

BANKALARDA TEMİNAT RİSKİNİN AZALTILMASI AMACIYLA GAYRİMENKUL DEĞERLEMESİNDE BİLGİ PAYLAŞIMI

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ÖZ

Küresel finans krizi nedeniyle banka ve çeşitli finans kurumlarında artmakta olan sorunlu kredi portföyleri aynı zamanda teminatlanma ve değerlendirme işlemlerinde problemler bulunmakta olduğuna işaret etmektedir. Bankalarda gayrimenkul değerlendirme süreci, teminat kalitesinin ölçülmesinde ve yükseltilmesinde çok önemli bir yere sahiptir. Bankalar, teminat kalitesinin ölçülmesinde ve yükseltilmesi hususundaki yüksek beklentilerine karşın, sektörün standardizasyondan uzak, deneyimsiz personelden oluşan ve yoğun rekabet içinde bulunmakta olan yapısı, gayrimenkul değerlendirme firmaları üzerinde bir baskı oluşturmaktadır. Yapılmış olan bu çalışmada, gelecekte bu konuda yaşanması muhtemel risklerin azaltılması ve bankaların teminat kalitelerini yükseltilmesi amacı ile öncelikle yasal altyapı ve sektörün durumu ele alınmış, arkasından buna bağlı muhtemel riskler tespit edilmiş ve son bölümde ise gayrimenkul değerlendirmesinin standardize hale getirilmesine ilişkin olarak sisteme bağlı bir çözüm önerisinde bulunulmuştur.

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INFORMATION SHARING IN PROPERTY APPRAISAL TO REDUCE COLLATERAL RISK IN BANKING

ABSTRACT

Increased non-performing loan portfolios of the banks that is stimulated by the global financial crisis, indicates a collateralization and appraisal problems not only for banks but for variety of financial institutions. The property appraisal process is very important and vital for the banks in measuring and increasing their collateral quality. The high expectations of the banks, lack of standardization, lack of experienced personnel, and high level of competition put extreme pressure on appraisal companies. In order to prevent the problems in the future, problems detected in the system and solutions are taken into consideration in the topic of this article.

Key Words: Appraisal, Property Appraisal, Information Sharing, Credit Bureau, Banking.

JEL Classification: D83, G14, G21

Introduction

The loan process for commercial customers is one of the most sophisticated processes banking. If the credit application is related with mortgage collateral it becomes even harder to assess credit. At this point the assistance of the appraisal companies are extremely important.

Mortgage as a leading collateral accepted by the banks has a secondary importance in credit assessments. Collateral gives the lender a right to liquidate the risk if the customer does not meet the requirements on due date. When credit officers assess loan applicants with mortgage collaterals, they need

information to evaluate the quality of the property that is subject to mortgage. As they are assessing the credit file, credit officers look up a single value (appraisal value) to compare the property at hand with the proposed amount of credit. Due to the nature of their responsibility, credit officers are focused more on credibility of the customer than the collateral.

Since each property is different in terms of construction specialties, legal properties and location requires special skills and expertise to calculate a single value for a property. Credit officers, who are experienced more on financial analysis and risk mitigation issues, usually lack this expertise. They need help to assess possible risks that may arise from taking the property as collateral.

This value is originated by property appraisal process, which is the set of methodologies for valuing real estates and assessing their legal situations. This process is usually outsourced by the bank to appraisal companies. In this way the appraisal companies become one of the key collaborators and their performance effects the related bank's customer satisfaction, collateral risk and balance sheet (by effecting the provision levels) of the bank.

Currently, there is no standard appraisal report format, no common rules or assumptions for appraisal models and calculations. What is more, the credit officers are facing conflicting appraisal reports. There is no anchoring point for a credit officer to figure out the reliability of an appraisal value.

We believe banks in Turkey need tools and methods to deal with this issue. In this paper, we describe a secure data sharing structure for the Turkish Banks to enable them to measure the misappraisal risk and manage their property portfolio. In order to prevent the future problems which are caused by misappraisal applications, we should regulate the property appraisal and market supervision applications as well.

