SECURITISATION 101

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Introduction

Securitisation is seen as an alternative to on-balance sheet funding and a form of disintermediation, allowing corporates and other institutions to raise capital directly with the Debt Capital Markets and often at a reduced cost.

In essence, securitisation consists of raising funding on the back of a pool of assets, which are generally receivables. For non-synthetic securitisations, these assets are typically sold to a bankruptcy-remote special purpose vehicle ("SPV") which in turns issues securities to finance such acquisition. This allows for de-linkage between the rating of the securities and the rating of, amongst others, the Originator/Seller of the assets.

This report explains the fundamentals of non-synthetic securitisation as well as GCR Ratings' ("GCR"'s) process for rating securities issued within a securitisation scheme.

What is Securitisation?

Securitisation provides an alternative source of funding to more traditional debt-raising mechanisms such as bank lending or corporate bond programs and has the advantage of turning illiquid assets into tradeable instruments.

Non-synthetic securitisation consists of selling a pool of assets to a bankruptcy-remote SPV which funds such acquisition through the issuance of debt securities. The securities are often issued in different classes or tranches. The assets are "ring-fenced" and their cash flows are dedicated solely to support the repayment of the debt issued, as well as any fees and other expenses associated with the securitisation.

Securitise-able assets should generate predictable cash flows. They typically consist of receivables with a defined repayment frequency and maturity and originated by corporates or financial institutions. Below are a few examples of the most commonly securitised asset classes:

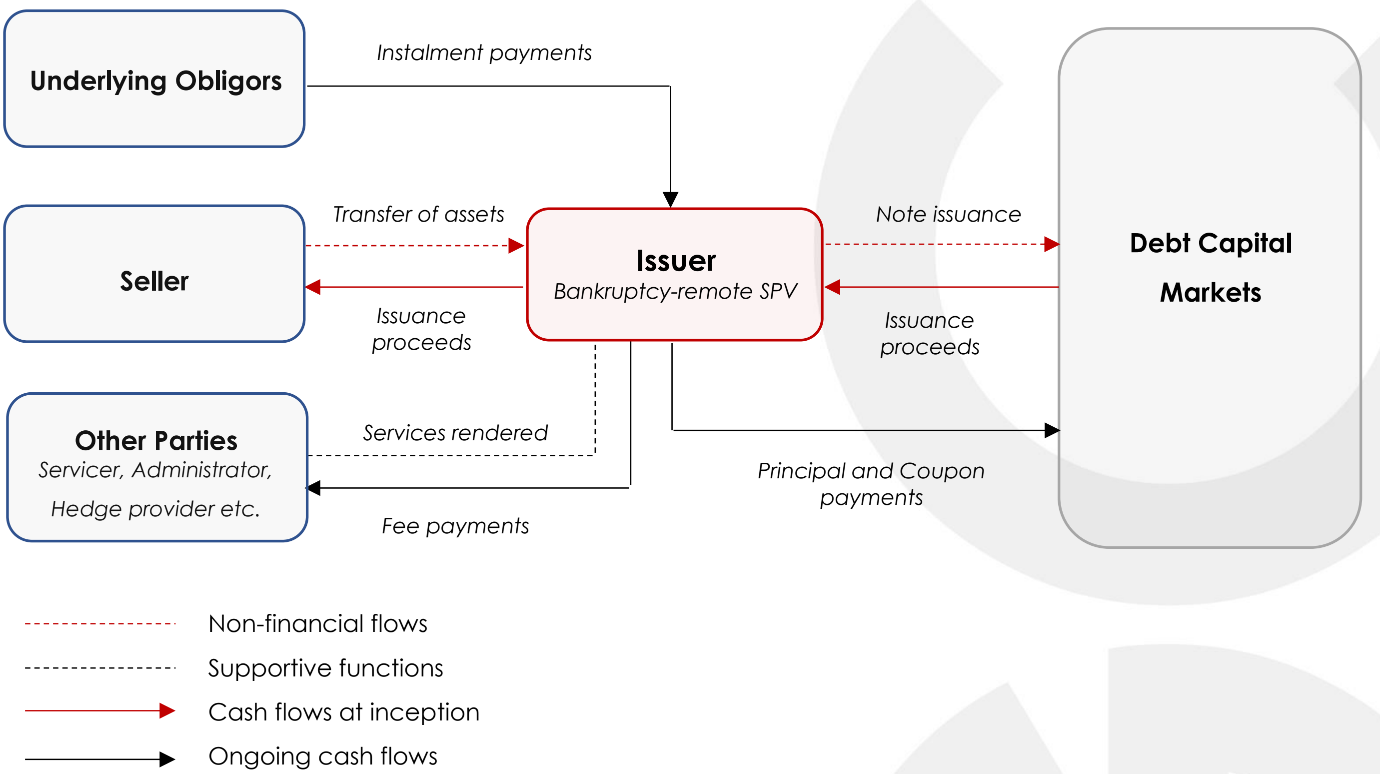
- Residential Mortgage-Backed Securities ("RMBS"): securities issued on the back of residential mortgage loans;
- Asset-Backed Securities ("ABS"): securities backed by various consumer-related receivables (e.g. auto loans, micro loans, credit card loans etc.) as well as non-consumer loans and leases (e.g. equipment leases, trade receivables etc.).
- Commercial Mortgage-backed Securities ("CMBS"): securities issued on the back of commercial mortgages;
- Collateralised debt/ loan obligations ("CDOs" and "CLOs"): securities secured by a portfolio of corporate loans.
- Asset-Backed Commercial Paper ("ABCP"): short-term debt securities secured by a portfolio of receivables. The nature of the receivables can vary greatly from one transaction to another.

Mechanism of a Non-Synthetic Securitisation Transaction

The figure below depicts in simplified terms a typical non-synthetic securitisation transaction. At inception, an entity (the Seller, generally a corporate entity or financial institution) sells a pool of assets to an SPV generally called the Issuing SPV or Issuer. The Issuer issues debt, typically in the form of notes, to the Debt Capital Market to fund the acquisition of the assets.

