540	465	138.574	111.514	97.156	83.739
240 MONTHS	734	572	485	405	176.108	137.184	116.440	97.112

- 100 thousand YTL loans could be used with 1.10 interest for 240 months, with 0.80 interest for 180 months and 240 months, with 0.60 interest for 120, 180 and 240 months,
- 75 thousand YTL loans could be used with 1.35 interest for 180 and 240 months, with 1.10, 0.80 and 0.60 interests for 120, 180 and 240 months,
- 50 thousand YTL loans could be used with every interest rate and all maturities.

Within the framework of these evaluations, assuming that the monthly interest rates will regress to 1.10 percent and especially to 0.80 and 0.60 percent levels, all loan sizes including 100 thousand YTL could be utilized for maturities of ten years and over. In this context, the yearly total loan amount predictions which will be the determinant of the housing demand are displayed in Table.52 below. Accordingly, between the years 2007 and 2015, 2.18 million pieces of 50 thousand YTL loans, 1.45 million pieces of 75 thousand YTL loans, 1.09 million pieces of 100 thousand YTL loans and 725 thousand pieces of 150 thousand YTL loans will be utilized.

**TABLE.52. PREDICTIONS FOR THE YEARLY UTILIZATION OF ADDITIONAL HOUSING LOANS AND NUMBER OF LOANS**

YEARS	ADDITIONAL LOAN BILLION YTL	TOTAL LOAN 50.000 YTL	TOTAL LOAN 75.000 YTL	TOTAL LOAN 100.000 YTL	TOTAL LOAN 150.000 YTL
2007	7250	145.000	96.650	72.500	48.325
2008	7540	150.800	100.500	75.400	50.250
2009	14790	295.800	197.200	147.900	98.660
2010	16530	330.600	220.400	165.300	110.200
2011	10730	214.600	143.050	107.300	71.500
2012	11455	229.100	152.700	114.500	76.350
2013	12325	246.500	164.350	123.250	82.175
2014	13340	266.800	177.850	133.400	88.925
2015	14790	295.800	197.200	147.900	98.600
TOTAL	108.750	2.175.000	1.450.000	1.087.500	725.000

With the formation of adequate conditions (lower interest rates, longer maturities, and the decrease in the monthly installments and total pay back burden), we predict that the loans that will be utilized most are the 75 thousand and 100 thousand YTL loans.

### III.3. INTERACTION BETWEEN THE HOUSING FINANCE SYSTEM AND HOUSING DEMAND AND BASIC FINDINGS

The interaction between the housing finance system and housing demand and the basic findings about this interaction are presented below. Table.53. displays the indicators that support these findings.

- In case the new housing finance system is established and is functioning under the presumed adequate conditions, the new system and mortgaged housing loans will be the most important determinant of the housing demand.

- However, the housing demand that will supposedly be created by the housing loans that will be utilized within the loan capacity framework of the new housing finance system will not be sufficient to satisfy the housing need. The additional housing demand that will be created in the system by the assumed granting of 50 thousand, 75 thousand and 100 thousand YTL loans will meet only 15 to 30 percent of the housing need.

- The capacity of the new housing finance system to create resources creates an additional housing demand of this size. The housing loan capacity that reaches 15 percent of GNP and 25 percent of the

**TABLE.53. PREDICTIONS FOR THE INTERACTION BETWEEN THE HOUSING FINANCE SYSTEM AND HOUSING DEMAND 2015**

YEARS	HOUSING DEMAND	HOUSING DEMAND INCLUDING URBAN TRANSFORMATION	ADDITIONAL HOUSING DEMAND FROM HOUSING LOANS (1)	ADDITIONAL HOUSING DEMAND FROM HOUSING LOANS (2)	ADDITIONAL HOUSING DEMAND FROM HOUSING LOANS (3)	NUMBER OF HOUSEHOLDS THAT HAVE THE CAPACITY TO UTILIZE HOUSING LOANS
2006	594.000	719.000				3.476.000
2007	564.000	694.000	145.000	96.650	72.500	3.526.000
2008	562.000	697.000	150.800	100.500	75.400	3.578.000
2009	590.000	730.000	295.800	197.200	147.900	3.689.000
2010	557.000	707.000	330.600	220.400	165.300	3.691.000
2011	518.000	673.000	214.600	143.050	107.300	3.753.000
2012	547.000	707.000	229.100	152.700	114.550	3.815.000
2013	509.000	674.000	246.500	164.350	123.250	3.868.000
2014	507.000	677.000	266.800	177.850	133.400	3.930.000
2015	502.000	677.000	295.800	197.200	147.900	3.983.000
TOTAL	5.450.000	6.955.000	2.175.000	1.450.000	1.087.500	

