ISTANBUL COMMERCE UNIVERSITY

GRADUATE SCHOOL OF FINANCE

INTERNATIONAL FINANCE MASTER PROGRAM

GENERAL VIEW ABOUT SECURITIZATION MECHANISM AND PRACTICES

Master Thesis

Mehmet Ozan GÜNER
200012319

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ABSTRACT

According to some researchers, recently some channels of monetary transmission mechanisms have been affected as a result of the interaction of securitization with monetary policies. These channels; The credit channel and the risk-taking channel, which are in the subcategory of the liquidity channel, constitute the bank's lending channel. As a result of the proliferation of liquidity conditions in securitizations through the liquidity channel, it is observed that it affects the profits from the mortgage /mortgage market, tends to reduce interest rates on housing loans, and may lead to a lower cost of credit on housing loans. It is observed that securitization through the credit channel can also provide a source of funds that can reduce the impact of funding costs that are increasing with the monetary policy it applies to banks, and through this channel, the monetary authority can compensate for the policy impact on credit demand. In addition, banks are also provided with incentives to take risks with credit secur octoberation.

Keywords: Turkey, USA, Securitization

ÖZET

Bazı araştırmacılara göre, son zamanlarda menkul kıymetleştirmenin para politikaları ile etkileşimi sonucunda parasal aktarım mekanizmalarının bazı kanalları etkilenmiştir. Bu kanallar; Likidite kanalının alt kategorisinde yer alan kredi kanalı ve risk alma kanalı bankanın borç verme kanalını oluşturmaktadır. Likidite kanalıyla seküritizasyonlarda likidite koşullarının yaygınlaşması sonucunda ipotek/mortgage piyasasından elde edilen kârları etkilediği, konut kredilerinde faiz oranlarını düşürme eğiliminde olduğu ve kredi maliyetinin düşmesine yol açabileceği görülmektedir. konut kredileri. Kredi kanalıyla menkul kıymetleştirmenin bankalara uyguladığı para politikası ile artan fonlama maliyetlerinin etkisini azaltabilecek bir fon kaynağı da sağlayabildiği ve bu kanal aracılığıyla para otoritesinin politika etkisini telafi edebildiği görülmektedir. kredi talebi üzerine. Ayrıca, bankalara kredi güvencesi ekimi ile risk almaları için teşvikler de sağlanmaktadır.

Anahtar Kelimeler: Türkiye, ABD, Seküritizasyon

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USA	: United States of America
ABS	: Asset-Backed Securities
API	: Open Market Transactions
BRSA	: Banking Regulation and Supervision Agency
BIS	: Bank for International Payments
See.	: See
BOJ	: Bank of Japan
bs.	: Printing
C.	: Skin
CBO	: Collateralized Bond Obligations
CDO	: Collateralized Debt Obligations
CDS	: Credit Default Swap/Swap
CLO	: Secured Loan Obligations
CMBS	: Commercial Mortgage-Backed Securities
CMO	: Secured Mortgage Obligations
ECB	: European Central Bank
ed.	: Editor
EDF	: Expected Frequency of Default
EURO	: The Currency of the European Union
FED	: American Central Bank
FHLMC	: Federal Housing Loan Mortgage Agency
FNMA	: Federal National Mortgage Association
GFO	: General Finance of Partnerships
GNMA	: Government National Mortgage Association

GSE	: State-Sponsored Organization
GNP	: Gross National Product
GDP	: Gross Domestic Product
Jun.	: Preparation
IMF	: International Monetary Fund
MBF	: Mortgage-Backed Securities
IFK	: Mortgage Financing Institutions
ISE	: Istanbul Stock Exchange
MBS	: Mortgage-Backed Securities
ITO	: Istanbul Chamber of Commerce
SME	: Small and Medium Budget Enterprises
CB	: Central Bank
MBS	: Mortgage-Backed Securities
Md.	: Substance
OCC	: Office of Currency Control / Office of the Comptroller of the Currency
OECD	: Organization for Economic Cooperation and Development
OCM	: Over-the-Counter Market
MPB	: Monetary Policy Board
RA	: Repurchase Agreement
RMBS	: Residential Mortgage-Backed Securities
RFM	: Railway Farm Mortgage/Loan
s.	: Page
S.	: Number
SEC	: U.S. Securities and Exchange Commission
SIFMA	: Securities Industry and Financial Markets Association
CMB	: Capital Markets Board

CML	: Capital Market Law
SPLRTO	: Capital Market Licensing Registry and Training Organization
SPC	: Special Purpose Company/Organization
TBA	: Turkish Banks Association
CBRT	: Central Bank of the Republic of Turkey
TLI	: Turkish Language Institute
CS	: Collateralized Securities
ATCMBF	: Association of Turkish Capital Market Brokerage Firms
TCMA	:Turkish Capital Markets Association

INTRODUCTION

The establishment of the Government National Mortgage Association/Ginnie Mae and state-sponsored organizations (Federal National Mortgage Association/Fannie Mae and Federal Home Loan Mortgage Agency/Freddie Mac) allowed the development of the secondary market in the United States during the securitization of residential mortgages in the 1970s.Thanks to securities backed by residential mortgages, the modern structured finance market has risen rapidly. The secondary mortgage market has also been stimulated thanks in part to the purchase of residential mortgages by state-sponsored institutions and organizations and the attempt to re-market these mortgages in the form of securities. The development of the sunday of this secondary mortgage market is due to the realization of securitization by the purchase of variable and conventional interest-bearing loans.financial methods that have been used in this secondary housing mortgage since the mid-1980s; it has also been used in the securitization of various assets such as vehicle loans, consumer loans and credit cards.In Europe, usually the export of mortgage-backed bonds and the failure of state-backed organizations to take the lead have led to a decrease in the volume of securitization. In addition, as a result of the introduction of the Euro, the importance of securitization in Europe began to increase as of the end of the 1990s.

In the development of securities in developed countries; new financial products designed to meet the requirements of market actors, financial funding formats and financial innovations being implemented in brokerage, as well as reducing regulations related to financial markets, have a significant impact.

Securitization is considered to be an extremely important external financing method in terms of meeting the requirements of banks and liquidity companies. The diversification of financial engineering, securitization of financial assets that are being exported varieties and evolves as a result, increases the options for investors, while exports of businesses to meet the needs of asset-backed securities by the fund and, as a result, contribute indirectly to the development of markets.

The transformation of business assets into securities is called securitization. The most important aspect for securitization is that the issuance of securities is based on the receivable rights represented by the asset in question. The receivables contained in the active part of the balance sheet of the enterprise are waiting until their due date, which leads to a loss of cash for the enterprise. By converting securities into securities and selling them, the assets become liquid and provide cash resources. Securitization is defined as a method of financing based on cash flow, since the cash flow provided by this asset, and not the asset itself, is guaranteed when securitization is performed, is shown. The bank's assets found in the accounts of certain types of consumer loans, housing loan, credit card or other assets/receivables on the date of the cash flow that occurred next, depending on the asset pool, a private organization established for the operation to be performed with the transfer to these entities based on the export of rights in securities to a bank with funds from investors to provide financing through the bank's Loan Securitization in particular is called.

The primary objective of securitization is to convert the financial assets active in the business into liquid and to provide access to high credit quality financing terms by reducing the cost. In addition, it is the reason for preference because it provides a positive effect on the capital adequacy ration of the exporting company and allows the distribution of risky assets on its balance sheet. But in addition to these benefits that securitization provides to enterprises, there are also a number of negative aspects, such as the exploitability of structured financing methods and the presence of asymmetric information. In particular, as a result of criticisms made in 2008 in the direction that risk management schemes and procedures that control the quality of mortgages caused the mortgage crisis due to the deterioration of the global financial crisis caused the mortgage crisis, it is observed that securitization has been examined by numerous studies conducted with extreme rigor. Of course, when it is evaluated in terms of the main factors determining the economic crisis, it is also observed that there are different factors other than securitization.

But with the economic crisis, the personalization of securities, in particular, the personalization of securities of sub-prime mortgage loans, has been the subject of a number of studies. Even before the economic crisis, some studies have drawn attention to the growth in the volume of securitization and have ideas that this growth may have an impact on the implementation of monetary policy. The macro-econometric assessments presented in the sources on this issue show the effects of the loose monetary policy implemented by the Federal Reserve in the 2000s on securitization. At the same time, it points out that securitization also affects certain channels of monetary transmission.

In the first part of the study, which consists of three parts, the definition, history and securitization methods of securitization are examined in detail. In the second part, the securitization process and its stages are described. In the third section, the risks, benefits and drawbacks of securitization are examined. In the last section, the applications of the securitization process in the United States and Turkey on the basis of theory and the role of securitization in the global financial crisis of 2008 are discussed.

In the study, statistical data available in books, articles and related institutions are scanned for the theoretical examination of securitization and domestic and foreign sources are applied.

1. CONCEPTUAL FRAMEWORK

1.1. Definition of Securitization

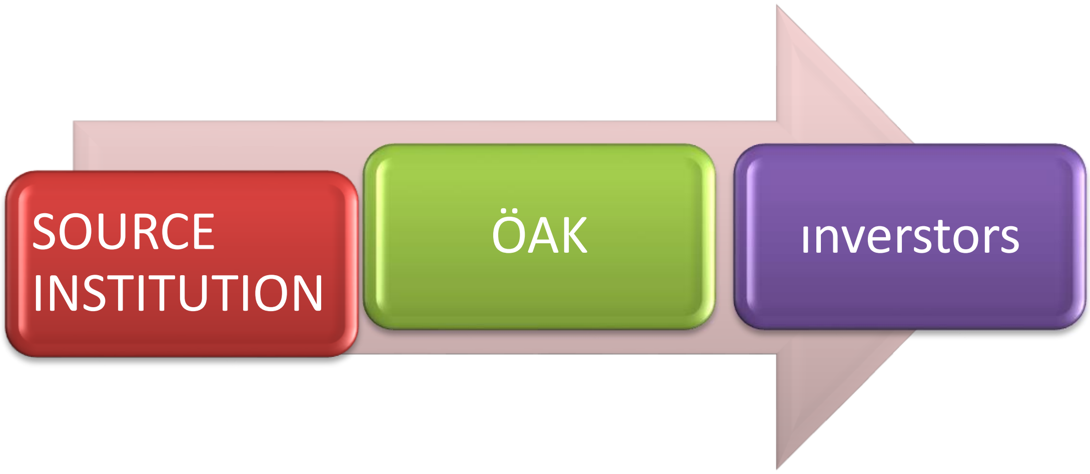
It is possible to define the term securitization in two different senses as narrow and wide. Obtaining fund flows by conventional methods, that is, by issuing securities through money markets, can be stated as a broad expression of securitization. As a result of the narrow expression of securitization, only asset-based securitization is expressed.

The term securitization refers to the sale of these assets by the entity that owns the assets that create a cash flow to an entity established solely for this purpose, and the issuance of securities by accepting this asset as the underlying asset purchased by this second entity[1].

Securitization (securitisation) process, which is used whatever the type of entity, in general, the same basic process is in question, the first source of a portfolio of assets that will be included in installation process, an asset pool creates. After that, the SPE, which will issue securities indexed to this asset/assets, is configured, and the assets are transferred to the SPE. At this stage, the goal is to have a real sale, to make it happen. As a next step, SPE issues securities based on the relevant asset/assets after credit rating and credit enrichment transactions. SPE uses the proceeds from the sale of securities to pay for the underlying asset it has purchased. In exchange for transferring assets to the SPE, the source organization becomes the owner of the SPE[2]. The securitization process and the functioning of this process are shown in Figure 1;

[1]Fabozzi et al., 2006:65
[2]Fabozzi et al., 2006:14

Figure 1. The Structure of Securitization



Source: Anbar, 2011, s. 39.

As seen in Figure 1, the process of securitization of cash flows on the basis of a qualifying asset are many similar source by the agency of legal entities and organizations, the creation of a special purpose pool this pool (OAK) to investors, real or legal person directly or transfer with the sale of these payments funded with assets in the pool in question takes place in the form of repayments. The purpose of creating a pool is to ensure that the securitization process, the associated cost, etc. it was to ensure that it was big enough to cover things and to diversify the risk[3]. Oluşthis process (the process of creating a pool and issuing securities based on this pool) can also be expressed as the conversion of illiquid assets that provide a certain return into the form of tradable securities (Eroglu, 2010: 33).

Prior to the institution, which is among the assets of the Securitization process source assets, the assets of the organization after they were transferred to the oak, while the SPE is among the securitization of assets and liabilities between investors after sales.

A special purpose entity (spe) is a separate organization from the source organization and was created solely for this purpose (for the purpose of securitization). The aim here is to separate the balance sheets of the issuing organization and the source organization from each other, to make the issuing organization independent of bankruptcy or any credit risk that the source organization may face. SPE is usually established in places such as Ireland,

[3] Morgan Stearns Corporation, 2012: 10

the Netherlands, Cyprus, Bahrain, the Virgin Islands, the Cayman Islands, and the Dominican Republic that are referred to as trans-coastal.

Securitization practices in the modern sense began in the United States in 1970 when the federal government motivated the securitization of residential mortgages. in 1977, private sector organizations also started to implement securitization. Securitization practices, which first started in the United States in 1970, continued to develop in the form of mortgage-backed home loans and with government support until the mid-1980s. in 1985, the issuance of non-mortgage-based securities was realized by securitizing computer leasing receivables[4].

The main difference in the securitization process is whether the receivables subject to this transaction will be on the balance sheet of the parent company or on the balance sheet of the special purpose company to be established. The process of issuing securities by leaving receivables on the balance sheet and showing collateral is called on-balance sheet financing.[5]. On the other hand, the process of transferring receivables to a special-purpose company and removing them from the company's balance sheet and, as a result, issuing securities by a special-purpose company is called off-balance sheet financing[6]

1.2 History of Securitization

The application of Western securitization is based on the sale of debt. The sale of debt has been known since ancient times; m.He. It is recorded in historical sources that debt securities written to the bearer in the 1400s were bought and sold in the Sumerian and Assyrian sundays.

Sundays sundays, which constitute a continuous market for securities, have maintained this function in the public markets and fairs in ancient times.

The purchase and sale of precious metals and precious metals, in parallel with the increase in scale growth of businesses, initially for investment purposes, then in order to be able to benefit from the profits from precious metals trading, securities began to spread in Europe, where these assets are traded and the first stock exchange was founded in the city of Antwerp in 1487[7].

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[4] Vatansever, 2000, p. 261
[5]The Agenda of the Capital Market, 2012, p.12
[6] Öcal, 1994, p.10
[7] Civan, 2007, p.15

16. in the XVIII century, this stock exchange was replaced by the Amsterdam stock exchange. Towards the end of the same century, stock exchanges were also established in Lyon and other cities in France[8].

The London Stock Exchange, which is currently an important stock exchange, began in 1770 with the hanging of the “The Stock Exchange” sign in a coffee shop and charging for entrances, buying and selling securities inside[9].

The legal establishment of the London Stock Exchange took place in 1875. After this exchange, stock exchanges were established in other cities of the UK. The London Stock Exchange has also been the inspiration and model for many American and Canadian stock exchanges, especially the New York Stock Exchange.

Securitization, which took tuesday in the USA in the 1970s, is part of the financial system, and the financial system is the lifeblood of the economy. However, there is no legal definition of securitization. Securitization is the process of converting something (assets) into a security in the broadest sense.

Securitization is a structured financial instrument. In today's capital market jargon, the word structured financing is almost always used as an alternative to securitization and other asset-based products. But in practice, the words structured financing and securitization are used almost interchangeably, as are the words securitized vehicle and structured product. We can say that structured financing is a broader term that covers securitizations.

MBS, or so-called mortgage-backed bonds, are the solution and purpose of a mortgage securitization transaction. In other words, the issuance of MBS is a mortgage securitization.

Historically, mortgage securitizations and MBS are the first application of securitization as the invention of a new financial method in the United States (USA) in the 1970s.

A.B.D.the most important driving force in securitization has been the establishment of practices for the state to promote home ownership. In order to accrue this purpose, secondary markets have also been created for mortgage markets.

[8] Öcal, 1994, p.10
[9] Civan, 2007, p.15

In Europe, in the modern sense, securitization operations were actively started in the early 1990s.

A.B.D. the reasons for this delay, which occurs when compared with:

Public authorities in Europe have a prohibitive attitude to this issue, as well as encouraging it

Not looking positively at the transfer of the loan receivable without the consent of the borrower,

Mortgage loans have variable interest rates,

Lack of government incentives,

More importantly, the existing system meets the need for housing financing[10]

Due to its internal dynamics when making changes in legal legislation that are an obstacle to implementation in Europe, A.B.D.the regulations in the are not taken in the same way, but original regulations have been made to them.

Since 2000, when the euro was converted, the practice of securities in Europe has gained momentum. Governments have taken the path of securitizing many of their assets, from their current assets to their future tax revenues

Despite these developments, A.B.D.significant differences are observed in the practice of securitization in the US and in Europe. At the beginning of them; A.B.D.securitization in Turkey occurs mainly through retail sales, while in Europe it occurs mainly through corporate sales.

Although the European securities sunday has been growing for many years, A.B.D.the sunday of securities in Russia has remained relatively small.

Participation in the European securities sunday also varies dec European countries.