On an ongoing basis, the SPV collects the payments from the obligors that underlie the assets it has purchased and directs these monies towards the payment of the scheduled coupon and principal payments to the noteholders. Other parties are generally involved and these also receive payments in exchange for various services rendered to the Issuer.

Figure 1: Non-Synthetic Securitisation Structure



Source: GCR

The Parties to a Securitisation

Due to its bankruptcy-remote nature, the Issuing SPV does not have any employees and as a result needs to outsource all supportive functions to external parties.

- Issuing SPV ("Issuer" or "SPV"). The Issuer purchases assets from the Originator/Seller and issues the notes. It is set up as a bankruptcy-remote SPV, meaning that it is owned independently from the Originator/Seller and that its constitutional documents contain certain restrictions on its activities (e.g. incurring debt etc.) and on the powers of its directors. The directors, or trustees, act for the benefit of the noteholders. The "special purpose" of the Issuing SPV is to ensure that the assets being securitised are "ring-fenced" – devoted to funding the payment obligations on the notes. This implies that they must be segregated from the originator's and seller's estates and other external claims, so that even if the originator or seller goes bankrupt, the assets and their cash flows are not available to the originator's or seller's creditors and continue to benefit the noteholders. Thus, the Issuing SPV must be legally independent of the Originator/Seller and a true legal sale of the assets must take place.

- Security SPV (applicable to South African jurisdictions). The Security SPV takes responsibility to make payments to the noteholders should the Issuing SPV default on its obligations towards them. To enable this, the assets are pledged and ceded to the Security SPV by the Issuing SPV and the Security SPV guarantees payment to noteholders. The guarantee is limited to the assets held in the portfolio. The Security SPV is, like the Issuing SPV, owned by an independent owner trust.
- Originator/Seller. The company that originates the assets (for example, a mortgage lender like a bank) is known as the originator, while the seller sells the assets to the issuing SPV. The Originator and Seller are often the same entity;
- Servicer. The Servicer administers the securitised assets by collecting payments and, if necessary, recovering and disposing of them. In many cases, the Originator/Seller also acts as the Servicer.
- Administrator. The Administrator manages the allocation of the cash generated by the assets to the noteholders and to the other secured creditors. The Servicer and the Administrator may be the same entity.
- Back-up Servicer/Back-up Administrator. Often, a Back-up Servicer and/or Administrator are appointed to take over the servicing and administration functions should the primary Servicer or Administrator fail to perform their obligations. This ensures continuity of operations beyond the existence of the initial Servicer,
- Account Bank. The bank provides an account to the Issuer where the monies are received (directly or indirectly) from the underlying obligors and from which payments are made.
- Noteholders. The noteholders are investors, who buy the debt, called asset-backed securities, issued by the Issuing SPV. The debt is generally issued in the form of notes, with specified terms and conditions. The notes form part of the liabilities of the issuer. Together with the other creditors of the issuer (such as other lenders, third party service providers as well as the tax authorities), they are known as secured creditors.
- Preference Shareholders. The issuer may issue preference shares, which are used as a profit extraction mechanism for the Preference Shareholders. If the asset portfolio has generated cash in excess of amounts due to all secured creditors and all fees and expenses have been paid, such cash can be paid to the preference shareholders in the form of preference dividends.

Other parties may be involved in a securitisation scheme to mitigate additional risks:

- Hedge Counterparty. Some transactions may present an interest rate mismatch whereby the interest rates related to the assets and to the notes respectively are not linked to the same reference rate. Cross-border transactions may also present currency risk, where cash flows received are denominated in a different currency from amounts to be paid. To mitigate these risks, derivative contracts are often entered into between the Issuer and a Hedge Counterparty.
- Liquidity Facility Provider. To cater for a potential mismatch between the cash flows generated by the assets and the payments due to the noteholders and other parties, a liquidity facility agreement may be entered into by the Issuer. Such mismatch is often caused by a difference

between the timing of collection of the monies stemming from the assets and the payment date related to the coupon and principal on the notes. Please note that the liquidity facility may also cover for credit risk (i.e. defaults or losses incurred on the asset portfolio).

- Guarantee Provider. A guarantee may be provided to the noteholders whereby a guarantor agrees to redeem the noteholders, partially or in full, on behalf of the Issuer should the latter be unable to do so. The terms and conditions of such guarantee agreements vary from one transaction to another, especially regarding the amount to be repaid to the noteholders (partial or full guarantee) as well as the triggers and timing for the payment of the guarantee.

Characteristics of the Securities Issued in a Securitisation Scheme

The features of the debt securities issued in a securitisation, which often take the form of notes, are typically documented in Applicable Pricing Supplements (APSs) which form part of the transaction documentation.

Defining characteristics include:

- The class or tranche of notes.
- The issuance amount.
- The issue price, which may be at par, discount or premium.
- The maturity dates, of which there are often two:
  - Scheduled maturity date, typically between one and five years, by which the issuer commits to repay the notes but is not in default if it does not do so, and
  - Final legal maturity date, typically ten to twenty-five years (or even longer), by which the notes must be repaid to avoid the issuer's being in default.
- The interest rate, which may be fixed or floating. Should the notes not be redeemed by the scheduled maturity date, the margin over the reference rate typically increases to what is known as the "step-up rate".
- If rated, the credit rating of the notes. Notes may be rated or unrated.
- If listed, the listing information (e.g. stock code) of the notes. Notes may be listed on an exchange platform, e.g. the Johannesburg Stock Exchange ("JSE"), or unlisted.

Motivation for Securitisation

While the end result of a securitisation transaction is the Originator/Seller's receiving the proceeds from the assets sold to the Issuing SPV, there are many different motivations for corporate and other institutions requiring funding as well as for investors. These include:

For the Originator/ Seller:

- Potentially achieving a lower cost of funding. Issuing securities on the back of a segregated pool of assets via a securitisation mechanism allows for de-linkage between the risk of the assets and the risk associated with the Originator/Seller. This means that the securities might achieve a higher rating than the originator/seller's rating and, if market conditions are favourable, pricing lower than the latter's on-balance sheet debt.

