

# Securitisation – prudence not paralysis



- Securitisation helps diversify the funding base of an economy, enabling banks to raise further financing, reduce borrowing costs for consumers or support more lending.
- Since 2008 regulation has been a key driver in incentivising market participants to use securitised assets as a structural tool - enabling a sustainable recovery of this market.
- Outside US sub-prime mortgages, collateralised debt obligations and leveraged vehicles, securitised assets have caused limited actual credit losses in respect of their level of seniority.

## Introduction

With the help of securitisation, the **systemic risk of an economy** is distributed beyond **bank balance sheets** to other capital market participants (institutional investors), **diversifying the funding base of the economy**, and while doing so freeing up bank capital – which helps enable banks to **raise further financing, reduce borrowing costs for consumers or support more lending**. Beyond the direct impact on financial markets and at a more practical level, examples of benefits of securitisation include: a car manufacturer using the process of securitisation to sell their claim on a stream of loan payments (i.e. convert the stream into one lump sum) to finance research and development to remain competitive or a department store with an in-house store card selling its claim on the card repayments to support product development<sup>1</sup>.

Given the above, it was not surprising to see that the IMF and OECD encourage regulators and policy makers to enable a sustainable recovery of the securitisation markets<sup>2</sup> after the global financial

crisis. It was evident that the main central banks took note - the Fed backed Fannie Mae and Freddie Mac in purchasing US mortgages post the global financial crisis while the ECB's asset purchase programme also included the purchase of securitised assets. In fact the EU came forward with several proposals, one of them being the creation of *Simple, Transparent and Standardised (STS) Securitisations* in a bid to make risk analysis easier and empower investors.

Given the importance of securitisation for the economy; its use as a liquidity and risk management tool for banks and its ability to allow investors to diversify into otherwise granular, inaccessible and illiquid instruments, in this paper we turn our attention to **helping investors understand securitisation better by:**

- identifying the prominent regulatory measures taken across major markets to restore investor confidence in securitised assets
- dispelling the blanket negative perception of securitised assets and hence attempt to show the differentiation between them
- outlining the importance of good deal structures.

## Improving access and transparency:

Securitisation is a process by which illiquid financial assets that would otherwise only exist on bank balance sheets are transformed into tradable commodities. This is done by the pooling together of discrete loan payments to create cash flow generating marketable securities. It is this pooling that enables difficult to trade small loans into tradable securities with a volume and size that can let the wider capital market participants (institutional investors) buy and sell otherwise granular, inaccessible and less liquid instruments<sup>1</sup>.

<sup>1</sup>Remarks of Commissioner Jonathan Hill at the European Parliament's Public Hearing on Securitisation, European Commission Speech, Brussels, 13 June 2016. <sup>2</sup> <https://www.imf.org/External/Pubs/FT/GFSR/2009/02/pdf/chap2.pdf> and <http://www.oecd.org/finance/public-debt/48620405.pdf>.

**What has changed since 2008?**

It is interesting to see that despite the troubles of the financial crisis, regulators did not determine that securitisation as a concept needed to be eradicated. Instead, regulation has been a key driver in incentivising various market participants to use securitisation as a structural tool.

In the United States, the major regulatory reform impacting securitisation transactions has been the Dodd-Frank Act. In the European Union, this has come from various regulatory reforms<sup>3</sup>. The positive impacts of these, from the point of view of an investor, are summarised in Table 1.

