

## SECURITIZATION: A BASIC TOOL OF FINANCING FOR THE FIRMS

### *ŞİRKET FİNANSMANINDA TEMEL BİR ARAÇ : MENKUL KIYMETLEŞTİRME*

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#### **Abstract:**

Securitization is one of the most important financing resources of the firms. Therefore, its volume and importance has increased over the years. In the last ten years, the issuance amount of the securitization in the US and Europe has increased so much that it has tripled in Europe. Securitization is a financial technique that pools assets together and turns them into a tradeable securities held by a bankruptcy remote special purpose entity. In this process, the most important tool is the special purpose entities that are created for a special purpose. In Turkey, the securitization process is different from the process in the US. This difference results from the lack of regulation. In this study, the securitization process in the US and Europe is examined in order to contribute to the development on the Turkish securitization market.

**Key Words:** Securitization, special purpose entities, mortgage backed securities, asset backed securities

#### **Özet:**

Menkul kıymetleştirme şirketlerin önemli finansman kaynaklarından biridir. Bu yüzden, menkul kıymetleştirmenin önemi ve hacmi yıllar itibarıyla artmıştır. Geçen on yıl içerisinde Amerika ve Avrupa'da menkul kıymet ihracının hacmi o kadar artmıştır ki Avrupa'da ihraç hacmi üç misline çıkmıştır. Menkul kıymetleştirme, aktifleri iflastan uzak bir özel amaçlı şirket havuzunda toplayıp daha sonra bunları ticari senetlere çeviren bir finansal tekniktir. Bu süreçte en önemli araç, özel bir amaç için oluşturulan özel amaçlı şirketlerdir. Türkiye'de menkul kıymetleştirme süreci Amerika'dan farklıdır. Bu farklılık düzenleme eksikliğinden kaynaklanmaktadır. Bu çalışmada, Türk menkul kıymet piyasasının gelişmesine katkıda bulunmak için Amerika ve Avrupa'daki menkul kıymetleştirme süreci incelenmiştir.

**Anahtar Kelimeler :** Menkul kıymetleştirme, özel amaçlı şirketler, tutuya dayalı menkul kıymetler, varlığa dayalı menkul kıymetler

## **1. INTRODUCTION**

Financial markets developed in response to the need to involve a large number of investors in the market place. As the number of investors keeps on increasing, the average size per investors keeps on coming down -this is a simple rule of the marketplace, because growing size means involvement of a wider base of investors. The small investor is not a professional investor: he is not as such in the business of investments. Hence, he needs an instrument which is easier to understand, and is liquid. These two needs set the stage for evolution of financial instruments

which would convert financial claims into liquid, easy to understand and homogenous products, at times carrying certified quality labels (credit-ratings or security ) , which would be available in small denominations to suit every one's purse. Thus, securitization in a generic sense is basic to the world of finance, and it is a truism to say that securitization envelopes the entire range of financial instruments, and hence, the entire range of financial markets (Kothari, 2003:33).

Securitization is one of the most important phenomenon of the finance literature. Its popularity comes from the benefits of its usage stated above. Moreover, as it can be seen in Table 1 and Table 2, the securitization issuance volume has increased greatly both in US and Europe recently. For example, in US issuance amount of securitization has increased from 958 billion dollars to 1,402 billion dollars in the last ten year. Parallel to the US, the securitization volume of European markets has tripled. These figures show that the usage and importance of the securitization have increased among the firms in the world.

Table 1: Securitization Issuance in US

Year	Amount (€ Billions)
1997	46.9
1998	36.5
1999	73.2
2000	78.2
2001	153.6
2002	157.7
2003	217.2
2004Q2	125.7

Source : [www.europansecuritisation.com](http://www.europansecuritisation.com)

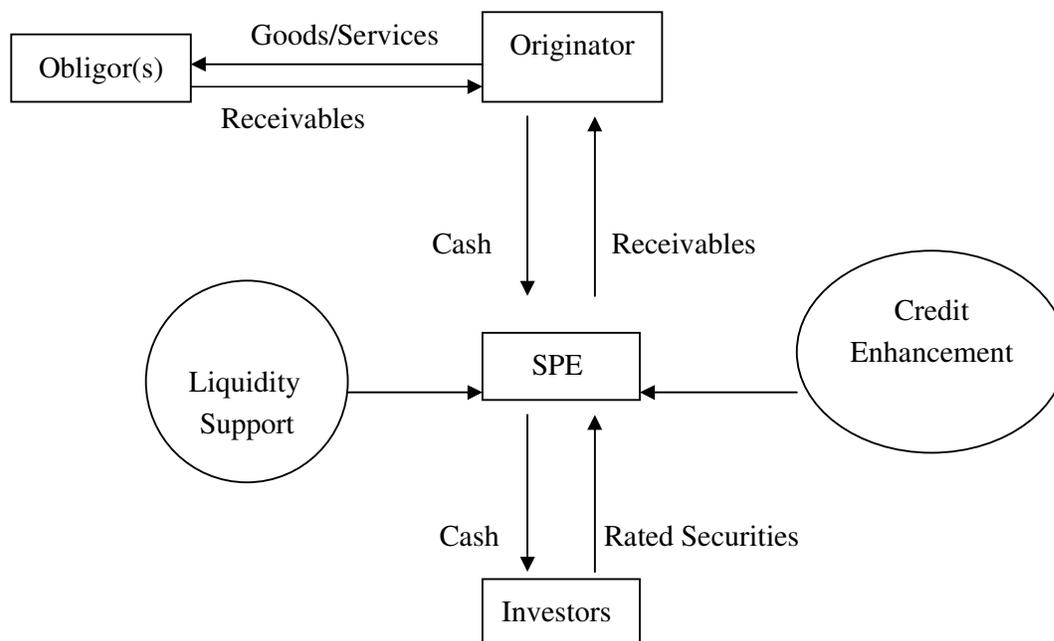
Table 2: European Securitization Issuance