- Diversification of capital pools. Securitisation is a useful tool for disintermediation in the funding process. It allows the Seller to access different pools of capital directly from the Debt Capital Markets as opposed to resorting solely to more traditional funding mechanisms (bank loans etc.);
- Balance sheet management. Securitisation allows close matching of the amortisation profile of the securitised asset portfolio and that of the debt issued, resulting in an asset-liability mismatch improvement.
- Potentially increasing liquidity. Securitisation can create liquidity through the refinancing of long-term assets with tradable instruments.
- Potential improvement of the Originator/Seller's internal procedures. Securitisation often entails extra scrutiny of the Originator/Seller's performance and processes by various parties including the rating agency. For instance, additional audits (e.g. audits of procedures and/or pool data) and data are often required, which may lead to the Originator/Seller's considering its operation from a new perspective and potentially improving them.

For Investors:

- Investing into secured instruments. The debt issued is backed by a portfolio of assets segregated from the Seller's own assets. Also, the notes generally benefit from structural enhancements that unsecured debt does not.
- Investing into instruments that can be structured to better suit investors' needs. The characteristics of the securities issued within a securitisation scheme (e.g. duration, amortisation profile etc.) can be tailor-made to suit various investment mandates in the Debt Capital Markets.
- Access to highly rated instruments. Some of the securitisation debt issued by the SPV can often be assigned high ratings (e.g. AAA ratings) while very few corporate and other institutions are rated at this level.
- Risk sharing. Securitisation allows investors to participate collectively in an investment and to share its underlying risks.
- Exposure to the risk and return of certain assets without holding them on their balance sheets.
- Proven track record of rating stability compared to, for instance, corporate ratings, given the "contained" nature of securitisation structures (e.g. restrictions on the assets purchased by the Issuing SPV and on the liabilities incurred).

Disadvantages of Securitisation

- Securitisation may restrict the ability of the Seller to raise debt in the future, depending on the portion of the Seller's assets encumbered through securitisation. Securitising a large portion of the Seller's assets reduces the amount of security available for on-balance sheet funding.
- Complexity. Securitisation structures are often financially, operationally and legally complex. Such complexity may introduce additional risk if not adequately identified and evaluated.
- Re-investment risk. Seeing as the amortisation of the debt issued generally mirrors the amortisation of the underlying asset portfolio, securitisation often carries prepayment risk and investors may experience a shortening of the duration of their investment.

Structural Features

Securitisation structures comprise various features that are generally designed to meet both the Originator/Seller's funding requirements and investors' investment needs.

Revolving Period

Some structures allow for a revolving period of typically three to five years, during which the Issuing SPV uses the monies collected on the asset portfolio to purchase additional assets instead of to redeem the notes issued.

The following are typical features of this revolving period:

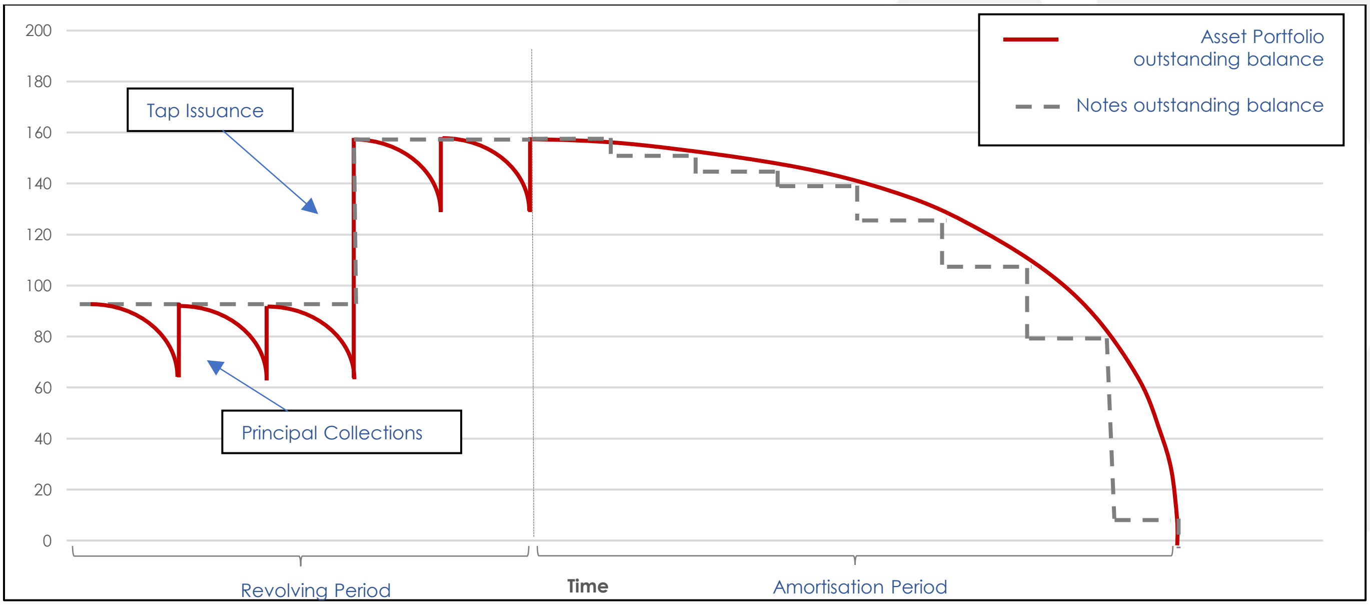
- Noteholders only receive interest. Principal is not repaid to the noteholders.
- Instead, principal payments collected on the underlying portfolio are used to buy additional assets, "topping up" the portfolio to its original amount.
- The issuer may issue additional debt in a "tap" issuance. The proceeds of a tap issuance are used to purchase additional assets, thereby growing the portfolio beyond its original size.

Some structures, called "Evergreen", do not have a defined end date to their revolving periods. The revolving period can last indefinitely as long as certain triggers based, amongst others, on performance, are not breached.

Certain transactions also include a pre-funding period, during which a portion of the proceeds from the debt issuance not used immediately to purchase assets is deployed towards further asset acquisition. If this additional funding cannot be fully utilised by the end of the pre-funding period, the residual amount is then generally allocated towards the redemption of the notes.

