

Asset Securitization In Asia

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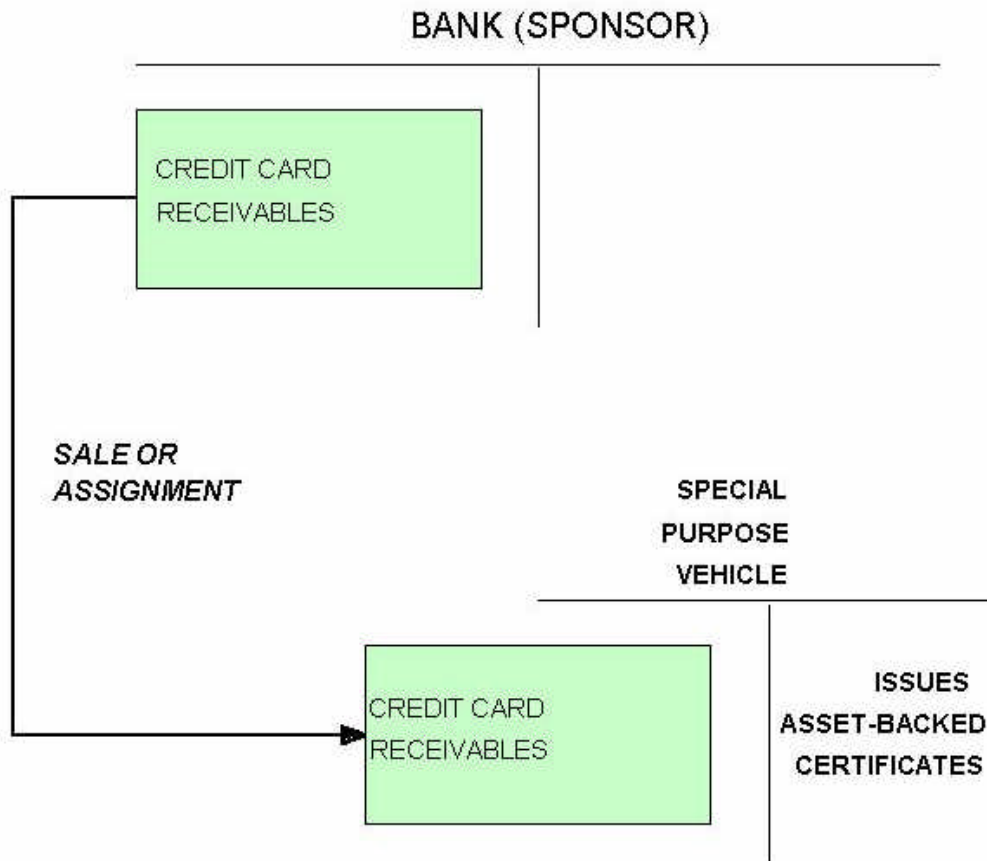
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For Asian financial institutions and companies, asset securitization may provide a very attractive financing opportunity.



Chapter 1

What is Asset Securitization?

Asset Securitization Defined

Securitization is the transformation of illiquid assets into a security -- that is, an instrument that is issued and can be traded in a capital market. Assets that have been transformed in this manner include residential mortgages, auto loans, credit card receivables, leases and utility payments. The term asset-backed security (ABS) is generally applied to issues backed by non-mortgage assets. Asset securitization techniques are being embraced by a number of Asian countries seeking to promote home ownership, to finance infrastructure growth, and to develop their domestic capital markets.

Asset securitization differs from collateralized debt or traditional asset-based lending in that the loans or other financial claims are assigned or sold to a third party, typically a special-purpose company or trust. This special-purpose vehicle (SPV) in turn issues one or more debt instruments -- the asset-backed securities -- whose interest and principal payments are dependent on the cash flows coming from the underlying assets. This process is outlined in Figure 2.



The key to asset securitization is the separation of good assets from a company or financial institution and the use of these assets as backing for high-quality securities that appeal to investors.

The Structure

The central element of securitization is the separation of good assets from a company or financial institution, and the use of these assets as backing for high-quality securities that appeal to investors. Such separation makes the quality of the asset-backed security independent of the creditworthiness of the originator.

The Cash Flows

In the normal arrangement, principal and interest cash flows received by the seller/servicer are paid directly to the SPV, which then pays investors the promised

interest and any principal that has been returned. In a structure of this kind, the investors may incur the payment-timing risk as well as other risks of the underlying assets, but not the credit risk of the originator.

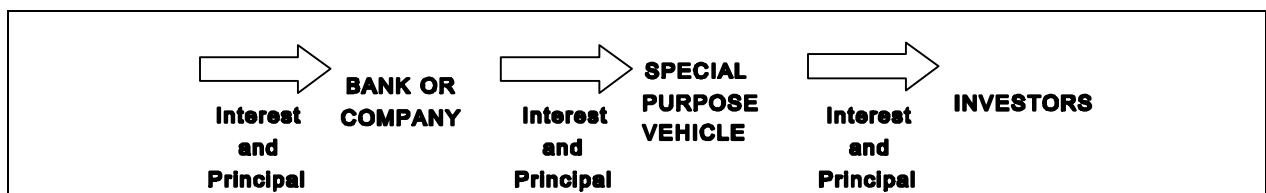
Most ABS investors are unwilling to take significant credit risk. Hence, even when the assets being securitized are themselves of good quality, many deals entail some form of credit enhancement, such as overcollateralization or a third party guarantee. For this reason, mortgage-backed and asset-backed securities tend to have excellent credit ratings.

The bank or company selling the assets will normally continue to service them, and hence will continue to derive servicing revenues.

The originator of the underlying assets will normally continue to process or service the assets -- communicating with borrowers, collecting their payments and earning a fee for doing so. In addition, the seller usually retains the excess servicing -- that is, the revenues from the assets, minus the interest and other costs incurred by the special-purpose vehicle. Occasionally, the originator may sell the servicing rights to a third party. This is often done in the US mortgage-backed securities market.

For corporations, asset securitization provides a new and potentially cheaper form of financing. For financial institutions (such as banks and finance companies) that have successful loan programs but face capital constraints, securitization is a means of removing assets from the balance sheet and of freeing up capital to support further lending. Asset securitization can open up a new avenue for funding -- one that enables a financial institution to achieve a good match between its assets and its liabilities.

For investors, the securities offer yields exceeding those on comparable corporate bonds and provide diversification into a different form of investment. Because the deals are usually large and have high credit ratings, the securities tend to be liquid and may be actively traded in secondary markets.