Among the European countries, DEC UK ranks first in the issuance of securities, followed by Germany, Italy, the Netherlands and Spain, respectively, while the UK ranks first in the issuance of securities[11].

[10] Eroğlu, 2010, p.20
[11] Ataman Erdönmez, 2006, p.1

A.B.D. and the most active country in the securities market after Europe is Japan. Securitization activities in countries other than Japan have been quite low.

It is expected that the volume of securities transactions will increase in countries such as South Korea, Singapore, Brazil after the regulations on the legal infrastructure in recent years.

Capital markets in the west, especially in the UK, 18. It became widespread in the XVII and 19th centuries. It continued its development in the 20th century. In the XVIII century, it has become an important resource for the supply of funds to the economy completely automatically.

The rapid change in communication and computing technology and the use of these technologies in the stock market and the securities, on the one hand, while increasing the size and depth of the stock market, on the other hand, reaches the magnitude of the volume of securities trading, globalization and the breakdown can lead to economic and political change by creating ripples in the world[12].

The global economic crisis in 2008 also reveals the severity of the economic vulnerability caused by securitization and the size of its impact area.

In addition, for the supply and replenishment of public debts of many western states that have reached astronomical heights, issued securities can also cause the growth of securities exchanges of these countries. jul.

This situation may lead to an inverse relationship between the size of the stock market and its decency.

In developing countries, as one of the reasons why securitization transaction volumes remain low; among the trigger factors of the global crisis experienced, securities-based derivative products have a huge impact, and this has a devastating effect revealed significant effect of negative opinion[13].

Banking Regulation and Supervision Agency (BRSA), the traditional securities securitization exposures secured from the Bank of origin directly or through lower

[12] Ataman Erdönmez, 2006, p.15
[13] Longstaff, 2005, p.10

participation kiymetlestirmey a special purpose entity / special purpose vehicle (SPV) by participating in a transfer of payments is defined as securities with the Securities[14].

In a more detailed definition, it should be noted that homogeneous, but illiquid, income-generating assets (mortgage loan, account receivables and lease leases, etc.), combined with the demands that represents the interests of security and re-packaged the cash flow defined as the process of securitization and third-party investors as securities sold other economic benefits of the loan pool. The asset-backed securities (ABS), all the income from the asset pool to offer a single class obtained a proportional interest investors, or two or more may be in the form of a class or multiclass offer my tongue. Different (and in some cases ambiguous) claims are issued, each of which has its own payment and risk characteristics.

Standard & Poor's explanation of the concept of asset-backed securities: Usually, investors in corporate bonds are repaid from the general income of an issuer. In turn, investors in securitized bonds, also called structured financing, are repaid from the cash flow generated by a certain pool of assets. A manufacturer sells its assets to a trust or company and issues securities backed by these assets. Securities are obligations that are usually issued by these private organizations. In a traditional securitization, investors usually do not contact the seller of the assets, only those assets that are included in the trust[15].

Financial markets have developed in response to the need to involve a large number of investors in the market. As the number of investors continues to grow, the average size of investors continues to decline. And this is a simple rule of the sunday, because the increased size means the participation of a wider investor base . A small investor is not a professional investor. Therefore, it needs a tool that is easier to understand and more liquid. These two needs, financial requests, liquid financial instruments to the evolution of the homogeneous into a product easy to understand and always will be appropriate to the small size, certified quality labels (credit rating or security) has identified bearing phases. Therefore, securitization in a general sense is fundamental for the financial world, and it is a truism to say that securitization covers all financial instruments and therefore the entire financial markets[16].

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[14] Ataman Erdönmez, 2006,p.15
[15] Ataman Erdönmez, 2006, p.16
[16] Longstaff, 2005, p.12

Securitization is one of the most important phenomena of the financial literature. Its popularity is due to the benefits of the above-mentioned use.

For example, the amount of securitization being issued in the United States has increased from $ 958 billion to $ 1.402 billion over the past decade. In parallel with the US, the securitization volume of European sundays has tripled. These figures show that the use and importance of securitization is increasing among firms dec the world[17].

In a technical sense, securitization is the issuance of securities backed by expected cash flows from certain assets, and not by the expected capacity of a private company or public sector organization to repay[18]. Common securitization process, the supply of receivables or other financial assets, financial assets, receivables and other functions to perform in order to isolate (specifically, the restructuring of credit expansion and the provision of cash flows) created a special purpose entity (SPE), it sells them to. SPE finances its purchases by issuing securities (usually promissory notes, commercial papers, bills of exchange, bonds or stocks) to investors. Legal agreements design the rights and obligations of all parties to the transaction, including the appointment of a manager to manage receivables when necessary.[19]

One or more financial institutions are engaged in the structuring and marketing of securities issued by the SPE. To facilitate investor demand, credit rating agencies evaluate the possibility of fulfilling the obligations of the SPE and assign an appropriate credit rating. Credit development and liquidity support are usually provided by SPE to ensure a high rating for Securities[20].

In securitization, there is a legal transfer of receivables to a separate entity, as this is important because there will be a transfer of receivables by the first issuer of the asset. It is also necessary to make sure that the transfer of receivables is recognized by the legal system as a real transfer and is counted instead of just an eye-wash, for which the fact is only a method of borrowing. In other words, the transfer of receivables should be a real sale of receivables, and not just a financing against the security of receivables[21].

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[17]Guay ve Kothari, 2003, p.20
[18] Bloomingdale ve Hawken, 2005, s.12
[19] Longstaff, 2005, s.12
[20] Davis, 2000, s.30
[21] Longstaff, 2005, s.14

1.3. Methods and Types of Securitization

The Securitization process, consumer and housing loans, finance lease payments arising from the lease contracts and export transactions receivables, credit card receivables, banks activities anonymous in production of goods and services outside of the scope of the claims from partnerships with customization in accordance with the legislation, including state-owned enterprises to their customers what they have done in the years which have been connected due to sales tally receivables on loans to be provided through the agricultural credit cooperatives T.C. The receivables of Ziraat Bank related to the year, T. It covers the promissory notes receivables arising from contracts of sale or promise of sale of real estate in the portfolio of real estate investment trusts with specialized loans opened by Halk Bank to artisans and artisans, as well as small businesses.

In addition, as stated in the Communiqué on Asset-Backed or Mortgage-Backed Securities of the Capital Markets Board (CMB) III-58.1;

• T.C. Installment and contractual receivables of the Prime Ministry Public Housing Administration arising from the sale of real estate,

• Short-term deposits, participation accounts, reverse repo transactions, money market funds, short-term debt instruments funds and Takasbank Money Market transactions made for the purpose of evaluating the cash obtained from the assets in the fund's portfolio,

• Assets other than capital market instruments that will be deemed appropriate by the Capital Market Board are also included in this scope.

In order for the securitization to be realized, the following 4 features must be available[22] ;

* Assets in asset pools must be of sufficient size and quality,

• The source institution and the institution providing services should be institutions with credibility and competence,

* Adequate legal structure and protection should be in place,

[22] Banks, 2006, s.61

Appropriate internal and external structural improvements and enhancements should be available

1.3.1. Methods of Securitization

Various factors such as market conditions, permissible legal framework, tax incentives, regulatory framework are effective in determining the securitization structure selected by the institutions[23].

One of the two methods generally applied in the securitization process is called payment transfer/ direct transfer (pass through) and the other is called cash transfer (pay through)/asset management. The element deciphering the difference between a payment transferor and a cash transferor is the legal ownership of the underlying assets. In a payment transferable structure, the issued securities represent an undivided ownership stake in the underlying assets, while in a cash transferable structure, the cash flow from the securitized assets is the issuer's responsibility[24].In other words, the difference between these two types of certificates, that is, securities dec issued to investors on behalf of the fund after issuance, is the nature of the certificate holder's claim on the cash flow created by the asset pool. If the investor has a direct claim on the entire cash flow, and the certificate holder has a proportional share in the cash flow of the collateral, the payment is called a transferable securities/certificate. Asset-backed securities are called cash-transferable securities/certificates, when there are rules for decoupling the cash flow of collateral between different classes of bonds[25].

1.3.1.1. Payment Transferable Securities

In payment transferable securitizations, receivables are deducted from the balance sheet of the source institution and sold to SPEs. Payment transferable securities provide investors with the opportunity to become direct partners in a portfolio or pool of receivables consisting of qualified assets that are similar to each other in terms of maturity and interest rate. Payment transferable securities give the source institutions the opportunity to make their balance sheets more risk-free by removing risky assets from

[23] Lakshman Alles, "Asset Securitization and Structured Financing: Future Prospects and Challenges for Emerging Market Countries", IMF Working Paper, WP/01/147, International Monetary Fund, 2001, s. 6.
[24] Federal Reserve System, An Introduction to Asset Securitization, Vol I/II, s. 9, 10, https://www.federalreserve.gov/boarddocs/srletters/1990/SR9016.HTM, (29.06.2021).
[25] Frank J. Fabozzi ve Vinod Kothari, a.g.e., s. 10.

the balance sheet and thus, to provide funds on better terms and on the cheap. The first examples of payment transferable securitization are shown in Table 1;

Table 1 Initial Securitizations with Payment Transfer

Tarih	Varlık Türü	İhraççı	Milyon $
May, 1985	Car loans	Valley National Bank ve Marine Midland Banks	100,5 60,2
December, 1986	Receivables from computer leasing	Goldome FSB	205,7
February, 1987	Credit card receivables	Bank of America	400,0
September, 1987	Housing loans	Green Tree Acceptance Corp	71,5
October, 1987	Receivables from equipment leasingı	American Airlines	92,6

Source: Karadağ, 1996,p. 63.

As an example of payment transferable securitizations, mortgage-backed securities (MBS) can be cited. In a typical MBS, cash flows from the pool of basic mortgage loans are transferred to certificate holders as principal and interest payments[26].

By selling risky receivables and removing them from the balance sheet, the company's balance sheets become more risk-free. However, debt/equity and equity/total asset ratios are improving. With the transfer of the right of ownership to investors, the source company gets rid of the tax liability payable from interest income arising from receivables[27].

Payment transferable securities may carry the risk of early payment. Annuities on mortgage loans and the value of the mortgage are sensitive to fluctuations in interest rates. That is, an increase in the interest or discount rate from 10 per cent to 11 per cent, for example, changes the face value of 30-year installments or a mortgage by 7.85 per cent. However, there are two important institutional differences between mortgage assets and income. dec. First, the lending institution provides the borrower with an option on the existence of a mortgage when selling a loan; the mortgage borrower is released to

[26] SIFMA, ‘‘Federal Agency and Government Sponsored Enterprises’’, s. 1.
[27] Ali Hepşen, a.g.e., s. 37.

purchase the contract in the event that interest rates fall, subject to a prepayment penalty. This purchase option feature is priced on other mortgage terms and interest rate. Secondly, most mortgages are traditionally in the form of a ready-to-sell (DOS) tangible asset, which means that if the borrower sells the housing, the lender can claim the value of the mortgage. If the interest rates are lower than the rate of the mortgage on the contract at the time of sale, the lender will not prefer this option. Conversely, if the interest rate is higher than the mortgage rate, the borrower is forced to give up the loan at the bottom of the market if he sells the house, and the landlord will not prefer this option. This ’lockdown' affects the probability of sale and therefore the expected maturity and value of the mortgage asset. Individuals will not be expected to change their home frequently if they have to replace a low-interest mortgage loan with a new one at higher market rates. As a result, the effective maturity of the mortgage asset is inherent depending on interest rates and other economic variables[28].Therefore, early payments made by credit borrowers also lead to securities being paid before their due date. This situation results in uncertain maturities of payment transferable securities and variability of cash flows and constitutes the biggest problem of such securities. In a payment transferable structure, all the principal and interest received are given to investors as payments on the underlying assets are received. In other words, any prepayment on the underlying asset is necessarily transferred to the holders of securities in such a way as to affect the principal and return[29].

In terms of credit risk; like the US Treasury obligations, the securities issued by GNMA are considered to have high credit quality, because the US guarantees timely interest and principal payments. However, pay-transfer issuances issued by the FHLMC and the FNMA have a slightly higher credit risk. Although FHLMC and FNMA enjoy some advantages arising from their federal contracts, the securities are backed by the full support of the U.S. government and the agency assurance of agents in lieu of loan guarantees. In addition, traditional securities that do not contain a guarantee of payment of a state-backed enterprise (GSE) usually have a higher degree of credit risk[30].

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[28] Jerry Green ve John B. Shoven, “The Effects of Interest Rates on Mortgage Prepayments”, Journal of Money, Credit and Banking, C. 18, No. 1, Ohio State University Press, Feb. 1986, p. 42, 58, 59.
[29] Federal Reserve System, a.g.e., p. 9, 10.
[30] James P Rothberg vd., “On the Determinants of Yield Spreads Between Mortgage Pass-Through and Treasury Securities”, Journal of Real Estate Finance and Economics C. 2, S. 4, Kluwer Academic Publishers, 1989, p. 302.

1.3.1.2. Cash-Flow Securities

In cash-transfer securitization, the security's security is an asset pool, and this asset pool is shown as a debt in the issuer's financial statements. Cash flow from assets is reflected in the value of the securities, while interest and principal payments are also reflected to investors. The first examples of cash-transfer securitization are shown in Table 2;

Table 2 Cash Transfer Initial Securitizations

Date	Asset Type	Issuer	$Million
March, 1985	Computer leasing from	Sperry	192,5
july, 1986	Auto loans	Chrysler	205,7
January, 1987	Credit card receivables	Republic Bank	199,5
November, 1987	Consumer loans	Household FSB	432,1

Source: Karadağ, 1996, p. 64

The securitization phenomenon was developed mainly in order to make the financial structure of the institution more risk-free by excluding the securitized asset from the balance sheet, to reduce the amount of capital required to finance the activities and to ensure that investors are better protected against the risk of bankruptcy[31].

Different needs, different expectations, investors are able to respond to different products because it creates securitization (some sources “securitization” as can pass), considered within the scope of structured finance. At the same time, with securitization, products that are bulky and therefore not marketable can also be more valid in buying and selling transactions, and can be found more attractive by different investors

Securitization is different from a secured loan or asset-backed securities or other financial receivables sold to a third party. The main element of securitization is the separation of good assets from the balance sheet of a company or financial institution and the provision of assets based on high-quality securities to investors. Securitization for institutions is a new and inexpensive form of financing. For financial institutions that have effective credit programs and are experiencing capital constraints, securitization means removing assets from the balance sheet and freeing up capital for further loan allocation. Securitization can be an alternative source of funding, and since securities are liquid

[31] Hepşen, 2005, s.145

products with a large trading volume and a high credit rating, they can be actively traded on secondary markets. For investors, menkule provides diversification for different investment instruments with greater returns than similar corporate bonds.[32]

In his study, Hakyemez (2012) touched upon securitization and securitization practices in various countries and expressed various problems encountered during the applications and developed solutions to these problems.

In this way, cash-flow securities give the investor the right to receivables on securitized receivables (an asset[33].

Collateralized mortgage obligations (CMO), which are popular in the application of cash-flow securities America, which stand on the balance sheet of the source company and express their indebtedness, are paid through this structure[34]. In addition, such securities can also be issued based on credit card receivables, auto loans, unsecured consumer loan receivables[35].

1.3.2. Types of Securitization

As a general rule, the nature of the source institution in the securitization process and the type of asset class determine the name of the issued securities. As shown in Figure 3 general structured financial product markets, asset-backed securities (VDMK – ABS), mortgage-backed securities (IDMK – MBS), secured debt obligations (CDO) and re-packaged consists of securities. The MBS sunday is also divided into residential (RMBS) and commercial (CMBS) securities, while the CDO asset class is also divided into several different types[36].

Financial products issued as a result of securitization are generally classified as asset–backed securities (ABS) and mortgage-backed securities (IDMK – mortgage–backed securities - MBS), depending on whether they are mortgage–backed securities or not. If kiymetlestirile an immovable pledge the receivables securities (mortgage or mortgage) secured by securities issued as a result of the securitisation of receivables, with a special name, the “mortgage backed securities” is expressed as. In exchange for all other types

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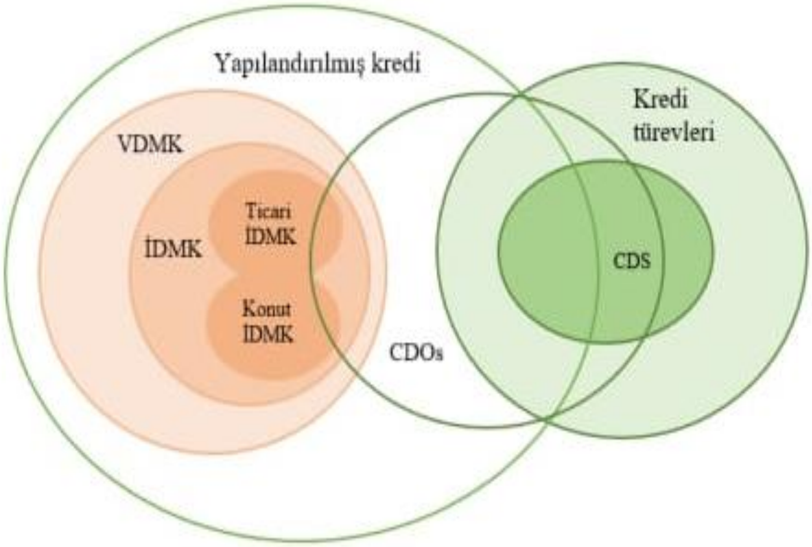
[32] Ataman Erdönmez, 2006, s.75-76
[33] Halil Doğru, a.g.e., s. 9.
[34] Lakshman Alles, a.g.e., s. 7.
[35] Saadet Tantan, a.g.e., s. 12.
[36] Frank J. Fabozzi ve Moorad Choudhry, “Structured Finance and Securitisation- Introduction”, The Handbook of European Structured Financial Products, ed. Frank J. Fabozzi and Moorad Choudhry, New Jersey, John Wiley & Sons Inc., 2004, s. 5.

of receivables that do not carry mortgage collateral[37]in other words, securities issued on the basis of the cash flow of an asset on the active side of the company are called "asset-backed securities[38]. Although the securitization process is the same for both financial products, the difference between them is whether the securitized receivables are secured dec a mortgage[39].