(1) FOR 50.000 YTL LOANS  
 (2) FOR 75.000 YTL LOANS  
 (3) FOR 100.000 YTL LOANS

bank loans and that creates an important amount of resource utilization abroad, is still limited compared to the housing need.

- Therefore, we predict that other housing purchasing methods and inclinations (purchasing with savings, building in return for land or flats, etc.) will continue to exist, in meeting the housing need and creating the housing demand, in addition to the utilization of housing loans.

- The numbers of households that will utilize the predicted number of loans and that have the income and savings capacity to form the housing demand is much more than the number of loans that will be utilized. However, the households that have the capacity to use these loans are the highest income group whose home ownership is high and housing need is limited.

- Therefore, there is a discrepancy between those who need housing and those who are capable of utilizing housing loans. However, we assume that the predicted number of loans will be utilized.

- The possibility of the low and medium income groups who have a higher housing need to utilize the housing finance system is very limited. Therefore, the housing needs of these households should be solved with public housing policies and social housing built within the framework of these policies.

- Taking into account the sizes of the loans that will be granted in the housing finance system, the housing demand will predominantly be for B quality housing with a value of 100 – 150 thousand dollars.

- This system will finance the housing demand arising from need and upgrade. It will not be adequate for investment oriented housing demand.

## ■ Chapter IV

# THE DEVELOPMENT OF THE HOUSING SECTOR WITH THE NEW HOUSING FINANCE SYSTEM AND CONTRIBUTION TO ECONOMIC GROWTH

We predict that as a result of the new housing finance system that is being established in Turkey the housing demand will increase and become stabilized. The numeric predictions pertaining to these have been presented in the previous chapters in detail. We expect the housing sector to also grow in a healthy and steady manner as a result of the financing opportunities offered by the housing finance system.

The growth in the housing sector will cause the construction sector to develop, while the expansion of the value added in the construction sector will boost economic development.

We expect that the predicted growth in the construction sector will positively influence the growths of the many industrial and service sectors that have close relations with the sector. The growth in both the construction sector itself and in the sectors influenced by it will have a clear contribution to overall economic growth.

A close relationship is observed between the development of the new housing finance system and the creation of additional value added and economic growth.

In this context, this part of our study presents our predictions for the additional value added that will be created by the anticipated growth that will take place in the new housing finance system and its contribution to economic growth.

While making these predictions, we make the following assessments and evaluations first.

1. The construction sector in Turkey consists of; housing construction (production) of the public, housing investments (fixed capital investment) and investments in non-housing construction (infrastructure), as well as the housing construction, foreign and domestic contracting services and housing investments (fixed capital investment) of the private sector.

2. The construction sector in Turkey has entered an unstable process and a period of decline since 1990. The share of the sector in the services sector and in GDP has declined during this period, and its share in GDP has fallen to less than 4 percent.

3. The 1999 earthquake, the 1994 and 2001 economic crises and the economic programs that were carried out lead to the decline in the construction sector. The share of the public in the construction

sector is decreasing gradually as a result of the limitations on the infrastructure and building investments by the public sector especially after 2000. We predict that, within the frameworks of the economic policies and public finance policies undertaken, the public investments will remain limited and that the share of the public in the construction sector will continue to decrease.

4. Building construction investments that are part of the fixed capital investments in the construction sector and which will be realized by the private sector to a large extent will continue to gradually increase.

5. Constructing services will develop steadily abroad and in accordance with the public investment programs domestically.

6. The housing sector will increase its share within the construction sector and will play a determining role in the growth of the sector. The housing sector will develop focused on the private sector, and the housing production of the public by authorized parties and local authorities will continue.

