The Handbook of

European Structured Financial Products

FRANK J. FABOZZI
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EDITORS
The Handbook of European Structured Financial Products
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Ronan Fox  Standard & Poor’s
Blaise Ganguin  Standard & Poor’s
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Apea Koranteng  Standard & Poor’s
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Structured Finance and Securitisation
Introduction

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Securitisation has been one of the most exciting developments in fixed income markets and illustrates perfectly the dynamic and flexible nature of the market itself. First introduced in the United States domestic market in 1969, it arrived in Europe in the 1980s and has witnessed dramatic growth right from inception. The application of securitisation techniques gives rise to “structured finance” securities, which now encompass a wide class of products, each of which deserves separate treatment in its own right.

In simple terms, securitisation is a procedure by which financial assets such as loans, consumer instalment contracts, leases, receivables, and other relatively illiquid assets with common features that are held on the balance sheet of a bank, financial institution, or other corporate entity are used as collateral backing for a package of securities that are issued to investors. The economic interest in the financial assets are thereby transferred to investors via the securitisation process. At the same time, illiquid financial assets are transformed into liquid securities that trade, to a varying degree, in a secondary debt capital market. While the actual process may be quite complex, involving a number of third-parties such as lawyers, credit rating agencies, insurers, account-
tants, and trustee service providers, as a concept it is straightforward. It has resulted in an enhanced range of corporate finance options, as well as advanced the process of disintermediation by which the users of capital are brought closer together to the providers of capital.

The motivations behind securitisation are covered in detail in this book, so we need not go into them here. Investors are attracted to such engineered securities mainly because of their desirable investment and maturity characteristics. However, the higher yield is associated with investors bearing some degree of prepayment, early amortisation, credit, and liquidity risk.

THE EUROPEAN STRUCTURED FINANCE MARKET

The first securitisation in the United States market used residential mortgage assets. The success of the securitisation process in the residential mortgage markets as a funding source and the acceptance of the derived securities by the investor base led to the application of this technology to other assets, such as credit cards, home equity loans, automobile loans, lease instalment contracts, and manufactured housing loans, to name a few on the ever expanding list of securitisable assets. The first nonmortgage asset-backed security, a computer lease-backed transaction, was issued in March 1985. Later in that same year, the first auto loan-backed securities were issued. Two years later, in 1987, the first credit-card backed security was issued. Since then, the asset-backed market has expanded.

In Europe the first asset classes to be securitised were residential mortgages in the United Kingdom in 1987. Since then, a wide range of assets have been repackaged into structured finance securities, including:

- Commercial mortgages
- Corporate bank loans
- Government assets such as lottery receipts and public sector housing receipts
- Credit card debt
- Car-loan (“auto-loan”) receivables
- Corporate assets such as nursing home and funeral home receivables
- Equipment (such as photocopiers and other office equipment) lease receivables
- Consumer loans

The flexibility and applicability of the securitisation concept itself, together with the inventiveness of investment bankers, means that virtually
any asset is a candidate for transformation into structured finance securities. The type of asset that is being securitised determines what the issued bond is called. Generally speaking, the structured financial product market is composed of *asset-backed securities* (ABS), *mortgage-backed securities* (MBS), *collateralised debt obligations* (CDO), and *repackaged securities*. As we shall see later, the MBS market is subdivided further into residential (RMBS) and commercial (CMBS) securities, while the CDO asset class also comprises a number of different types too. As a rule of thumb, the nature of the originating institution, as well as the asset class itself, determines what the issued securities are called. Speaking generally, banks originate RMBS and CMBS, while corporates issue ABS. Insurance companies and fund managers issue CDOs.

In Exhibit 1.1 issue volumes for the European market are shown, along with issue volumes in all currencies shown as USD-equivalent. Exhibit 1.2 shows the breakdown of issuance by original asset class. Securitisation has been introduced in a number of countries across Europe, both inside and outside the Eurozone. Exhibit 1.3 shows the issuance breakdown by country, with the largest issuers shown to be the United Kingdom and Italy.

A more recent development in the European market, again following the trend in the United States, was that of CDOs. The CDO market is sometimes considered as distinctly separate from the ABS and MBS

**EXHIBIT 1.1** European Issuance Volume, 1996–2003 YTD

<table>
<thead>
<tr>
<th>Year</th>
<th>USD Mln.</th>
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<tbody>
<tr>
<td>1996</td>
<td></td>
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<td>1997</td>
<td></td>
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<td>1998</td>
<td></td>
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<td>2000</td>
<td></td>
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<tr>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Securitization.Net, JPMorgan Chase Bank.*

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1 Like all rough rules of thumb, there are exceptions. Bank originators of corporate loans would be issuing ABS, for example, and banks have also been large issuers of CDOs. Government-sponsored issues are usually classed ABS.