Figure 2 Structured Financial Products



Source: IMF, “Containing Systemic Risks and Restoring Financial Soundness”, Global Financial Stability Report, Washington DC, April 2008, s. 57.

Collateralized debt obligations collateralized debt obligations CDO) is a type of asset-backed securities, although an extended, secured debt obligations and asset-backed securities, there are some key differences between. Collateralized debt obligations issued on the basis of assets such as asset-backed securities and credit default swaps are divided into classes according to their structure, reason for issuance, portfolio management style and collateral assets[40].

1.3.2.1. Housing Finance System and Mortgage-Backed Securities

An effective housing finance system is required to transfer funds collected from surplus economic units to individuals who request funds (who need borrowing to buy housing) and provide a return to savers while performing this function, and on the other hand,

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[37] Halil Doğru, a.g.e., s. 7.
[38]Shenol Babushchu, "Financial Market Instruments", Financial Management: Basic Theories and Annotated Examples, ed. Aysel Gündoğdu, Ankara, Seçkin Broadcasting, 2017, p. 110.
[39] Halil Doğru, a.g.e., p. 8.
[40] Nükhet Eriş, “Collateralized Debt Obligations”, CMB Qualification Study, Ankara, 2007, p. 3-8.

provide credit conditions that they can repay to the borrower by receiving these funds. When the effectiveness of the housing finance system is assessed by the presence of a sufficient amount of long-term housing loans offered on the market, this only depends on the level of development of financial and capital structures[41].

1.3.2.1.1. Housing Finance Systems

English "mortgage known as" between the public and at the beginning of "it pays the rent, long-term home-buying system" mortgage mortgage, also known as system-based, long-term debt and providing loans to Real Estate, creditors would it take to, get back at maturity if it does not, one or more of encashment of own real estate that gives you the right to collect the debt primarily with assurance refers to the agreement . Therefore, a mortgage is not a mortgage loan, but a legal document indicating that an immovable property is issued as a mortgage/pledge in exchange for the debt received.[42]

The system of mortgage financing originated with practices in medieval Europe. Considering the period when the first examples of the system were seen, the land was actually a kind of assignment contract with the owner of the real estate giving maturity to the person he sold and making payments in installments[43].

The first Mortgage application in the world was found in the UK in 1190, and the regulation on this application was included in English Law. In the UK, lenders would mortgage the real estate they wanted to get the loan to people who wanted to buy the real estate and needed the fund, and they would collect the real estate by selling it in case the debt was not paid off. Mortgage practice in America, which is called the New World, began with the leadership of insurance companies in the 1930s, and these years are a period when 2 million construction workers were unemployed when loans issued in the US construction industry were not repaid. In order to correct this negative situation in the construction and mortgage market, the US Congress established the Federal Housing Administration (FHA) in 1934[44].

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[41]Ilhan Uludag and Sarah Arican, Economics of Financial Services (Markets- Institutions- Tools), Istanbul, Beta Edition Publication, 1999 p. 394.
[42]Mehmet Ali Öztüfekçi, ”Tax Approach to the Mortgage System Project in Turkey", Journal of Tax Problems, issue 212, May 2006, ss.7-14
[43]Hakan Berbercuma, ”Mortgage Housing Finance System and Structure in Turkey", Unpublished Master's Thesis, Marmara University, Institute of Banking and Insurance, Istanbul, 2006, p.26.
[44]Suna Oksay, Tolga Ceylantepe, ”Mortgage and Mortgage Insurance", TSRSB, Insurance Research and Review Publications-7, Istanbul, 2006, p.9.

Growing up with the mortgage system to meet housing needs, housing development projects, the realization of new business as a result of the construction of the shopping center and ALS, qualified employees and workers towards meeting the needs of employment-enhancing investments have been carried out, many people are acquiring real estate owner and housing wealth in the protection of the acquired assets or turned into one of the tools that are used because it is undeniable the importance of the system in terms of the country's economy has become. The fact that the construction sector, to which the mortgage system is connected one-on-one, is also intertwined with a wide range of sectors has led to the fact that this system is the locomotive of economies.

Considering the economies of the country, the mortgage system is important for its positive reflection on economic growth and indicators. One of the effects of the system is that consumers can more easily become homeowners as a result of the extension of maturities and the fact that monthly installments become payable. Secondly, it will increase the volume of loans, and not only that, secondary markets will be formed and new financial instruments will be bought and sold here, and this structure will make a huge contribution to the deepening of financial markets. In particular, it is important that the financial markets are deep in order to ensure the development of countries and to continue this.

one of the main indicators of social deepening is the rate at which funds created in the financial sector are transferred to the real sector. The greater this ratio, the greater the financial depth will increase, and vice versa, because the financial deepening will be weak, economic growth will not be at the desired level due to lack of resources in the real sector[45].

One of the indicators of financial deepening is the multiplicity of the variety of institutions and instruments in the financial markets. An excess of diversity will lead to an increase in the supply and demand for funds. From this perspective, the Mortgage System will help deepen and grow the financial markets with the tools and institutions in the primary and secondary markets, and as a result, their contribution to economic growth will be inevitable. However, there is a direct relationship between the size of the financial system and economic development and GNP per dec. The studies conducted (Fisher and Jaffe's

[45]Suna Oksay, "The Need for New Legal Regulations in Financial Markets and the Turkish Financial System", Journal of Recommendation, Marmara University, Institute of Social Sciences, Istanbul, June 2000, p.45.

study in 2003) also showed that there is a relationship between GNP dec Gross National Product) per capita and the amount of Mortgage in the country.

In a country with a developed financial system, GNP per capita will be high, however, people's housing needs and the need for housing loans will increase. The resulting credit demand will feed the financial market and the economy, leading to growth. Financial markets, whose task is to bring together the lack of funds and the surplus of funds, will be able to perform these functions dec the best way with increasing loans.

On the other hand, the Mortgage System will provide the opportunity to own a large number of low- and middle-income houses with the possibility of long-term and low-interest loans. With the increasing demand for housing, the construction sector will grow, the quality of construction will increase, illegal construction will decrease, and this will trigger economic growth. In addition, employment will increase with the growth of the construction sector, especially because the need for specialists in the lending process in the application of the Mortgage System is inevitable, and thanks to Mortgage, a new field of employment will be born, which is called a Mortgage Broker. In addition, with the regular functioning of the Mortgage System, housing subsidies that the state is likely to provide will decrease, and the state budget will include one item lighter. However, increased housing ownership will contribute positively to the property taxes that the state will receive[46].

Mortgage finance mortgage loans primarily for the functioning of the system, mortgage loan insurance, mortgage-backed securities such as mortgage bonds and mortgage-based capital market instruments possible the use of restrictive provisions needs to be replaced. The widespread use of these tools is of great importance for the survival of the system. In addition, creating a housing finance sector and ensuring a sufficient level of flow of funds to this market also depends on the fact that the economic and financial systems of the countries concerned are generally strong[47].

Mortgage housing loans should be in the form of a long-term supply of funds in accordance with the demand for long-term funds in terms of their structure. In other words, there will need to be a long-term investor group in the capital sundays, such as

[46] Suna Oksay, T. Ceylantepe, a.g.e., s.10-12.
[47] Özgür Kurç"A New Approach to Housing Finance in Turkey: The Mortgage System", Unpublished Master's Thesis, Istanbul Technical University, Institute of Natural and Applied Sciences, Istanbul, June 2005, ss.28-32.

pension companies, insurance companies, real estate investment trusts. The lack of the specified institutions supporting these funds in the infrastructure of the mortgage housing finance system will lead to a deterioration in the structure of the system and the conversion of loans into short-term commercial bank loans. The intervention of the public in housing finance should be in the form of increasing the funds for this sector, therefore reducing the cost of funds and preventing excessive rise in housing prices by ensuring the supply of housing in accordance with demand. For this purpose, it is important to create an institutional structure that will ensure the transfer of funds and the production of funds[48].

The satisfaction of large volumes of demands and needs for housing depends on long-term housing financing on a very large and sustainable scale. A regular movement of long-term flows of funds should be considered as a central issue. That is why it is necessary to successfully mobilize domestic savings. The transfer of domestic savings to the capital market depends on the level of development of the financial and capital markets and the effective policies of the institutions regulating the market. The provision of a loan at a level that can ensure the purchase of housing and at conditions that can be repaid is one of the factors that will determine the success of the housing financing system[49].

The functioning of the mortgage housing financing system takes place within the primary, secondary and capital markets. Primary markets, houses changed hands, want to buy a home with a loan, corporate finance, while Moslems from housing markets, secondary markets, which provides funding through securitization of housing finance markets, providing the primary markets. The capital market is the market where institutional investors such as banks, private pension institutions, insurance companies invest in secondary market instruments such as bonds, bonds, stocks[50].

The mortgage housing finance system is generally based on the use of long-term housing loans, such as 15-20 years, by financing institutions for those who want to own housing in exchange for a mortgage to be established on housing. Receivables arising from loans

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[48]Ibrahim Kavrakoglu, Ali Reza Kalyan v.d., ”Suggestions for Housing Problem and Solution", Istanbul Chamber of Industry Research Department Publications, Publication No: 1983 11, Istanbul 1983, p.4
[49] İlhan Uludağ, a.g.e., s.27.
[50]Murat Gökşin Berberoğlu, ”Housing Finance and a Suitable Model Proposal for Turkey", Unpublished Doctoral Dissertation, Istanbul Technical University, Institute of Social Sciences, March 2005, Istanbul, ss.57-62.

are transferred to "Mortgage-Backed Securities Organizations" and these organizations issue and sell mortgage-backed investment fund or Asset-Backed Securities (ABS) in exchange for the receivables they inherit. The funds provided from the securitization of housing loans are transferred back to the system, and in this way, financial institutions can also finance long-term housing loans.

Secondary markets, sectors and regions more excess capital in a capital deficit, drain the economy by sectors and regions play an important role in capital markets in order to ensure the continuity of the secondary and primary market is a market which is the locomotive of the funding system.

It is not the lending institutions that regulate the transaction in the process of buying real estate with the mortgage housing finance system, evaluate the application, but the brokers who mediate them. The main function of the broker in this process is to help those who need funds to find the most suitable loan by providing consultancy services to those who receive loans.

The practice of financing housing with a mortgage is embodied after the conclusion of the mortgage agreement. In the mortgage agreement, the issues between the mortgagor and the decommissioner are clearly stated. The loan in question in the mortgage transaction is a loan that has been issued to a person who wants to buy any property. If the person receiving the property (the mortgagor) has difficulty paying the lender (the mortgagor), the lender has the right to close the loan and buy back the property that has been mortgaged by selling it. In this system, the mortgaged property is the guarantee of the mortgagor in one aspect. A mortgage, in favor of the lender, establishes a mortgage on the real estate of the owner of the real estate. If this mortgage is difficult for the owner of the real estate to fulfill his obligations, the lender applies it to the asset specified in the terms of the debt agreement and provides for the payment of the debt[51].

1.3.2.1.2. Mortgage-Backed Securities

The mortgage debt market has become an increasingly important part of the US capital market over the past 20 years. In particular, commercial banks, savings and loans, and mortgage loans by financial institutions such as mortgage companies created by the securitisation of mortgage-backed securities (MBS), has been dominating the mortgage

[51] William L. Ventolo, Jr. & Martha R. Williams, Fundamentals Of Real Estate Appraisal, 8 th Edition, Dearborn Real Estate Education Published, Chicago 2001, s.44

markets in recent years (Xu and Fung, 2005). The value of the US MBS is about $ 3.7 trillion, equivalent to 36% of the gross domestic product in the US as of 2001[52].

A mortgage-based collateral is a demand for cash flows generated by a certain pool of mortgages. Most mortgage-backed securities in the United States are issued by three state-backed enterprises or one of the institutions known as Ginnie Mae (GNMA), Freddie Mac (FHLMC) and Fannie Mae (FNMA). backed securities are issued directly by mortgage lenders. since its inception in the 1970 dec, mortgage-backed securities have become very popular as an investment vehicle among individual and institutional fixed income investors. The main reasons for this popularity are that mortgage-backed securities provide attractive returns, have little credit risk or trade in a liquid secondary market[53].

Mortgage-Backed Securities that can be purchased are divided into three general classes:

* Transition documents;

• Mortgage-backed bonds

• Repayment bonds

Pass-through (PT) certificates are securities issued against a certain collateral pool that are subject to cash flow matching. The balance on the PT is always equal to the mortgage balance in the pool, and cash flows from borrowers are motioned to investors, and there are delays and deductions on service and warranty fees. Transitions are typically not the issuer's responsibility and feature credit enhancement through various techniques[54]. They can be issued by lenders or channel institutions. The most well-known passes in the US are guarantees guaranteed by Ginnie Mae[55].

The Ginnie Mae transition channels are essentially risk-free in terms of default due to the regulation of financial guarantees. Firstly, the transitions are supported by mortgage loans, which are secured for holders of certificates (securities). Secondly, the mortgages themselves are covered by Federal Housing Administration (FHA) or Veterans Administration (VA) insurance[56]. Finally, fast payment interest and principal are guaranteed by Ginnie Mae. Because it is a direct agency of the United States Government,

[52] Chiquier vd. 2004, s.15
[53] Longstaff, 2005, s.20
[54] Longstaff, 2005, s.20
[55] Chiquier vd. 2004, s.1
[56] Chiquier vd. 2004, s.2

Ginnie Mae crossings are supported with the full faith and credit of the federal government[57].

"Mortgage-Backed Bonds" (MBBS) are the debt obligations of the issuing institution. They are similar to MBS in that both instruments are backed by the same group of mortgage lenders that provide collateral for the instrument. However, while MBS provides a more effective capital, the mortgage assets that support the instrument are removed from the balance sheet of the mortgage lender, in the case of mortgage bonds, the asset remains on the balance sheet. The trade-off for low capital efficiency is that mortgage bonds allow funds to be raised more cheaply. Since the assets remain on the balance sheet of issuing institutions, investors apply to a fully capitalized credit institution instead of a special-purpose vehicle that does not have its own capital

A ”repayment bond" is a hybrid of a direct transition and Mortgage-Backed Bonds (MBBS). As a direct transition, payment through the bond relates the interest and principal income from the mortgage pool, the bond interest obligation and the principal deduction. As in the case of the MBB, mortgage lenders guarantee the bonds and issue a loan to the issuer. However, unlike other bonds, a repayment bond allows an institution to liquidate low-yield loans without having to close the loss of capital.

1.3.2.2. Asset-Backed Securities

Asset-backed securities (ABS) are securities based on cash flows from certain assets, including receivables and some loans[58].

Not every organization is able to export ABS. Banks, large authorized brokerage firms, leasing companies, financing companies, etc. are organizations that have the authority to issue CMBS. In addition, these organizations can be decoupled among themselves according to the risk levels of the products (underlying asset). That is to say, the low-risk category of borrowers by commercial banks and finance companies securities receivables belonging to the car companies are affiliated to kiymetlestirili, medium, and high risk category of loans by borrowers, asset securities are pools kiymetlestirili independent financing companies. The credit quality of the underlying asset/underlying asset pool is important in securitization, not the source institution

[57] O’Rourke, 2001, s.15
[58] Banks, 2006, s.90

The stages of issuance of asset-backed securities are described. These stages can be expressed as;

In the export of ABS, the source organization transfers the receivables it has to a special purpose company that is usually established only for the purpose of exporting VDMK. Since receivables are released from the balance sheet of the source organization and entered into the balance sheet of the special purpose company, an off-balance sheet financing type transaction is performed.

A special purpose company issues a ABS on the basis of these receivables and sells the ABS to investors.

The income obtained from the sale is transferred to the source organization as the price of the receivables received from the source organization.

As the source organization collects these receivables, it transfers them to the special purpose company.

If it is a special purpose company, it transfers these payments to the investors who own ABS within the specified periods[59].

Just as ABSscan make payments at a fixed interest rate, they can also make payments at a variable interest rate. ABSs can be short-term, as well as long-term, and they can also be prepaid or callable (callable). There are no rules about the fact that the organization to which ABSs will be exported is public or private, the currency in which they are based is domestic or foreign. Their participation in the stock market depends on preference.

The difference of ABS from other securities is that the assets are economic values included in the balance sheet. In ABSs, there is a presence first. Then, according to this asset, debt is found and passive is formed and ABS is issued[60].