Chapter 2

The Basic Elements

The Assets

While residential mortgage loans provide the core of the global asset-backed securities market, a wide range of other financial claims can and have been securitized. Indeed virtually any income-producing asset with an adequate performance record and some diversification of credit risk can be securitized. Consumer finance receivables -- in particular car loans and credit card receivables - - constitute the most important segments of the non-mortgage ABS market. Other assets commonly securitized include home equity loans (second mortgages), student loans, cellular phone receivables, mobile home loans, heavy equipment loans and leases.

The suitability of assets for securitization lies not so much in what they are, but in whether they are amenable to rigorous credit and statistical analysis. For example, does the originator have three years of statistics on the composition of receivables, agings, defaults, losses, and dilution? Do the accounts receivable statistics show stable, consistent trends? Are the assets unencumbered and transferable? If these criteria can be satisfied, there seems to be no limit to the range of assets and cash flows that can be securitized: examples include revenues from the singer David Bowie's performances, and future disasters (payments for catastrophe insurance).

Suitable assets are separable from the originator and amenable to rigorous credit and statistical analysis.

The Securities

The securities issued represent an accommodation between the originator's needs, the payment characteristics of the underlying assets, and investors' preferences and constraints.

Asset-backed instruments may take a wide range of forms. They may pay interest at fixed or floating rates; they may be short or long in term; they may have a fixed maturity or be prepayable or callable under a variety of conditions. Some are publicly issued and others privately placed; some denominated in local currency and others in foreign currency. In general, the securities represent an accommodation between the originator's needs, the payment characteristics of the

assets, and investors' preferences and constraints. Some asset-backed securities are placed domestically (in the country of origin), some in a major capital market such as the USA or Japan, and others in two markets simultaneously. Many are issued globally in the form of Eurobonds. They may or may not be listed on an exchange; indeed, their liquidity varies from actively traded (like some US mortgage-backed securities) to nontradable (such as certain Japanese ABS issued under the so-called MITI Law). Some ABS are placed in the United States under Rule 144A, which allows limited trading. Others are issued in the form of commercial paper, which is tradable but not, strictly speaking, a security. The diagram below suggests that the claims can assume a broad spectrum of forms.



The Originators

Commercial banks, savings banks, finance companies and corporations constitute the principal originators of the loans and similar assets that are securitized. As the range of assets being securitized has widened, so has the range of issuers. A recent development has been the entry into the market of state-owned enterprises and infrastructure projects. Most originators are top quality banks and corporations. However, some weaker borrowers or countries have discovered that they can employ their good assets to access capital markets that would otherwise be closed to them.

Most originators are good quality banks and corporations.

The Investors

The great majority of ABS are held by institutional investors, such as insurance companies, unit trusts (mutual funds), money managers, banks, pension funds and the like. In the United States, however, many individual investors hold mortgage-

backed securities. In Asia, commercial banks own a major share of ABS, but pension funds and insurance companies are increasingly interested in these instruments.

Managing the Risks

Developing an appropriate legal structure and managing credit risk are the two biggest challenges in ensuring the success of an asset-backed issue. Many investors who recognize that asset-backed securities can be a rewarding component of their portfolios are unwilling or unable to perform the complex analysis required. They may also be unable or unwilling to bear the credit and other risks associated with these instruments. Fortunately, in the United States and certain other countries, the ABS market is sufficiently well developed that the risks can be carefully identified and reallocated to those best able to bear them. Today, the techniques for doing so are being transferred to Asia.

Since investors rely heavily on the detailed assessments and ratings assigned by the principal rating agencies such as Moody's and Standard and Poor's, early involvement of these agencies in the risk-management process makes good sense. The rating agencies focus on such issues as the following:

Involvement of the rating agencies in the ABS risk-management process is essential, since investors rely heavily on their assessments.

- Credit risk
- Sovereign risk
- Servicer performance risk
- Interest rate and currency risks
- Prepayment risks
- Legal risks
- Liquidity risk
- Swap counterparty risk
- Financial guarantees

Credit risk arises from the possibility that the issuer of an ABS, usually a special-purpose vehicle, may default on its liabilities. Since the SPV is normally structured to have no assets or business other than holding the securitized assets, the principal focus is on the cash flow from the assets themselves. The most important possibility to be considered is default by the underlying borrowers, such as the car owners in the case of automobile loan securitization. While a small but predictable loan loss ratio is manageable, the rating agencies must carefully analyze the variations in default and delinquency rates and evaluate any factors that might trigger an escalation in defaults.

Since the SPV is normally structured to have no assets or business other than holding the securitized assets, the principal focus is on the cash flow from the assets themselves.

Sovereign risk takes many forms, but is most evident when the underlying assets are in one country and investors are in another. Sovereign nations may interfere with cross-border cash flows through taxes, exchange controls or other measures. This risk can be mitigated by using an offshore SPV and a foreign guarantor, by capturing foreign-source cash flows, or by specifying an independent jurisdiction to govern the agreements. However, the most effective way to protect investors against sovereign risk is to ensure that the transaction accords fully with all laws and regulations and with the national economic interest.

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Once a pool of assets has been securitized, someone -- commonly the originator of the assets -- must continue to collect principal and interest, follow up on delinquents, maintain statistics on performance, pass on payments in a timely fashion, and perform numerous other administrative tasks. **Servicer performance risk**, which arises from the possibility that the servicer will fail in these tasks, must be reduced by proper screening and monitoring of the servicer. The ability to choose an alternate servicer can play an important role in mitigating this risk.

Frequently, the payment characteristics of the underlying assets do not match the needs of investors. This may give rise to **interest-rate risk**. For example, if the assets are leases, which are essentially fixed-rate loans, the cash flows may be unsuited to banks that prefer floating-rate assets. One way to bridge this gap is to have the SPV enter into a fixed/floating interest-rate swap, which allows investors to receive a market-based interest rate. This is particularly valuable for those many investors whose cost of funds is also based on short term rates.

Currency or interest rate swaps are common adjuncts to cross-border asset-backed securities.

Currency risk -- the risk of devaluation -- arises when the assets underlying an issue are denominated in a currency that investors do not wish to hold. Some ABS contracts provide for an increase in the local currency payments to offset any decrease in the currency's value. Alternatively, a currency swap can be employed

to transform the local currency cash flows into known payments in, say, US dollars or Japanese yen.

Payments made in excess of the scheduled principal payments on a loan are called prepayments. Individuals and businesses normally pay early either because of a change in their circumstances or because they can refinance on better terms. When borrowers can refinance at cheaper cost, it generally means that investors must reinvest at lower rates. That is why **prepayment risk** often implies interest-rate risk. Although prepayments are a factor in many ABS, they have the greatest impact on securities backed by long-term, fixed-rate home mortgage because it is here that they may produce the largest change in the present value of foregone cash flows. To mitigate prepayment risk for investors who prefer long-term instruments, prepayments from the underlying mortgages are often redirected to different classes of investors. The best-known structure for accomplishing this redirection is the collateralized mortgage obligation, or CMO. In this structure, the principal payments from the underlying mortgages are used to retire different classes of debt on a priority basis according to specified terms.