**Table 1: The impact of market reform on investment decision making for securitised assets**

	Pre 2008 accepted practice and outcomes	Subsequent market reform		Impact
		EU/UK	US	
<b>Due Diligence</b>	<p>No obligation on originators, sponsors or original lenders to provide data on the credit quality and performance of the underlying exposures supporting a securitisation transaction.</p> <p>No regulatory requirement on investors to understand the underlying risks or structures of a transaction.</p>	<p>There is now an obligation on institutional investors to have a thorough understanding of the risks and structural features (e.g. waterfalls, triggers, defaults) of a transaction; obtain information they require from the issuer, sponsor or originator; and obtain an explicit statement from the originator, sponsor or original lender that it has made the necessary risk retention - to make sure there is alignment of interest between the originator and the investor.</p>	<p>Issuers are required to perform a review of securitised assets which is designed and effected to provide reasonable assurance that the disclosure regarding the pool assets in the prospectus is accurate in all material respects; and to disclose the nature, findings and conclusions of such review.</p> <p>If assets in the pool deviate from the disclosed underwriting criteria, the issuer must explain: how the assets deviate, and the amount and characteristics of nonconforming assets; which entity determined that the non-conforming assets should be included in the pool; and if compensating factors (strengths to compensate for weakness) were used to accommodate those assets.</p>	<p>Better modelling and understanding of every transaction and therefore more reliable loan-by-loan risk assessment by investors and tighter underwriting standards by originators.</p>
<b>Credit Rating Agencies</b>	<p>Over-reliance on ratings produced by a conflicted set of credit rating agencies.</p>	<p>The issuer, originator and the sponsor are required to publish any information (incl structure, credit quality and performance) to conduct comprehensive stress tests on the cash flows and collateral values supporting the underlying exposures.</p> <p>Issuers or related third parties of structured finance instruments are now required to obtain ratings from two credit rating agencies, where an issuer pays for those ratings. Further, the issuers or related third parties need to have at least one credit rating agency with no more than 10% of the market share, and if not, document why.</p> <p>Regulation now prevents credit rating agencies from rating entities in which its largest shareholders have an interest.</p>	<p>The prospect of future employment by an issuer or underwriter should not influence a credit analyst in determining a credit rating (Look back review)</p> <p>Ensure users of ratings have enhanced statistics on initial credit ratings and subsequent changes to them.</p> <p>Rating agencies must establish, maintain, enforce, and document standards of training, experience, and competence for its employees who determine credit ratings</p> <p>The rating symbols methodology must be clearly define consistently applied.</p> <p>Personnel involved in sales or marketing, or who are influenced by sales or marketing considerations, are barred from participating in the determination or monitoring of a credit rating or in the development of credit rating methodologies.</p>	<p>A more reliable credit rating system with conflicts of interests contained. Rating agencies need a higher subordination to get to a certain level of rating. Finally rating agencies have reassessed their risk models for structuration.</p>
<b>Risk Retention</b>	<p>Market makers were well within their legal right to distribute all originated loans without the obligation to retain any on their own books. This resulted in high volumes of loans being generated and securitised without attention to the credit quality of those loans.</p>	<p>Originators, sponsors or original lender have to retain a material net economic interest (with no sharing of retention) of at least 5% (on an ongoing basis) of securitised exposure.</p>	<p>Until very recently, originators, sponsors or original lender have had to retain a material net economic interest (with no sharing of retention) of at least 5% (on an ongoing basis) of securitised exposure. More recently there has been a rollback of this rule in the US CLO market. We continue to see US CLO managers retaining a 5% interest to ensure they are able to cater to the EU risk retention requirements and regulations.</p>	<p>A better alignment of interest between originators and investors, incentivising originators to assess credit quality diligently. This is better known as having 'skin in the game'.</p>

<sup>3</sup> Examples of regulation affecting securitisation in the EU: The Basel II and III, the Capital Requirements Directive and Capital Requirements, the Credit Agency Regulation, the Alternative Investment Fund Managers Directive and the Solvency II Directive, amongst others.