The paper is divided in three substantive sections. In first section we describe the current structure of the property appraisal sector, in second section we define the current problems of Turkish Banks are facing and finally in third section we provide a solution to mitigate the misappraisal problem.

1. Property Appraisal Market in Turkey

Until 2000 the appraisal market in Turkey was not properly regulated. A Turkish appraiser did not need a license or any certification to appraise property. For complex properties Royal Institution of Chartered Surveyors (RICS) license was highly appreciated but for appraisal of standard residential buildings an ex-construction engineer or architect could write a report in a format of their choice.

The banks had an approach of outsourcing the complex property appraisals to local well known appraisers and preparing the simple appraisals themselves. After the banking crisis in 2001, CMB - Capital Markets Board of Turkey took over the responsibility of regulating the property appraisal market. CMB issued the main legal code (CMB Code: Series VIII, N.35) about appraisal in 12 August 2001. With this regulation CMB set ground rules to appraisal market, certified the appraisers and created a list of companies (called CMB listed companies) that fit certain standards.

The period between 2001 and 2005 was a preparation period for property appraisers. They attended classes, had exams, proved their solid experiences on property appraisals and took their CMB licenses. On 19 October 2005 amendments were made in the Turkish Banking Law 5411 to enable BRSA (Banking Regulation and Supervision Agency) to certify appraisal companies that are serving banks (clause 15, 34) and force the appraisal companies to have professional indemnity insurance (clause 36). As banking law authorized BRSA. BRSA took the initiative to determine the details and then a procedure issued on November 2006 and the minimum requirements for property appraisers to serve banks were

specifically explained. Also this procedure forced the banks to use the CMB listed companies for appraisal of properties that are related with a credit line above a certain limit.

Main customers of the appraisal companies were banks and they need to comply with the new regulation. There were hundreds of local entrepreneurs (usually consist of single appraiser) that had been serving the banks and could not continue their "business as usual" routine. They needed to unite and establish a company or they were hired by property appraisal companies (on a contractual basis).

Finally in 17 December 2010 BRSA broadened the credit types to be valuated by CMB listed companies. All of the credits allocated with the purpose of purchasing residential properties that are acquired for commercial purposes were to be performed by CMB listed companies.

Currently BRSA is creating a certified property appraiser company list as an alternative to the CMB list. It is known that BRSA is planning to take over the certified company process and CMB list will be replaced by BRSA list in near future.

1.1. Actors

1.1.1. Banks

The main customers in property appraisal market are banks. They constitute the majority of the total demand and are highly organized. They have extensive negotiation power over the property appraisal companies.

1.1.2. Real Estate Investment Trusts (REIT's)

As the second player on the demand side, Real Estate Investment Trusts usually demand the appraisal of a large collection of real estate properties. Their demand comes with regards to their financial calendar. The non-uniform demand

scheme causes operational problems on property appraisal companies.

1.1.3. Appraisal Companies

There are 111 CMB listed appraisal companies. Majority of these companies are located in Istanbul. The geographical distribution of the companies can be seen below.

Figure 1: Number of Appraisal Companies

| Location | Appraisal Companies | (%) |
|--------------|---------------------|-------------|
| İSTANBUL | 64 | 57% |
| ANKARA | 29 | 25% |
| İZMİR | 5 | 5% |
| BURSA | 3 | 3% |
| ANTALYA | 2 | 2% |
| GAZİANTEP | 2 | 2% |
| ADANA | 2 | 2% |
| AYDIN | 1 | 1% |
| KAYSERİ | 1 | 1% |
| KONYA | 1 | 1% |
| SAKARYA | 1 | 1% |
| Total | 111 | 100% |

Source: <http://www.spk.gov.tr>

1.1.4. Appraisers

According to the statistics presented by The Association of Capital Market Intermediary Institutions of Turkey, as of October 2011 the total talent for property appraisal in Turkey is 2697 appraisers. The details are as follows.