When borrowers prepay because they can refinance at a cheaper cost, it also means that investors must reinvest at lower rates.

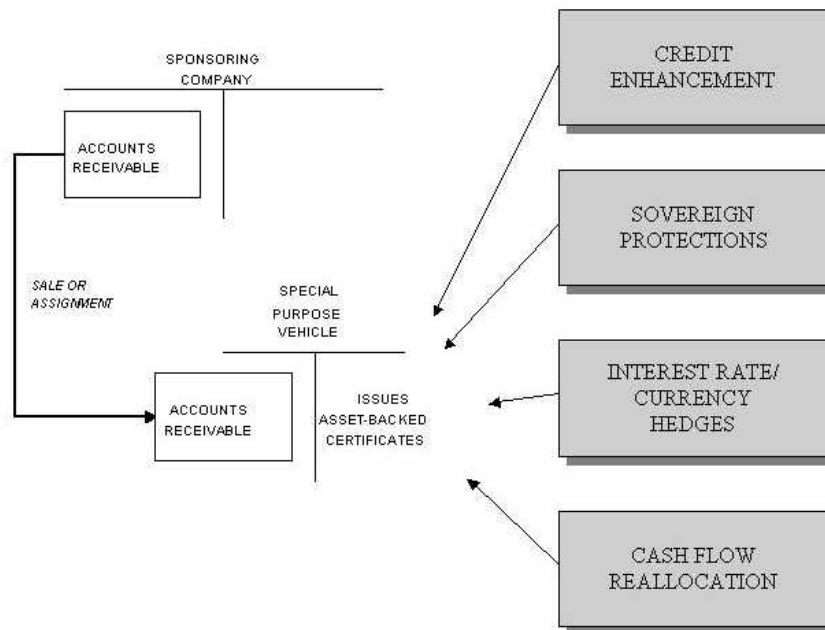
Devising a **watertight legal structure** in a securitization is a great challenge, particularly in countries where the legal/regulatory framework is evolving. The major issue is “bankruptcy-remoteness”: the SPV must be insulated against bankruptcy of the originator, and vice-versa. Should the originator experience financial difficulties, the SPV must still be able to perfect its security interest in the assets and obtain full control over cash collections. Other legal issues include the legal, accounting and fiscal status of the asset transfer (is it a true sale?) and the form of the SPV (trust, unit trust, corporation?). Since some countries in Asia have legal systems that are based on Anglo-Saxon law, others on code law, and still others on a combination of the two, these questions must be answered on a case-by-case basis. Protecting investors by making the special-purpose entity “bankruptcy remote” is a challenge in some Asian jurisdictions.

Liquidity risk is the possibility of a cash shortfall at times when interest or principal payments are due. If the individual obligors behind the underlying loans are late with their payments, cash flow to the SPV may be insufficient for it to make interest and principal payments in full and on time to investors. The cash flow from the underlying assets to the investors should be structured -- and, if necessary, supplemented -- in such a way that no such shortfall will occur.

Swap counterparty risk arises when an interest rate or currency swap is part of the deal, and can be minimized by choosing a counterparty of high credit quality.

Many asset-backed securities are **guaranteed**, to remove the burden of analysis from the investor. Rather than having to conduct a detailed analysis of a complex structure, many investors prefer to rely on a top-rated, specialized financial institution whose only business -- and livelihood -- depends upon maintaining its top rating through extremely prudent credit policies. In some transactions, swap counterparty risk is included in the financial guarantee.

In short, various techniques are employed to eliminate or mitigate the risks affecting the underlying assets. Four major categories of risk-reduction are illustrated the next diagram.



What's Different About It?

Linking particular assets to specific debt is by no means a novel form of financing. Collateralized loans are a tried and true form of bank lending, and mortgage lien loans long predate the development of the ABS market. However, asset securitization differs from traditional asset-based lending in that the assets are legally segregated from the originator's credit condition and marketable securities are created out of the assets' cash flows. Furthermore, in order to assure that these securities will be liquid, the asset pool is commonly credit enhanced by including excess collateral or cash reserves and/or by securing a third-party guarantee for the financing.

Asset securitization differs from traditional asset-based lending in that the assets are legally segregated from the originator's credit condition, and marketable securities are created out of the assets' cash flows

Securitization of trade receivables is sometimes confused with factoring. While there are some similarities, there are also fundamental differences. Factoring often involves full recourse, while securitization does not. Factoring tends to be more useful to middle-market companies that have limited access to other forms of funding, while securitization is more commonly used by large companies of investment-grade quality. Such companies are motivated to use securitization as a strategic funding tool.

Credit Enhancement With Financial Guarantees

Financial guarantees have become an essential component of the domestic and international market for asset-backed securities. These guarantees, sometimes also referred to as bond insurance or surety bonds, are used to elevate an MBS or ABS to high investment-grade ratings. Depending upon the financial guarantee company's own rating, a security may be raised to the single-A or triple-A level. In effect, the guarantor rents its rating for a fee. In addition the guarantor serves the investor by ensuring that all features of the ABS, including the pool quality, meet international standards.

Why may it make sense for an Asian ABS to be supported by a financial guarantee, despite the cost?

A financial guarantee can pierce the sovereign rating ceiling.

First, because its own capital is at risk, the financial guarantor will see to it that the investor gets a well-structured transaction, that the collateral is sufficient to meet all obligations, and that the legal and servicer risks have been mitigated. Second, a financial guarantee gives the investor two ways out: either the collateral pays or the guarantor pays. Third, the guarantor will continue to monitor the deal and act to protect itself and the investor long after the issuer and the banker have moved on to other deals. Fourth, a financial guarantee enables the banker to simplify the distribution of securities to investors and improve the economics of otherwise complex issues by taking the "story" out of the deal. Fifth, because investors in many Asian countries are inexperienced with ABS, the imprimatur of a reputed guarantor may be critical to gaining their confidence. Finally, where the borrower is seeking access to investors beyond its country's boundaries, a financial guarantee can pierce the sovereign rating ceiling --offering, for example, a Thai borrower an investment grade rating higher than the sovereign rating of Thailand

itself.

A Growing, Global Market

The US asset-backed securities market continues to be the world's largest. More than \$1.6 trillion in mortgage-backed securities are currently outstanding in the United States. More significantly, the volume of new asset-backed (non-mortgage) issues has nearly tripled in recent years.