Year	Amount (\$ Billions)
1997	958.5
1998	1,161
1999	1,393.8
2000	1,602.1
2001	1,461.4
2002	1,370.1
2003	1,288.7
2004	1,402.6

Source: [www.bondmarkets.com](http://www.bondmarkets.com)

In a technical sense, securitization is the issuance of marketable securities backed not by the expected capacity to repay of a private corporation or public sector entity, but by the expected cash flows from specific assets (Bloomingdale and Hawken, 2005:3). In a common type of securitization transaction, an originator of receivables or other financial assets sells the financial assets to a **special purpose entity** (SPE) established to isolate the receivables and to perform other functions (e.g., restructuring of cash flows and provision of credit enhancement and

liquidity support). The SPE finances the purchase of receivables by issuing securities (usually notes, commercial paper, bills, bonds, or preferred stock) to **investors**. Legal agreements design the rights and obligations of all parties to the transaction, including the appointment of an administrator to manage the receivables where necessary. One or more financial institutions are usually involved in structuring and marketing the securities issued by the SPE. To facilitate investor demand, credit rating agencies assess the likelihood that the SPE will default on its obligations and assign an appropriate credit rating. **Credit enhancement** and **liquidity support** is usually obtained by the SPE to ensure a high rating for the securities (Davis, 2000:2). This basic structure of securitization is shown in Graphic 1 below.



Graphic 1: Basic Structure of Securitization

Source: Davis, 2000:1

The entity that securitizes its assets is called the **originator**: the name signifies the fact that the entity was responsible for originating the claims that are to be ultimately securitized. There is no distinctive name for the investors who invest their money in the instrument: therefore, they might simply be called **investors**.

Since it is important for the entire exercise to be a case of transfer of receivables by the originator, not a borrowing on the security of the receivables, there is a legal **transfer of the receivables** to a separate entity. In legal parlance, transfer of receivables is called **assignment of receivables**. It is also necessary to ensure that the transfer of receivables is respected by the legal system as a genuine transfer, and not as a mere eyewash where the reality is only a mode of borrowing. In other words, the transfer of receivables has to be a **true sale** of the receivables, and not merely a financing against the security of the receivables.

The originator transfers the assets to the SPE, which holds the assets on behalf of the investors, and issues to the investors its own securities. Therefore, the SPE is also called **the issuer**. SPE will be examined detailed in the fourth section of the study (Kothari, 2003:38).

## **2. ADVANTAGES AND DISADVANTAGES OF SECURITIZATION**

Securitization offers several advantages both originators and investors. One of the potential benefits of securitization to the originators is that it is a way of raising non-recourse debt and thus expanding funding capacity of the originator beyond market constraints, the limits imposed by debt covenants and corporate charters. It also offers access to longer term fixed rate debt than is affordable through a bank loan or bond issue (Stone and Zissu, 2000:135).

For some private-sector institutions, securitization is used to lower the firm's weighted-average cost of capital. This is possible because equity capital is no longer required to support the assets and highly rated debt can be issued into deep capital markets with investor demand driving down financing costs. Moreover, it can enhance managerial control over the size and structure of a firm's balance sheet. For example, accounting de-recognition of assets (ie, removal from the balance sheet) can improve gearing ratios as well as other measures of economic performance (eg, Return on Equity). Financial institutions use securitization to achieve capital adequacy targets, particularly where assets have become impaired. Securitization also releases capital for other investment opportunities. This may generate economic gains if external borrowing sources are constrained, or if there are differences between internal and external financing costs.

Securitization often reduces funding risk by diversifying funding sources. Financial institutions also use securitization to eliminate interest rate mismatches. For example, banks can offer long-term fixed rate financing without significant risk, by passing the interest rate and other market risk to investors seeking long-term fixed rate assets. In addition to these benefits, securitization has also been used successfully to give effect to sales of impaired assets (Davis, 2000:5).

Securitization benefits investors, too. The foremost benefit of securitization to investors is the separation of the credibility of securities and originator. In a securitization, investors no longer focus on the risk of originator, instead they evaluate the creditworthiness of assets backed securities. As mentioned in the SIA research report of Security Industry Association (2002), the other benefits to investors are briefly;

**Diversification:** Securities issued by SPEs are typically backed by numerous assets. By investing in a pool of assets rather than in an individual asset, investors can diversify their risk. This is similar to the difference between investing in mutual funds as opposed to individual stocks.

**Liquidity:** There is an active secondary market in many types of securities, whereas there is relatively little trading in the underlying assets themselves.

**Varying investor needs:** Securitized instruments can be designed, or “structured” to meet different investor needs. For example, some investors require shorter-term investments, while others wish to make longer-term investments. Some wish to invest in securities that pay a fixed rate of interest, while others wish to invest in securities where the interest rate adjusts periodically.

**Stability:** The securitization market has exhibited very stable credit performance overall, and has experienced relatively few adverse credit events such as downgrading or default of SPE securities or bankruptcy of SPEs.

In spite of these advantages, securitization also has some disadvantages for Originators, including significant initial transaction and on-going compliance costs and reduced control by the Originator of the assets sold to the SPE. Costs with respect to a securitization transaction are

generated by a variety of professionals required to complete and maintain such transactions, including attorneys for the Originator and the other parties, trustees (in many cases), rating agencies, accountants and investment banks, placement agents or financial advisers. Another disadvantage of securitization for Originators is that securitization often requires Originators to surrender a great amount of control over the assets in order to achieve some of the tax and accounting benefits. However, this disadvantage is somewhat mitigated through the Originator's retention of servicing rights.