The licensed appraisers:

- 1766 licensed property appraisers (all kinds)
- 117 appraisers (only residential building appraisal permission)

Appraisers that earned the right to take the license but in pending status:

- 632 licensed property appraisers (all kinds)
- 182 appraisers (only residential building appraisal permission)

1.1.5. Associations

The Banks Association of Turkey establishes relations between the commercial banks in Turkey. The property appraisers are trying to organize themselves by forming the establishing the following initiatives:

- TSPAKB (The Association of Capital Market Intermediary Institutions of Turkey): Association has been established according to the Capital Market Law in 2001. This association is certifying appraisers.
- Lidebir (The Association of Licensed Appraiser Companies): Association established in 2007 by the appraisal companies. Their mission is to set the ethical principles of the market and increase the quality of the human resource. They are working on the problems of the appraisal companies.
- TDUB (Turkey Licensed Appraisers Association): Association established in 2010. It is a legal representative of the CMB licensed appraisers. Their mission is to improve the infrastructure of the appraisal activity, create a database to calculate appraisal statistics.

- DUD (Appraisers Association): Association established in order to organize appraisers not necessarily CMB licensed and training the members.

1.2. Current Problems Of Appraisal Companies

1.2.1. Turkish appraisal market lacks any standardization

In the United States, appraisals of complex properties (like factories, hotels) are usually reported in a narrative appraisal report. However for mortgage appraisals of residential properties, the appraisal is most often reported on a standardized form with standard approach/assumptions. This form is called Uniform Residential Appraisal Report (i.e. Freddie Mac Form 70, Fannie Mae Form 1004).

Turkish appraisal market lacks standardization for report formats. Initially each of the appraisal companies created their own format. Receiving reports with different formats and assumptions caused complications on the demand side and immediate retaliation comes from the banks. They can create their own formats as well. Currently each bank is forcing the appraisal companies to use their own format. This situation cause severe inefficiency in writing a report on the supply side.

Also the market lacks a standard approach about appraisal approach or parameters. (TDUB is trying to set some criteria) The appraisers may calculate the area of a property by using different approaches, they may use different interest levels in their cash flow analysis, they may select any precedent from any resource (there is no standard code for selecting a precedent). These discrepancies in approach results in extremely different values set for the same property by different appraisers.

1.2.2. Lack of Experienced Human Resource

The property appraisal license in Turkey was first issued only a decade ago. There are only a few personnel that are experienced and are still working in an appraisal company. The trend for the advanced appraisers is to establish their own companies. It can be very difficult to find an appraiser with solid experience.

1.2.3. High level of competition

The main demand for property appraisal comes from 23 REIT's (which are open to public) and 31 banks (that has the right to collect deposits). Here are the factors that increase the competition:

- Banks are usually managing the property appraisal demands from a specific department in their head office. For practical purposes they are consolidating their demands on a group of (usually less than 10) appraisal companies that has access to all locations in Turkey. This forces the appraisal companies to spread their operations all around Turkey although it is not profitable for most of them to exist in some locations
- Banks and REIT's have extremely active associations. They are powerful through out negotiations during deals. The average appraisal report price is decreasing each year.

1.2.4. Extreme Pressure on Service Levels

The property appraisal process is highly correlated with the mortgage credit allocation process. The high expectations of the bank customers, put time pressure on the property appraisal companies. The banks are demanding reports at short time intervals (one working day for residential buildings, three working days for other types or a week for really complex projects). The time constraints of the banks adding up with the non-uniform demands from REIT's means low quality reports

because they are prepared too quickly and checked too lightly. In addition, the customers and bank officers increase pressure on the appraisers by pressuring them to increase the value of the property in their appraisal reports.

2. Bank Lending Procedure and The Effect of Appraisal Reports on Credit Decision

2.1. Brief Description of Turkish Banking Legislation on Property Appraisal Usage

Briefly the regulation on the collaboration of banks and property appraisal companies is strict on two issues; the independency of the appraisers and the technical sufficiency of the property appraisal companies as service providers.

There are two main legislations on this issue:

- Regulation on Authorization and Activities of Providers of Assessment Services to Banks
- Regulation on Bank's Procurement of Support Services and Authorization of Such Service Providers

According to the Regulation on Authorization and Activities of Providers of Assessment Services to Banks, a bank operating in Turkey is required to outsource the appraisal works and affairs (that are above a certain limit) to an independent external appraisal company.