The end of the revolving period marks the beginning of the amortisation period where the notes are being redeemed. The graph below illustrates the differences between the two periods from both an asset portfolio and notes perspective.

Figure 2: Revolving vs Amortisation periods



Source: GCR

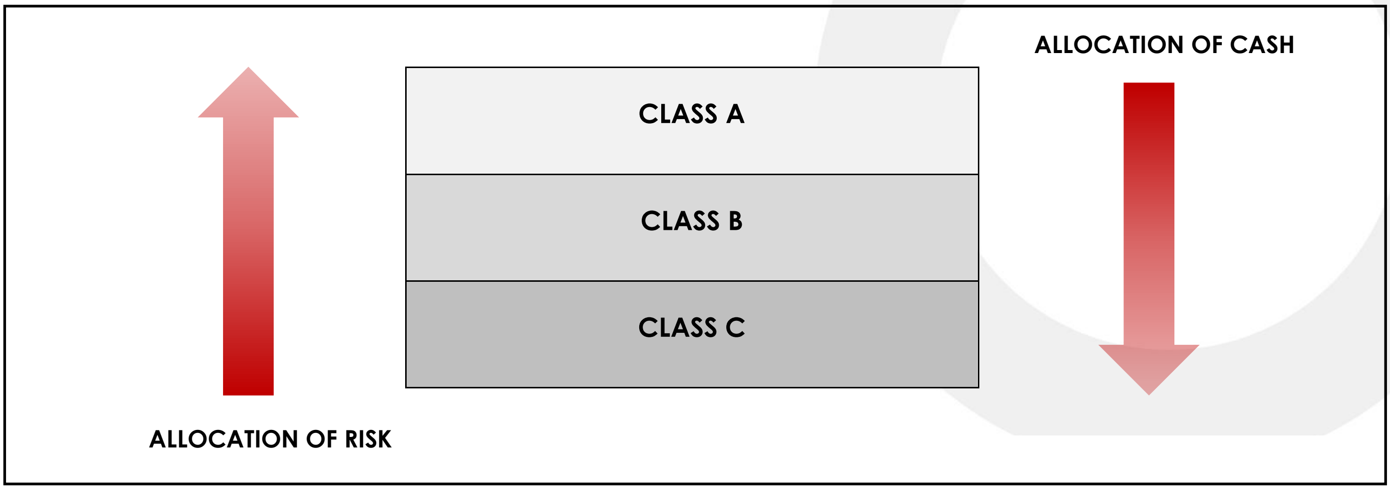
Amortisation Structures

Most commonly during the amortisation period, notes are redeemed as and when cash is received from the underlying asset portfolio. This is known as a pass-through amortisation schedule. In such structure, the amortisation of the notes closely follows the asset amortisation profile, limiting a potential mismatch between the assets and liabilities of the Issuing SPV, along with the prospect of negative carry.

The allocation of cash in redeeming the different transches of notes can follow two patterns:

- Sequential amortisation. The different tranches of notes are redeemed in descending order of seniority. For example, where Classes A, B and C are issued, the Class A (the most senior) notes are redeemed first, then the Class B notes and then the Class C notes. This creates subordination amongst the Classes of notes, meaning that the lower-ranking notes provide some credit support to the higher-ranking notes by absorbing any potential losses first. This credit enhancement increases over time as notes of senior classes are redeemed. Credit enhancement is the subject of a later section.

Figure 3: Sequential Amortisation



Source: GCR

- Pro-rata amortisation. Notes are repaid according to the percentage they make up of the total value of notes outstanding, irrespective of their seniority. For example, if Class A notes comprise 10% of the total notes outstanding, only 10% of principal collections over a given period will be used to redeem Class A notes. Because pro-rata amortisation does not create seniority between the classes of notes issued, it is often subject to performance conditions or triggers not being breached.

Pro-rata amortisation has the advantage of stabilising the cost of funding for the Issuing SPV given that the weighted average interest margin paid to the noteholders remains constant throughout the life of the transaction (excluding effect of possible increased fees and interest rate fluctuations). On the other hand, sequential amortisation causes a progressive increase in the weighted average interest margin paid to the noteholders seeing as the most senior notes, which generally yield lower interest margins, are redeemed first.

Table 1: Sequential vs Pro-Rata Amortisation: Pros and Cons	
Sequential	**Pro-Rata**
+ Mechanical increase in credit enhancement via the subordination available to the notes	**-** Credit enhancement available to the notes remains constant
- Progressive increase in the cost of funding	**+** Cost of funding is stabilized (excl. impact of increased fees and interest rate fluctuations)

Irrespective of the amortisation pattern of the notes, the allocation of the cash collected from the asset portfolio to the noteholders and to any other secured creditors strictly follows the priority of payments defined under the transaction documents.

Priority of Payments

The priority of payments defines the rank of seniority of each creditor of the Issuing SPV when it comes to receiving payments. The priority of payments is often called the "cash waterfall", as payments cascade in a specific order.

Generally, the transaction documentation of a securitisation transaction delineates three different priority of payments that relate to three different stages in the life of the transaction:

- Pre-enforcement during the Revolving Period. The priority of payments may direct that interest payments to the notes are to be sequential (in order of seniority of class) or pro rata. Principal payments are used to replenish the asset portfolio by acquiring more assets.
- Pre-enforcement during the Amortisation Period. The transaction has entered into the amortising phase either because the predetermined revolving time period has ended or because performance triggers have been breached. Assets are no longer purchased and notes are being redeemed.
- Post-enforcement Period. Following the occurrence of an event of default and the decision by a majority of noteholders to enforce the security, the notes become immediately due and payable and each class is repaid sequentially.

Expenses charged by external service-providers, such as the Servicer and/or the Administrator, are generally senior in the priority of payments to all classes of notes, although a portion may be subordinated to them. Payments towards the subordinated loan are in most instances subordinated to the those towards the notes.