The fundamentals of ABS are based on mortgage-backed bonds. Here, individual mortgage loans collected in a pool are treated as collateral, and bonds are created based on them[61].

In the securities markets, a distinction is usually made dec asset-backed securities and mortgage-backed securities. Asset-backed securities in markets outside the United States

[59] Sermaye Piyasasında Gündem, 2012, s.12
[60] Alptekin, 2009, s.12
[61] Brigham ve Ehrhardt, 2005, s.677

cover all instruments that are securitized, including those based on mortgages[62]. There is no significant difference between ABS and MBS, except for the nature of the securitized receivables.[63].

ABSs have a fixed yield and a certain maturity structure, which is one of the features of traditional corporate bonds. However, ABSs are different from traditional bonds. This difference is that all payments to investors are secured by a pool created with the receivables of the source organization.

Considering the development of ABSs in history, the practice of financing real estate in this way, which considers the economic value of real estate as the basis, is first seen in the Decree published by Friedrich the Great in Prussia on 28.09.1769.

on 31.01.1857, the Law adopted in the Swiss state of Geneva granted credit institutions the right to issue promissory notes in exchange for real estate collateral. with the Law on Mortgage Banks on 13.07.1899 and the Law on Mortgage Notes on 21.12.1927, mortgage securities in Germany were converted into financing instruments.

In 1916, the Federal Land Bank (Federal Land Bank) and the Federal Home Loans Bank (Federal Home Loans Bank) began operating in the United States. Established in 1933, the homeowners Credit Union (Home Owners' Loan Association, federal Farm Credit Union (federal farm Loan some of the members of the corporation unable to pay their loans, the federal Land banks and the Federal Housing Financing Institutions taking over the debts of the bank gave loans in exchange for guaranteed bonds. in 1934, the Federal Savings and Loan Insurance Corporation (FSLIC) and the Federal Housing Administration (FHA) were established and insured mortgage loans[64].

In 1938, the Federal National Mortgage Association (FNMA, Fannie Mae) began regulating the purchase and sale of FHA-insured mortgages on the second-hand market. In 1968, The Government National Mortgage Association (GNMA, Ginnie Mae) was established and began working as a guarantor. In 1970, the Federal Housing Loan Mortgage Association (Federal Housing Loan Mortgage Corporation, FHLMC, Freddie Mac) was also established[65].

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62 Bakkal ve Korkmaz, 2011, s.16
63 Bakkal ve Korkmaz, 2011, s.18
64 Aydın, 2006, s.62
65 Aydın, 2006, s.92-93

The VDMK market in America dates back to 1985, when Chrysler securitized a portfolio of car loans[66]. In the same year, Sperry ABS, an American electronic equipment company, acquired Sperry Financial Corporation (Sperry Lease Finance Corp.). Then, it sold its computer rental receivables with a fixed interest rate worth $192.4 million to this company, which was established for special purposes[67]. Securitization based on a credit card was first carried out in the USA in 1987. Capital One, MBNA and Advanta were the first banks to securitize credit card receivables[68].

by the 1990s, this market included home loans, boat loans, student loans, and various leasing transactions. The development of securitization products based on consumer and auto loans in Europe took place in the late 1990s. In addition, the copyrights of music, cinema and literary works can also be securitized. The most well-known example of this is the securitization of the 10-year income of 287 songs belonging to David Bowie, which was called Bowie Bond in 1997.

Compared with America, the development of securitization in Europe has been different. There are valid reasons for this situation. One of them is that there is no public organization that will be a pioneer in securitization in Europe and will provide motivation to investors, and most public organizations in Europe find it difficult to securitize. Securitization in America has been publicly supported since the first day, so much so that markets have been made flexible in order to increase transaction volume and liquidity in the pre-crisis period. In addition, the legal regulations in Europe have been such that they have been an obstacle to securitization. For this reason, in the process of European privatization, it was necessary to blend its own internal dynamics with the American model

In many European countries, large corporate banks have become the first organizations to allocate loans in securitization. However, many governments have achieved the objectives of privatization and reduction of liabilities on the balance sheet of assets of private companies with public capital and fulfillment of minimum obligations under EU regulations through securitization. Governments in Europe have chosen to securitize their

[66] Banks, 2006, s.61
[67] Sermaye Piyasasında Gündem, 2012, s.12
[68] Anbar, 2011, s.101

assets over a wide december of assets, from real estate to lottery proceeds and even future tax revenues[69].

In 1985, the first securitization transaction in the UK was carried out with the issuance of bonds of the SPE called “Mini”, which was established to purchase 1200 mortgages from Bank America Finance Limited. The first securitization transaction in France was carried out in 1990 with the first issuance of bonds based on consumer credit by Credit Lyonnais[70].

VDMKs first entered the Turkish legislation with Articles 13 /A and 22 /C of the Capital Markets Law No. 2499, which was amended by law No. 3794 of 1992. The implementation of VDMK, which began with the communiqué published in 1992 in Turkey (Series: III, No:14), has developed within a framework in which the banking sector showed interest until 1995. Although the application of VDMK initially seemed attractive to banks due to the fact that it made assets liquid, excluded risks from the balance sheet and had a cost advantage, it seems to have lost its importance as of the years after 1995[71].

Securitization transactions are subject to current assets and receivables that are expected to arise in the future. In order for receivables (cash flows) that are expected to arise in the future to be securitized, it is necessary to have a structure that will provide cash flow in the future, and the cash flows that this structure will provide must be securitizable. Here, the source institution accepts the receivables that it expects to receive in the future as underlying assets during the normal operating period, issues securities based on them, or transfers these receivables to the Bank and ensures the issuance of securities. Future cash flows constitute guarantees for principal and interest payments on issued securities. The fact that cash will be owned dec the future, and not at the moment (cash flow will be generated in the future) is the primary difference between future cash flow securitization and current asset securitization.

When we compare future cash flow securitization with traditional borrowing from the point of view of the source institution, it is possible to see that there are some positive aspects of future cash flow securitization. In traditional lending, the lending institution (natural or legal person) is related to the values of assets on the balance sheet of the firm.

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[69] Ataman Erdönmez, 2006, s.79
[70] Yurtseven, 1993, s.11
[71] Aktuna, 2010, s.23

Investors who are in the position of a lender in the securitization of future cash flows are looking at the firm's cash flows. In traditional lending, there is a risk of not being able to pay the debts of the source institution (borrower), that is, there is a credit risk. Credit risk and country risk are eliminated in future cash flow securitization. The reason for this situation is that in the securitization of the future cash flow, the SPE has the right to all future cash flows and sends the remaining amount to the source institution after receiving the commission of the SPE on cash flows.

The reasons why organizations other than banks prefer to issue ABS and not corporate bonds are the possible reduction in funding costs, the diversity in funding sources, and the acceleration of earnings (for the purpose of being included in financial reporting[72].

1.3.2.3. Collateralized Debt Obligations

Collateralized debt obligations (CDO) are the securitization of a portfolio consisting of debt instruments.

The basic functioning of secured debt obligations, bank loans, bonds, such as mortgage assets with credit risk of the underlying asset pool underlying the pool asset in the creation of cash flow and cash flow of the assets of securities is in the form of expulsion depending on that. The reason why these securities are called collateralized debt obligations is that the payments on the issued bonds depend on the cash flows of the collateralized and collected assets in a pool.[73]

Although they are similar to ABS in terms of their structure, the biggest feature that distinguishes CDOs from ABSs is that the assets collected in the pool are not uniform, and these assets do not have to have similar characteristics. In other words, CDO pools have a heterogeneous structure[74]

CDO is a tool that was created to redistribute the existing credit risk in the fixed income market and is the most preferred and developed tool for this purpose over the past decade. A financial institution (usually a bank) establishes a legally separate entity to purchase and then resell a portfolio consisting primarily of bonds or other liabilities in order to create a CDO. This organization is known as a structured investment vehicle (SIV). SIV is a variant of SPE. SIV increases its funds (usually) by issuing short-term commercial

[72] Fabozzi ve diğerleri, 2006, s.70
[73]The Agenda of the Capital Market, 2006, p.15
[74] Sayılı, 2008, s.108

papers, from which it uses its income to purchase liabilities such as corporate bonds or tutsat or credit card debts. He collects these debts in a pool, and then divides them into classes, slices[75]. Not only does decoupling less attractive collateral assets into more attractive securities, but it also distributes the credit risk of the collateral portfolio between the tranches, creating products that appeal to investors with different risk-return profiles.

The mechanism of securitization of CDO can be listed as follows[76];

• Creation of a reference portfolio consisting of bank loans and/or negotiable financial instruments and/or credit derivatives,

• Severing the credit risk of the portfolio in question, its connection with the person / institution that created the portfolio,

• Dividing the reference portfolio, which is the basis for CDOs, into tranches (slices) according to a seniority ranking that allows creditors to reach their cash flows according to a certain priority if a problem arises.

Slice allocated to the promised revenue from exports hasn usually more than three got in return in order to meet the top slice first, then to the other and then gradually lower rungs of the next slice is distributed. CDO slices, as in ABSs, are structures in which the top digit has an AAA rating. The lowest tranche (capital tranche) is usually taken by the one who prepares the CDO[77].

The decibels included in the primary priority tranche are securities rated AAA to AA and entitled to initial demand in cash flows. Usually, primary priority securities account for 70% to 90% of the structure. Collateralized debt obligations in the secondary priority or middle tier are usually securities that are rated with a credit rating between BBB and BB and have a secondary right to cash flows from collater dec. A tranche that usually does not have a credit rating, does not receive interest payments, and receives the remaining cash flow after payments are made to other tranches is called a capital tranche. Since a loss due to a default of collateral assets will first be covered by the capital tranche, this tranche is also called the first loss tranche (first loss tranche[78]. Cash flows from collateral

[75] Bodie ve diğerleri, 2009, s.474-475
[76] Balı ve Yılmaz, 2012, s.94
[77] Hull, 2009, s.530
[78] Anbar, 2011, s.125-126

assets are distributed from top to bottom. However, losses related to any credit event that may occur are reflected in the securities segments from the bottom up.

CDOs can accept many assets as the underlying asset. These assets can be home loans and student loans, as well as credit cards and many other different assets. By accepting different assets from different sectors as a basis, CDOs are attractive to investors due to the idea of getting rid of the risk that only one sector may face (one sector loses, the other sector gains). However, the fact that the interest rates offered by CDOs to investors are much higher than the interest rates offered by other investment alternatives and that they have different tranches for different risk appetites has supported the attractiveness of these products to investors.

CDOs provide investors with great flexibility due to the different risk groups provided by different products. Due to the fact that they can more easily meet the wishes of investors with different risk preferences, loan portfolio holders can sell the portfolio in slices, rather than reaching investors who will accept all the existing risks of the portfolio. Risk-averse investors prefer the upper tranches, while investors who want higher risk and returns prefer the lower tranches.

The purpose of the person who creates the CDO contract is to earn more than the money he pays for the relevant debt instruments by selling CDO tranches to investors[79].

The term CDO was formed as a result of advances in securitization and was first heard in 1988. CDO is a structured finance product in which an organization such as SPE issues bonds and promissory notes based on cash flows that the underlying asset pool (collateral pool) will realize. The mentioned pool includes one or more of the following products[80];

* Investable or higher rated corporate bonds,

* Bonds of emerging markets,

* Captive-based securities,

* Asset-backed securities,

* Real estate investment trust debts,

* Bank loans,

[79] Hull, 2009, s.532
[80] Fabozzi ve diğerleri, 2006, s.119

* Depleted, depreciated debts and special case loans,

* Other CDOs.[81]

The first examples of CDO were formed when banks transferred assets (including loans and bonds) on their balance sheets through securitization due to capital pressure created by legal regulations. The first CDO was launched by the British National Westminster Bank in September 1996[82].

CDO contracts have become the fastest developing asset class in the ABS market since the 1990s due to the advantages it offers to the investor side and also the issuer side, which are the parties performing the transactions, and have found widespread export areas in the Americas, Europe and most of Asia. Seen so much demand in other countries between the subject and the biggest reason is the lack of regulations on the lack of a loan pool.

The risk of the collateral pool depends mainly on the credit quality and diversification. Higher credit quality indicates a lower risk of default and a lower return, while a good diversification indicates a reduction in losses and a low return[83].

CDO[84];

Provides investors with securities with the desired risk/return profile and professionally managed credit risk,

Allows loan holders to transfer the physical assets and risks of their loan portfolios,

Optimizes the use of capital and balance sheet. While the issuing company gains financial elasticity by preparing a CDO, it reduces the capital allocation it has to make due to credit inventories and regulations by transferring its risky assets to investors,

Allows new loan holders,

Provides access to new capital sources and shaping periodic funding,

Gives intermediaries the opportunity to take advantage of market opportunities.

[81] Banks, 2006, s.121
[82] Savaşman, 2010, s.22
[83] Banks, 2006, s.124
[84] Banks, 2006, s.122

Investors should look at the probability of default and cumulative default rates, default correlations and recovery (recovery) rates before entering into TBI agreements[85]. The recovery rate is the amount that will remain in our hands for the relevant securities after a possible default situation. As a matter of fact, in an environment where the recovery rate is 60% (hence the loss in case of default, THK=40%), the post-default value of a 10 TL security will be 6 TL (and the amount of loss is 4 TL). This situation and this ratio are determined and conditioned by the parties at the time of the establishment of the contract.[86]

In order to find out the possibility of default, each institution and organization follows many different methods. Some evaluate historical data and credit ratings for the possibility of default on a single reference asset. When there are more or even as many as 150 assets in the asset pool, the general trend in finding the probability of default is to take the average of the degrees of assets in the portfolio. The correlation of the assets in the underlying asset portfolio (underlying asset pool, collateral pool) of CDO is important for the return on CDO. A perfect correlation creates problems, as it will give a relationship between the probability of default of assets, default times and spread values, a state of decency, dependence. The recovery rate, which is the recoverable part of the nominal value of the bond in case of default, varies from issuer to issuer and from sector to sector. Rating agencies issue data indicating the average prices of defaulted bonds. According to these data, analysts determine sectoral recovery rates and credit ratings for use in determining the expected recycling rates of assets in the collateral pool. It should be noted that the average recovery rates are formed as a result of the forecasts of rating agencies. The recycling rates realized may vary according to the current conjuncture[87].

Although CDO and ABS seem to be similar, they are different tools. The main difference between them is that cash flows from the investor's side depend on the default of the underlying asset on the other side, and the underlying asset is usually dec by an expert (eg. this is because it is managed by a portfolio manager).

CDO is a generic name, and the name of this product may vary depending on the type of underlying asset. If the underlying asset is a bond, collateralized bond obligations (CBO/bonds) while taking the name of the underlying asset collateralized loan

[85]Fabozzi and others, 2006, s.150
[86] Fabozzi and others, 2006, s.150-151
[87] Banks, 2006, s.121

obligations with the loan (CLO) is the name of the underlying asset funds, collateralized fund obligations (CFO) and the underlying asset mortgage products, collateralized mortgage obligations (CBO/mortgage) name.

The first example of CLO was formed by the NatWest company when they wanted to exclude some of the loans they had and the risks they had with them from the balance sheet. CLOs allow banks to distribute and diversify the credit risks they have within the market.

In CBO/bond transactions, a pool of high-yield bonds is created and securities that accept the yield of this pool as the basis are issued. These operations were first carried out at the end of the 1980s.

CBOs can be grouped according to their underlying assets, as well as grouped according to their purpose and structure of issuance. These[88];

Cash-based CDO: This type of CDO with a cash flow at its source makes a certain principal and interest payment to its investor using the cash flows generated by the reference asset in the CDO portfolio,

CDO built on market capitalization: These CDO's usually tend to increase the return of their investor by buying/selling and/or selling some profitable collateralized assets in the portfolio. The asset manager of CDO acts with the motive of realizing the capital gains of the assets in the CDO portfolio. It is a longer-term but less preferred type of CDO,[89]

CDO for arbitrage purposes: Some CDOs are focused on arbitrage opportunities. This type of CDO is often preferred by equity investors, especially those who want to take advantage of the yield decoy between high-yield assets and low-yield liabilities. The majority of CDOs are composed of CDOs for arbitrage purposes,

CDO for balance sheet liability purposes: These products, which are intended to ensure a balance between the balance sheet items, are configured in such a way as to comply with the purpose of removing risky assets contained in the underlying asset issuer's own balance sheet. [90]The primary purpose of the issuing institution is to improve the risk-

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[88] BAFAD, 2014: 37

[90]

return ratio of the balance sheet while fulfilling certain legal regulations, such as capital adequacy ratio,[91]

Synthetic CDO: Synthetic CDO includes products that are prioritized over the sale of credit protections, such as CDO, instead of cash assets. Synthetic CDOs use CDOs to replicate cash-based CDOs. In order for SPEs to be able to issue synthetic CDO at the beginning, they must first receive cash deposits. They also cover these deposits from structured CDSs. In case of any losses, these deposits are covered,

Hybrid CDO: Hybrid CDO is a hybrid CDO that includes synthetic CDO and cash-based CDO together.