Finally, in some cases, due to either the low quality of the assets involved or the lack of operating history of the Originator, or both, the costs of credit enhancement, when combined with the high transaction costs of securitization generally, may actually make a securitization more costly for an Originator than a bank financing (Hahn, 2005:2).

### **3. WHAT TYPE OF ASSETS CAN BE SECURITIZED?**

Any type of asset with a reasonably predictable stream of future cash flows can be securitized. The assets that are easiest to securitize are those: that occur in large pools, for which past experience can be used to predict default rates, for which documentation is standardized and for which ownership is transferable. Some of the asset types that have been securitized include residential and nonresidential mortgage loans, credit card receivables, trade receivables, automobile, boat, motorcycle and other consumer loans, automobile leases, heavy truck and equipment loans and leases, equipment leases, oil and gas receivables, trademark and patent receivables, film and television distribution rights, airline ticket receivables, small business loans, tax liens and health care receivables (Hahn, 2005:11).

As shown in Table 3, in US the most common debt security is the mortgage backed security. Besides, asset backed securities which is a broad name of securitization of financial instruments, are in circulation. But, in total, these two types of securitization compose the largest part of the American bond market.

Table 3: US Outstanding Level Of Public&amp;Private Bond Market Debt 2005

Type	Amount (\$ Billions)	% of Total
Municipal	2,215.8	8.7
US Treasury	4,165.8	16.4
MBS	5,907.6	23.3
Corporate	5,027.3	19.8
Fed Agencies	2,603.9	10.3
Money Market	3,468.9	13.7
ABS	1,955.2	7.7
<b>Total</b>	<b>25,344.5</b>	<b>100</b>

Source: [www.bondmarkets.com](http://www.bondmarkets.com)

### 3.1 Mortgage Backed Securities (MBS)

The mortgage debt market has become an increasingly important component of the U.S. capital market in the past two decades. Mortgage-backed securities (MBS) in particular, which are created through securitization of mortgage loans made by financial institutions such as commercial banks, savings and loans and mortgage companies, have come to dominate the mortgage debt markets in recent years (Xu and Fung, 2005:397). As of 2001, the value of U.S. MBS outstanding amounts to about \$3.7 trillion, equivalent to 36% of U.S. gross domestic product, which can be seen in Table 4.

Table 4: US MBS Volume And Relative Size To GDP

Years	MBS Outstanding (in Billions of Dollars)	MBS: Relative Size to GDP (in %)
1984	332	8,1
1985	415	9,5
1986	530	11,5
1987	718	14,5
1988	811	15,1
1989	942	16,5
1990	1.111	18,9
1991	1.271	20,6
1992	1.426	21,9
1993	1.551	22,5
1994	1.716	23,5
1995	1.862	24,4
1996	2.070	25,5
1997	2.273	26,3
1998	2.588	28,5
1999	2.955	30,6
2000	3.232	32,2
2001	3.717	36

Source: [www.federalreserve.gov](http://www.federalreserve.gov)

A mortgage-backed security is a claim to the cash flows generated by a specific pool of mortgages. In US, most mortgage-backed securities are issued by one of the three government-sponsored enterprises or agencies known as Ginnie Mae (GNMA), Freddie Mac (FHLMC) and Fannie Mae (FNMA), although there is a growing trend toward mortgage-backed securities being issued directly by large mortgage lenders. Since their inception in the 1970s, mortgage-backed securities have become very popular as an investment vehicle among individual and institutional fixed-income investors. Key reasons for this popularity are that mortgage-backed securities offer attractive yields, have little or no credit risk and trade in a liquid secondary market (Longstaff, 2005:622).

The Mortgages-Backed Securities that could be issued are divided in three general classes: a) Pass-through certificates; b) Mortgage-backed bonds, and c) Pay-through bonds.

Pass-through certificates are securities issued against a specific collateral pool subject to cash flow matching. The balance on the PT is always equal to the balance on the mortgages in the pool and the cash flows received from borrowers are passed through to investors, with a delay and deduction for servicing and guarantee fees. Pass-throughs are typically not the liability of the issuer and feature credit enhancement through a variety of techniques. They may be issued by lenders or conduit institutions. In US the best known pass-throughs are the securities guaranteed by Ginnie Mae (Chiquier et al, 2004:5).

The Ginnie Mae pass-throughs are essentially riskless with respect to default because of a layering of financial safeguards. First, the pass-throughs are backed by mortgage loans held in trust for the certificate (securities) holders. Second, the mortgages themselves are covered by the Federal Housing Administration (FHA) or the Veterans Administration (VA) insurance. Finally, prompt payment interest and principal is guaranteed by Ginnie Mae. Because it is a direct agency of the United States Government, Ginnie Mae pass-throughs are backed by the full faith and credit of the federal government.

“Mortgage-backed bonds” (MBB) are debt obligations of the issuing institution. They are similar to MBS in so far that both instruments are backed by a group of similar mortgage loans that provide the collateral for the instrument. But while MBS are more capital efficient because mortgage assets underpinning the instrument are removed from the mortgage lender’s balance sheet, in the case of mortgage bonds the assets remain on balance sheet. The trade off for lower capital efficiency is that mortgage bonds may allow funds to be raised more cheaply. Because assets remain on the balance sheet of the issuing institutions, investors have recourse to a fully capitalized credit institution, rather than a special purpose vehicle with no capital of its own (O’Rourke, 2001:36).