7. The share of the private sector in the construction sector will increase. The housing sector focused on private sector will be determining and guiding in the construction sector.

Following these assessments and evaluations, we examine the present relationship between the construction sector that contains the housing sector and economic growth and development. The indicators that show the relationship of the construction sector with the economy and its growth are displayed in Table.54.

**TABLE.54. THE INDICATORS OF THE RELATIONSHIP BETWEEN THE CONSTRUCTION SECTOR AND ECONOMIC GROWTH**

INDICATORS	2005	2006 IQ	2006 IIQ
NUMBER OF HOUSES THAT WERE GIVEN A CONSTRUCTION PERMIT	511.236	102.359	170.286
CONSTRUCTION PERMIT MILLION M2	99.4	19.35	34.45
CURRENT VALUES OF THE HOUSES WITH CONSTRUCTION PERMITS IN BILLION YTL	3782	781	15.64
CONSTRUCTION SECTOR GROWTH IN FIXED PRICES %	21.5	26.7	13.7
CONSTRUCTION SECTOR GROWTH CONTRIBUTION	0.90	1.00	0.59
TOTAL GDP GROWTH %	7.40	6.49	7.47
SHARE OF CONSTRUCTION SECTOR IN GDP % (IN CURRENT PRICES)	4.4	4.8	4.8
CONSTRUCTION SECTOR VALUE ADDED IN BILLION YTL	21.31	5.16	7.00
CONSTRUCTION SECTOR VALUE ADDED IN BILLION DOLLARS	15.78	3.82	4.83
MANUFACTURE SECTOR GROWTH	6.1	4.0	10.7
INDUSTRIAL SECTOR GROWTH CONTRIBUTION	1.90	1.49	3.37

SOURCE: TURKEY STATISTICS ASSOCIATION

The main findings derived by this analysis are as follows:

- The construction sector has grown rapidly during the past one and a half years. The growth in fixed prices is 21.5 percent in 2005, 26.7 percent in the first quarter of 2006 and 13.7 percent in the second quarter.
- The share of the construction sector in GDP is 4.4 percent in 2005 and 4.8 percent in the first two quarters of 2006.
- The construction sector has supplemented economic growth to a large extent with its 2005 and 2006 shares in GDP and fixed growth rates. The contribution of the construction sector to GDP that has grown

by 7.40 percent in 2005 has been 0.90 points. In 2006 the construction sector has contributed 1.00 points to the 6.49 percent GDP growth in the first quarter and 0.59 points to the 7.47 percent growth in the second quarter.

- The construction sector has generated a value added of 21.3 billion YTL or 15.8 billion dollars in 2005, 5.16 billion YTL or 3.82 billion dollars in the first quarter of 2006 and 7 billion YTL or 4.83 billion dollars of value added in the second quarter of 2006.

- While the construction sector reached these growth and value added figures, construction permits were given to 511.236 housing units that make up 99.4 million square meters in 2005. Construction permits were given for 170.286 housing units of 19.35 million square meters in the first quarter of 2006 and for 170.286 units of 34.45 million square meters in the second quarter of 2006. The value of the housing who received construction permits was 37.8 billion YTL in 2005, 7.81 billion YTL in the first quarter of 2006 while 15.64 billion YTL in the second quarter of 2006.

- The housing sector is gradually becoming the determinant in the construction sector. The shrinking in the housing sector that took place following 1999 has changed its direction since 2003 and the sector has begun to grow once more. An important increase in housing demand and production was realized in 2005, especially with the utilization of housing loans.

The growth in the construction sector in 2005 has also been high as compared to previous years, considered as base years, where stagnation and deceleration took place. This high growth has continued during the first half of 2006 with the push of housing loans. However, a slowing down will be observed in the second half of the year.