According to the Regulation on Bank's Procurement of Support Services and Authorization of Such Service Providers, any service taken from an appraisal company is considered as a procurement of service and it is obligatory to the banks:

- To prepare a risk management program in relation to such service procured. (define the service, evaluate costs and benefits, evaluate necessity of procurement)
- To examine if the structure of relevant service company has technical knowledge and infrastructure,

- To evaluate financial capability,
- To evaluate experience, knowledge and human resources
- To prepare a technical adequacy report and evaluate the overall position of the property appraisal company to achieve such support services at a quality required by the bank. This technical adequacy report should be drawn up by the top management of the bank for submission to the bank's Audit Committee. With the comments of audit committee the technical report is presented to board of directors and the board of directors decides whether to sign a support service agreement with the appraisal company.

In the event that the property appraisal service is procured in accordance with the Regulation as indicated above, principle of protection of customer secrets stated in Article 73 of banking law shall not be breached.

2.2. Appraisal Report Usage in Lending

When credit officers assess loan applicants with mortgage collaterals, they need information to evaluate the quality of the property that is subject to mortgage. As they are assessing the credit file, credit officers look up a single value to compare the property at hand with the proposed amount of credit and an appraisal report to evaluate and understand the possible risks on the property.

This appraisal report typically has the following sections;

- *The description of the assessed real estate:* Kind of the property, and the location identifiers are stated in this section. The unique identifiers differ across countries, for Turkey the unique identifier is the set of four values on title deed (1) city, (2) location, (3) map section, (4) parcel.

- *Legal investigation of the real estate:* The construction permissions, building license, Occupancy Permit and existing mortgages of the real estate are stated in this section.
- *Appraisal value:* The appraisal reports contain more than one value. A typical appraisal report states:
 - Market value: The value that a real estate can be sold in suitable/competitive market condition.
 - Urgent sales value: It is the most presumable value of a real estate to be sold in case of urgency.
 - Fair value: The estimated sales value ignoring the legal condition of a real estate.

The effect of appraisal report quality on the credit processes:

- The appraisal report should be clear and easy to understand. Too many technical terms and complex assumptions misguides the credit officers and cause bad credit decisions
- Legal problems may seriously deteriorate collateral quality and legal issues should be stated on the appraisal report. Any missing legal issue came out to be a problem if the credit goes to Non-Performing Loan (NPL) status.
- The appraisal value should be fair. If the appraisal value becomes too low, the bank ends up with an upset (and probably lost) customer. If the appraisal value becomes too high, the collateral does not cover the credit if the credit goes to NPL status. Also this value is used in provisioning and collateral coverage calculations and indirectly affects the capital adequacy ratio.

The effect of appraisal process timing on the credit processes:

- If the credit officer requires the appraisal report beforehand, which usually is the case for commercial segment, the credit application waits for the appraisal process. Any lags on the appraisal process increase the process timings of the credit officer and decrease customer satisfaction.
- If the credit officer does not require the appraisal report during the credit allocation process and just set a constraint on the minimum appraisal value. Then the appraisal process becomes a part of the credit disbursement process and any lag in appraisal affects the disbursement of money to the customer.

The effect of appraisal value on provisioning and NPL files:

In provisioning if the credit is collateralized with a mortgage, minimum of the appraisal value or mortgage value is used to calculate the deduction amount from credit risk. In other words the appraisal value indirectly affects the profitability of the bank.

The banks tend to buy the properties that are the collateral of the NPL file if the price in the auction goes too low. The appraisal reports are used in deciding the price level to buy the property from the auction. An overvalued report may result in the purchase of the property at high price.

2.3. Effects of Wrong Appraisal

The appraisal value should mirror the real value of the property. Banks do not prefer high or low values. The credit officers just want to see the real picture, they understand that over appraisal of a property is as problematic as undervaluing it.