1.3.2.4. Slicing

The credit rating is one of the important factors that improves the quality of collateral in the pricing of asset decimals. These asset segments receive different credit ratings according to the measure of investability. For example, senior class is in the AAA zone, intermediate class is in the AA and A zones, while BBB, BB, B and non-credit rated classes are in the decency zones. In accordance with the “cascade rule” in structured financial products, investments in other tranches cannot be made without redemption of securities in the senior tranche. In this context, in the event that the pool fails to generate the expected cash flow for the holders of securities due to the disruption in the return of certain loans; first, those who receive securities from the capital tranche and then from the dec tranche will be deprived of full payment. In turn, the holders of high senior tranches and senior tranches, which are at the top of the capital structure and have received the AAA rating from credit rating agencies, are considered unlikely to be unable to make the promised payments[92]. This structure can also be called a “cash flow waterfall”.

The financial assets in this section are mostly preferred by investors who want to avoid risk, such as insurance companies and pension companies. Lower-level divisions are riskier investments. The financial assets in this section are preferred by investors who want more protected funds and other high risk returns[93].

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[92] Coşkun, 2010, s.77
[93] Chambers, 2009, s. 3

The value of the capital tranche has a positive relationship with the correlations of simultaneous default of products within the asset portfolio. As the correlation of simultaneous defaults in the reference portfolio increases, the value of the capital tranche increases, which means that the value of the spread that will occur will also be less. The values of the senior and most senior tranches, on the other hand, have a negative relationship with the correlation of defaulting at the same time. As the correlation of simultaneous defaults in the reference portfolio increases, the values of the most senior and senior tranche will decrease (the investment here will become worthless) and the spread value will increase[94].

Although the slicing process increases the complexity and leverage of structured financial products, it has reduced the costs of financial lending institutions, resulting in a decrease in the imperfection and negative values in the market, which can occur in the form of carelessness, ignorance, defective market and Market Segmentation. a creative process that enables the development of financial products that suit the needs of investors. From the point of view of investors, investors who do not have sufficient knowledge about the risk of a security due to the problem of asymmetric information and tend to be risk averse can take advantage of structured financial products by purchasing a security in the senior tranche. Credit risk and economic capital and regulatory capital ratios for banks who want to improve transfer of structured senior tranche eliminates the risk of unexpected losses while selling a financial product by purchasing an option that aims to eliminate the risk of default. Under the assumption that the geographical and sectoral distribution of the loan portfolio has been achieved, it has been considered that the slicing process reduces the risk towards the upper tranches[95]. However, creating too many slices can cause various problems. Such a situation makes it difficult to price each tranche clearly and can facilitate a decrease in the credit quality of the underlying asset.

If the reasons and achievements of the slicing process are mentioned[96];

Transaction Costs: Some investors may want to enlarge their portfolios by investing in some sectors and industries where it is impossible/difficult to invest without structured finance intermediation.[97] Examples of these are home loans and consumer loans. If we

[94] Neftci, 2008, s.556
[95] Coşkun, 2010, s.78-79
[96] Crawford, 2010, s.13-16
[97] Neftci, 2008, s.556

consider an investment fund that wants to invest in real estate, it will never enter into this business due to its deterrence of a group of personal housing loans due to the high transaction costs. Group of similar assets and housing loan, sell, create a common pool and on that basis, so investors can be reached and reduces transaction costs to sell into structured financial products, is taken to a preferable level,

Market Segmentation: When the “cascade rule” in the slicing process is examined, it is seen that structured finance makes the top slice “safe, minimum risk”. Such a ”safe, less risky, least likely to incur losses" debt is addressed to the segment that pays a premium, as in the case of requesting collateral in repo contracts and derivative agreements. Structured financial products with asset pooling and slicing have provided the investor with a much larger number of more secure securities than collateral, which can be relatively risky,

Lack of a Market: Markets where it is not possible to bet (trade, play) on the possibility of a certain event happening are called a missing market. Dilimlendirme investors through structured finance and asset pooling and previously they may have various combinations they can't get the option asset and it is becoming possible to achieve certain results. Considering that there are investors who want to bet on the fact that the housing market will decline, there are derivative products (for example, ABSs) that have been created based on certain segments of the market. CDS) this allows investors to make any bet they want,

Information Asymmetry: The issuer of securities usually has more information about the quality of the guarantees of the securities they issue than investors. If the buyer and seller are in a situation of such information inequality, it is called information asymmetry. Slicing can solve this kind of problem. All investors who invest in the credit quality of structured financial products have enough information to make an assessment of the asset pool, although they do not feel safe that will not exceed a certain level of loss that may occur and the default do not have sufficient information to provide (this trust is likely to be the formation of the ratings on the shares of the company). When the risk is concentrated in the lowest tranche, this tranche can be held by the issuer, as well as this tranche can be sold to groups of investors who have the ability to manage this risk. Meanwhile, people who have derived structured financial products can sell the upper tranches to less qualified investors. This dynamic structure makes the slicing process important and necessary for the marketing of structured financial products.

2. THE SECURITIZATION PROCESS AND ITS STAGES

2.1. The Process of Securitization

The securitization process begins with the selection of the assets owned by the issuer and the creation of the pool, after which the issuance process is structured within the legal framework. The following discusses the assets that are subject to processing, the parties involved and the stages of the transaction, respectively[98].

2.1.1. Assets in the Securitization Process

Securitization, mortgage loan receivables (non-housing loans, including commercial loans, receivables, loan receivables, credit card receivables, finance lease receivables, claims, hotels and accommodation, health care receivables, student loans, municipal fees and concession fees, etc. a wide range of assets, which includes, in short, all types of assets with an income stream, can be put into securitization operationsr[99].

Assets that a resource company can use as collateral for the issuance of asset securitization are divided into two types[100]: (1) current assets/receivables and (2) future assets/receivables. Transactions related to this type of collateral, such as residential mortgage loans, commercial mortgage loans, corporate loans, auto loans, and student loans, which are shown as examples of assets that fall into the first category, are called current asset securitizations. In the second category, credit card receivables whose cash flows they will provide are of a predetermined nature[101], asset/receivable transactions that will occur in the future, where examples such as airfare receivables, oil and gas royalties and tax revenue receivables can be counted, are called future flow securitizations. The type of securitization of future cash flow (or income-based) financing is often associated with emerging markets and project financing. Assets include income received during the normal course of the company's business, the producer or owner of the property; export receivables, fee-based income, rental flows, etc. it includes[102].

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[98] Saadet Tantan, a.g.e., s. 12-17

[99] Board of Governors of the Federal Reserve System, Report to the Congress on Risk Retention, Oct 2010, s. 17-21, https://www.federalreserve.gov/boarddocs/rptcongress/securitization/riskretention.pdf , (25.05.2021).

[100] Frank J. Fabozzi ve Vinod Kothari, a.g.e, s. 7-8.

[101] Nurcan Öcal, a.g.e., s. 113.

[102] Alexander Batchvarov vd, “Mechanics of Securitisation”, The Handbook of European Structured Financial Products, ed. Frank J. Fabozzi and Moorad Choudhry, New Jersey, John Wiley & Sons Inc, 2004, s. 22.

2.1.2. The Parties to the Securitization Process

Many units may be parties to the securitization process. Figure 3 shows these units;

Figure 3 The Parties Involved in the Securitization Process

Source: Anbar, 2011, s. 45.

The source institution is the owner of assets subject to securitization. With this feature, the source institution creates a pool of these assets owned by the source institution and transfers this pool to a special purpose institution in exchange for a certain discount. In this way, the source institution gets the opportunity to make more loans by providing lower cost funds through securitization. In this case, it is possible to say that it is the party that provides financing for the source institution through securities issued by the special purpose institution.

The lending institution creates a pool of receivables that is the guarantee of ABSs with loans that it has opened over time or purchased from secondary markets, and sells or transfers this pool to SPE to issue securities based on them[103].

Securitization of financial products from monitoring the service providing company and as a result, the cash flow from these products, the management of these products and these products had been passed to the oak of principal and interest payments collected, investors and yedd-i who are responsible for preparing periodic reports regarding financial products

[103] Ataman Erdönmez, 2006, s.76

Emine owned organization. This organization is affiliated to the source company or is a completely independent organization.

Special purpose institutions are institutions that receive assets from many different source institutions, create a pool of these assets, and sell these securities to investors by creating securities that accept this pool as a basis. The assets of the balance sheet of a special-purpose institution include receivables that it acquires solely for the purpose of issuing asset-backed securities, while liabilities arising solely from securitization are included in its passive. These institutions limit their activities to the issuance of asset-backed securities and the purchase of assets to be securitized from the source institution through the income they receive in this way. The main reason why the activities of the special-purpose institution are limited is that these institutions are characterized as a "non-bankrupt institution". A special purpose institution has acquired this feature due to the fact that its activities are limited by certain rules[104].

There are some characteristic features of off-balance sheet SPEs. These features are that their capital is low, there is no independent manager or employee, their managerial function is performed by a predetermined person whose behavior is in the face of all kinds of financial movements, services for their assets are provided under the service agreement, and in practice, bankruptcy is not possible. Based on this situation, it can be said that SPEs are companies that do not have employees, are not expected to make important decisions, lack physical space and cannot go bankrupt. The belief that the security will be repaid in the securitization process depends not on the financial structure of the institution that is the issuer of the securities, but on the soundness of the underlying asset pool. That is why the capital of the SPE is symbolic

There is no rule about what kind of company SPE should be established as. This institution in question can be a joint stock company, as well as a fund.

Investment banks are institutions that act as intermediaries in the sale of asset-backed securities to investors. They work as contractors in the sale of asset-backed securities to investors or carry out direct brokerage activities in the sale of asset-backed securities. In addition to this task, which they perform during the securitization process, they are one of the predecessor organizations that provide advice to the issuing institution on october assets will be securitized and attract a large number of investors.

[104] Hakyemez, 2012, s.11-12

Most securitization structures use various methods of credit enrichment in order to reduce the credit or interest rate risks of securities holders, ensure that the issued securities receive a higher credit rating, and increase their attractiveness to investors. The credit enricher can be the issuer himself, as well as external institutions such as banks, insurance companies or monoline (which insures bonds only) insurance companies. According to the assurance mechanisms provided by the issuer (prioritization structure, over-collateralization, reserve account, etc.), internal credit enrichment; access to the assurance mechanisms provided by third parties (letter of guarantee, surety bond, business guarantee, etc.), on the other hand, is called external credit enrichment. The structure and amount of credit enrichment are usually determined by consulting with credit rating agencies that will rate the securities to be issued[105].

In addition to separating the credit risks of the underlying asset and the issued securities from each other, due to the effect of the credit enrichment process, the credit ratings of the underlying asset and the october securities that are parties to the securitization process differ from each other. This difference results in favor of the creditworthiness of the issued securities.

Credit rating agencies are organizations that evaluate the underlying asset pool and issued securities and issue notes to these products, rating these products. For this purpose, businesses, asset-backed securities issued by credit rating agencies credit quality of the underlying asset pool underlying the pool asset able to fulfill the payment of the principal and interest payments of the products exported has the power to, whether provided assurance mechanisms, legal issues, etc. he is studying it. Credit rating agencies monitor these products that they rated at the beginning of the securitization process during the maturity period and constantly update their credit ratings.

In order to evaluate the credit risk of the pool, rating companies should analyze the interest rate, loan-to-asset ratio, maturity, interest structure and property characteristics of each loan in the pool in the best way. If these rates cannot be met due to the asset pool, credit rating companies may require the use of some credit enrichment methods to meet this level[106].

[105] Anbar, 2011, s.47-48
[106] Alper, 2008, s.147

As an intermediary between the company providing services in the securitization process and investors, as well as loan guarantors and investors, yedd-i emin has the responsibilities of purchasing assets from the issuer dec behalf of the fund and issuing investors' certificates. The entity that issues asset-backed securities and the unit established by the trusted person who maintains the assets of the fund manage the pool, which consists mainly of loans. This unit is authorized to collect payments on loans and guarantees of guarantees that guarantee these loans[107].

Yedd-i emin, who receives a certain fee before all other expenses and a compensation to cover all unexpected expenses, does this in order to fulfill his responsibilities.

Investors refer to natural and legal persons who invest in asset-backed securities. It is possible to consider investors as individual or institutional investors who purchase products issued as a result of the securitization process.

Usually the most public securities were offered for sale, although a large portion of investors who invest in these securities insurance companies, pension funds, commercial banks, investment banks, funds, investment funds, institutional investors such as mortgage credit institutions includes[108].

In addition, the Securitization process that configures active in their portfolios and that provides advice about negotiating the conditions of the contract “editor”, asset-based sale of securities guarantee “guarantor”, which has a special role to kiymetlestirmed with securities asset-based securities for kiymetlestirme, tax consultants, auditors, such as market makers can be found by (Erdonmez Ataman, 2006: 76).

2.1.3. Stages of the Securitization Process

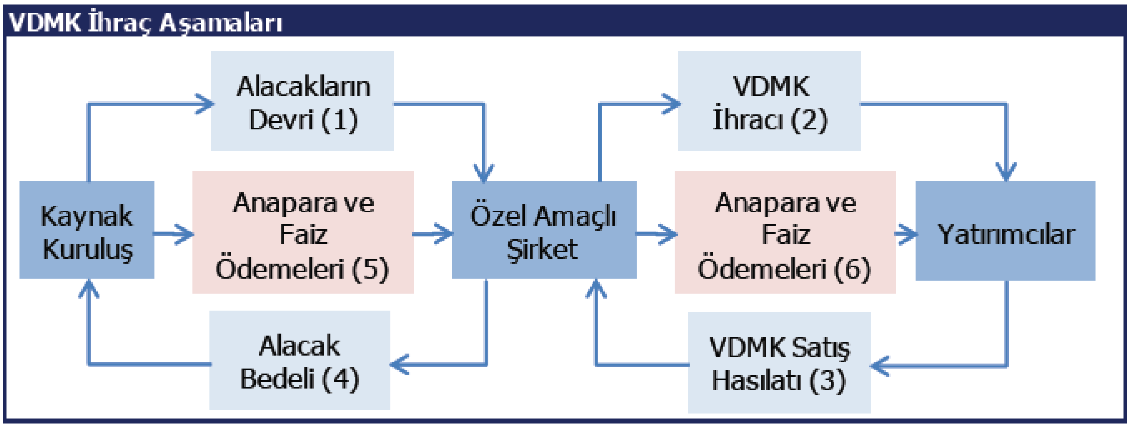
It is possible to explain the relationship of these institutions, which are legally structured and specialized in their fields, with each other, and the events that take place within the securitization structure in Figure 4:

After the investment bank, which will broker the sale of ABS, determines the source company (hence the receivables that will be securitized), a special purpose company is established and dec brokerage contract is concluded between the three institutions. With the contribution of other participants, the investment bank organizes the necessary actions to establish the legal structure. Whether the receivables will be removed from the balance

[107] Hakyemez, 2012, s.11-12
[108] Anbar, 2011, s.50

sheet, the rating agency, law offices, the necessary guarantees and institutions that will provide these guarantees are determined, the sale price of the receivables is determined according to the discount rate. Before the sale, the investment bank goes to the ’road show" and meets with investors to determine the price and investor of the securities. (the stage defined as ’book-building'). After that, the export takes place by a special purpose company[109].

Figure 4 VDMK Export Stages



Source: Özcan Çikot, ”Debt Instruments", Gündem, p. 115, TSPAKB, March 2012, p. 12.

In a securitization transaction issued by VDMK[110];

(1) the source company creates a pool of receivables that it will process, and the pool transfers or sells it to a special purpose company that is usually established to issue VDMK only in exchange for these receivables. Since receivables are released from the balance sheet of the source organization and entered into the balance sheet of the special purpose company, an off-balance sheet financing type transaction is performed and the credit risk arising from receivables from loans issued is transferred to other parties involved in the transaction.

(2) The company for special purposes issues VDMK based on these receivables and sells it to investors. During this, yedd-i emin is involved in the process to fulfill its obligations such as storing, valuing the portfolio and controlling cash flows[111].

[109] Halil Doğru, a.g.e., s. 70, 80, 83, 84.
[110] Özcan Çikot, a.g.e., s. 12
[111] Nurcan Öcal, a.g.e., s. 12.

(3) The proceeds from the sale are

(4) the amount of the receivables received from the source company is transferred to the source company. In this way, it will meet the need for funds.

(5) As soon as the source company collects the receivables in question (borrowers of the loan issued before), it transfers them to the special purpose company. Cash flow is ongoing.

(6) If it is a special purpose company, it transfers these payments to the investors who own VDMK within the specified periods.

If there is not enough cash due to the decency and amount mismatch between the collection of receivables and VDMK payments, the way to obtain a loan from those who provide guarantees to cover the payments is taken[112].When all VDMK payments are completed, if there are excess / excessive collateralization and excess receivables and collections, the special purpose company will return these receivables to the source company in order to manage the cost of excess/excessive collateralization[113].

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[112] Halil Doğru, a.g.e., s. 84, 85.

[113] Steven L. Schwarcz, ''The Alchemy of Asset Securitization'', s. 142

3.THE BENEFITS, RISKS AND DRAWBACKS OF SECURITIZATION

3.1. The Benefits of Securitization

There are several advantages of securitization, both for creators and for investors. One of the potential benefits of securitization is a way to increase non-repayable debt and, consequently, increase the creator's funding capacity beyond the limits imposed by market restrictions, debt agreements and company contracts. It also offers access to longer-term fixed-rate debt than is reasonable through a bank loan or bond issue[114].