A “pay-through bond” is a hybrid of the pass-through and the Mortgage Backed Bonds (MBB). Like the pass-through, the pay through bond links interest and principal income from the mortgage pool to the bond interest obligation and principal reduction. Like the MBB, the mortgage loans collateralize the bonds and become a liability to the issuer. Unlike either of the other bonds, however, the pay-through bond enables an institution to liquidate low yielding loans without having to write off a capital loss.

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

Asset-backed security (ABS) is a broad name given to a wide variety of financial instruments that give investors a claim on the interest and principal payments generated by a pool of loans (Ergungor, 2003:1276). Another definition of asset backed securities is that ABSs are debt and related securities whose commitment to repay investors is backed by (a) the value of some form of (usually) financial asset and/or (b) credit support from a third party to the transaction. This definition implies two things: First, the investors’ risk is linked to the assets which back the securities he invests in. It is not the issuer’s general revenues that remain the primary source of interest payments and repayment of principal of the ABSs, but the cash flow generated by the assets. The investor’s credit analysis centre therefore on a clearly defined pool of assets. In fact, often the only assets the investor can look to in order to be paid is this pool of assets. Second, there are frequently features built into asset-backed structures that enhance, either by means of

internal structural measures or with the help of outside parties, the credit quality of the underlying assets (Swiss Exchange, 2000).

Asset-backed securities enable depository institutions, finance companies, and other corporations to "liquefy" their balance sheets (i.e., raise cash by borrowing against assets) and develop new sources of capital. Assets such as credit cards, automobile loans, and home equity loans are securitized and sold in the public markets or as private placements (Zweig, 2006).

The definition of an asset-backed security can be expanded to include securities backed by leases, depending on the percentage of the cash flows that come from the disposal of the asset underlying the lease. Cash flows from the sale of a physical asset to recover residual value are different from cash flows from financial assets that "by their terms convert into cash," but these types of securitizations have become common in recent years with the popularity of consumer auto leases and other equipment-type leases (Foley and Rojek, 2005:2).

Table 5 and Table 6 show the issuance of asset backed securities according to their collateral types in US and Europe. In US, credit cards are the most important source of the securitization, but the usage of home equities have increased over the years shown. As of 2004, home equities' share in asset backed securitization exceeds the percentage of credit cards. Auto loans and collateralized debt obligations are also important collaterals of the asset backed securities. In Europe, half of the asset backed securities are collateralized by the receivables. As seen in Table 6, credit cards and home equities aren't as important in US as in Europe.

Table 5: US ABS Issuance By Collateral Type, 2000-2004

	Auto	Credit Cards	Home Equity	Manufactured Housing	Student Loans	Equipment Leases	Collateralized Debt Obligations	Other
2000	133.1	306.3	151.5	36.9	41.1	58.8	124.5	219.6
% of Total	12.4	28.6	14.1	3.4	3.8	5.5	11.6	20.5
2001	187.9	361.9	185.1	42.7	60.2	70.2	167.1	206.1
% of Total	14.7	28.2	14.5	3.3	4.7	5.5	13	16.1
2002	221.7	397.9	286.5	44.5	74.4	68.3	234.5	215.4
% of Total	14.4	25.8	18.6	2.9	4.8	4.4	15.2	14
2003	234.5	401.9	346	44.3	99.2	70.1	250.9	246.8
% of Total	13.8	23.7	20.4	2.6	5.9	4.1	14.8	14.6
2004	232.1	390.7	454	42.2	115.2	70.7	264.9	258
% of Total	12.7	21.4	24.8	2.3	6.3	3.9	14.5	14.1

Source: [www.bondmarkets.com](http://www.bondmarkets.com)

Table 6: European ABS Issuance By Collateral Type 2004

Type	Amount (€ Millions)	Percentage (%)
Receivables	28,044.7	51
Collateralized Debt Obligations	7,692.8	14
Credit Cards	3,406.3	6
Auto	2,958.6	5
Consumer Loan	697	1
Other	12,718	23
Total	55,517.4	100

Source: [www.europeansecuritisation.com](http://www.europeansecuritisation.com)

#### 4. SPECIAL PURPOSE ENTITIES

Securitization involves the transfer of receivables but it is impossible to transfer such receivables to the investors directly, therefore, it is necessary to bring in an intermediary that would hold the receivables on behalf of the end investors. This entity is created solely for the purpose of the transaction: therefore, it is called a **special purpose vehicle (SPV)** or a **special purpose entity (SPE)** or, if such entity is a company, **special purpose company (SPC)**. The function of the SPE in a securitization transaction could stretch from being a pure conduit or intermediary vehicle, to a more active role in reinvesting or reshaping the cash flows arising from the assets

transferred to it, which is something that would depend on the end objectives of the securitization exercise (Kothari, 2003:42).

An SPE is a legal entity created by a firm (known as the sponsor or originator) by transferring assets to the SPE, to carry out some specific purpose, or circumscribed activity, or a series of such transactions. SPEs have no purpose other than the transaction(s) for which they were created, and they can make no substantive decisions; the rules governing them are set down in advance and carefully circumscribe their activities. Indeed, no one works at an SPE and it has no physical location (Gorton and Souleles, 2005:7).