Around the world, asset-backed securities markets have also been growing rapidly. The first mortgage securitization in Europe, a UK mortgage-backed issue, was completed in 1987. Public or private asset-backed issues have since been consummated in France, Germany, Spain, Italy, Belgium, the Netherlands and Sweden, among other countries. A dozen or more countries in Asia, including Japan, Hong Kong, Thailand, Indonesia, India and the Philippines have all seen the introduction of asset-backed securities, as have Canada, Australia, New Zealand and a number of countries in Latin America. In addition, almost every day, significant new asset-backed bonds are issued in the Eurobond market. The instrument has become a standard component of conservative, yield-seeking international investment portfolios.

Increasingly, the ABS technique is being seen as an adjunct to project financing where cross-border revenues can be isolated from the project and assigned to a trustee bank as backing for internationally placed securities. This application is discussed in Chapter 5.

Chapter 3

The Securitization Process

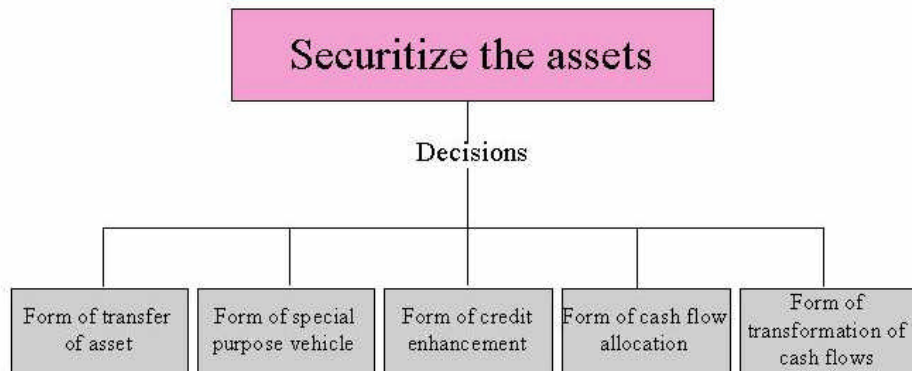
The Technique Summarized

In a typical structure such as those used in several Asian countries, asset-backed securitization works as follows:

- I A lender, such as a bank, finance company or corporation, originates loans, e.g. hire-purchase (HP) installment loans, leases, or credit card receivables. Typically, the financial institution wishes to expand, but finds that its capital and the term financing available to it are insufficient to support the desired expansion of its business.
- II The securitization structure is developed. A new legal entity is created, a special-purpose vehicle (SPV), purely for the purpose of holding and financing the assets to be securitized. The originator will sell or assign certain assets, such as its car loan receivables, to the SPV. The nature of the transfer and the legal status of the SPV vary from issue to issue and require careful design.
- III The assets are chosen and the structure designed to obtain a high rating, typically ranging from single-A to triple-A, from a major credit rating agency. This can be accomplished in one or more of the following ways:
 - **Preparing the pool for securitization**, for example, by employing prudent criteria in screening assets for inclusion.
 - **Credit improvement at the level of the SPV**. The special-purpose company and the whole legal structure must be designed so that it is bankruptcy-remote. In addition, in many instances, anticipated cash flows from the assets exceed the scheduled principal and interest payments. This is known as overcollateralization. Alternatively, the seller may agree to replenish the asset pool if its value falls.
 - **Third-party credit enhancement**, such as a guarantee purchased from a specialized financial guarantee company, which itself has a top credit rating.
 - The SPV issues one or more **classes of securities** paying defined interest rates, and gives the money it receives from investors to the seller of the assets. If one class is senior and the other is subordinated,

the senior securities usually carry high ratings while the subordinated class bears a lower rating -- typically below investment grade. This may also involve restructuring the cash flows: allocating different cash flows to different classes of investor, and/or transforming the debt service payments by means of interest rate or currency swaps. The key decisions made so far are summarized in the diagram.

Key Decisions



- Over time, the payments from borrowers to the originator are processed by a servicer (typically the originating institution itself). The servicer passes the interest, principal and fee payments from the borrowers, less servicing fees, to the SPV. The SPV in turn pays a pre-defined interest rate to the investors, plus any principal repayments, according to the terms of the ABS. The seller/servicer may also accrue excess servicing income, i.e. the difference between the assets' revenues and all costs.
- When all principal payments have been made and the securities have accordingly matured, the SPV is extinguished and any remaining assets (including cash) are returned to the originating bank or firm.

The servicer is commonly the originating institution or company itself.

A Hypothetical Example

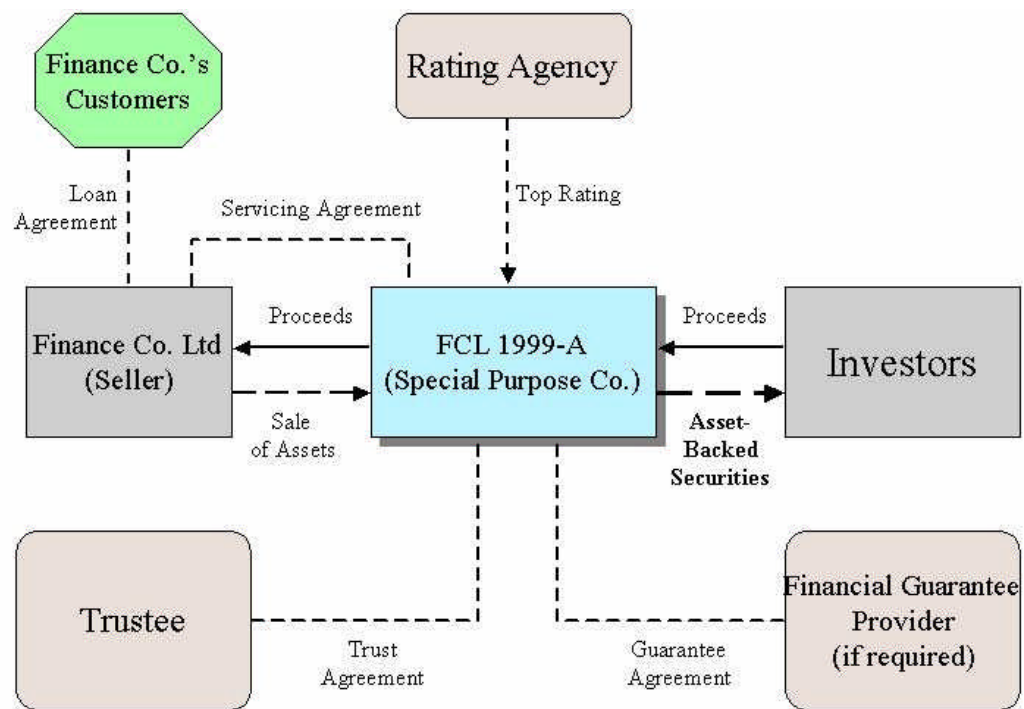
We can perhaps best explain the use of the techniques by means of an example. We start with an hypothetical finance company, Finance Company Ltd (FCL). The company provides loans for private automobiles, small delivery vans and trucks, and farm equipment. While the receivables have a reliable payment history, the growth of FCL's business means that it has strained the limits of its leverage to dangerous levels. Equity capital is scarce, and the owners are not willing to relinquish control by issuing public stock. Issuing a corporate bond would be difficult and costly, particularly since FCL's financial ratios would not produce a top credit rating.