In some private sector organizations, securitization is used to reduce the weighted average cost of capital of the firm. This is possible because equity capital is no longer needed to support assets, and high-rate lending can be provided to deep capital markets, while investor demand reduces financing costs. It can also increase management control over the size and structure of a firm's balance sheet. For example, accounting for the non-recognition of assets (that is, their removal from the balance sheet) can improve economic ratios, as well as other measures of economic performance (for example, Return on Equity). Financial institutions use securitization to achieve capital adequacy goals, especially in cases where assets lose value. Securitization also generates capital for other investment opportunities. If external sources of borrowing are limited or there are differences between internal and external financing costs, this can lead to economic dec[115].

Securitization usually reduces the risk of funds by diversifying the sources of funds. Financial institutions also use securitization to eliminate interest rate discrepancies. For example, banks can offer long-term fixed-rate financing without significant risk by passing interest rate and other market risk to investors looking for long-term fixed-rate assets. In october to these benefits, securitization has been successfully used to exert influence on the sales of undervalued assets[116].

Securitization also benefits investors. The main benefit of securitization for investors is the separation of the reliability of the securities and the creator. In a securitization, investors no longer focus on the risk of creation, but instead evaluate the creditworthiness

[114] Stone ve Zissu, 2000, s.15
[115] Bayındır, 2007, s.9
[116] Davis, 2000, s.10

of asset-backed securities. As stated in the SIA research report of the Security Industry Association (2002), other benefits to investors are briefly;

Diversification: Securities issued by SPEs are typically backed by many assets. Investors can diversify their risk by investing in a pool of assets rather than individual assets. This is similar to the difference dec investing in mutual funds, as opposed to individual stocks.

Liquidity: There is an active secondary market for many types of securities, and there are relatively few transactions on the underlying assets themselves.

Changing investor needs: Securitized instruments can be designed or “configured” to meet different investor needs. For example, some investors demand shorter-term investments, while others want to make longer-term investments. Some want to invest in fixed-rate securities, while others want to invest in securities in which the interest rate is set at december intervals.

Stability: The securitization market has generally shown a very stable credit performance and has experienced relatively few negative credit events, such as the downgrade or default of SPE securities or the bankruptcy of SPEs.

Despite these advantages, the assets sold to the Securitization process and ongoing compliance costs and also important the startup reduced by including control SPE initiators for the sender has some disadvantages. The costs associated with a securitization transaction are borne by lawyers, trustees (in most cases), rating agencies, accountants and investment banks, settlement agents or financial advisers for the Initiator and other parties. Another disadvantage of securitization of contractors is that securitization requires the Owners to surrender a large amount of control over the assets in order to obtain certain Taxation and accounting advantages[117].

Finally, in some cases, the poor quality of the assets in question, or the Resource Holder's lack of operating history, or both, often combined with the high transaction costs of securitization, make the costs of extending credit more costly than financing the securitizing bank[118].

The securitization process has many benefits for the persons and/or institutions that are parties to the transaction. These benefits can be summarized as follows;

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[117] Hahn, 2005, s.11
[118] Hahn, 2005, s.12

- Assets subject to securitization are removed from the balance sheet and replaced with cash (the amount remaining except for securitization-related expenses). Thus, the amount of cash owned by the source institution and the position of the balance sheet are improved. In addition, thanks to securitization, management's control over the dimensions and structure of the company's balance sheet increases,
- Securitization is a way of financing for some private sector organizations, which allows to reduce the weighted average cost of capital. Securitization allows to evaluate the available capital in different investment channels,
- The credit rating of the securities issued through Securitization the company's own credit rating is higher than that (because securities issued by the company to be issued by an organization that is independent from the company), a type of securitization financing is less costly according to traditional financing methods,
- As it diversifies its financing sources, securitization reduces the related risk. Securitization provides investors with the opportunity to make investment decisions regardless of the credit solvency of the source organization. Securitization provides investors with opportunities for return on investment and diversification based on different risk preferences, thereby contributing to a more optimal market.

Apart from these;

- It makes a market that can remain stationary for commercial transactions liquid by reducing transaction costs,
- The securitization process ensures that brokerage costs are reduced. The existing brokerage costs are also related to the service received and are usually low,
- Securitization process increases savings due to the fact that it offers investors a guarantee of return on interest or guaranteed payment of securities, as well as a commitment to the quality of credit and a guarantee within the yedd-i emin,
- Securitization allows risk diversification due to the fact that it collects financial products with different characteristics in the same pool and offers them to investors,
- Securitization gives capital owners the opportunity to be in the role of trustee (depositary) without owning the asset in question. Financial assets can be subject

to securitization, as well as physical assets can be subject to securitization, which means that an enterprise can operate it without owning a physical asset,

- Fund raising, loan allocation and holding of this loan up to maturity, which we can dec among the main services of banks, are carried out by separate institutions / players in the securitization process. This situation may result in increased efficiency and the market becoming more efficient.

The biggest disadvantage created by securitization is that the source institution and the investors, that is, the parties involved in the transaction, are unaware of each other. It is unclear who is taking what risk. Another big drawback is the carelessness of banks in approving loans and keeping track of loans issued. In addition, it may be a significant problem to not pay attention to whether the loans placed in the securities pool are under the threshold value or below the threshold, that is, the loans that are paid (could) most and non-paid (e) can be placed in the same package. The fact that securities created on the basis of loans issued on primary markets are traded on the secondary market may carry greater risks than risks on primary markets. Synchronization of interest provided from the asset pool and payable to investors is a difficult process, their non-compliance can create various problems. The complexity of the documentation process of the securitization process and the fact that it requires expertise make this process difficult and pose various managerial risks. At the same time, this situation leads to an increase in time loss and cost, as well as a decrease in the effectiveness of supervision and surveillance.

The biased status of credit rating agencies, which was also seen in the Enron scandal, may also be relevant for structured financial products and securitization, which is a sub-branch of these products, and therefore, the risk that the product actually carries may not be noticed by investors. Also in the Enron case, it is possible to see that securitization can also facilitate fraud and fraud. Enron has taken some of its assets and liabilities off the balance sheet through securitization and thus created a different perception, preventing investors from seeing the company's financial situation with all its transparency. At the same time, Enron has guaranteed some of the assets it has securitized and thus has not actually removed them from its balance sheets. As a result of all this, Enron has become an even riskier company than is known. Securitization can lay the groundwork for all these negative movements[119].

[119]Elul, 2005: 24.

3.2. Risks and Drawbacks of Securitization

Relating to the global financial crisis that started in July 2007; strong macroeconomic growth rates, is considered the best in the world, with modern risk management techniques capable to control the credit risk of a country, how can you be so acclaimed in financial engineering has created confusion a thing that could go wrong ; prior to the financial crisis, has improved in the last decade complex structured finance products, markets and business models represents the first test of ; the statements of some academicians and researchers stating that intertwining banking and capital has the property of being the first securitization crisis are included.

3.2.1. Borrowers Terms

From the point of view of a mortgage loan requester, if decisions are made incorrectly, their subsequent correction leads to consequences that are difficult to return and leave the borrower in a difficult situation, and problems that will occur during the preparation of contracts cause disruptions in the functioning of the system. The type and rate of interest to be applied at the stage of using the loan is of great importance, and the consumer should apply for the use of the loan after evaluating their own financial conditions very well. It can be argued that the necessary importance in these issues has not been shown in the US mortgage market. In particular, subprime mortgage loans used for low-income people to own housing have been misjudged and intensive loan requests have been made thanks to this incentive.

Lenders in the US mortgage market are studying credit areas, but because lenders are not studying lenders, and there are many credit creative institutions on the market, the necessary supervision of the entire credit process has not been provided, and the process of creating loans that exceed standards has been experienced. Those who took out loans were not sufficiently informed, and consumers who had few financial opportunities were initially forced to take out loans at high interest rates because they could not make large amounts of down payments. Lenders violated the limits that would force the stability of the system and tried to create loans without informing the credit fields sufficiently, setting the stage for inevitable disruptions in the repayment of loans.

Interest rates increased out of control as a result of deterioration of cash flows of subprime and variable interest rate mortgage loans that fall into the risky credit group, excessive use as if they were risk-free, and high interest rates were given to risky people, and as a result, interest and principal payments were disrupted. The entire mortgage market has been affected by the growth of the credit crisis, which began with Subprime mortgage loans, and has also affected other types of loans. The ballooning increases in housing markets have caused asymmetric information in the market, causing credit users to be misled. However, the value of the houses shown as collateral in exchange for loans used in the market with the deterioration of balances has decreased and there have been difficulties in providing collateral. After all, subprime mortgage loans used for the purpose of housing for low-income people have been one of the reasons that led the United States to the crisis, affecting all sectors[120].

3.2.2. From the Point of View of Lenders

The main problem that arises from the point of view of lenders is the determination of low credit standards by these institutions. Tracking the profile of borrowers has become difficult due to the fact that lending standards vary from bank to bank. The scoring operations that distinguish loans from each other are performed by financial companies for a fee other than banks, and there have been some problems related to standards here. Lenders have fundamentally shaken the system because they have not been sensitive enough. As a result of the fact that the credit scores did not reflect the truth, the credit quality deteriorated and there were failures in the system.

Due to the cessation of loan repayments, the flow of funds in the securities market has stopped, and housing has begun to be repurchased by lenders. However, the oversupply of supply in the housing market due to the problematic credit surplus has reduced housing prices and a liquidity shortage has arisen when housing sales have become unaffordable. After all, the system has become almost inoperable.

3.2.3. From the Point of View of Issuers of Securities

The securitization process is based on the issuance of securities by the bank at the cost of real estate after the mortgage has been placed on the real estate. The loans made available by the bank are taken by the domestic or foreign investor on a long-term basis and thus the real estate is securitized and the issuance and circulation of securities is ensured.

in 2006, the Federal Reserve Bank (FED) stated that the quality of subprime mortgage loans had deteriorated, but this was not a situation that would create a crisis, but the

[120] Faruk Demir, Aysegul Karabiyik, Emine Ermishoglu, Ayhan Kucuk, “The US Mortgage Crisis”, Banking Regulation and Supervision Agency (BRSA), Working Communique of the Strategy Development Department, Issue 3, Istanbul, August 2008, ss.3-5.

necessary regulations and restrictions should be introduced. Since these regulations would be contrary to the policy of the Bush administration, it was not ensured that they would be radical, it was decided to revise the regulations without damaging market conditions and it was expected that the market would come into balance spontaneously[121].

Housing loan financing has continued its continuity with the coordinated work of the primary and secondary markets in the United States. However, especially due to lack of control into the system instead of the use of housing loans spekulatorlug the purpose of obtaining housing problem started, although the continuation of the securitization of these loans has reduced the quality export standards. The fact that the main purpose of brokerage firms transferring interest rate risk through securitization is to make a profit and that it is difficult to control the system has led to situations that will block the system. Due to such problems, the problematic system has become a global crisis and has affected many countries. Because the section created by mortgage loans in the global securities market is a very important place. As of 2007, the volume of the securities market in the United States, which is the market leader in the market for securities based on personal mortgage loans, was $ 149.9 trillion. Since about 90% of residential securities, which make up 70% of the asset-backed securities market, are issued, all fluctuations that occur also affect global markets[122].

3.2.4. In Terms Of Investors

As a result of the fact that institutions and organizations, including banks, state-sponsored organizations and free funds, assumed high risks, investors made their investments by relying on credit ratings without questioning the market and without dec sufficient knowledge about credit ratings.

Incorrect decisions and investments were made as a result of the complexity of the rating system used to show all the risks of mortgage loans, as well as the investor's inability to adequately analyze the riskiness of the instruments. In addition, the rating system does not include all risks, and even a flawless analysis does not lead to a state of complete abstraction from risks. Due to such problems, there were disruptions for the investor, and the investor also took his place in the crisis phenomenon

[121] Faruk Demir, Ayşegül Karabıyık, Emine Ermişoğlu, Ayhan Küçük, a.g.e., ss.6-8.
[122] IMF, Global Financial Stability Report – Containing Systemic Risks and Restoring Financial Soundless, World Economic and Financial Surveys, ISSN 0258-7440, April,2008, http://www.imf.org/external/pubs/ft/gfsr/2008/01/pdf/text.pdf, (10.12.2021).

4. APPLICATIONS OF USA AND TURKEY IN SECURITIZATION

4.1. U.S. Application of Securitization

The first securitization practices appeared in the United States (USA) in the 1970s. The main reason for this is that the United States has a developed capital, money, production and service sector, and as an advanced economy, it wants to introduce new solutions or alternative applications to economic problems with the help of its advanced technology. The great development that started in the 1970s and continued until the 1980s in the US markets, where insurance companies have a great weight in the mortgage markets, has been replaced by stagnation over time. Over time, there have been major reductions in the profitability ratios of the sector, and low pricing and fraudulent transactions by mortgage regulators have caused the sector to suffer major losses. So with great effectiveness in providing funding to the sector of activity of insurance companies narrowed, but the Securitization practices, together with piysaya invest in these securities as input source in conjunction with the introduction to the market, are starting to move again, and companies with this method, the market is still continue as the source[123]. This structure was the process of collecting home mortgage loans in the pool, making them into a package and converting them into marketable and saleable securities. It started as payment transferable securities by the US government-affiliated Government National Mortgage Institution (GNMA-Ginnie Mae). Securitization has shown a great improvement in the following years and has been made available for other items in the asset.

In order to better reveal the development of securitization in the United States, we need to go back to the great economic depression that arose in the United States in the 1920s. As a result of the economic crisis, the U.S. government help regain balance in the economy, the deteriorating housing owners lose their assets to ensure that lending institutions support the construction sector in order to combat unemployment and to stimulate new laws, and various institutions has been activated[124].First we look at the historical chronology in the United States, in 1933, the purpose of government-guaranteed mortgage debtors their debts and revive the mortgage market by issuing bonds to refinance the debts of house owners who Agency (HOLC), to be paid back their loans

[123] Kürşat Yalçıner, "İpotek Karşılığı Menkulleştirilmiş Krediler", Gazi Kitabevi, 2006.s.62.
[124] Ali Hepşen Securitization as a Financing Method: Mortgage-Based Securitization and its Application in Turkey", Istanbul Chamber of Commerce, Publication No:2005-13, Istanbul 2005, p.6.

against the risk borrowers in 1934, the goal is to credit institutions, loans, insurance and mortgage insurance, which will lead to the Federal Housing Administration (FHA) in 1938 improve the mortgage market, second hand, continuous liquidity to the market and increase the supply and demand for mortgage loans with the goal of providing by the U.S. Congress established the Federal National Mortgage Association (FNMA-Fannie Mae) in 1944 by the American government to acquire housing for veterans returning from the Second World War to facilitate, promote and borrowings established in order to make it attractive, unlike the upper limit on the amount of housing loans to insure FHA does not collect any down payment and loan insurance premiums of former combatants who don't prompt administration (VA), we can see applications. As a result of the fact that mortgage loans were insured and government guaranteed by the FHA and VA, standardization of loans was carried out, which contributed to the formation of a healthy second-hand market[125].

Due to the fact that the used mortgage market has not reached the desired level, the institution was divided into two separate institutions in 1968 in order to work more effectively;

- The current Federal National Mortgage Association (FNMA), again subject to some government regulations, has been transformed into a special management structure, the shares of which have become available for purchase and sale on the New York Stock Exchange.
- Government National Mortgage Association (GNMA), the full faith and credit of the U.S. government as an institution active in the mortgage market securitization encouraged by second-hand studies, and in 1970, for the first time, the government launched a public offering of the Securities securitizations guaranteed by the transfer of the payment.Applications have been in the form of converting receivables arising from mortgage loans bearing FHA and VA guarantees into securities and selling them to investors.

In 1970, the Federal Home Loan Mortgage Corporation (FHLMC-Freddie Mac) was established to further deepen the second-hand mortgage market. For the first time in accordance with the purpose of the organization, in 1971, it issued certificates of participation supplemented by conventional mortgage loans.

[125] A.e., 8.

In 1977, under the leadership of Salomon Brothers and Bank Of America, payment transfer securities backed by conventional mortgage loans without federal government guarantees were issued and securitization began to be applied in the private sector as well. Starting from the mid-1980s, other receivables such as car loans, credit card receivables, leasing receivables, export loans that were active were also securitized and asset-backed securities were issued.

Accordingly, in March 1985, Sperry Lease Finance Corporation issued securities based on computer leasing receivables in its possession. Also in the same year, securitization of car loan receivables was started, and in 1986, the first securities in the amount of USD 50 million based on credit card receivables were issued on behalf of Bank One Corporation by Salomon Brothers.

As of 2005, the amount of asset-backed securities issued in the United States was US$1.9 trillion, and the amount of shares issued was US$18.2 trillion. Issues of asset-backed securities are at the level of about 11% of shares.

4.2. Application of Securitization in Turkey

Within the framework of the capital market legislation of our country, in 1992, asset-backed securities issued as a result of securitization were regulated for the first time by Article 13 / A of the CMB and Communiqué Serial: III, No: 14 of the CMB[126].