**TABLE.55 THE DISTRIBUTION OF THE VALUE ADDED CREATED IN THE CONSTRUCTION SECTOR**

COMPLEMENTING SECTORS	% SHARE
TOTAL PRODUCTION	100.00
GROSS VALUE ADDED	47.65
OTHER FACTOR INCOMES	29.71
PAYMENTS TO EMPLOYEES	17.02
OTHER	0.93
INPUTS FROM OTHER SECTORS	52.35
INDUSTRY	29.90
CEMENT, LIME, ETC.	8.13
IRON AND STEEL	6.13
METAL CONSTRUCTION EQUIPMENT	2.95
CERAMIC PRODUCTS	2.62
SAND, CLAY, QUARRY	1.59
GAS RETORT AND REFINED PRODUCTS	1.38
OTHER	7.13
SERVICES - TRADE	15.20
WHOLESALE TRADE	2.29
RETAIL TRADE	1.57
LAND TRANSPORTATION	3.43
FINANCIAL INTERMEDIARIES	2.62
OTHER	5.29
IMPORT INPUTS	7.25

- Therefore, taking the effects of the base years into account, the growth rate in the construction sector and its impact on economic growth will slow down beginning with 2007. But the value added created by the construction sector will continue to increase. The value added volume (15.8 billion dollars) that was attained in 2005 with 511 thousand construction permits will constitute an important basis. So even if the growth slows down in the following years, the value added created will be maintained.

- In addition to the direct contribution of the growth in the construction sector to economic growth, an indirect contribution also results from the growth triggered by the construction sector in the industry and service sectors it is in contact with. Table.55 shows the distribution of the value added created by the construction sector and its relationships with other sectors. According to this, the construction sector has a close relationship with the industry and service sectors as shown in the table. While these sectors provide major inputs to the construction sector, the expansion in the construction

sector that results from the increased housing demand directly triggers the growth in these sectors. More than half of the production value created in the construction sector (52.35 percent) is a result of the inputs from the other sectors. The growth in the sector directly affects these sectors as well.

The share of the outlined industry sectors within total industry is approximately 20 percent, and their share within service sectors is approximately 70 percent.

While the construction and housing sectors are in contact with the above mentioned sectors during the housing construction phase, once the construction is completed, demand is formed for many half-durable and durable consumer goods industries. Within this framework many sectors such as white goods, furniture, electronic equipment and home textiles are primarily influenced by the expansion of the housing supply. Within the framework of all these evaluations, the following predictions are made about the probable contributions of the construction sector to economic growth until 2015.

- The construction sector will follow a growth pattern that accelerates in the beginning and stabilizes later in accordance to the anticipated growth tendencies in the housing finance system. The growth will be below the growth rate of 2005 which was very high because of the base effect, but will be more stable as a result of the effect of the housing finance system and will develop between the 6 – 8 percent and 8 – 10 percent bands.
- The contribution of the construction sector to economic growth will be between 0.50 and 0.70 points in light of the predicted growth rates in the construction sector. The contribution on growth of the various sectors that are affected by the construction sector during housing construction and after completion will be between 0.30 and 0.40 points during the same period.
- According to the growth predictions in the construction sector, the value added that is estimated as 16 billion dollars in 2007 will increase throughout the years in a stable manner and will reach 29.4 billion dollars in 2015. We predict that the total value added created between 2007 and 2015 will be 201.6 billion dollars.
- The growth and value added creation predictions in the construction sector were made based on the development potential in the housing finance system. The positive or negative fluctuations that may take place in the sub groups of the construction sector excluding the housing sector have not been taken into consideration.

**TABLE.56 PREDICTIONS FOR THE CONSTRUCTION SECTOR AND ITS CONTRIBUTION TO ECONOMIC GROWTH**

YEARS	CONSTRUCTION SECTOR GROWTH %	CONSTRUCTION SECTOR CONTRIBUTION GROWTH	CONTRIBUTION TO GROWTH OF RELATED SECTOR	VALUE ADDED CREATED IN BILLION DOLLARS
2007	6-8	0.50	0.30	16.0
2008	7-9	0.60	0.35	17.3
2009	8-10	0.70	0.40	18.9
2010	8-10	0.70	0.40	20.6
2011	7-9	0.60	0.35	22.2
2012	7-9	0.60	0.35	24.0
2013	6-8	0.50	0.30	25.7
2014	6-8	0.50	0.30	27.5
2015	6-8	0.50	0.30	29.4





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