This company is ripe for asset securitization. Equity capital is scarce and costly, but the assets themselves are sufficiently strong to support a high credit rating without the backing of the originating lender.

In short, this company is ripe for asset securitization. The assets themselves are sufficiently strong to support a high credit rating without the backing of the originating lender. While many investors may not have the means to scrutinize and evaluate the assets, one or more rating agencies will do so, as will a specialized, highly rated, financial institution which will provide its own guarantee.

After working with its bankers, the financial guarantee company, the regulatory and rating agencies and the lawyers to structure the deal, FCL establishes the new company, called FCL 1997-A, to buy its hire-purchase receivables and to issue asset-backed securities. This new company or trust has no other purpose and will be dissolved after the securities mature -- hence the term special-purpose vehicle (SPV). This is illustrated in the Figure.

A new legal entity is formed to buy the receivables and to issue asset-backed securities. It has no other purpose, and will be dissolved after the securities are redeemed.



The specially formed vehicle purchases the assets from FCL and sells notes or certificates to investors. The investors' stake is secured by the assets in the trust, which are held on behalf of investors and are *no longer* controlled by the originator or its creditors. The investors, however, are getting more than secured claims. They are receiving predictable cash flows from a selected pool of assets that has been screened by the originator, by the rating agency, and in many cases by an independent guarantee company. The latter not only guarantees timely payment of principal and interest, but also offers expertise in ensuring that the security is of very low risk. After all, the financial guarantee company stands to lose the most if something goes wrong, and it will do all it can to avoid losses.

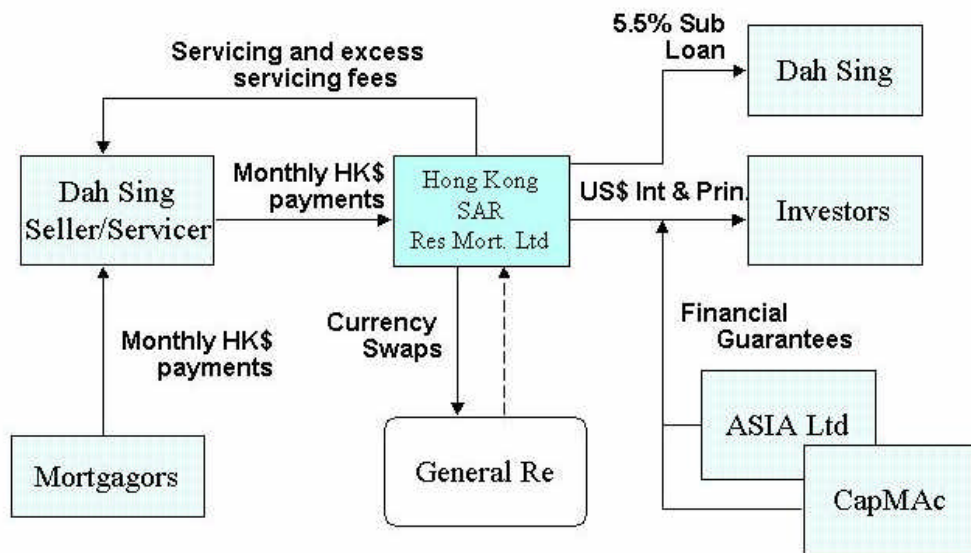
Soon after the initial transfers have been effected, payments begin flowing to investors. Figure - illustrates the ongoing flow of cash payments. Installment payments are made to the finance company, which continues its role as servicer and continues to derive income from this activity. These payments are transferred, less servicing and other fees, to the SPV, which passes them on to investors. The installment payments include both interest and principal. Any prepayments of principal are also passed through to the investors. The excess of revenues over costs, if any, is often returned to the seller under an agreement that gives the seller/servicer an incentive to keep costs and risks low.

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Eventually, on or before the final maturity date, the investors get back the full principal they invested. Accumulated income is returned to the seller/servicer.

A Case Study: Dah Sing Bank Mortgage Securitization

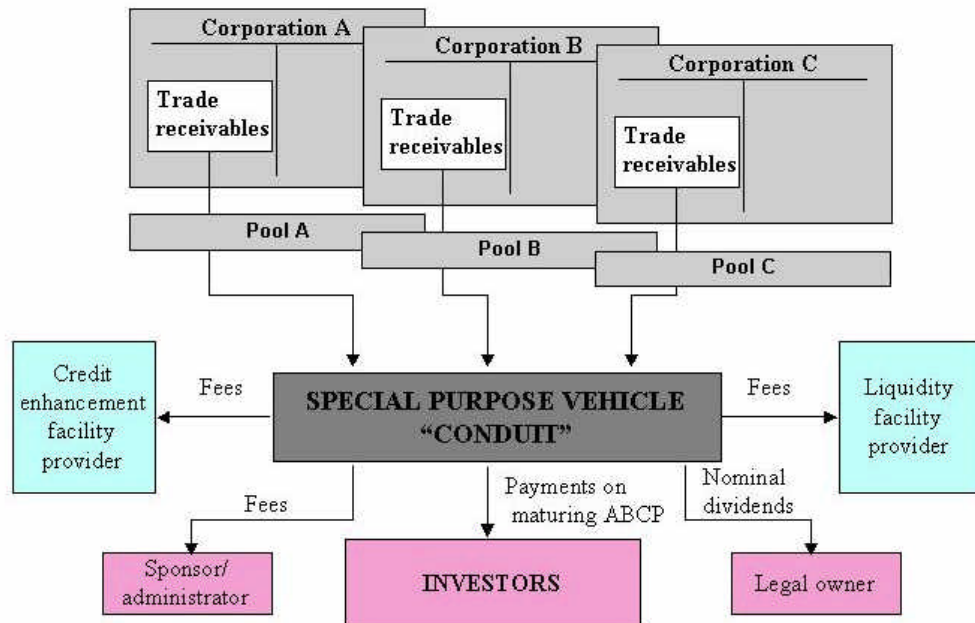
The Dah Sing residential mortgage securitization illustrates how several risk-management techniques can be combined to create a highly-rated security. In this transaction, the underlying assets were Hong Kong-dollar denominated, floating-rate home mortgage loans. Dah Sing Bank, as originator/servicer, sold the mortgage pool to a Cayman Islands SPV which issued two classes of debt. The first, a US dollar floating-rate note, was sold to American investors including banks. The second, subordinated, tranche was held by Dah Sing's parent holding company. The structure of the deal is summarized in the diagram below.