	Pre 2008 accepted practice and outcomes	Subsequent market reform		Impact
		EU/UK	US	
Liquidity	The initial shock that triggered the global financial crisis was amplified through liquidity effects and banks scrambling to meet immediate payments.	Now liquidity coverage ratio (LCR) requires banks to hold a sufficient buffer of high quality liquid assets (HQLA) to cover net liquidity outflows during a 30-day period of stress. The stock of HQLA should include assets of high credit-quality and liquidity. The stress scenario to determine the net cash outflows reflects both institution-specific and systemic shocks.  Senior securitisation tranches are recognized as HQLA by Central Banks		Reduced the probability and potential impact of a liquidity crisis in the securitised market or at least a dampening of its effects.
Leverage	Excess leverage, especially among hedge funds, an over-reliance on bank financing, and the 'originate and distribute' model lacking a secondary market, had repercussions in 2008, when the most highly leveraged investors became forced sellers i.e. rapid unwinding to aid substantial deleveraging led to prices falling.	The Dodd-Frank Act (in the US) and the implementation of Basel III (in Europe) are the driving forces behind regulatory reforms globally. Two new capital ratios were created by the Basel committee in 2009. The first ratio, the common equity tier 1 (CET1) ratio, requires that banks hold minimum amounts of common equity capital – the strongest and most expensive form of capital – relative to their risk-weighted assets. The second ratio, the supplementary leverage ratio (SLR), requires that banks hold minimum amounts of tier 1 capital relative to all leveraged exposures, both on- and off-balance sheet, regardless of their risk.		Prevent de-stabilising through fire-selling of assets.
Underwriting Criteria	Self certification of income levels possible in some cases.	The Mortgage Credit Directive (MCD) that introduces a European framework of conduct standards for firms selling residential mortgages has barred self-certifying income levels for the purpose of lending. Now borrowers need to provide tax returns to validate their claims.	The Dodd-Frank Wall Street Reform and Consumer Protection Act have given rise to tighter underwriting criteria in the US. Loans if issued with risky features such as interest only repayments, negative amortisation, balloon payments, high debt-to-income ratio etc take certain legal protections away from lenders, and make it easier for borrowers to challenge the lenders in court - this has incentivised lenders to be more cautious while underwriting.	Tighter underwriting criteria globally.
Leveraged Shadow Banking (SIVs and money market funds)***	A structured investment vehicle's (SIV) strategy involves borrowing money through the issuance of leveraged short-term securities (commercial paper) and subsequently investing that money through the purchase of longer-term securities*. However, borrowing for the short term (using commercial paper) became extremely hard to refinance during the global financial crisis - causing a severe maturity mismatch** and therefore forcing buyers of longer-term securities to unwind their positions when liquidity dried up.	Money Market Fund reforms through the SEC in US and the Money Market Fund Regulation in the EU have started making it difficult for SIV and short-term borrowers investing in longer-term assets using leverage to flourish. Banks must now incorporate structured investment vehicles on their balance sheets. Money market funds must hold more liquid assets and limit the maturity mismatch. Also, limits on leverage and duration mismatch have been imposed and continue to be considered.		More difficult for off-balance sheet short-term borrowing to fund structured products.

\*The SIV's profit was derived from the difference between the higher interest rate received from the long-term securities and the lower interest rate paid on the issued short-term securities. \*\* Between the funds borrowed and those invested. \*\*\* AXA IM analysis of market information and industry research papers.

Sources: Hogan Lovells: Summary of key EU and US regulatory developments relating to securitization transactions, Feb 2016; <https://voxeu.org/article/liquidity-risk-and-systemic-banking-crises>; [http://europa.eu/rapid/press-release\\_MEMO-14-579\\_en.htm](http://europa.eu/rapid/press-release_MEMO-14-579_en.htm); <https://www.bis.org/press/p171006.htm>; [https://www.ssga.com/cash/ref\\_doc/trends\\_doc/Part%202020Capital.pdf](https://www.ssga.com/cash/ref_doc/trends_doc/Part%202020Capital.pdf).