SPEs began appearing in the portfolio of financing vehicles that investment banks and financial institutions offered their business customers in the late 1970s to early 1980s, primarily to help banks and other companies monetize, through off-balance-sheet securitizations, the substantial amounts of consumer receivables on their balance sheets. A newly created SPE would acquire capital by issuing equity and debt securities, and use the proceeds to purchase receivables from the sponsoring company, which often guaranteed the debt issued by the SPE. Because the receivables have limited and reliably measured risk of nonrepayment, a relatively small amount of equity usually was sufficient to absorb all expected losses, thus making it unlikely that the sponsoring company would have to fulfill its guarantee. In this way the sponsoring company could convert receivables into cash while paying a lower rate of interest than the alternative of debt or factoring, as the debt holder could be repaid from the collection of the receivables or the sponsor. SPEs also allow the sponsors to remove receivables from their balance sheets, and avoid recognizing debt incurred in the securitization (Hartgraves and Benston, 2002:246).

The legal form for these entities may be a limited partnership, a limited liability company, a trust, or a corporation. Regardless of their legal form, off-balance-sheet entities share the following characteristics:

- They are often thinly capitalized.
- They typically have no independent management or employees.

- Their administrative functions are often performed by a trustee who receives and distributes cash in accordance with the terms of contracts and who serves as an intermediary between the SPE and the parties that created it.
- If the SPE holds assets, one of these parties usually services them under a servicing agreement (Soroosh and Ciesielski, 2004:30).

An essential feature of an SPE is that it be “bankruptcy remote,” that is, the SPE never be able to become legally bankrupt. The SPE can be structured to achieve this result. To make the SPV as bankruptcy remote as possible, its activities can be restricted, for instance it can be restricted from issuing debt beyond a stated limit. Standard and Poor’s (2002) lists the following traditional characteristics for a bankruptcy remote SPE:

- Restrictions on objects, powers, and purposes,
- Limitations on ability to incur indebtedness,
- Restrictions or prohibitions on merger, consolidation, dissolution, liquidation, winding up, asset sales, transfers of equity interests, and amendments to the organizational documents relating to “separateness”,
- Incorporation of separateness covenants restricting dealings with parents and affiliates,
- “Non-petition” language (i.e., a covenant not to file the SPE into involuntary bankruptcy),
- Security interests over assets and
- An independent director (or functional equivalent) whose consent is required for the filing of a voluntary bankruptcy petition.

The SPE can also obtain agreements from its creditors that they will not file involuntary petitions for bankruptcy. Depending on the legal form of the SPE, it may require more structure to insure effective bankruptcy remoteness. For example, if the SPE is a corporation, where the power to file a voluntary bankruptcy petition lies with the board of directors, then the charter or by-laws can be structured to require unanimity. Sometimes charters or by-laws have provisions that negate the board’s discretion unless certain other criteria are met (Gorton and Souleles, 2005:10).

According to the securitization type, the structure of the transfer of assets to the SPE can be different. Securitization type can be a “cash flow” or “synthetic”. In a cash flow-based securitization, the ownership of the assets whose cash flows are to be securitized are actually

transferred to the SPE. In a “synthetic” securitization, by contrast, the cash flows and/or economic exposure is transferred to the SPE through the use of a total return swap or some other derivatives transaction. The two are equivalent from a risk and return standpoint, but synthetic SPEs do not assume actual ownership of any assets.

From the perspective of the originator of a cash flow securitization, isolating the assets or cash flows in question in an SPE is often a necessary step to achieve sales accounting treatment under GAAP and thereby remove the assets in question from its balance sheet. From the investor perspective, isolating the assets/cash flows serves to insulate the transaction from the potential bankruptcy of the originator as well as its overall credit risk profile. In doing so, it allows the investor to take on the isolated risk in the transaction in question rather than the wider populations of risk that are probably inherent in direct equity or debt investments of the originator. In addition, if the obligations of the cash flow-backed SPE are to be more highly rated than the direct obligations of the originator, complete isolation from the risk profile of the originator will be requisite (Kavanagh, 2002).

The major risk to an investor in an SPE is that in times of financial distress, the company transferring the assets (known as the sponsoring company, sponsor or the transferor) may try to reach back into the SPE and get access to the assets. The charter of the SPE is thus written specifically to prevent, indeed prohibit, any such possibility. For example, covenants are generally inserted in an SPE’s organizational or loan documents to prohibit any merger with another entity, any other debt other than what is specifically raised at the time of SPE formation, payment of dividends or interest to the sponsoring entity, commingling of assets and liabilities with the sponsoring entity.

Another major risk for an SPE investor is that the assets of the SPE, while seemingly completely isolated from the transferor, may well be rolled back into the transferor’s balance sheet by a bankruptcy filing by an SPE. To eliminate this risk, it is common for many SPE structures to have two SPEs, instead of one. The first SPE would be the primary investment vehicle to raise

capital from outside investors and would be designed to be completely protected bankruptcy filling. For example, this entity would have a covenant restriction in its organizational documents preventing it from voluntary filling for bankruptcy. In addition, this SPE would either be financed as an all-equity firm (i.e., no debt that can lead to involuntary bankruptcy petition), or would have loan covenants on debt preventing the lenders from bankruptcy petition. Thus, both voluntary and involuntary bankruptcy risk are ruled out for this SPE. SPE1 would then invest in a second SPE, say SPE2, which would buy the assets from the sponsor or transferor (Dharan, 2002:116).

## **5. THE STRUCTURE OF SECURITIZATION**

There are generally two types of securitization structures: the fixed pool structure and the revolving pool structure.

### **5.1 Fixed Pool Securitization**

A fixed pool securitization structure involves the transfer on the closing date of a discrete pool of assets to an SPE, the issuance by the SPE of securities backed by the assets and a pass-through of the collection of the assets (*Collections*) to investors without any use of collections to purchase new assets.