The Dah Sing securitization succeeded in large part because of its strong credit enhancement. First, the underlying mortgages have a very low default rate. Second, Dah Sing assumed the first 5.5% of the risk, and its net fees were subject to reduction if default rate increased. The credit quality of the first tranche was raised to a triple-A level by a first-11%-loss guarantee from ASIA Limited, a Singapore-based financial guarantee company, and a full guarantee of timely payment of principal and interest from CapMAC, a triple-A rated US financial guarantor. Finally, a currency swap eliminated the investors' foreign exchange risk.

Asset-Backed Commercial Paper

The issuance of asset-backed commercial paper is a relatively unheralded but growing form of securitization in the United States. In this structure, a bank establishes a special-purpose vehicle (the “CP conduit”) in the form of a trust or corporation, which purchases trade receivables, consumer debt, equipment leases and other non-traded paper from various corporations and financial institutions. The bank typically provides (1) the administration of the conduit, (2) a liquidity facility, and (3) partial credit enhancement in the form of a letter of credit. The conduit funds itself entirely by issuing commercial paper, which is structured in such a way as to obtain a top (A1/P1) short-term rating. The relationship among the parties in a typical transaction is illustrated below.



Chapter 4

The Benefits and Costs

The Economics

Why -- and when -- does securitization make more sense than conventional, general-obligation borrowing?

The brief answer is that it makes sense when assets can be, so to speak, transformed and clarified -- a process that makes them more valuable to investors outside a company than they are to the company itself. However, if the debt market is efficient and investors know the company's condition with and without the assets, securitization may not, in fact, lower its cost of capital. Nonetheless, it is frequently the case that even if a company sells its best assets, the cost of the remainder of its debt is unaffected.

Capital requirements and mandatory reserves give financial institutions an incentive to fund assets at a lower cost and free up their capital.

On this basis, securitization has been adopted by many banks and savings institutions -- as a means of reducing regulatory capital requirements without noticeably raising their cost of capital. In general, regulatory costs or rigidities create an incentive for banks to shrink their balance sheets by securitizing loans.

Yet regulatory factors alone cannot explain why securitization has grown so fast. Many non-bank financial institutions and corporations have also chosen to finance their assets off the balance sheet. Where investors have poor information about the issuing company, or do not like its management, or where the capital market suffers other imperfections, asset securitization can be a technique that benefits both issuer and investor. The key lies in the idea that investors often prefer assets (and hence are satisfied with a lower rate of return) that have been legally removed from the company's ownership and/or control.

Securitization has a unique role to play in Asia, where, investors are often uncertain as to the value of particular assets on the balance sheet -- such as corporate loans or accounts receivable -- in relation to the diversified activities of a company. Do these assets truly offer security to a lender? If such assets are placed in a special-purpose vehicle, investors may readily place their funds in securities backed by those assets, even though they would not do so when those same assets

were buried among the company's general assets.

Investors who are unfamiliar with a company or its businesses often prefer assets (and therefore accept a lower rate of return) when the assets are legally removed from the company's ownership and/or control.

Asset securitization may therefore be a valid component of a firm's financial plan, if:

- I The right **market imperfections** are present. This is typically the case when investors lack information about the originators' operations, or when issuers are constrained by capital or other regulations, or when investors' choices are constrained, or when the government provides explicit or implicit backing for the issuer's debt.

- II **Monitoring is not impaired.** A financial incentive for the originator to keep defaults to a minimum can be built into the structure of a transaction, and the monitoring role can be assigned to those best able to undertake it -- not the investors, but the rating agencies, guarantors and trustees.

- III **The right legal and tax framework exists.** Such a framework protects both issuers and investors when certain assets are separated from the originating bank or business.

When the right conditions are present, securitization can give borrowers access to funds, offer investors a wider choice of high-quality instruments, and improve the efficiency and liquidity of the capital market.

How Originators Benefit

Originators gain from securitization by obtaining many of the benefits of high-credit-quality financing without retaining the debt on their books and without foregoing profitable aspects of the assets, including origination, servicing, expansion of business, and retention of excess spread. The price paid is that the technique can be complex and may require a significant initial investment of managerial and financial resources. For those companies willing to make this investment, there can be significant and permanent advantages from having access to the asset-backed market. These advantages include the following:

The technique can be complex and may require a significant initial investment of managerial and financial resources.

- I. **Assets removed from the balance sheet.** If structured as a sale, securitization can allow the issuer to reduce its assets and its debt, thereby increasing its scope for borrowing. In effect, securitization allows a bank or business to achieve greater leverage.
- II. **Retention of servicing revenues.** The seller normally continues as servicer, retaining the servicing fees, the excess of the SPV's revenue over costs, and surplus collateral once the ABS are redeemed.
- III. **Lower financing costs.** Well-regarded pools of assets owned by a company or bank can be used to structure a security of higher credit quality and, therefore, of lower market cost than the corporate entity could issue itself.
- IV. **Reduction in required capital.** For a bank or finance company that faces regulatory capital requirements, a securitization transaction that qualifies as a sale of assets for bank-regulatory purposes reduces the need for equity financing. The latter may be costly and hard to obtain, and it may dilute control.
- V. **Retention of competitive advantage.** Securitization allows for a reduction in assets without the sale of a business franchise and often with the retention of much of the earning power of the assets.
- VI. **Nondisclosure.** For privately held companies, securitization can offer a means of raising public debt without extensive disclosure of proprietary information. Instead, disclosure is confined to the characteristics of the assets being securitized and, perhaps, the servicing capabilities of the originator.
- VII. **Recognition of gains (or losses).** Depending on accounting rules, a securitization structured as a sale of assets may allow a seller to recognize an accounting gain (or loss) equal in the aggregate to the present value of any expected future cash flows payable to the seller that will be derived from the assets.
- VIII. **Improved asset/liability management.** Securitization of assets allows the selling institution to arrange debt issues to fund assets whose payments are perfectly matched to the cash flows on the assets. This transfers the funding-mismatch risk to those more willing or able to bear it, such as those who have an opposite mismatch.

In actual practice, not all originators will reap all these benefits: a precise evaluation must be made on a case-by-case basis. The costs of securitization offset some of the gains. These include up-front costs such as rating agency fees and structuring and underwriting fees charged by investment banks, and ongoing expenses such as trustee fees and the premium charged for third-party guarantees. For corporations, the biggest gains may come from the fact that they can expand the volume of financing for their customers, and continue to reap a positive cash flow from the receivables' net revenues, without having to raise additional funds on their balance sheets. For regulated financial institutions, the savings in the cost of equity capital often offsets the out-of-pocket costs.