The over-appraisal of a property that is subject to mortgage creates the following risks:

- If the credit becomes non-performing a part of the loan amount cannot be repaid by liquidation of the mortgage.
- The banks customer is usually satisfied with the appraisal value (as it is over valued) and the credit relationship starts. After a few years as the property appraisal will be renewed and probably the appraisal value will be decreased to its proper level. At this point the bank either has to call for additional collateral from the customer or make the customer pay some of the credit value.
- If the loan becomes non-performing the bank may accidentally purchase a property from the auction by giving a higher price.

The under-appraisal of a property that is subject to mortgage creates the following risks:

- The customer is highly disappointed and usually chooses another bank. Bank loses potential profit.
- If the loan becomes non-performing, loan loss provision has to be spared and capital adequacy ratio is negatively affected.

Current problems of appraisal companies the appraisal values (and report qualities) of two different appraisal companies differs in extreme proportions. The banks are trying to overcome this issue by ordering some control appraisal reports and performing cross checks (which we believe is complicating the issue even further). The customers are abusing this situation by ordering appraisal reports themselves and sending the reports to the banks stating they are undervaluing their properties.

The sector lacks any common anchoring value or statistics. Banks in Turkey need tools and methods to manage this issue. In Section 3 we describe a secure data sharing

structure for the Turkish Banks to enable them measure the misappraisal risk and manage their property portfolio.

3. Opportunities Created By Collaborative Information Sharing

Given the problems of appraisal companies (Section 1.3) we can state that the general quality of the appraisal reports prepared in the market is low. Also the title deeds in Turkey and municipality records about building stock are not electronic (stored in hard paper files in inventories) and are not shared online (appraiser need to physically go and check). We believe these structural problems will be solved in a couple of decades. Until then the practical way to reduce misappraisal risk is to share appraisal reports online and make comparative analysis throughout the market.

Opportunities that may be created by collaborative information sharing throughout the property appraisal sector are as follows:

- Reduce heterogeneity of the data: As the market share data in secure environment the different assumptions in calculations converge to market practices, errors are easily detected. Eventually the difference between appraisal values will reduce and the homogeneity of the data will be increased
- Better calculate collateral risks: The banks will have easy access to the values of similar properties in similar locations. They'll better calculate their collateral liquidation potential.
- Identify potential fraud: As the market gets easy access to comparable data any fraud attempts of appraiser (in agreement with the landlord) will be easily detected. Banks and appraisal companies will establish automatic warning mechanism that measures the variation of the

property value at hand with the statistics of similar properties at that location.

- Reduce bad debt: As credit files are better assessed with additional information,
- Reduce costs: For appraisal companies it becomes relatively more efficient to pool information and make comparative analysis. There is also a potential cost reduction if regulation enables, for small credits, the usage of average shared/secure property value of that location.

Given the evident benefits to credit officers and appraisers, it is natural to expect information sharing to emerge as soon as an efficient mechanism for coordinating this process. We believe the most suitable environment is the current Credit Bureau (KKB) structure.

3.1. Credit Bureau - The Right Environment to Share Collateral Data

According to the Credit Bureau Knowledge Guide 2006, more than 54 countries have at least one credit information sharing system. In the United States, there is at least one credit bureau file (may go up to three) for every credit-using individual in the country. All European countries have public registers for real estate collateral (mortgages) to alert present creditors and potential new lenders.

Credit bureaus are the institutions established (sometimes mandated by law) to share investigation and mitigate credit and moral hazard problems. The information shared is not only timely information about credit accounts and payment plans but also the characteristics and behavior of potential borrowers.

Since privacy of data is essential for financial institutions and customer data is secured by law, the necessary legal environment for information sharing has to be done in a way to

still secure privacy. All credit bureaus are subject to legal privacy constraints and technically skilled to secure the data. We believe the most suitable environment to share appraisal data will be credit bureau with their systems, legal status and expertise. None of the associations stated before have the technical capability or legal status to undertake this responsibility.