A variation of the fixed pool securitization structure is the pre-funded deal. In a pre-funded deal structure, a discrete pool of assets is transferred to an SPE on the closing date and more principal amount of bonds are issued than there is collateral to back the bonds. Then, for a short period thereafter (usually no more than three months, which period is referred to as the “*pre-funding period*”) additional assets are sold to the SPE and paid for with the excess proceeds from the sale of bonds. Thus, a pre-funded deal uses bond proceeds, not collections, to purchase the additional assets. After the pre-funding period ends, the pool is fixed and the deal operates as if it were a fixed pool (Hahn, 2005:12).

### **5.1.1 Real Estate Mortgage Investment Conduit (REMIC)**

Real estate mortgage investment conduit (REMIC) is an entity through which an issuer can sell multiple class securities with call protection to investors. A REMIC may be a corporation, trust, association, or partnership, but in order to qualify, it must confine its investments to mortgages, cash, government securities, foreclosure property acquired in connection with imminent default of a mortgage, or other REMICs.

Although a REMIC may have a wide variety of income sources, ownership interests in a REMIC are divided into two categories: regular interests and residual interests. Regular interests are those offered to most investors; they are bond-like instruments with a face value equal to the share of the REMIC's underlying assets represented by the specific instrument. Regular interests are very flexible in that they can be structured with long or short maturities and also senior or subordinate positions. In contrast, residual interests collect two types of payments made by the mortgage borrowers: (1) payments in excess of those needed to pay the regular interests; and (2) any reserve funds set up initially that are not needed to make up deficiencies in payments to regular interests. In a REMIC, residual interests are freely transferable.

The REMIC structure offers issuers a flexible tool with which to design classes (tranches) of interests to meet investor needs and respond to market conditions. Sequential pay (SEQ) classes are the most basic classes within a REMIC structure. They are also called Plain Vanilla, Clean Pay or Current Pay classes. The principal (amortization) on these classes is retired sequentially; that is, a class begins to receive principal payments from the underlying securities only after the principal on the previous class has been paid in full. The principal payments, including prepayments, are directed to the first sequential class (A) until it is retired, then the payments are directed to the next sequential class (B) until it is retired. The process continues until the last sequential pay class is retired. While the class A principal is being paid down, B and any lower class holders receive monthly interest payments at the fixed coupon rate on their principal. Thus, the higher the class, the shorter its maturity and the lower interest rate it carries, as with all types of bonds (Eisenberg, 2002).

### 5.1.2 Trusts

A trust may be a common law trust that is not an entity for statutory purposes (often referred to as “*grantor trust*”) or a statutory trust (often referred to as an “*owner trust*”), which is an entity created pursuant to a specific statute. The assets held by a trust may be any type.

In a *grantor trust*, the certificate holders (investors) are treated as beneficial owners of the assets sold. The net income from the trust is taxed on a pass-through basis as if the certificate holders directly owned the receivables. To qualify as a grantor trust, the structure of the deal must be passive — that is, the trust cannot engage in profitable activities for the investors, and there cannot be “multiple classes” of interest. Grantor trusts are commonly used when the underlying assets are installment loans whose interest and principal payments are reasonably predictable and fit the desired security structure.

In an *owner trust*, the assets are usually subject to a lien of indenture through which notes are issued. The beneficial ownership of the owner trust’s assets (subject to the lien) is represented by certificates, which may be sold or retained by the bank. An owner trust, properly structured, will be treated as a partnership. Like the grantor trust, the owner trust is expressly limited in its activities by its charter, although owner trusts are typically used when the cash flows of the assets must be “managed” to create “bond-like” securities. Unlike a grantor trust, the owner trust can issue securities in multiple series with different maturities, interest rates, and cash flow priorities (Comptroller and Currency, 1997).

An owner trust may issue debt, as well as ownership certificates. If debt is issued, the rights of the holders of the trust’s ownership certificates are subordinate to the rights of the holders of notes issued by the trust. The interests issued by a grantor trust represent an undivided beneficial ownership interest in the assets of the trust (Hahn, 2005:13).

Over the past decade, the complexity of the trust structures employed by issuers has increased dramatically. In the late 1980s, issuers typically set up a “stand-alone” trust that housed a single pool of credit card receivables each time they wanted to securitize a group of card loans.

Innovations in trust structures, such as master trusts and issuance trusts, have enabled issuers to lower issuance costs, issue more efficiently, strategically time issuance, and increase the appeal of ABS issues to the investment community (Furletti, 2002:4).

## **5.2 Revolving Structure**

A revolving securitization structure permits the use, for some period of time (the “*Reinvestment Period*”), of Collections to purchase new assets from the Originator (such purchases being referred to as “*Reinvestments*”). Under the revolving securitization structure, investors receive periodic interest payments but do not begin receiving repayments of principal until the Reinvestment Period ends (this phase is referred to as either a “*Wind-Down Period*” or an “*Amortization Period*”). The Amortization Period may begin on the earlier of a specified date or upon the failure of either the SPE or the assets to meet certain performance criteria based on defaults, delinquencies, yield generation, etc. (such criteria being referred to as “*Wind-Down Events*,” “*Amortization Events*” or “*Termination Events*”) (Hahn, 2005:14).

### **5.2.1 Commercial Paper Conduit**

A commercial paper (CP) conduit is a special-purpose entity that regularly buys interests in pools of financial assets from one or more sellers and funds such purchases by selling commercial paper notes primarily to institutional investors. Most CP conduits are sponsored and administered by large commercial banks and the sellers are, more often than not, existing customers of such banks. The bank sponsors do not own equity interests in such conduits. They organize and administer them to offer an alternative source of funding to customers owning financial assets with historically-measurable cash flows, such as trade receivables (Dorris and Panayotou, 2004:10).