2 During 2003 the newest countries in Europe to witness securitisation were Greece and Poland, while during 2000 Portugal saw its first transaction.
market, but it follows the same principles used for the earlier products. Its growth has been dramatic, given that the first CDOs were only issued in Europe in 1998. Like the other products, it has been introduced in several forms. The main distinction within CDOs has been about the type of assets originated, whether loans (collateralized loan obligations or CLOs) or bonds (collateralized bond obligations or CBOs), and the motivation behind deal issuance, whether “arbitrage” or “balance sheet.” These distinctions are discussed in detail later in this book.

Exhibit 1.4 shows CDO transaction issuance in the European market from 2000. Exhibit 1.5 shows the type of collateral originated during 2002.

**EXHIBIT 1.2** Collateral Type During 2002

![Collateral Type During 2002](image)

*Source: Securitization.Net, JPMorgan Chase Bank.*

**EXHIBIT 1.3** Origination of Assets in Europe 2002

![Origination of Assets in Europe 2002](image)

*Source: Securitization.Net, JPMorgan Chase Bank.*
Part V of this book looks in detail at CDOs, including the newest CDO type known as a *synthetic* CDO, which combines traditional securitisation techniques with credit derivatives.

**Organisation of This Book**

This book is organised into six parts. Part I introduces structured finance products and the concept of securitisation. This includes chapters on the mechanics of a securitisation transaction, as well as separate chapters that analyse structured finance products from the point of view of investors and originators. Included in Part I is a chapter on the various “agency”
services required, by investors, in a securitisation deal, and which are provided by specialist banks known as trust banks.

The following parts are split by products. Part II looks at ABS and the various asset classes that have been originated as ABS. It includes chapters on credit card ABS, consumer loan ABS, auto loan ABS, lease securitisations, and mezzanine loan securitisations. There is also a chapter on public sector transactions, which have been dominated by issuance from the Italian government. Information about other types of securitisation backed by trade receivables, corporate stock, and non-performing loans, is also included.

A special type of ABS is whole business securitisations. (A specific example of this type is U.K. pubs). This is covered in Part III.

Part IV focuses on residential and commercial MBS. Because of the size of the Italian RMBS market, a chapter on that market is covered in the book.

In Part V we look at CDOs, both cash and synthetic CDOs. This includes a chapter on valuing CDOs. Because synthetic CDOs make extensive use of credit derivatives, we have included an introductory chapter on these instruments in Part I.

Finally, Part VI looks at structured credit products in the form of credit-linked rates and repackaged transactions. In all parts we have also considered the analysis of structured financial products, primarily credit analysis from the rating agency perspective.
Securitisation has become a widely used term to describe many mechanisms through which risks are transferred between various parties. The description encompasses the sale of risk assets in absolute form, as well as the synthetic transfer of specific aspects of risk. This chapter seeks to bring a definition to the word securitisation. We seek to define the various contexts in which the word is used, the parties to such contracts, and their motivations. From this high-level background to the market it is apparent that the world of securitisation is still being defined—new asset classes and new mechanisms are being created, with new counterparties coming to the market regularly.

WHAT IS SECURITISATION?

Securitisation is effectively a process through which loans, receivables, and other assets are pooled. The related cash flows and economic values are employed to support payments on related securities. These securities are issued in the public and private markets by or on behalf of issuers, who utilise securitisation to finance their business activities. These securities are generally referred to as asset-backed securities (ABS).
The investor’s risk is therefore linked to the assets which back the securities he invests in. The primary source of interest payments and repayment of principal of the ABS does not rely on the issuer’s general revenues, but on the specific cash flows generated by the assets. The investor’s credit analysis therefore focuses on a defined pool of assets.

Most securitisation transactions seek to isolate the financial assets that support payment flows on the related ABS. Isolation ensures that payments on the ABS are derived exclusively from the performance of a specific, and often segregated, pool of financial assets.

The pool of assets securitised is frequently enhanced, either by means of internal structural measures or with the help of outside parties, from a credit perspective. Liquidity facilities may provide some credit enhancement, but usually provide a mechanism to streamline cash flows on the transaction, ensuring a smoother flow of payments to investors, especially where underlying payment flows on the securitised assets are subject to some volatility.

This is why ABS are usually issued by special purpose vehicles (SPVs) whose purpose is to hold a specific pool of assets and issue securities against these assets.