Table 2: Example of Priority of Payments		
Pre-enforcement/Revolving	**Pre-enforcement/Amortising**	**Post-enforcement**
Senior Expenses (incl. Servicer/Administrator/Backup Fee)	Senior Expenses (incl. Servicer/Administrator/Backup Fee)	Senior Expenses (incl. Servicer/Administrator/Backup Fee)
Liquidity Facility/Swap Payments	Liquidity Facility/Swap Payments	Liquidity Facility/Swap Payments
Interest on Class A, B, then C	Interest on Class A, B, then C	Interest and Principal on Class A
Purchase of Additional Assets	Principal on Class A, B, then C	Interest and Principal on Class B
		Interest and Principal on Class C
Interest and Principal on Subordinated Loan	Interest and Principal on Subordinated Loan	Interest and Principal on Subordinated Loan
Preference Share Dividends	Preference Share Dividends	Preference Share Dividends
Ordinary Share Dividends	Ordinary Share Dividends	Ordinary Share Dividends

Source: GCR

Credit Enhancement

Credit enhancement, whereby the credit quality of a part or of all of the notes issued is improved beyond that of the portfolio of assets that back them, is a highly significant aspect of securitisation.

Several different types of credit enhancement are utilised in a securitisation transaction – both internal and external.

Internal Credit Enhancement

Internal credit enhancement refers to credit support generated by the structure's own cash flows or made available to the Issuing SPV by a third party at inception of the transaction.

- Excess spread. This is the first source of credit enhancement available in a securitisation structure. The assets may bear a yield that is higher than the sum of the interest due on the notes and other contractual expenses. This excess yield is generally used to cover defaults or losses incurred on the assets.
- Subordination. This form of credit enhancement is created by defining ranks of priority between the various tranches via the priority of payments. Payments (interest, principal or both interest and principal) are directed first to senior noteholders and then to subordinated noteholders. Thus, subordinated noteholders provide credit support to the senior noteholders by incurring first losses that may occur.
- Overcollateralisation. Overcollateralisation is created when the issued notes are of a total amount that is lower than the aggregate face value of the assets held in the portfolio. The issuer usually finances the purchase of these excess assets with a subordinated loan. The subordinated loan acts as a subordination mechanism for the benefit of all the notes.
- Reserve fund. Cash can be placed into a reserve and utilised to absorb potential losses that may occur on the assets, adding a layer of credit protection for the noteholders. The Reserve can be funded via a subordinated loan, the issuance of notes and/or excess spread.

The degree of credit enhancement that is provided for a particular class of notes is generally expressed as the percentage of the underlying asset portfolio.

Figure 4: Illustration of Internal Credit Enhancement

ASSETS	LIABILITIES
Receivables Portfolio **100**	Class A Notes **70**
	Class B Notes **15**
	Class C Notes **10**
	Subordinated Loan 1 **5**
Reserve Fund **10**	Subordinated Loan 2 **10**

Excess Spread

Credit enhancement available to the Class A notes via:

1. Subordination: (10+15)/100 = 25%
2. Overcollateralisation: 5/100 = 5%
3. Reserve Fund: 10/100 = 10%

Total Credit enhancement to Class A Notes = 25% + 5% + 10% = 40%

Source: GCR

External Credit Enhancement

External credit enhancement refers to credit support provided by an external party and made available to the Issuing SPV on demand or upon the occurrence of certain events. Such form of credit enhancement often introduces a rating dependency between the notes and the external party providing the support.

- Guarantee. An external guarantor, for example, an insurer, may guarantee the notes. The guarantor would take over the payment obligations of the issuer should certain events take place.
- Letters of credit. A financial institution may issue letters of credit that guarantee payments to the noteholders.
- Cash collateral. A reserve cash fund may be provided by a party external to the securitisation at the request of the Issuing SPV.

Risks Related to a Securitisation Transaction

There are several categories of risk that can affect the Issuing SPV's ability to repay the notes:

Asset-Related Risk

The nature of the assets sold to the Issuing SPV will have a significant impact on its ability to honour its obligations towards the noteholders. The risks posed by the asset portfolio can be split into three main categories:

- Underlying contract-related risk. The characteristics of the contracts defining the receivables (such as the amortisation profile of the receivables or the interest rates payable thereon) are key determining factors of the quantum and timing of the cash flows received by the Issuing SPV. For example, payment holidays can introduce liquidity problems to the Issuing SPV, and a reference rate that differs from that of the notes can introduce interest rate risk.
- Obligor-related risk. The payment behaviour of the underlying obligors also has a significant influence on the cash flows received by the Issuing SPV. Such behaviour is driven mainly by the credit profile of the borrower (income and indebtedness, credit history etc.). Also, concentration towards a few borrowers may increase the losses incurred by the SPV should these borrowers become delinquent.
- Underlying security-related risk. Receivables such as residential mortgage loans or auto loans are backed by the underlying goods financed. The nature and location of the security greatly impacts on the monies that can be recouped by the Issuing SPV should the underlying obligor default. For instance, residential properties have historically shown a steadier value than automobiles or equipment. Moreover, the Issuing SPV may encounter greater difficulties in recovering monies from the security when ownership of the financed goods is not passed to the SPV when purchasing the receivables.

Legal Risk

Legal risk relates to the legal soundness of the securitisation structure in light of all applicable pieces of legislation and regulation in every relevant jurisdiction. In a traditional securitisation scheme, the fundamental legal risks that need to be addressed are as follows:

Bankruptcy Remoteness of the SPV

To avoid any contagion of a bankruptcy of the Originator/Seller to the Issuing SPV, which can affect the cash flow distributed to the noteholders, a legal and corporate independence must be established between the two entities. This is achieved through, amongst others:

- Independent shareholding structure and corporate activity of the SPV. The ordinary shares of the Issuer are owned by an entity that is independent from the Originator/Seller. For instance, in South Africa, an owner trust generally holds all the ordinary shares issued by the Issuing SPV. The Issuing SPV is also run independently from the originator/seller with separate governance and controls in place. The majority of the directors of the Issuing SPV must therefore be independent from the Originator/Seller - not only to ensure that the SPV is run independently from the Originator/Seller, but also to limit the risk of voluntary bankruptcy.
- Restriction of the SPV's business activities. The Issuing SPV's commitments, and any other transactions the Issuing SPV may engage in, must be limited to those needed to perform its obligations under the transaction documents. Thereby, the universe of possible liabilities and secured creditors of the SPV is restricted and the risk of new creditors instigating legal action against the SPV is reduced.
- Limited recourse, subordination and non-petition. The transaction documents contain limited recourse, subordination and non-petition language. Such provisions are an important feature as they restrict the rights and capacity of the secured creditors to take individual action against the Issuing SPV. Under limited recourse and subordination clauses, the secured creditors agree to limit their claims to the assets owned by the Issuer and according to the payment order dictated by the priority of payments. Once the assets have been extinguished, the secured creditors agree to abandon all claims against the Issuing SPV.