Assets that can be securitized in accordance with the provisions of this communiqué that have been issued; export transactions receivables from financial leases, housing loans, consumer loans, except on bank activities in production of goods and Services Joint Stock Corporation, state-owned enterprises receivables from Installment Sales to their customers depending on their year, the people's Bank of Turkey by small businesses, tradesmen and artisans opened specialization credits, real estate investment trusts are specified as promissory notes receivables arising from contracts for the sale or promise of sale of real estate in the portfolio.Asset-backed securities issued on the basis of these assets may be interest-bearing and periodic in nature, as well as be sold on a discount basis. Organizations that can issue asset-backed securities are financial leasing authorized

[126] Halil Doğru, a.g.e., s. 246.

organizations, financing companies, real estate investment trusts, banks and general finance partnerships[127].

For the first time in Turkey, the issuance of VDMK using financial lease receivables, Interbank A.Sh. it is available in branches. Consumer loans, credit card receivables and housing loans followed this securitization process.

The distribution of CMB issues realized since 1992 by CMB bulletins following the entry into force of the CMB Communiqué issued within the scope of the law by year is shown in Table 10.

By Law No. 3794, the Communiqué Serial: III, No: 14 of the CMB, which was included in the CMB in 1992, provides for the issuance of VDMK by two separate methods: first, a firm can issue VDMK in exchange for receivables from its own assets to an organization that pursues a special purpose, without transferring it to an organization, the main firm can issue VDMK in exchange for receivables from its own assets. This is called the direct export method. However, the most important factor that distinguishes VDMKS from other securities is that the receivables that have been securitized are transferred to an organization with a special purpose and the protection of the rights of the persons who own VDMK arising from these receivables is realized by the issuance of VDMK from this organization. Thus, the owners of VDMK will have a priority right over the receivables in the event that the source company goes bankrupt. Accordingly, in accordance with the Law No. 4487 and the provision added to Article 13 / A of the CMB in 1999, it is aimed to impose a ban on foreclosure of the source company on receivables to third parties and to restrict the powers of the source company on receivables. However, although the mentioned provision of the law gives VDMK owner persons and organizations some rights over receivables, it does not provide for VDMK owners to pay the cash collected from receivables in any case[128]. Secondly, the general finance partners (GFOS), whose terms of incorporation are determined by the communique, can issue VDMK in exchange for the specified receivables by taking over the receivables of the types that have been disclosed. In addition to being the equivalent of a special purpose organization in the United States in Turkish written law, the CMB introduces the GFO into a form of commercial enterprise whose task is to constantly export VDMK. The

[127]Burak Aytunc, ’Special Purpose Entities and Their Use as an Off-Balance Sheet Accounting Method", CMB Qualification Study, Capital Markets Board Department of Partnership Finance, Ankara, 2002, p. 7.
[128]Halil Doğru, a.g.e., s. 248, 251, 252, 253, 259, 260, 266.

amount of capital required to be obligated by the GFO is kept by the communiqué in a very high amount (TL 10 billion in 1992). The cost of issuing VDMK is affected by the obligation of the GFO to have a certain level of capital, like other organizations, taxes on income generated by the operation of capital, and the cost of capital due to the cost of VDMK. The amount of the profits of the organizations mentioned in the kiymetlestirmed Securities, an increase in the cost of funding, while adversely affects their use for securitization securitization, which is a very important advantage[129].

On 06/03/2007, with the amendment carried out in accordance with the Law No. 5582 and the Capital Markets Law, the CMB. Md. The provisions for asset-backed securities in 13/A are removed from the text and replaced by the CMB. md. 38/B and C, two types of new investment funds have been established under the name of "asset finance fund", which will issue asset-based securities, and "housing finance fund", which will issue mortgage-based securities. Thanks to the regulation of housing /asset finance funds that will operate as a special targeted organization in securitization, it has eliminated the 'tax risk' that may occur during the inflows and outflows of receivables to the fund. Corporate income tax is not levied on earnings from housing/asset finance funds. In addition, the use of the fund provides an advantage in terms of the inability to use the fund's assets in a different way until the VDMK and IDMK are redeemed, it cannot be included in the bankruptcy table, it cannot be foreclosed, and the rights owned by the owners of VDMK and IDMK are protected[130]. 2007 due to the change in the law in the year, it is allowed to issue VDMKS only by the asset finance fund and to be designed as an off-balance sheet instrument. VDMKS can be sold to qualified investors on an allocated basis, as well as be offered to the public. In addition, it will be possible for VDMKS that have been offered to the public to be traded on the stock exchange. The rating of these VDMKS by a minimum authorized rating agency is also mandatory in accordance with the Communique[131].

In March 2007, the law on "Amending Various Laws Related to the Housing Finance System" was published in the official gazette and entered into force. This law also provides for the system of securitization, with the exception of housing loans. In this way, it is envisaged that a solution to the housing problem in our country can be produced. In

[129]A.e., s. 253, 267, 268.
[130]Halil Doğru, a.g.e., s. 248, 276, 278, 279.
[131]CMB Communiqué on the Principles of Asset Finance Funds and Asset-Backed Securities,http://www.spk.gov.tr/Duyuru/Goster/2008827/1, (05.07.2021).

accordance with this law, the second-hand markets necessary to respond to loan requests for housing loans that banks will provide are created, while protection mechanisms are provided for consumers who borrow on the one hand[132].

On 09/01/2014, the “Communiqué on Securities Based on Assets or Mortgages" No. III-58.1 prepared by the CMB was published in the Official Gazette No. 28877 and entered into force[133]. This communiqué complies with the regulations contained in the Capital Markets Law No. 6362 dated 30.12.2012. This communiqué Serial: IV, No: 35 serial: IV, No: 34 is held in the communiqué, and the structure as similar tools and financing for the funds funds and asset financing gosterenkonut IDMK VDMK with similar features with the regulations of the legislation is intended to make a single notification, merging and more simple.

October 2011, after a decennial break after 1998, the issuance of a VDMK of TL 192 million was carried out by the Aktif Yatırım Bank in October 2011. Thus, for the first time, the first VDMK issuance based on personal loans was realized[134]. Asset Finance Fund Development and Investment Bank of Turkey A.It was established by Ş and issued VDMK with a nominal value of 3 billion 15 million TL on 05/12/2018. In this way, four sources have provided the organization with liquidity up to the size of the issuance. These source organizations are; Halk Bank of Turkey A.Sh., T.C. Ziraat Bank A.Sh., Türkiye Vakıflar Bankası T.A.O., Garanti Bank of Turkey A.Sh.’dir. These VDMKS are made with a fixed coupon payment every 3 months and a term of 5 years. The payments of these VDMKS to their investors are provided by the cash flows of mortgage-backed securities (ITMK) and housing loans of the four mentioned organizations[135]. In this way, the amount of VDMK issuance in 2018 showed an increase of approximately 3 times compared to the amount of issuance in 2017 and reached approximately 4 billion 302 million TL.

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[132]Suat Teker ve Çağrı Özkan A Model Proposal for Housing Loans and Securitization”, Journal of Accounting and Finance (MUFAD), P. 37, January 2008, p. 26- 28.

[133]SPK, Press Release on the Communiqué on Securities Based on Assets or Mortgages,http://www.spk.gov.tr/Duyuru/Goster/20140109/0, (05.07.2021).

T.C. Resmi Gazete, 09.01.2014, S.: 28877, http://www.resmigazete.gov.tr/eskiler/2014/01/20140109-11.htm, (05.07.2021).

[134]Özcan Çikot“ ”Private Sector Borrowing Instruments in Turkey and Around the World", Agenda, P. 116, TSPAKB, April 2012, p. 20, 21.

[135]In Turkey, development and investment banks, asset-backed securities, Asset Finance Reports, TKYB Fund asset financing, Export documentation and export certificate organizing, December 2018, https://kalkinma.com.tr/biz-ne-yapiyoruz/yatirim-bankaciligi-ve-faaliyetleri/sermaye-piyasalaridanismanligi/ihrac-belgeleri-ve-ilgili-dokumanlar, (20.06.2021).

VDMK has not been issued in our country after 1998[136]. The reason for this is that the receivables of Turkish resource companies are securitized in foreign markets.

In Turkey, securitization and, accordingly, the capital market have appeared on different grounds than in the west. In the West, this market, which was formed to meet the resource needs of firms, was formed in our country, rather, to meet the funding needs of the treasury. It is necessary to examine the issues of securities and capital markets in Turkey in two periods.

With the Capital Markets Law No. 6362, which came into force in 2012, fundamental changes have been made in the capital markets (Official Gazette No: 28513, Date. 30.12.2012).

As one of the effective factors on the occurrence of the 2008 global crisis, uncontrolled securities to the forefront of consideration; the elimination of possible risks and the realization of the goal of being one of the world's financial centers in Istanbul, with the Capital Market Law No. 6362 purpose for the realization of fundamental changes have been made. Some of them are:

Borsa Istanbul A.Ş.Sh. it was founded,

The legal entity of the Istanbul Stock Exchange has been terminated,

The legal entity of the Istanbul Gold Exchange has been terminated,

the Capital Markets Law No. 2499 of 1981 has been repealed,

The Decree Law No. 91 of 1983 on Securities Exchanges has been repealed.

Borsa Istanbul has obtained an operating permit by registering and announcing its articles of association on April 3, 2013 after preparation by the Capital Markets Board and approval by the relevant Minister.

In accordance with the law entered into force; First of all, the Regulation on the Principles of Organization, Activity, Operation and Supervision of Exchanges and Market Operators[137],

Borsa Istanbul A.Ş.Sh. Many regulations have been published and put into effect, such as the Regulation on the Principles of Stockbroking Activities[138].

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[136]Halil Doğru, a.g.e., s. 247.
[137]Official Gazette Number: 28712, Date. 19.07.2013
[138]Official Gazette Number: 29150, Date. 19.10.2014

In addition to the current activities, the legal infrastructure of “sukuk” applications has been provided by the Capital Markets Board with the Communiqué on Lease Certificates issued on June 7, 2013[139].

In addition, Participation Banks operating in this period, the Association of Participation Banks of Turkey, Our Securities A.Sh. and Borsa Istanbul A.Sh.with the cooperation of, the Participation Index calculation has been initiated.

In determining the companies holding shares that may be included in the Participation Index, the first calculation of which was made on 09.07.2014:

Field of activity[140];

Interest-based finance, trade, services, brokerage,

Alcoholic beverage, gambling, game of chance,

Pork and similar food,

Tourism, entertainment, press, publication, advertising,

Tobacco products, weapons,

Futures gold, silver and foreign exchange trading,[141]

Attention is paid to the fact that they are not companies. Applications are evaluated under the supervision of a designated advisory board, and those who meet the criteria are included in the index.

Borsa Istanbul based on 2010 data; World Federation of exchanges (WFE) registered the number of companies traded in the stock market 52 in the range between 29-30 well as by market value in the range 28-30 well as the volume of transactions as well as in the range of 19-20 is located.

According to the data of WFE, September 2014, 44,000 companies with a total market capitalization of US $ 63 trillion are traded on world stock exchanges.

[139]Official Gazette Number: 28670, Date. 07.07.2013
[140] Beşirli, 2009
[141]Official Gazette Number: 28670, Date. 07.07.2013

The Bombay Stock Exchange of India ranks first with 5,477 companies in terms of the number of companies listed on the stock exchange. He is followed by the Toronto Stock Exchange with 3774 companies and the Tokyo Stock Exchange with 3429 companies[142].

In terms of market capitalization, the New York Stock Exchange ranks first with a market capitalization of US $ 19 trillion. The number of companies listed on the New York Stock Exchange is 2,429 units. In addition, the market capitalization of the Nasdaq Stock Exchange, which also operates in the United States, is 6 trillion American Dollars; A.B.D. The total value of their exchanges reaches 25 trillion American dollars. This corresponds to 40% of the 63 trillion US Dollars that are the sum of the world stock market values[143].

A.B.D. its stock markets are followed by the Tokyo Stock Exchange with US$4.5 trillion and the London Stock Exchange with US$4.4 trillion. As of the annual trading volume, approximately 42% of the 60 trillion US dollars in total trading volume of the world's stock exchanges are realized by US stock exchanges. They are followed by the Stock Exchanges of China (Shenzen and Shanghai) with 16% and the Tokyo Stock Exchange with 8%[144].

[142] Civan, 2007, s.15
[143] Hepşen, 2005, s.78
[144] Erdönmez, 2006, s.36

5. DATA

Data covers hedonic housing prices and inflation rates, spans the monthly period from 01-2010 to 08-2021 for the USA and Turkey countries. Those countries have taken separately from each other to prevent confusing in terms of understanding and to be clear. We exclude gross domestic products data due to number of missing values and also lack of time period. All data was obtained from Statistica and Bloomberg web sites. In addition, time series approaches and analysis techniques were used for those indicators to compare Turkey and USA situation in terms of financial and to understand clearly what is the difference in these countries.

Two different time series models were established for the countries covered during the analysis process. Furthermore, the basic econometric assumptions regarding the data set were checked and the logarithm of the variables were taken in order to eliminate the scale difference between the variables that used in the data set.

Table 3 Descriptive Statistics

Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
INF_US	140	1.96	.326	.99	2.60
INF_TR	140	2.45	.14	2.24	2.76
HKFE_TR	140	1.91	.16	1.65	2.28
HKFE_US	140	2.24	.07	2.12	2.42
Skewness	0.43	3.98	77.00	0.00	
Kurtosis	0.59	3.42	70.81	0.00	
Jarque-Bera	4.92	26.21	28589.65	0.00	
Probability	2.34	27.45	27861.83	0.00	

In Table 3 shows descriptive information about data set. While the average (mean) inflation rate in the USA is 1.96, it is seen that the maximum is 2.60. Although these values express the inflation rates of which logarithms are taken, when the descriptive statistics of Turkey and the USA are compared, it is seen that the maximum value and average (mean) value of the inflation rate for Turkey is higher than for the USA.

Comparing USA, which has one of the world's two largest economies, and Turkey, which ranks 14th in the world-wide high inflation ranking, can be said that it is observed that the inflation rate is increasing day by day, especially due to the negative developments experienced during the Covid-19 pandemic period, the ongoing economic crises since the 2000s, the migration events and political-political conflicts. However, with the increasing inflation rate, there are changes in the exchange rate, bank interest rates change and there is a decrease in purchasing power. As a result of the negative effects of this situation, the economic growth of the countries slows down or remains constant. The main reason for the inflation rate difference between the USA and Turkey can be summarized in this way.

According to the descriptive statistical information in table 3, while the average(mean) and maximum house sales prices for the USA are 2.24 and 2.42, respectively, it is 1.91 and 2.28 for Turkey. According to the results, it is seen that housing sales prices in USA are higher than Turkey. According to the publications made in various news channels and newspapers recently, it has been stated that American citizens have made serious housing purchases in Turkey in the summer of 2021. However, it is stated that the highest housing sales prices of the last 5 years are in the USA.

6. FINDINGS

Due to the development level of the capital market, the global economic conjuncture and the hesitations about long-term stability, the difficulties of issuing long-term and fixed-income securities in Turkey are known. For this reason, in the thesis handled, the USA and Turkey were analyzed with housing sales data and GDP indicators as securities indicators, and thus the findings were reached.

Before examining the comparing between hedonic housing price and inflation rates, the existence of extreme values were investigated by means of descriptive statistics and kernel density function. The existence of extreme values and the fact that the distributions of error terms is not normal were presented. Since there are extreme values and normal distribution assumption is not valid, Gaussian fixed effect estimators will be biased (Koenker, 2004). In this case, non-parametric regression method which is less sensitive toward the extreme values compared to the models based on Gaussian conditions in the analysis. Before the estimation of models, descriptive statistics used in the investigation of existence of the extreme values and normal distribution of error terms were exhibited in Table 3. Figure 5 in the below presents kernel density functions.

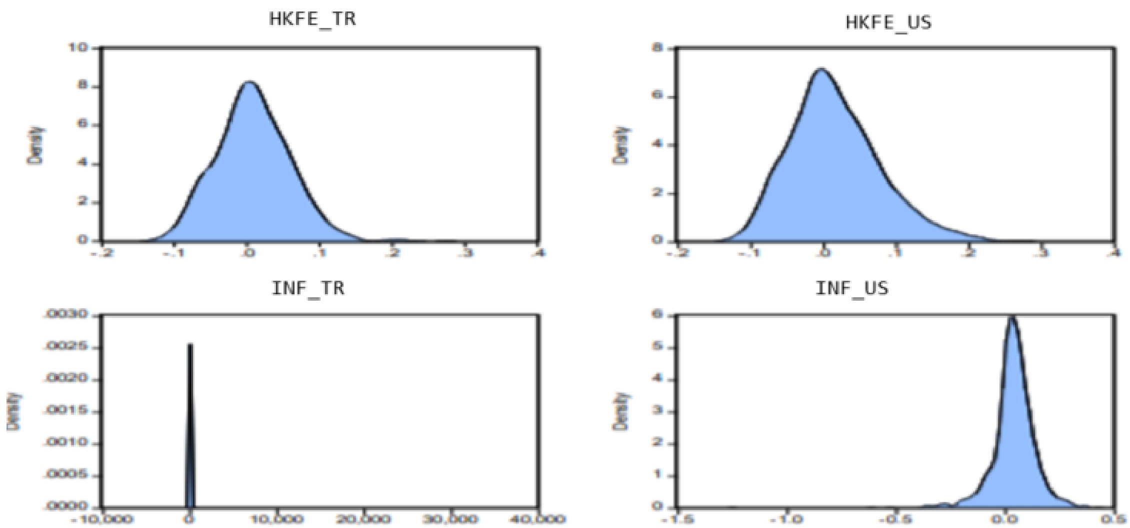

Figure 2 Kernel Density Function

Estimation of non-parametric regression model could be carried out using general approach that mentioned classical and modern econometrics approach in the literature (Wooldridge,2015). In Table 4 and Table 5 shows that there are regression results showing how housing prices are affected in exchange for a one-unit change in inflation in terms of USA and Turkey, respectively.