How Investors Benefit

Asset-backed securities are not suitable for all investors: they are more complex, and they may be less liquid than other debt securities. Nevertheless, we can identify several reasons why many investors find that asset-backed securities open up attractive new investment opportunities:

- I. **Superior return.** The main benefit from the investor's viewpoint is a higher return or spread than is generally available on corporate or sovereign debt of a similar rating.
- II. **Liquidity.** The securitization structure offers far greater liquidity than do the individual loans backing the transaction.
- III. **Diversification.** Investors gain an opportunity to diversify their portfolios by participating in a different class of assets.
- IV. **Mitigation of event risk.** Unlike similar, high-rated corporate bonds, asset-backed securities are largely immune from event risk. The latter results from takeovers, restructurings and other events that effectively alter the credit status of senior unsecured corporate obligations.
- V. **Coping with Constraints.** Many institutional investors are constrained to purchase only investment grade securities, and some are limited to triple-A paper. Both requirements can be met in the ABS market.

While asset-backed securities can clearly enhance an investment portfolio, they are not risk free. In the United States, pass-through securities backed by long-term, fixed-rate prepayable mortgage loans have, at times, suffered sharp drops in value when interest-rate movements have triggered large postponements or accelerations of payments. Since prepayments can also be triggered by other factors, such as a decline in the cushion between cash inflows and contractual payments, investors

should be aware of the ill-defined maturity that characterizes many asset-backed securities.

Effects on the National Economy

In those countries where a high proportion of residential mortgages and other claims have been securitized, the gains to the national economy can be measured in the billions of dollars.

The effect of securitization on the economies of different countries is still difficult to assess because the technique is in its infancy in many parts of the world. Nevertheless it is no exaggeration to say that in countries such as Great Britain, Australia, Canada and the United States where a high proportion of residential mortgages and other claims have been securitized, the gains to the national economy can be measured in the billions of dollars. In the United States alone, for example, at least \$1,600 billion of mortgage- and asset-backed securities are outstanding. According to a conservative estimate, securitization reduces the annual cost of financing for homeowners and others by 0.5 percent. One-half percent of \$1,600 billion is \$8 billion of freed-up resources each year.

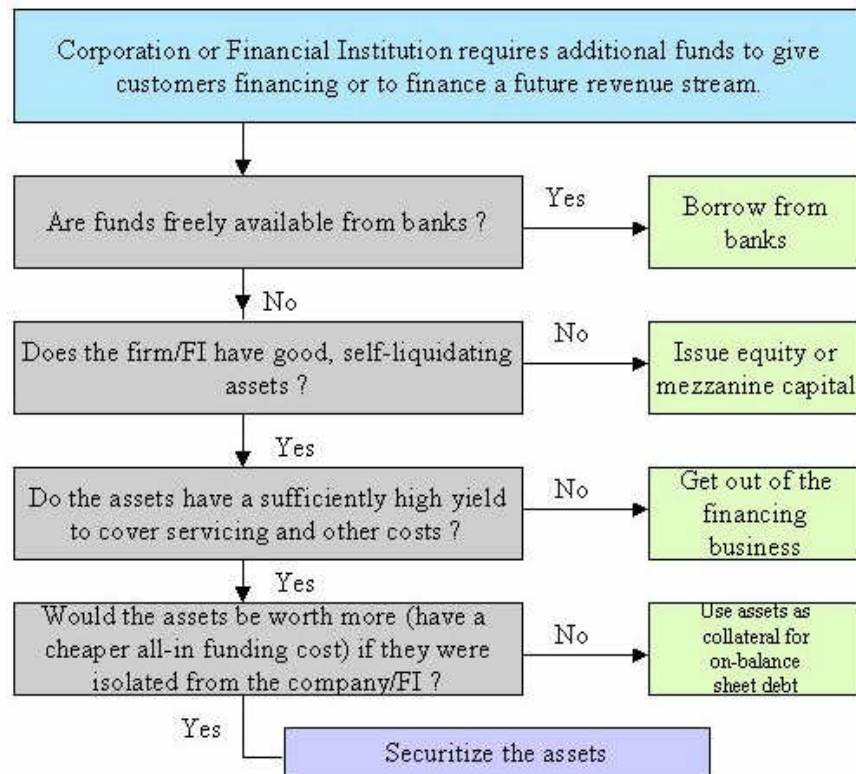
But the case for securitization is actually even stronger than this. Asset securitization, if introduced in a transparent and orderly fashion, offers Asian countries additional gains from:

- I. Capital market development, as more high-quality securities are added to the fixed-income market.
- II. A source of funds for rapidly growing, capital-constrained, banks, finance companies and industrial companies whose expansion depends on the extension of credit to their customers.
- III. An expanded source of financing for residential home ownership.
- IV. The potential for financing of infrastructure projects, such as toll roads, that produce reliable revenue streams capable of being contractually assigned to a separate legal entity.

In sum, there is a strong argument favoring the growth of asset securitization in those nations with developing capital markets as well as in the more mature ones.

A Decision Flowchart

State-owned companies, corporations and financial institutions seeking a new source of financing should weigh the benefits of securitized finance against its costs and complications.



The basic issue, we have argued, is whether the assets are worth more off the balance sheet than on. In Figure - we offer a decision tree to help focus on the key considerations. The following are among the criteria an originator should consider in deciding whether it is ready for asset-backed financing:

- I. Does it have enough data about the assets to satisfy the rating agencies and financial guarantors?
- II. Does it face a regulatory or capital constraint that makes freeing up the balance sheet important?
- III. Is the servicing process adequate to meet the high standards of the asset-

backed market?

- IV. Is the originator willing to undertake a complex, time-consuming transaction in order to obtain a broader, potentially cheaper, ongoing source of funding?
- V. Does the originator currently face a high cost of funding for assets that, if taken in isolation, would be recognized as sound, cash-generating assets?

Originators who can answer these questions in the affirmative should be ready to go to the next stage -- namely, to consider alternative structures for securitizing their assets.

Chapter 5

Securitizing Infrastructure Revenues

The Securitization of Future Revenue Flows

Asia's strength lies in its future, and many investors are confident that investment in the region's infrastructure is a sound bet. Yet infrastructure and natural resource projects have heavy initial requirements, a long time horizon, and revenues that are not supported by tangible financial claims comparable to hire-purchase or mortgage contracts.

Future flow financings, including project financings, are secured by anticipated future revenues, not by existing assets.