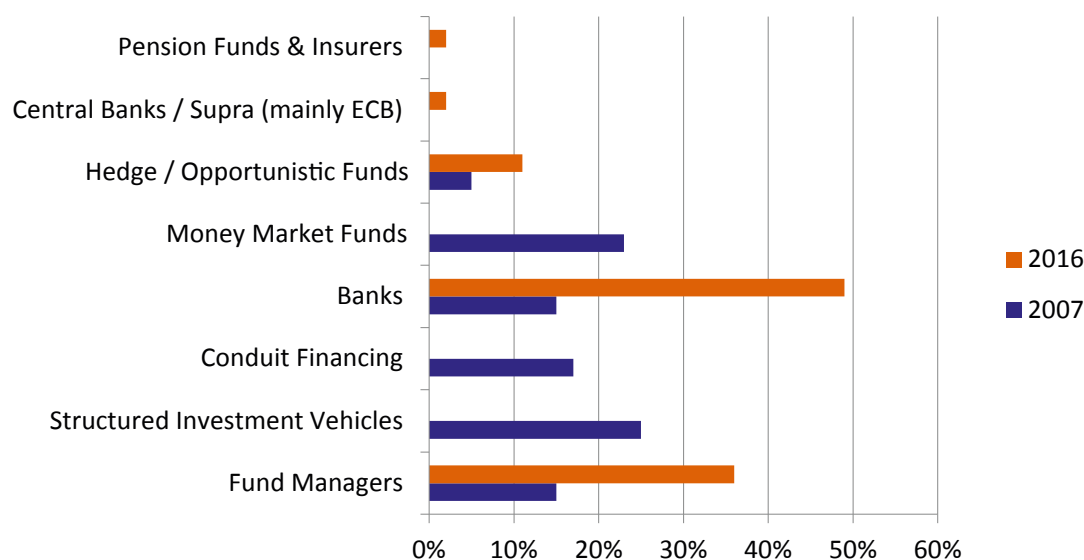
This table is not a documentation of all regulatory efforts since 2008. It is a collection of our observations of how the various market reform efforts have collectively (and over time) helped structurally strengthen the securitised market.

## Investor Thinking: Securitisation – prudence not paralysis

As a result of the regulatory changes and tighter underwriting criteria:

- The overall quality of securitised assets is higher which is why securitised assets are now used by banks as funding and capital relief/ allocation tools. As such, **securitisation is no longer about banks removing poor quality assets from their balance sheets** and passing them on to investors. Instead it is about **a) investors’ capital working hand in hand with banks who maintain a significant part of the risk alongside investors and b) providing funding for an identifiable pool of assets.**
- **Some securitised assets are also retained on bank balance sheets** and used as a central bank funding tool for example discount windows and long-term repo operations<sup>4</sup>. When a bank wants to access those funding tools from the central banks they have to pledge collateral and senior asset backed securities are collateral that the central banks are willing to accept.
- **Securitised assets have been put on par with other asset classes** in the sense that no group of market participants (such as investment banks previously) should be able to benefit from a structural market advantage vis-a-vis other investors.
- **The investor base for structured products has started to change and broaden.** Regulation is on track to effectively eradicate leveraged short-term money market funds from investing in longer-term structured products and replaced this with unlevered long term investors. Central banks (through quantitative easing and asset purchase programmes), treasury departments of corporates and banks as well as traditional fixed income funds are some examples of long-term investors having increased their allocation to structured products. Pension funds and insurance companies are beginning to explore these asset classes cautiously, as expected<sup>5</sup>. Figure 1 illustrates this shift in investor base.

**Figure 1: Structured finance investor base 2007 vs 2016**



Source: RBS Securitised Products Strategy, ConceptABS.

Notes: 1. Hedge/Opportunistic funds might include some legacy ABS CDOs. Banks include Bad Banks i.e. corporate structures that isolate illiquid and high risk assets held by a bank, a financial organisation or a group of banks/financial organisations. 2. Conduit Financing: Conduits are special purpose vehicles (SPVs) created by banks to provide short-term financing to corporations. Through conduits, banks sell short-term debt, such as commercial paper, and use the proceeds from the sale to purchase loans, such as credit card debt, student loans, auto loans, and mortgages. These loans are financial assets that are used as collateral for investors and are not included in the balance sheet of the financial institution. As the maturity date for an existing short-term debt looms closer, a conduit issues new debt, the proceeds of which are used to settle the repayment obligations of the maturing debt (Investopedia).