The assets acquired by a CP conduit may be trade receivables, leases, auto loans, credit card receivables, mortgages, consumer loans or asset backed securities backed by any of those assets. The CP conduit may acquire the assets directly from the Originator or, more commonly, it will

acquire interests in assets through securities or obligations issued by another SPE that acquires the assets from the Originator.

Because (i) the commercial paper issued by the CP conduit matures at various times (but always in less than one year and, generally, in less than three months) and (ii) the maturities of the assets are not matched to the commercial paper maturities, rating agencies require that CP conduits have committed bank liquidity facilities in amounts at least equal to the face amount of the commercial paper issued by the CP conduit. The committed liquidity facilities assure that the CP conduit will have funds to pay maturing commercial paper (Hahn, 2005:15).

### **5.2.2 Stand-Alone and Master Trusts**

*Revolving asset trusts* may be either stand-alone or master trust structures. The stand-alone trust is simply a single group of accounts whose receivables are sold to a trust and used as collateral for a single security, although there may be several classes within that security. When the issuer intends to issue another security, it simply designates a new group of accounts and sells their receivables to a separate trust. As the desire for additional flexibility, efficiency, and uniformity of collateral performance for various series issued by the same originator has increased over time, the stand-alone structure evolved into the master trust structure.

Master trusts allow an issuer to sell a number of securities (and series) at different times from the same trust. All of the securities rely on the same pool of receivables as collateral. In a master trust, each certificate of each series represents an undivided interest in all of the receivables in the trust. This structure provides the issuer with much more flexibility, since issuing a new series from a master trust costs less and requires less effort than creating a new trust for every issue. In addition, credit evaluation of each series in a master trust is much easier since the pool of receivables will be larger and less susceptible to seasonal or demographic concentrations. Credit cards, home equity lines of credit, and other revolving assets are usually best packaged in these structures (Comptroller of Currency, 1997).

Master trusts can be “socialized” or “nonsocialized,” two categories which generally refer to how the SPE waterfall works, i.e., how the receivables’ cash flows are internally allocated. In nonsocialized trusts there is no reallocation of excess cash flow until each series is paid its full amount. Socialized trusts pay the trust’s expenses, including the monthly interest to investors, based on the needs of individualized series. Generally, the socialized excess spread is socialized across all SPV notes issued by the trust. This means that should there be an early amortization event, then all the notes go into early amortization. In a nonsocialized trust, the notes have their own separate excess spreads (Gorton and Souleles, 2005:14).

## **6. CREDIT ENHANCEMENT**

Depending upon the nature of the transaction and the assets involved, the asset pool may need to be supported by one or more types of credit and/or liquidity support (“credit enhancement” and “liquidity enhancement,” respectively) in order to achieve the desired credit risk profile for the debt securities being issued.. Depending on the nature of the transaction and the type of assets, the securitization pool may need such support to attract investors. Enhancement or support can come from the assets themselves or from an external source. Examples of internal enhancements include subordinating one or more tranche, or portion, of the securities issued. This practice places the claims of one tranche over another. Any defaults affecting the securities must be absorbed by a subordinate tranche before the senior tranche is affected. Over-collateralization of asset pools is also used to enhance credit. This occurs when the amount of assets placed in a securitization pool exceeds the principal amount of bonds issued.

External credit enhancements can include a surety bond or a letter of credit from a financial institution. Both options serve as guarantees that investors will receive the payments associated with the securities (Cowan, 2003).

### **6.1 Subordination**

A popular type of internal credit support is the senior/subordinated (or A/B) structure, which is technically a form of “overcollateralization.” It is characterized by a senior (or A) class of

securities and one or more subordinated (B, C, etc.) classes that function as the protective layers for the A tranche. If a loan in the pool defaults, any loss thus incurred is absorbed by the subordinated securities. The A tranche is unaffected unless losses exceed the amount of the subordinated tranches.

The senior securities are the portion of the asset backed security issue that is typically rated triple-A, while the lower-quality (but presumably higher-yielding) subordinated classes receive a lower rating or are unrated (European Securitization Forum, 1999).

## **6.2 Overcollateralization**

Overcollateralization is an internal credit enhancement created when the principal amount of the assets exceeds the principal balance of the securities. That excess results in (i) excess interest collections on the assets (note that interest collections are generated by all of the assets and that usually the interest rate on the assets exceed the interest rate on the securities) and (ii) some cushion of principal that may be applied to losses on the assets before the investors experience losses.

Overcollateralization represents the difference between the certificate balance and the underlying loan balance, such that the senior holders can withstand losses up to the amount of the overcollateralization before incurring any losses directly. In other words, the amount of overcollateralization represents the excess value between (a) the principal amount of the receivables backing a given ABS (or MBS) transaction and (b) the actual outstanding ABS (or MBS). For example, if an entity issues \$75 million of securitized assets which are secured by underlying collateral valued at \$100 million, then the amount of overcollateralization is \$25 million (Rinne, 2004:40).

## **6.3 Excess Spread**

Excess spread exists whenever the average interest rate paid on the underlying assets is greater than the average interest rate paid on the securities backed by the assets. The excess of the interest received over the amount necessary to pay the interest on the securities is referred to as

the excess spread. However, excess spread is rarely paid directly to the Originator; it is usually applied first to cover the fees, delinquencies and credit losses in the transaction.