A future flow financing, such as a project financing, is secured by anticipated future revenues rather than by existing assets. These revenues may be contractual, such as a long-term agreement by the Indonesian state electricity authority to purchase a minimum number of kilowatt-hours from a co-generation power, or they may be non-contractual, such as highway toll revenues. Future flow financings are not necessarily tied to an infrastructure project. A private business, such as a Singaporean internet service provider, might securitize its non-contractual revenues. A Thai coal mining company might securitize long-term revenues from contractual sales to private as well as public users of the resource. The following case study illustrates the versatility of asset-backed techniques when they are applied to project financing.

Case Study: Ras Laffan

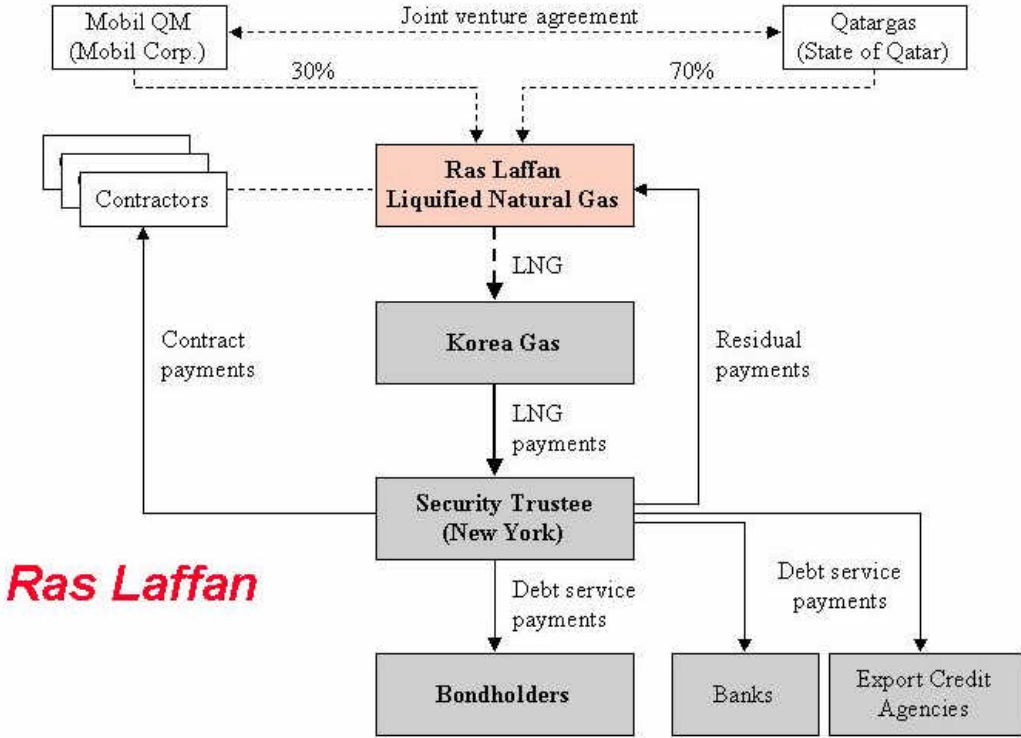
Long-term projects require a high level of investor protection. Experience suggests that longer-term, cross-border infrastructure or project revenues can serve as the backing for securities if: (1) the contractual character of the revenues is ensured; (2) hard-currency revenues are secured; and (3) an offshore trustee and SPV are established. These elements are illustrated in the case of a project-financing bond issued with the backing of liquid natural gas (LNG) revenues from Korea.

Ras Laffan is an LNG project based in Qatar and owned by Qatar General Petroleum Corp. (70%) and Mobil Oil (30%). Despite completion risks, the possibility of regional conflict in the Arabian Gulf area, and reliance on a host of participant agreements set in an unfamiliar legal system, the project was able in

1996 to issue bonds rated investment grade in the US market. The key to the transaction was the fact that the offtake of natural gas was to be sold pursuant to a long-term purchase agreement to Korea Gas Corporation (Kogas), and that all payments by Kogas would be earmarked to service the senior debt offshore. Kogas, Korea's largest state-owned gas company, entered into a 25-year take-or-pay sale and purchase agreement with Ras Laffan, committing itself to buy most of the project's output at the higher of a crude-oil-based LNG proxy market price or a minimum floor price sufficient to meet debt service obligations.

All parties to this transaction signed a trust agreement that required that the revenues and proceeds be deposited directly with an independent trustee.

To achieve a debt rating that exceeded Qatar's triple-B sovereign foreign currency rating, all parties to this transaction, including Kogas, entered into a trust agreement that required that the revenues and proceeds be deposited directly with a New York trustee, Credit Suisse, shown below as the Security Trustee. The trustee, according to a priority payment schedule, insures that lenders receive interest and principal payments, after operations and maintenance expenses have been met.



Chapter 6

Conclusions

At its core, the technique of asset securitization involves the separation of good assets from a company or financial institution and the use of those assets as backing for high-quality securities that will appeal to investors. The assets -- financial claims or contracts securing future revenue flows -- are typically sold to a special-purpose entity that is independent of the originator's credit. Such separation makes the quality of the asset-backed security independent of the creditworthiness of the originator. The economic elements that make this technique work are the ability: (1) **to isolate the assets**, thus making them more identifiable, secure and liquid; (2) to **transfer risks** to those best able to evaluate and bear them; and (3) to **create tradable securities**, hence increasing economic efficiency by providing cost savings to borrowers, creating investment opportunities for investors, and developing the capital market. Asset securitization is a highly versatile technique for mobilizing capital.

Many Asian countries are uniquely positioned to gain from the evolution of asset-backed financing in the region. For Asian corporations, asset securitization provides a new and potentially cheaper form of financing. For loan originators such as banks, securitization is a means of removing assets from the balance sheet while retaining most of the economic benefits associated with them, and of freeing up capital to support further loan writing. For many Asian financial institutions that face a dearth of risk-management tools, asset securitization can open up a new avenue for funding that enhances their ability to match the maturities of their assets and liabilities. For investors in Asia, including banks, unit trusts and pension funds, the securities offer yields exceeding those on comparable corporate bonds while providing an opportunity to diversify a fixed-income portfolio by adding another class of securities.

Securitization is already proving to be an important option for governments seeking to promote private-sector growth and employment and to access funding for infrastructure development. As in the United States, the growing housing sector could benefit from more efficient and cheaper access to capital. Because asset-backed and mortgage-backed deals are usually large and have high credit ratings, the securities tend to be liquid and may be actively traded in secondary markets. This promotes capital market development and enhances the competitiveness of regional financial centers.

Acknowledgments

The author wishes to thank the following for their contributions and insights: Eileen Fargis, Steve Halprin, Mahesh Kotecha, Alex Lam, Phil Sherman, John Watkins, Ram Wertheim, Ruth Whaley, and David White.

Related Web Sites:

- Asiansecuritization.com
- Globalsecuritization.com
- ABSnet.net