Table 4 Non-parametric regression for USA

Source	SS	df	MS			
				Number of obs	=	140
				F(1, 138)	=	17.50
Model	.09426701	1	.09426701	Prob > F	=	0.0001
Residual	.743485279	138	.005387574	R-squared	=	0.1125
				Adj R-squared	=	0.1061
Total	.837752288	139	.006026995	Root MSE	=	.0734

HKFE_US	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
INF_US	-.0789317	.0188698	-4.18	0.000	-.116243	-.0416203
cons	2.40169	.0376198	63.84	0.000	2.327304	2.476076

On the table 4 presenting the relation between hedonic housing prices and inflation rates for USA. According to analysis results, it is seen that one per cent change in the inflation rate reduces the housing prices by 7 per cent. According to the established non-parametric model, the model explanatory power of the housing price and inflation rate variables is around 10 per cent. However, the model coefficients are significant.

Table 5 Non-parametric regression for Turkey

Source	SS	df	MS			
				Number of obs	=	140
				F(1, 138)	=	2538.99
Model	3.73803254	1	3.73803254	Prob > F	=	0.0000
Residual	.203170558	138	.00147225	R-squared	=	0.9484
				Adj R-squared	=	0.9481
Total	3.94120309	139	.028353979	Root MSE	=	.03837

HKFE_TR	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
INF_TR	-1.099554	.0218216	-50.39	0.000	-1.142702	-1.056406
cons	4.615069	.0537639	85.84	0.000	4.508762	4.721377

On the table 5 strike that the relation between hedonic housing prices and inflation rates for Turkey. According to analysis results, it is seen that one per cent change in the inflation rate reduces the housing prices by 10 per cent. According to the established non-parametric model, the model explanatory power of the housing price and inflation rate variables is around 94 per cent. Following table 6 presents us the forecast performance tatistics for the both of data set;

Table 6 Forecast performance statistics

Model	RMSE	MAE	MAPE	RMSPE
NPM	0.4253	2.9358	204.5730	70.1374
%5	0.5518	4.3470	658.1789	219.1833
%10	0.7807	6.3682	897.0976	407.9949
%25	0.5875	4.4537	578.0629	284.0137
%50	0.4431	3.0474	264.3460	128.8621
%75	0.3943	2.7764	378.0971	140.8311
%95	0.5014	3.7921	626.2446	232.7237

Considering the Root Mean Squared Error (RMSE) for comparison, we find that the RMSE is 0.4253 for Non-parametric Regression Model (NPM) and 0.3943 for the 75th quantile of the dynamic panel quantile model. However, the RMSE is 0.5518 for the 5th quantile. Consequently, the forecast performance of quantile regression changes by quantiles as compared to NPM's forecast performance.

It has been concluded that the decrease in the inflation rate for Turkey and the USA decreases the housing sales price almost at the same rate. The analysis results show that the average inflation rate in the USA is approximately 0.49, and the average house sales price is approximately 0.33, which is less than in Turkey.

Eventually, the analysis results were obtained by scaling the variables that have volatility, such as the currency of the indicators used in the analysis. In other words, unit effects are not reflected on the indicators. As a result of the analysis, opposite results are generally related to the micro-macroeconomic indicators of the countries. An increasing effect in the housing market may not always lead to an increase in national income. The main reason for this is that there are different factors (such as inflation, exchange rate, raw material prices).

The effects that housing demand can cause on the housing market and the general economy are related to housing supply and prices. In this context, changes in housing supply and housing demand may affect housing prices negatively/positively. At the micro level, housing prices can cause negative/positive effects on GDP depending on the changes in the economic situation of countries.

On the other hand, at the macro level, changes in housing prices also affect securitization volumes and indicators such as GDP, which are affected by the risks associated with these transactions. In the global financial crisis, especially in countries where the housing-finance link is strong, monitoring the changes in housing prices as a basic barometer of the housing market is important in terms of understanding the risk accumulations in the general economy. Especially in the results of the analysis, it can be seen how strong and effective the relationship between the hedonic housing market and the national income of the country is in countries with different development levels.

CONCLUSION

Municipalities and commercial enterprises, especially commercial banks, also meet liquidity requirements through securitization exports. In addition to the fact that large enterprises can provide liquidity by exporting more asset-based securities compared to medium and small enterprises, medium and small enterprises also meet the financing requirements. At the same time, they also reduce the exposure of medium and small businesses to credit assignment. It allows banks to provide the volume of loan provision by adhering less to deposits. Through a bank or non-bank credit institutions and organizations that provide, in terms of securitization of assets removed from the balance sheet, the cash flows of illiquid assets on the condition that they be brought together, the export can be performed, and in this way, with the provision of liquidity means that more capital to remain free of credit demand. In order to facilitate the ability to trade, the newly created financial instruments facilitate the provision of liquidity by diversifying the credit risk associated with the main collateral. Thanks to this, it is able to attract more investors. As a result, it provides the borrower with the opportunity to achieve lower financing costs of individuals and institutions.

Securitization provides liquidity and various benefits to municipal, bank and commercial enterprises, while also having negative effects. in the economic crisis that occurred in 2008 – the mortgage crisis caused by sub-threshold mortgage loans, especially in resources- securitization also has an impact. In numerous studies conducted in the context of the subject, the lack of supervision over the quality of mortgages, the size of moral risk, the securitization of unsuitable loans, and the loosening of lending standards are among the determining factors of the mortgage crisis. In addition, it is seen that some of the examinations and researches carried out in the pre-crisis stage have started to draw attention to the growth in banks' credit demand and the increase in securitization volume. After the crisis, the number and scope of these analyzes increased. It is believed that the interactions of monetary policy with securitization are beginning to be questioned through investigative people and have implications for some channels present in the mechanism of monetary transmission.

Regarding the effects of securitization on monetary transmission channels, the authors note that it affects them through different channels. The channels mentioned in this study are evaluated under three main headings. The first of these channels is the liquidity channel. The other two are the risk-taking channel and the bank's lending channel, which are in the subcategory of the credit channel. The subject of the liquidity channel is what can be done to improve the functioning of these markets with october additional liquidity provided by securitization deepening the credit markets and related to this. The increase in liquidity conditions indicates that it affects the mortgage/mortgage market results, causes lower loan costs on housing loans, and securitization tends to reduce mortgage loan interest rates. As a result of the deepening of the market due to the growing securitization, it may make it difficult for the central bank to influence interest rates.

The evidence obtained shows that access to the securitization sunday may make the impact of central bank policies on credit demand less sensitive. In order to achieve a significant reduction in bank loans, it may be necessary to make a larger policy move with securitization. On the other hand, restricting access to the secondary credit market or making arrangements that will cause securitization to be more costly may affect the demand for bank loans.

The beginning of the implementation of securitization in Turkey dates back to 1992. due to the new legal regulation implemented in 1999, there has been no securitization for 12 years. During this period, when securitization was not made, it is seen that the banks in our country exported securities by taking their assets abroad and transferred them back to our country under the name of securitization loan. After that, the legal regulations were re-regulated and a new period was started in the securitization process by establishing an asset finance fund with this regulation.

As a result of the developments, it is seen that the securitization carried out in the last months of 20118 was carried out without an initial public offering and was met with great interest by the Ministry of Treasury and Finance. Because of these, there is also an existing potential in Turkey, which has experienced all the practices of securitization from previous years, that it can carry out these issues. It is also foreseen that these activities may increase in the coming times. The current situation in our country, in volume that occur at the level kiymetlestirme existing in European countries and in the United States is not observed, although kiymetlestirmen securities in overseas applications for banks ' credit supply and monetary policy aktarimninda the impacts of policy instruments, considering that I did this work in the central bank's policy applications, it is aimed to emphasize the importance of this topic.

REFERENCES

Akgündüz Ahmet“ "Camekiyye", T.D.V. Encyclopedia of Islam, I- Xliv, C,7, Istanbul 1993, Ss, 45-46

Aktuna, E. A. (2010). A Review on Synthetic Investment Instruments. Unpublished Master's Thesis. Izmir: Dokuz September University Institute of Social Sciences.

Alles, Lakshman: “Asset Securitization And Structured Financing: Future Prospects And Challenges For Emerging Market Countries”, Imf Working Paper, Wp/01/147, International Monetary Fund, 2001.

Alper, D. (2008). Commercial Mortgage-Backed Securities and their Structuring. Journal of Accounting and Finance. (40), 142-153.

Alptekin, E. (2009). Securitization and its Role in the Global Financial Crisis. Izmir Chamber of Commerce R & D Bulletin. dec. (2009 April), 11-16.

Anbar, A. (2011). Structured Finance. Bursa: Ekin Publisher.

Ataman Erdönmez, p. (2006). Kiymetlestirmes Is Active Securities. Bankers Magazine. (57), 75-84.

Aydın, N. A. A. (2006). Types of Capital Market Instruments Based on Mortgage Mortgage Loans and Analysis of These Instruments in Terms of Risk-Return Preferences. Unpublished Master's Thesis. Istanbul: Istanbul University Institute of Social Sciences.

Grocer, p., Unafraid, Sh. (2011). Structured Financial Instruments and Leveraged Equity Markets of Brokerage Firms. Istanbul: Hyperlink Yay

Balı, p., Yilmaz, Z. (2012). The Relationship between Credit Default Swap Margins and the ISE 100 Index. dec. 16. The Book of the Finance Symposium (ss. 83-104), Edited by Ataturk University, Erzurum. October 10-13, 2012.

Banks, E. (2006). Synthetic and Structured Assets. Great Britain: John Wiley & Sons.

Mr. S., ”Securitization Practices and Their Place in Jurisprudence" Journal of Istanbul University Faculty of Theology Issue 16, Year 2007, Ss, 249 -273, Istanbul

Bashirli Mehmet, "Stock Market in the Ottoman Empire: New Regulatory Initiatives from Dersaadet Bond Exchange to Esham And Bond Exchange”, Fırat University Journal of Social Sciences, Volume 19, Issue 1, Ss 185 – 208, Elazig, 2009

Bloomingdale's, B., & Hawken, K., The International Comparative Legal. Guide To: Securitization, Global Legal Group, Uk, 2005.

Bodie, Z., Kane, A., Marcus, A.J. (2009). Investments. Singapore: McGraw-H

Brigham, e. F., Ehrhardt, M. C. (2005). Financial Management. United States of America: South-Western Cengage Learning

Chambers, N. (2009). Structured Financial Products (Structured Financial Products). http://finans.ekibi.net/konu-yapilandirilmis-finansal-urunler-structuredfinancial-products.html (08.09.2021).

Chiquier, L., Hassler, O., & Lea, M., Mortgage Securities In Emerging Markets. World Bank Policy Research Working Paper, (3370), 2004.

Civan M., Capital Market Analysis and Portfolio Management, Gazi Bookstore, Ankara, 2007

For example, Y. (2010). Structured Finance and the Global Financial Crisis. Financial, Political & Economic Reviews. 47(545): 73-82.

Crawford, J. (2010). CDO Ratings and Systemic Instability: Causes and Cure. New York University Journal of Law &Business. 7 (1), 1-45.

Çikot, Özcan: "Debt Instruments", Gündem, p. 115, Tspakb, March 2012, p. 7-17.

Çizakça Murat, The History of Business Partnerships in the Islamic World and in the West, Trans. Şehnaz Layıkel, History Foundation Yurt Publications, Istanbul, 1999.

Davis, N., Securitization: A Public Policy Tool? (No. 00/08). New Zealand Treasury Working Paper, 2000.

Davis, N., Securitization: A Public Policy Tool? (No. 00/08). New Zealand Treasury Working Paper, 2000.

Dharan, B. G., Financial Engineering With Special Purpose Entities. Chapitre Du Livre: Enron And Beyond: Technical Analysis Of Accounting, Corporate Governance And Securities Issues, 2002.

Elul, R. (2005). The Economics of Asset Securitization. Federal Reserve Bank of Philadelphia Business Review. (Q3), 16-25.

Erdönmez Pelin Ataman, "Asset Securitization" Bankers' Journal, Issue 57, pp. 75-84, Istanbul, 2006.

Smith, O. E., Securitization. Economic Commentary (Cleveland), 2003, 1.

E. Of Course., ”Secondary Market Products and World Applications in the Mortgage System" Journal of Business Research, Vol. 2, Issue 4, 2010, pp. 19-38.

Eroglu, E. (2010). Secondary Market Products and World Applications in the Mortgage System. Journal of Business Studies. 2 (4), 19-38.

Fabozzi, F. J., Davis, H. A., Choudhry, M. (2006). Introduction to Structured Finance. United States of America: John Wiley & Sons.

Faruk Demir, Aysegul Karabiyik, Emine Ermishoglu, Ayhan Kucuk, “The US Mortgage Crisis”, Banking Regulation and Supervision Agency (BRSA), Working Communique of the Strategy Development Department, Issue 3, Istanbul, August 2008, ss.3-5

Foley, M.D. And Rojek, J.M., Sec Rules On Asset Backed Securities", Kpmg Defining Issues, 05/1, 2005, 1-6.

Fujii, M. (2010). Securitized Products, Financial Regulation, and Systemic Risk. ADBI Working Paper Series. (203), 1-22.

Gorton, G. B., & Souleles, N. S., Special Purpose Vehicles And Securitization. In The Risks Of Financial Institutions. University Of Chicago Press, 2007.

Guay, W., & Kothari, P. P., How Much Do Firms Hedge With Derivatives?. Journal Of Financial Economics, 70(3), 2003, 423-461.

Guay, W., & Kothari, P. P., How Much Do Firms Hedge With Derivatives?. Journal Of Financial Economics, 70(3), 2003, 423-461.

Hahn, R. J., Securitization: An Introduction. Hunton&Williamsllp Charlotte, 2005.

Hakkemez, C. (2012). Sample Country Practices in Securitization and Recommendations for Turkey. Unpublished Master's Thesis. Ankara: Ankara University Institute of Social Sciences.

Hakyemez, Cihan: ”Sample Country Practices in Securitization And Recommendations for Turkey", (Unpublished Annual Thesis of Ankara University Institute of Social Sciences), Ankara, 2012.

Hepshen A., Securitization as a Financing Method: Mortgage-Based Securitization and Its Application in Turkey, Istanbul Chamber of Commerce Publication, Istanbul, 2005.

Hepshen, A. (2005). Securitization as a Financing Method: Mortgage-Based Securitization and its Application in Turkey. Istanbul: Istanbul Chamber of Commerce Publications.

Hull, J. C. (2009). Options, Futures, and Other Derivatives. United States of America: Pearson Education.

Montenegro, n. (1996). Issuance of Asset-Backed Securities of Consumer Finance Companies. Unpublished Master's Thesis. Istanbul: Istanbul University Institute of Social Sciences.

Longstaff, F. A., Lender Credit And The Valuation Of Mortgage-Backed Securities. Real Estate Economics, 33(4), 2005, 619-661.

Morgan Stearns Corporation. (2012). Structured Finance-Accessing Capital Markets Through Securitization.

Neftci, P. N. (2008). Principles of Financial Engineering. Canada: Academic Press.

O Rourke, E., Asset Covered Securities-An Alternative Source Of Funding For Irish Mortgage Lenders. Housing Finance-London-Building Societies Association Then Council Of Mortgage Lenders, (51), 2001, 36-41.

Öcal N., "Application of Securitization in Turkey, Effects, Problems and Solution Suggestions", Gazi University Institute of Social Sciences (Master's Thesis) Ankara, 1994

I Broke., Introduction to Economics, Ezgi Bookstore, Bursa, 2008

Fighting, p. A. (2010). An Analysis on the Impact of Credit Derivatives on Credit Risk in the Banking Sector. Unpublished Master's Thesis. Edirne: Trakya University Institute of Social Sciences.

No., K. (2008). Credit Derivatives within the Scope of Credit Risk Management: The Opportunities it Provides and the Threats it Creates. Unpublished Master's Thesis. Ankara: Ankara University Institute of Social Sciences.

Soroosh, J., & Ciesielski, J. T., Accounting For Special Purpose Entities Reviewed: Fasb Inquiry 46 (R). The Cpa Journal, 74(7), 2004, 30.

Stone, C. A., & Zissu, A., Securitization: The Transformation Of Illiquid Financial Assets Into Liquid Capital Market Securities Examples From The European Market. Financial Markets, Institutions & Instruments, 9(3-4), 2000, 133-278.

Patriot, n. (2000). Asset-Backed Securities Application. Muğla University Journal of the Institute. 1 (1): 259-274.

Xu, X. E., & Fung, H. G., What Moves The Mortgage-Backed Securities Market?. Real Estate Economics, 33(2), 2005, 397-426.

Yurtseven, H. (1993). Asset-Backed Securities and their Application in Turkey. Unpublished Master's Thesis. Istanbul: Istanbul University Institute of Social Sciences.

Zweig, M., Bailout Fro Working People-Report Monday 9-29 At Noon Announcement, 2008.