The basic concept of securitisation may be applied to virtually any asset which has a reasonably ascertainable value, or that generates a reasonably predictable future stream of revenue. As a result, securitisation has been extended beyond the typical asset classes (see Exhibit 2.1) to less well-known asset classes, including insurance receivables, obligations of shippers to railways, obligations of purchasers to natural gas producers, and future rights to entertainment royalty payments, among many others.

The fundamentals of securitisation are relatively homogeneous, being common to most transaction types. As a result, securitisation structures and the roles and functions of key transaction participants are similar wherever the securitisation concept is applied. This is the case regardless of jurisdiction, despite different regulatory and legal environments. We discuss some generic securitisation transaction features and compare true sale and synthetic securitisation structures later in this document.

Securitisation may therefore be distinguished from other, more traditional forms of debt and equity financing, in which returns to investors are generally derived from the claims-paying ability or profit-making potential of an ongoing business enterprise.

The ABS market can also be distinguished from the corporate debt and equity markets because of the regular return of principal exhibited. ABS require investors to assess the impact of alternative potential future
The concept of securitisation

Cash flows (including prepayments) in making a meaningful evaluation of a security’s yield.

**Originator Classification**

Originators have encompassed many guises. The most common asset originators in the securitisation world are banks, mortgage originators, specialist consumer credit originators, asset managers, and, increasingly, corporates. Exhibit 2.1 summarises most classes of potential originators, the possible range of asset classes they could consider securitising, and their motivations.

The most significant European originators, from a volume perspective, are the banks. Their leading motivation to date has been achieving greater regulatory capital efficiency. However with the proposed changes to the Basel Capital Adequacy Guidelines, this primary motivation is likely to refocus towards liquidity, business growth, prepayment risk transfer, and credit risk transfer.

There are various categories of issuing vehicles for structured transactions, which range from direct issuance by the originators themselves to multiseller conduit structures. These categories can be summarised as follows.

The United States and, increasingly, the European market have seen significant securitisation flows via the conduit market, whereby several originators effectively “club” together under a single sponsored issuance programme. This clearly generates economies of scale for the originators, and is especially efficient for short-dated receivables which are originated by corporates. Additionally, where an originator wishes to preserve some degree of anonymity this can be achieved under some structures. The risk is still transferred to investors, who typically purchase credit-enhanced commercial paper, with credit enhancement either provided by publicly issued securities, or subordinated loans.

In the context of securitisation, these are companies established solely for the purpose of purchasing risk or cash flows from the originator, and routing it to investors. They are often domiciled offshore, and usually bankruptcy remote from the asset originator. This effectively segregates the assets being securitised from the originator’s other business assets.

On occasions the originator itself will issue the notes, with the note performance correlated to the performance of specific assets maintained on their balance sheet. Key to the success of such structures is the originator’s ability to eliminate other assets from the risk equation. Other occasions where the originator will also act as issuer are where their whole business is being securitised.
### EXHIBIT 2.1  Originator Classification, Target Asset Classes, and Motivation

<table>
<thead>
<tr>
<th>Originator Type</th>
<th>Asset Class</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>Mortgage loans (residential and commercial); loans (consumer and corporate); bond and credit derivative portfolios; leases</td>
<td>Risk transfer; capital efficiency; new business; liquidity; prepayment risk transfer</td>
</tr>
<tr>
<td>Specialist mortgage originators</td>
<td>Mortgage loans (residential—often nonconforming and subprime)</td>
<td>Liquidity; new business; risk transfer; capital efficiency; prepayment risk transfer</td>
</tr>
<tr>
<td>Consumer finance providers</td>
<td>Credit card loans; auto finance loans; personal loans; leases</td>
<td>Liquidity; new business; risk transfer; capital efficiency; prepayment risk transfer</td>
</tr>
<tr>
<td>Companies</td>
<td>Exports; receivables; inventory; leases</td>
<td>Capital efficiency; liquidity</td>
</tr>
<tr>
<td>Leisure and retail operators</td>
<td>Pub receivables; theatre cash flows; retail cash flows; franchise revenues</td>
<td>New business and liquidity; capital efficiency; profit</td>
</tr>
<tr>
<td>Real estate developers</td>
<td>Debt finance for offices; hotels; shopping malls; care homes</td>
<td>Capital efficiency; liquidity; term and cost</td>
</tr>
<tr>
<td>Municipalities</td>
<td>Social security contributions; taxes; parking tickets; hospitals; specific assets</td>
<td>Capital and balance sheet efficiency; liquidity; term and cost</td>
</tr>
<tr>
<td>Governments</td>
<td>Privatisation debt (e.g., PFI in the UK); export credits</td>
<td>Capital and balance sheet efficiency; liquidity; term and cost</td>
</tr>
<tr>
<td>Utilities</td>
<td>Receivables; real estate</td>
<td>Capital efficiency; liquidity; term and cost</td>
</tr>
<tr>
<td>Projects</td>
<td>Cash flows post completion</td>
<td>Capital efficiency; liquidity; term and cost</td>
</tr>
<tr>
<td>Asset managers</td>
<td>Bond, credit derivative and loan portfolios</td>
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<td>New business and liquidity; capital efficiency; profit</td>
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<td>Housing Associations</td>
<td>Real estate portfolios and resultant cash flows</td>
<td>Capital efficiency; liquidity; term and cost</td>
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<tr>
<td>Healthcare</td>
<td>Real estate portfolios and resultant cash flows</td>
<td>Capital efficiency; liquidity; term and cost</td>
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*Source: Commerzbank Securities.*
ORIGINATOR MOTIVATION