3.1.1. Credit Bureau in Turkey (KKB)

The credit bureau in Turkey (will be referred as KKB) is active since 1995 and is sharing credit data both for retail and commercial customers. The first legal arrangements to share data were made in 1993 (The Banking Law of Turkey was amended to make data sharing possible through a company that is owned by at least 5 financial institutions.) followed by the second change in 1999 which allowed all organizations which are approved by The Banking Regulation and Supervision Agency to share their data with financial institutions. This amendment made it possible for KKB to enlarge its member portfolio.

KKB is a private held company, the shareholder structure consists of 9 major banks of Turkey but the membership is widespread throughout the financial sector. Currently KKB has 100 financial institutions as member. Not only banks but also consumer credit companies, finance houses, insurance companies, stock exchange companies, leasing, factoring and forfeiting companies can become a member of KKB.

Figure 2: The Amount of Data Shared Via KKB

| | <u>2006</u> | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|
| Number of Members | 29 | 35 | 38 | 77 | 99 |
| Number of Credit Accounts Shared | 71.707.144 | 85.333.873 | 102.988.385 | 116.121.333 | 133.463.002 |
| Number of Credit Card Accounts | 43.209.758 | 49.583.489 | 58.021.845 | 62.253.559 | 67.797.491 |
| Number of Consumer Loan Accounts | 16.014.688 | 20.336.091 | 25.202.322 | 29.727.877 | 35.102.631 |

| | | | | | |
|---------------------|------------|------------|-------------|-------------|-------------|
| Number of Mortgages | 562.246 | 777.126 | 1.007.616 | 1.300.595 | 1.770.648 |
| Number of Enquiries | 45.958.098 | 70.666.975 | 104.643.467 | 115.477.969 | 161.567.532 |

As the volume of credit accounts and number of financial institutions increased the credit bureau establishment becomes essential. If the number of consumer credit accounts is low. Credit bureaus may not evolve privately and are usually forced by law (Pagano and Jappelli, 1993). As can be seen from the figures KKB in Turkey is a mature and capable credit bureau and the company is an opportunity for the sharing of property appraisal data.

3.1.2. Operating Model of KKB

To become a member an institution has to share its information. First the institution passes through a series of tests and validations, then shares the credit data with its history and establishes a secure environment for continuously sharing the related data. There is a membership agreement between the member and KKB with extreme privacy clauses. After this preparation a member of KKB can retrieve data from the credit bureau.

A member of KKB can either search for a client by using the online services of provided by KKB from its secure web page or establish a direct connection with the KKB database or create an enquiry by using a web service between systems. Either way the data retrieved from KKB is the same. The member can either make an enquiry focused on a commercial company or an individual. The search engine of KKB is focused on the entities that are applying for a credit.

A typical KKB consumer credit report includes three kinds of information:

- Identifying information: such as the person's name, tax number, addresses and date of birth.

- Credit information: credit accounts at banks (bank names are indexed) and financial institutions. The accounts are listed by type, the date opened, the credit limit or loan amount, outstanding balances, payment plans and payment performances are presented.
- Credit score: generates a credit score for the individual and gives a final code (like L =Legal Action, 8 = NPL - watch list)

A typical KKB commercial credit report includes three kinds of information:

- Identifying information of the company: such as the name, tax number, addresses, group companies and shareholders.
- Credit information: credit accounts at banks (bank names are indexed) and financial institutions. The accounts are listed by type, the date opened, the credit limit or loan amount, outstanding balances, payment plans and payment performances are presented.
- Collateral information: guarantors, cheque information, mortgages.

There is a tariff based on the number of enquiries made and but the members share some of the money collected on the pool with respect to the amount of their data enquired by other members.

3.2. Adaptation of Credit Bureau Model to Property Appraisal Sector

3.2.1. Current Mortgage Data Stored in KKB

For mortgage loans used by individuals there is no collateral information in KKB. The focus is the credibility of the individual and payment performances. However for commercial

loans with mortgage collateral the following data is shared and available in KKB:

- Property type
- City
- Providence
- Address
- Location
- Map section
- Parcel
- Land share
- Appraisal code
- Appraiser
- Appraisal value
- Appraisal date

3.2.2. The Proposed Solution to Adapt KKB for Sharing Property Appraisal Results

We found appropriate two approaches of adapting KKB database for information sharing in property appraisal values.