One of the most common shortfalls that arises in securitizations is a shortfall in the principal received on the assets compared to the principal owed on the securities. Such a shortfall arises due to credit losses on one or more assets. The effect of losses is commonly eliminated or reduced by applying excess spread to reduce the principal balance of the securities in an amount equal to the credit losses. However, because excess spread only exists on a month-to-month basis and is not stored up (unless a reserve or spread account is used), if the credit losses for any particular month exceed the excess spread available in that month, the loss may then be carried over to the next month (depending upon an number of variables, including whether the securities are notes that are treated as debt for tax purposes) and excess spread from that month applied to reduce losses in that period and the carry-over loss. In this fashion the principal of the investors is protected and losses to investors are minimized.

Another common shortfall arises from delinquencies in payments by obligors on the underlying assets and dilutions, such as returns, guarantee claims or discounts granted to obligors on the underlying assets. It is important to remember, however, that whenever losses, delinquencies or dilutions occur, the actual amount of excess spread is reduced or eliminated because the interest collections related to the defaulted, delinquent or diluted assets are not received (Hahn, 2005:15).

#### **6.4 Surety Bonds**

Surety bonds are external credit supports. A surety bond is an insurance policy provided by a rated and regulated insurance company to reimburse the ABS for any losses incurred. Often the insurer provides its guarantees only to securities already of at least investment-grade quality (that is, BBB/Baa or equivalent). Usually this requires one or more levels of credit enhancement that will cover losses before the insurance policy. An insured ABS is rated equal to the claims-paying rating of the insurance company, typically triple-A, because the insurance company guarantees

the timely payment of principal and interest on the security (European Securitization Forum, 1999).

## **7. SECURITIZATION IN TURKEY**

In Turkey, the first regulation for the securitization was made in 1992 by the Turkish Capital Market Board (CMB), the main regulatory body responsible for the supervision and regulation of capital markets. On 31 July 1992, the CMB has issued a Communiqué on the “Registration of the Asset Backed Securities with the Board and the Principles of Establishment and Operation of General Finance Companies”. This Communiqué regulates only the securitization of receivables.

Under the Communiqué, asset backed securities are defined as negotiable instruments backed by receivables of the issuer or of a third party assumed by the issuer pursuant to the terms of the Communiqué. The Communiqué sets out an exhaustive list of issuers as follows:

- general finance companies,
- banks, financial institutions, leasing companies and
- real estate investment companies.

Apart from general finance companies, other issuers are specifically regulated entities under Turkish law. General finance companies are introduced to the market via the Communiqué. They are defined as special purpose vehicles formed solely to purchase receivables from a third party and to issue asset backed securities. Although, general finance companies are called special purpose entities, this is only a homonym. General finance companies don't function the same as the special purpose entities in US, because these companies can't be created by the originator firm and aren't bankruptcy remote.

The receivables determined by the Communiqué to be used as the collateral for the asset backed securities are;

- Consumer loans: Loans extended by banks to real persons or loans extended by consumer credit organizations to legal entities and real persons to finance their purchase of goods and services;

- Housing loans: Loans extended by banks for the purchase of houses completed; loans extended against mortgage and loans extended by state banks in order to improve the housing market;
- Receivables from finance leasing agreements;
- Export receivables: Loans extended by banks and special finance institutions (mainly Islamic banks) to finance export transactions and receivables of factoring companies originating from export transactions;
- Other receivables: receivables of joint stock companies and State Economic Enterprises from installment sales represented by notes;
- Agricultural loans extended by T.C. Ziraat Bank (a state bank);
- Loans extended by T. Halk Bank to small size investors;
- Receivables of real estate investment companies represented by notes which originate from real estate sale or option agreements.

There are two thresholds introduced by the Communiqué;

- The total receivable portfolio of a general finance company cannot be more than 20 times of its net worth (i.e. paid in capital plus reserves);
- The total value of asset backed securities cannot be more than 90% of the value of the backing receivables

The issuance volume of the Turkish securitization is much lower than the US and Europe. As shown in Table 7, while total amount of securities has grown year by year, the asset backed securities haven't been issued since 1998. Moreover, the total amount of securities includes the amount of both private and public securities, which isn't an actual indicator of the development of securitization. Because the mortgage code hasn't been enacted yet, the mortgage backed securities aren't in the circulation, which is a big loss for the development of Turkish securitization market.

Table 7: Volume of Securitization in Turkey

Years	Total Amount of Securities (billion \$)	Asset Backed Securities (billion \$)
1992	22.9	2.1
1993	26.4	4.8
1994	18.9	1.4
1995	24.5	2.5
1996	30.6	0.5
1997	34.3	0.15
1998	43.8	0.04
1999	50.2	0
2000	65	0
2001	92.7	0
2002	100.4	0
2003	153.3	0
2004	188.2	0

Source : Turkish Capital Market Board (2004) Annual Report, <http://www.spk.gov.tr>

## 8. CONCLUSION

A securitization is a financial transaction in which assets are pooled and securities representing interests in the pool are issued. Securitization involves (1) the sale of a large pool of receivables by the originator to a "bankruptcy-remote," special purpose entity (SPE), and (2) the issuance and sale by the SPE, in either a private placement or public offering, of debt securities that are subsequently satisfied from the proceeds of and secured by the receivables. This description of the securitization structure is very basic. Actual structures involve many more elements and participants.

The issuance volume and importance of the securitization have increased over the years. For example, in US, as of 2004, ABS and MBS compose the nearly % 30 of the debt market. In Turkey, unfortunately, the volume of securitization is very low. The main reason for this lowness is the lack of regulation for mortgage backed securities and special purpose entities. In order to develop the Turkish securitization, firstly the mortgage code is enacted immediately and then

necessary changes should be made in the Turkish Commercial Code to form special purpose entities functioning as in US.

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