True Sale of the Asset Portfolio

The purchase of the asset portfolio by the Issuing SPV must constitute a true sale to avoid any clawback from the Originator/Seller. The main features of a true sale of assets are:

- Transfer of ownership of the receivables from the Seller to the Issuing SPV. The sale of the asset portfolio must achieve effective transfer of ownership to the Issuing SPV.
- Clear identification of the assets sold. The asset portfolio sold to the Issuing SPV must be clearly identifiable. The identification generally consists of a sale schedule comprising a line-by-line list of the assets sold, together with unique identifiers of these assets. The asset management systems of the Servicer should be able to flag unequivocally the assets belonging to the Issuing SPV.
- No encumbrance. The asset portfolio must be free of any encumbrances (typically, any agreement or arrangement providing any form of security or preferential treatment to a third-party) at the time of the sale to the Issuing SPV.

Legal, Valid and Binding Nature of All Related Documents

The validity, enforceability and binding nature of the contracts related to the underlying asset portfolio (for example, mortgage loan agreements), as well as the enforceability of the security attached to such loans (if any), is an aspect of legal risk that must be addressed.

The transaction documents include various contracts detailing the obligations and recourse of each party involved in the securitisation scheme. These must also all be valid, legal, binding and enforceable.

Structural Risk

Structural risk relates to the efficiency of the features and mechanisms in place in a securitisation structure to mitigate a potential degradation of the credit quality of the asset portfolio or of the financial situation of the Issuing SPV. These mitigants generally take the form of covenants or triggers. Here are a few examples of structural features designed to add protection for the noteholders:

- Portfolio covenants. These covenants are designed to maintain the credit quality of the portfolio at a certain level when additional assets are purchased during the revolving period. Portfolio covenants allow the purchase of additional assets by the Issuer provided that the key metrics of these assets are maintained at defined levels (e.g. the weighted average yield of securitised loans must be maintained at a given minimum etc.). Eligibility criteria, which define the general characteristics of the assets that can be included in the securitised portfolio, complement the covenants.
- Performance triggers. Thresholds are often put in place to initiate an action or end an existing situation should the performance of the underlying assets or their financial condition not meet certain standards. For instance, arrears- or default-based triggers would end the revolving period if breached or loss-based thresholds would cause the deferral of the payments due to certain classes of noteholders. If set too loosely, performance triggers may not catch the degradation of the performance of the Issuing SPV early enough and this could result in noteholders incurring losses. If set too tightly, the triggers may prevent the structure from adequately performing its funding function.
- Cash-trapping mechanisms. Securitisation structures generally allow the trapping of excess cash (using excess spread) to cover for potential defaults or losses. The two most widely used cash retention mechanisms are 1) the principal deficiency ledger ("PDL") and 2) reserves constituted from excess spread. The amount of cash to be allocated towards the redemption of the notes always includes an element of default or losses incurred on the asset portfolio in addition to principal collections. Such element is funded through available excess spread. Should the latter not be sufficient to cover for such amount, the deficit is recorded in a ledger – the PDL – with a view to be paid on the next payment date. Some reserves can also be constituted on the deterioration of performance of the asset portfolio to a predetermined level. For example, some transactions include an arrears reserve where excess spread is trapped should defaults exceed a defined percentage of the asset portfolio.

Counterparty Risk

The Issuing SPV is exposed to both operational and financial risks related to the counterparties to which it has outsourced certain functions. Operational risk relates to inadequate or failed internal procedures and systems, and comprises a strong human element.

Financial risk relates to: 1) the monies belonging to the SPV and transiting through other parties before being deposited into the former's bank account, and 2) payments to be made by a designated counterparty as added protection for the benefit of the noteholders.

Examples of counterparties that might pose an operational risk to the Issuing SPV are the Servicer and the Back-up Servicer given their vital interaction with the underlying borrowers on behalf of the SPV.

Counterparties that maight present a financial risk to the issuing SPV include the account bank, which holds the monies belonging to the SPV.

The Credit Rating of Asset-Backed Securities

A credit rating expresses a forward-looking opinion on the financial strength of an entity or some of the debt securities it issues. Structured finance ratings only apply to the debt securities issued by the Issuing SPV or to the debt programme in place. Debt securities can be rated on a long-term and/or short-term basis and on a national and/or international scale basis. The credit rating of asset-backed securities by GCR can be described as a four-step process:

Historical Data Analysis

An analysis is conducted on the historical performance of the asset portfolio backing the Issuing SPV's liabilities. Historical arrears, defaults and recoveries, prepayments and general asset pool characteristics are analysed over the past few years. The outcome of such analysis is the formulation of a base case, which reflects average historical performance plus an element to account for the volatility thereof. Base case assumptions contain the rating agency's view on the performance of the asset portfolio in an unstressed economic environment and constitute key inputs to the fourth and final stage of the rating process - cash flow analysis.

Legal and Tax Analysis

A review of the transaction-related documents is key in assessing the legal robustness of the transaction as well as any influence of the applicable tax environment on the cash flows distributed to the noteholders. The review of the transaction documents serves additional purposes, such as to:

- Determine whether the provisions of the transaction documents are in line with GCR's rating criteria. Rating outcomes may vary depending on whether the transaction documents reflect, amongst others, the various rating thresholds and remedial actions stipulated in GCR's rating criteria.
- Assess the strength of the various mitigants to the risks born by the Issuing SPV. GCR pays close attention to the structural features of the transaction that are intended to mitigate existing risks or

provide additional enhancements. This applies to, amongst other mechanisms, covenants and/or triggers that are in place.