3.2.2.1. Model A

The strategy of this model is to make minimum structural changes and quickly start sharing of property values within existing members in a collateral risk focus.

- *Target:* To share mortgage collateral data between members and try to mitigate collateral risk in banking by enabling bankers to compare similar property appraisals.
- *Required Legal Amendments:* Legal structure is suitable.

- *Required Systemic Changes:* The following improvements should be done.
 - KKB database should be improved in a way to share the property specifications and appraisal results of mortgages that are related with credits of individuals (as it is done for mortgages related with commercial credits).
 - The property details that exist currently in KKB database should be enriched with area, value/area, urgent sales value, legal status of property (coded) information.
 - KKB search engine should be improved to enable direct searches on property. Currently a member creates an enquiry on a commercial customer and if the entity is using some commercial credits with mortgage collateral, the details of the property can be seen. The member should be able to search for properties by using location, area, map section, property type fields. In this way the member may compare an appraisal report at hand with similar reports.
- *Potential Additional Users:* The property appraisal and control units of banks.

3.2.2.2. Model B

The strategy in this model is to broaden the membership structure of KKB, share maximum amount of information about the properties at hand with a focus on the property itself. TDUB involvement and legal changes is required to establish this model.

- *Target:* To share mortgage collateral data between financial institutions and appraisal companies and try to increase the quality of the property appraisal reports by sharing information between appraisal companies as well.

- *Required Legal Amendments:* Legal amendments have to be made to authorize KKB as the information sharing entity of property appraisal market. Also BRSA consent is needed for appraisal companies to become a member of KKB.
- *Required Systemic Changes:* In addition to the improvements stated for model A the following should be done;
 - A separate database with different security level should be created for property appraisals. Appraisal companies should share the following information on that database (whether it is related with a credit or not):
 - Appraisal company name
 - Appraisal company code
 - Appraisal date
 - Appraisal report number
 - Land lord tax number
 - Land lord name
 - Property type
 - City
 - Providence
 - Address
 - Location
 - Map section
 - Parcel
 - Land share
 - Area
 - Value / area
 - Appraisal code
 - Appraiser
 - Appraiser CMB license no

- Controller
- Controller CMB license no
- Appraisal value
- Urgent sales value
- Legal status
- The methods used in appraisal (will be more than one)
- The data used in sales comparison analysis (if comparison of sale method) is used. The comparison data will be shared. There will be more than one comparison data per report):
 - The sales value
 - Code of sales (whether it is sold or is in pending status)
 - Area of the sold property
 - Legal status of the sold property
 - Information source name
 - Information source Tel
 - City, providence, address, location of the sold property,
 - Specialties reduced from the value during comparison
 - Specialties added to the value during comparison
- This new database should be accessible to all KKB members and appraisal companies as well.
- Current KKB credit database should have the ability to link the mortgages with their respective property reports (by using unique keys like map section code, parcel)
- KKB search engine should be improved to enable direct searches on a list of properties by any of the fields stated above.

- *Potential Additional Users:* The property appraisal and control units of banks, the appraisal companies

4. Conclusion

The property appraisal process is highly correlated with the mortgage credit allocation process and is very important for the banks in measuring their collateral quality. The high expectations of the banks, lack of standardization, lack of experienced personnel, and high level of competition put extreme pressure on appraisal companies. These all together often result in quickly prepared, lightly checked reports with contradicting appraisal values.

There is no anchoring point for the banks to compare and check the appraisal values. The development of a data sharing methodology focusing appraisals in Credit Bureau (KKB) will be a good solution for the banks to figure out the reliability of the appraisal reports at hand. Such a systemic data sharing method will decrease misappraisal risk and make the banks better control their collateral risks.

In a broader perspective KKB membership structure may be enlarged to cover the appraisal companies as well. This will help the appraisal companies prepare high quality appraisal reports and will be one of the major steps to standardization of the property appraisal market.

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Zorunlu Karşılıklar Hakkında 16/11/2005 Tarih ve 25995 Sayılı Tebliğ.

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