Understanding originator motivation and decision-making criteria are fundamental to assessing whether to invest in a structured finance transaction. A successful transaction creates a partnership between originator, servicer, and investor. This partnership must transcend all three parties throughout the life of the transaction, with each ideally understanding each other's motivations.

The key reasons for securitising can be summarised as follow. For banks and corporates, traditional balance sheet risk management requires optimal liability management. Securitisation enables risk capital usage to be optimised, focusing capital utilisation on residual economic risk coupled with allocations for operational and day-to-day business management risks.

Through the effective transfer of credit risk, capacity for incremental credit risk is created, freeing counterparty limits. Two of the most significant constraints on business growth are capital and risk appetite. In optimising capital usage, and reducing credit risk, business capacity is effectively created. One of the most misunderstood motivations. It can be achieved essentially through routing existing revenues, less the cost of the transaction, towards generating a return on the reduced capital allocation.

An added bonus for many is the access to a significant, alternative source of liquidity from an often-new range of investors. For lower rated organisations, securitising selected funded assets possessing an inherently stronger credit quality than their own, this funding may also be less expensive. Furthermore, the liquidity generated may be longer term, and create enhanced matching of assets and liabilities.

We will also discuss later in this chapter some alternative methods of meeting these objectives (outside of securitisation), and contrast these with securitisation techniques.

SECURITISATION TRANSACTION CATEGORIES

As the market matures there are, in our opinion, three broad categories of securitisation transactions. These are described below.

Financing and Capital Management Transactions

Financing and capital management transactions represent the core transaction type in the securitisation arena. In Chapter 6, we present a relative value framework for analysing this transaction type.

Originators generate assets such as loans and receivables which are ultimate payment obligations of their customers (debtors). When securitising such assets (or an interest in these assets), the originator receives liquid-
ity. The issuer in turn uses the assets to collateralise the ABS. The customers will not usually be aware that the assets have been securitised, and that there has therefore been an effective change in control of their liability—the change may in fact not ever be made public, as a synthetic structure may in fact not lead to any change in control, but merely a transfer of risk.

**Repackaging for Arbitrage**

Repackaging transactions typically take the form of a series of notes issued in the form of an ABS, backed by a portfolio of bonds (including ABS themselves), credit derivatives, loan portfolios, and other forms of credit risk. The arbitrage operates between the yield on the underlying and the required all-in cost of the notes, and success is often measured by comparing the relative costs of holding the assets “on balance sheet” relative to through a securitised structure.

**Market-Value Transactions**

In market-value-based transactions the asset manager must take specific action, usually selling the collateral, to liquidate assets. This exposes investors to liquidity and market risk.

**TRANSACTION FEATURES AND PARTICIPANTS**

Securitisation structures appear to be complex; however, there are common features which make them easier to understand, facilitating analysis and comparison.

An *originator* extends finance to a *borrower* to facilitate the originator’s purchase or use of an asset. This creates a financial asset. Once created, the originator usually continues with the collection and management of the asset, in a consistent manner to ongoing credit and collection procedures. These activities are generally referred to as servicing, and the party performing them is referred to as the *servicer*.

In order to create ABS, the originator conveys the assets to be securitised to another entity (usually a bankruptcy-remote SPV, but also, frequently, a trust)—the *issuer*. The SPV or trust then issues debt securities in the capital markets. The securities are usually purchased by institutional *investors* (including banks, conduits, insurance companies, pension plans, and portfolio managers).

The issuer uses the proceeds from the notes to pay the purchase price of the assets being securitised. The transfer of assets from the originator to the issuer is generally a *true sale*. A true sale removes the assets from what would constitute the bankruptcy or insolvency estate of the origi-