- Allow GCR to model the financial structure accurately in its cash flow model. As explained later in this document, the cash flow model run by the rating agency is a reflection of the structural features of the transaction (such as the cash allocation provisions, etc.) which have a direct impact on the rating of the debt securities.

Counterparty Analysis

Though its counterparty risk analysis, GCR determines whether the reliance on a party to perform its obligations towards the Issuing SPV introduces risk to the successful allocation of monies to the noteholders and whether a credit-linkage between the rating of the securities issued and the rating of the counterparty is implied.

This requires that the rating agency understands the operational capacities and capabilities of third-party service providers such as the Servicer, and to have a clear understanding where cash flows transit through prior to being allocated to the noteholders.

Cash Flow Analysis

Cash flow modelling makes use of the results of the previous steps in the rating process, particularly the base case assumptions arrived at through data analysis and analysis of the structure engineered under the transaction documentation.

Cash inflows to the Issuer are stressed to mimic harsh economic conditions that could affect the performance of the asset portfolio. For instance, base case defaults are stressed upwards and base case recoveries are stressed downwards to degrees standardised as per GCR's published rating criteria. Cash outflows from the issuer to all of its secured creditors are modelled as per securitisation structure, including the application of the priority of payments defined in the transaction documentation. According to rating agency methodology, the base case assumptions are deemed to apply to a "B" rating scenario. The ability of the issuer to honour its obligations to the noteholders in a timely (or, sometimes, ultimate) manner as the elements of cash inflows are stressed in each incrementally more severe scenario is what allows the notes to obtain progressively higher ratings. The table below shows the long-term and short-term ratings that can be assigned by GCR:

Table 3: National Long-Term and Short-Term Ratings Assigned by GCR

Long-Term Rating	Short-Term Rating
AAA(xx)	A1+(xx)
AA+(xx)	
AA(xx)	
AA-(xx)	
A+(xx)	A1(xx)
A(xx)	
A-(xx)	A2(xx)
BBB+(xx)	
BBB(xx)	A3(xx)
BBB-(xx)	
BB+(xx)	B(xx)
BB(xx)	
BB-(xx)	
B+(xx)	
B(xx)	
B-(xx)	
CCC+(xx)	C(xx)
CCC(xx)	
CCC-(xx)	
CC(xx)	
C(xx)	
SD(xx)	SD(xx)
D(xx)	D(xx)

Structured finance ratings are denoted with an "SF" suffix.

Source: GCR

Please refer to the research report titled "Asset-Backed Securities Cash Flow Model" for more details on how GCR models asset-backed securitisations.

Disclaimer

Note that GCR is not a legal, tax or financial adviser and will only provide a credit opinion of the rated securities. For example, a rating does not cover a potential change in the applicable laws nor can it be regarded as an audit. Moreover, GCR is not a party to the transaction documents nor does it provide legal, tax or structuring advice.

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Glossary of Terms/Acronyms

Administrator	A transaction appointed agent responsible for the managing of a Conduit or a Special Purpose Vehicle. The responsibilities may include maintaining the bank accounts, making payments and monitoring the transaction performance.
Advance	A lending term, to transfer funds from the creditor to the debtor.
Agent	An agreement where one party (agent) concludes a juristic act on behalf of the other (principal). The agent undertakes to perform a task or mandate on behalf of the principal.
Amortisation	From a liability perspective, the paying off of debt in a series of installments over a period of time. From an asset perspective, the spreading of capital expenses for intangible assets over a specific period of time (usually over the asset's useful life).
Arrears	General term for non-performing obligations, i.e. obligations that are overdue.
Asset	An item with economic value that an entity owns or controls.
Bond	A long term debt instrument issued by either: a company, institution or the government to raise funds.
Borrower	The party indebted or the person making repayments for its borrowings.
Call Option	A provision that allows an Issuer the right, not the obligation, to repurchase a security before its maturity at an agreed price. The seller has the obligation to sell the security if the call option holder exercises the option.
Capital	The sum of money that is used to generate proceeds.
Cash Flow	A financial term for monetary changes in operations, investing and financing activities.
Collateral	An asset pledged as security in event of default.
Commingling	The mixing of various transaction parties' funds in an account.
Coupon	Interest payment on a security.
Covenant	A provision that is indicative of performance. Covenants are either positive or negative. Positive covenants are activities that the borrower commits to, typically in its normal course of business. Negative covenants are certain limits and restrictions on the borrowers' activities.
Credit	A contractual agreement in which a borrower receives something of value now, and agrees to repay the lender at some date in the future, generally with interest. The term also refers to the borrowing capacity of an individual or company
Credit Enhancement	Limited protection to a transaction against losses arising from the assets. The credit enhancement can be either internal or external. Internal credit enhancement may include: Subordination; over-collateralisation; excess spread; security package; arrears reserve; reserve fund and hedging. External credit enhancement may include: Guarantees; Letters of Credit and hedging.
Credit Rating	An opinion regarding the creditworthiness of an entity, a security or financial instrument, or an issuer of securities or financial instruments, using an established and defined ranking system of rating categories.
Credit Risk	The probability or likelihood that a borrower or issuer will not meet its debt obligations. Credit Risk can further be separated between current credit risk (immediate) and potential credit risk (deferred).
Debt	An obligation to repay a sum of money.
Debt Sponsor	Usually as Investment bank that brings a transaction to the capital markets, similar to an Arranger.
Default	A default occurs when: 1.) The Borrower is unable to repay its debt obligations in full; 2.) A credit-loss event such as charge-off, specific provision or distressed restructuring involving the forgiveness or postponement of obligations; 3.) The borrower is past due more than X days on any debt obligations as defined in the transaction documents; 4.) The obligor has filed for bankruptcy or similar protection from creditors.
Desktop	An assessment of the property value, with the value being compared to similar properties in the area.
Downgrade	The assignment of a lower credit rating to a corporate, sovereign of debt instrument by a credit rating agency. Opposite of upgrade.
Enforcement	To make sure people do what is required by a law or rule et cetera.
Environment	The surroundings or conditions in which an entity operates (Economic, Financial, Natural).
Excess Spread	The net weighted average interest rate receivable on a pool of assets being greater than the weighted average interest rate payable for the debt securities.

Guarantee	An undertaking for performance of another's obligations in event of default.
Guaranteed Investment Contract	A contract that guarantees the principal and interest repayment over a period of time. Typically GIC are used in relation to a bank account.
Income	Money received, especially on a regular basis, for work or through investments.
Index	An assessment of the property value, with the value being compared to similar properties in the area.
Issuer	The party indebted or the person making repayments for its borrowings.
Junior	A security that has a lower repayment priority than senior securities.
Liability	All financial claims, debts or potential losses incurred by an individual or an organisation.
Liquidity	The ability to repay short-term obligations or short-term availability of liquid assets to a market or entity.
Liquidity Risk	The risk that a company may not be able to meet its financial obligations or other operational cash requirements due to an inability to timeously realise cash from its assets. Regarding securities, the risk that a financial instrument cannot be traded at its market price due to the size, structure or efficiency of the market.
Loan	A sum of money borrowed by a debtor that is expected to be paid back with interest to the creditor. A debt instrument where immovable property is the collateral for the loan. A mortgage gives the lender a right to take possession of the property if the borrower fails to repay the loan. Registration is a prerequisite for the existence of any mortgage loan. A mortgage can be registered over either a corporeal or incorporeal property, even if it does not belong to the mortgagee. Also called a Mortgage bond.
Loss	A tangible or intangible, financial or non-financial loss of economic value.
Market	An assessment of the property value, with the value being compared to similar properties in the area.
Obligation	The title given to the legal relationship that exists between parties to an agreement when they acquire personal rights against each other for entitlement to perform.
Option	Either a call or a put option. A call option gives the holder the right to buy assets at an agreed price on or before a particular date. A put option gives the holder the right to sell assets at an agreed price on or before a particular date.
Origination	A process of creating assets.
Originator	An entity that created assets and hold on balance sheet for securitisation purposes.
Owner Trust	Owner of a securitisation vehicle that acts in the best interest of the Noteholders.
Payment Date	The date on which the payment of a coupon is made.
Prepayment	Early or excess repayment of an obligation. Partial or full prepayment of the outstanding loan amount.
Prepayment Rate	The rate of prepayment in relation to the pool of obligations. Also called prepayment speed.
Principal	The total amount borrowed or lent, e.g. the face value of a bond, excluding interest.
Private	An issuance of securities without market participation, however, with a select few investors. Placed on a private basis and not in the open market.
Property	Movable or immovable asset.
Provision	An amount set aside for expected losses to be incurred by a creditor.
Rating Outlook	A Rating Outlook indicates the potential direction of a rated entity's rating over the medium term, typically one to two years. An outlook may be defined as: 'Stable' (nothing to suggest that the rating will change), 'Positive' (the rating symbol may be raised), 'Negative' (the rating symbol may be lowered) or 'Evolving' (the rating symbol may be raised or lowered).
Recovery	The action or process of regaining possession or control of something lost. To recoup losses.
Repayment	Payment made to honour obligations in regards to a credit agreement in the following credited order: 3.) Satisfy the due or unpaid interest charges; 4.) Satisfy the due or unpaid fees or charges; and 5.) To reduce the amount of the principal debt.
Reserves	A portion of funds allocated for an eventuality.
Seasoning	The age of an asset, the time period passed since origination.
Securities	Various instruments used in the capital market to raise funds.
Securitisation	Is a process of repackaging portfolios of cash-flow producing financial instruments into securities for sale to third parties.
Security	An asset deposited or pledged as a guarantee of the fulfilment of an undertaking or the repayment of a loan, to be

	forfeited in case of default.
Senior	A security that has a higher repayment priority than junior securities.
Servicer	A transaction appointed agent that performs the servicing of mortgage loans, loan or obligations.
Shareholder	An individual, entity or financial institution that holds shares or stock in an organisation or company.
Spread	The interest rate that is paid in addition to the reference rate for debt securities.
Stock Code	A unique code allocated to a publicly listed security.
Structured Finance	A method of raising funds in the capital markets. A Structured Finance transaction is established to accomplish certain funding objectives whist reducing risk.
Subordinated Loan	A loan typically given by the Issuer to the securitisation vehicle that is more junior than a junior tranche.
Surveillance	Process of monitoring a transaction according to triggers, covenants and key performance indicators.
Timely Payment	The principal debt, interest, fees and expenses being repaid promptly in accordance with the contractual obligation.
Tranche	In a structured finance, a slice or portion of debt securities offered that is structured or grouped to resemble the same degree of risk associated with the underlying asset or with a similar degree of risk. A junior tranche has a higher degree of default risk than a senior tranche.
Transaction	A transaction that enables an Issuer to issue debt securities in the capital markets. A debt issuance programme that allows an Issuer the continued and flexible issuance of several types of securities in accordance with the programme terms and conditions.
Trust	A third party that acts in the best interest of another party, according to the trust deed, usually the investors. Owner of a securitisation vehicle that acts in the best interest of the Noteholders.
Trustee	A third party that acts in the best interest of another party, according to the trust deed, usually the investors. Owner of a securitisation vehicle that acts in the best interest of the Noteholders.
Ultimate Payment	A measure of the principal debt, interest, fees and expenses being repaid over a period of time determined by recoveries.
Valuation	An assessment of the property value, with the value being compared to similar properties in the area.
Waterfall	In securitisation, the order in which the cash flows are allocated to the transaction parties.
Weighted	The weight that a single obligation has in relation to the aggregated pool of obligations. For example, a single mortgage principal balance divided by the aggregated mortgage pool principal balance.
Weighted Average	An average resulting from the multiplication of each component by a factor reflecting its importance or, relative size to a pool of assets or liabilities.