### Dispelling a blanket negative view about securitisation

Despite efforts by regulators, not all investors are convinced. The collapse in the US sub-prime home mortgage market is still fresh in the minds of many investors. The criticism and as a result reluctance to invest in securitised assets however extends beyond the subprime residential mortgage-backed securities, to other securitised assets – often without differentiating between the underlying assets. In Table 2 we provide the 12-month impairment rates over the long term (1993-2016) for a few different securitised asset classes to illustrate the fact that perceived impairments across the board are higher than actual impairment rates. Table 2 (overleaf) also aims to capture some of the major differences between a few selected securitised asset classes.

<sup>4</sup>Central bank lending facility meant to help commercial banks manage liquidity needs. <sup>5</sup>The capital charge in the US is low and therefore a lot of insurance companies are able to invest in ABS. This is also the reason why the US ABS market is four or five times the size of the European ABS market. Also ABS is part of major fixed income indices so although fund managers need to take the more tactical overweight or underweight decision, there is a default strategic investment decision to invest in ABS as a result of index construction.

**Table 2: An illustration of diversity in the securitised market**

	Residential mortgage backed securities	Asset backed securities	Commercial mortgage backed securities	Collateralised loan obligations
<b>12-month impairment rates Historical average 1993-2016 (All ratings)</b>	US RMBS (7.80%) EMEA RMBS (0.40%)	US ABS (0.60%) EMEA ABS (0.30%)	US CMBS (3.50%) EMEA CMBS (1.40%)	US CLO (0.20%) European CLO (0.20%)
<b>Exposure to...</b>	Consumers	Consumer and corporates	Corporates	Corporates
<b>Securitized by...</b>	Household property	Automobiles, equipment and credit cards	Commercial property	Operating assets of a company
<b>Static vs. dynamic underlying</b>	Static	Usually static, but to maintain the size of portfolio it is replenished with new loans once existing loans get paid off	Static, although the underlying tenants could change without a change to the terms of a lease.	Not static during the reinvestment period
<b>Revolving or not</b>	No*	Yes, for credit cards or Auto loans	No	Revolving in the reinvestment period only
<b>Average investment horizon</b>	2-5 years**	1-3 years	5-10 years	6-7 years

\* Post the global financial crisis this is not a practice as rating agencies have reinforced their methods and standard structures are more transparent. This is the case unless the transaction has a pre-funding structure.

\*\* Although Dutch Mortgages have a longer duration

Source: For 12-month impairment rates: Impairment and Loss Rates of EMEA Structured Finance Securities: 1993-2016, June 2017 and Impairment and Loss Rates of US and European CLOs: 1993-2016, July 2017.

Note: ABS: Asset backed securities, primarily credit cards and auto loans; RMBS: Residential mortgage backed securities CMBS: Commercial mortgage backed securities; CLOs: Collateralised loan obligations; CDOs: Collateralised debt obligations.

There are certainly notable exceptions, but evidence suggests that looking at securitised assets as a whole, could result in a misinformed blanket negative view. **Outside US sub-prime mortgages, Collateralised Debt Obligations CDOs (especially CDOs of CDOs) and leveraged vehicles such as Structured Investment Vehicles (SIVs), securitised assets have caused limited actual credit losses** in respect of their level of seniority. This is due to the robustness of the underlying credit assets and also to the fact that securitised assets have credit protection mechanisms built into their structuring. In the section that follows we examine the importance of a good deal structure.

### The importance of good deal structures

Although credit risk analysis is imperative in assessing any loan, unlike investment grade or high yield credit investing, securitised debt investing is not driven by collateral quality and default probability alone. The structure of a deal is another dimension that needs to be analysed in parallel.

The main benefits of some aspects of structuring, common to the securitised assets covered in this paper, are outlined below: **special purpose vehicles (SPV); tranching and credit support mechanisms.**

#### a) SPV – helping investors isolate credit risk

The process of securitisation isolates pools of loans from the general credit risk of the originator. This is achieved by selling loans that are on the balance sheet of the originator to a special purpose vehicle (SPV). The SPV is set up solely for the purpose of the securitisation transaction with limited predetermined levels of allowed activity. It can accept investments but cannot borrow further or lend any money.

Benefits of an SPV to the end investor:

- The funding accepted into an SPV is not towards the entire balance sheet of an originator but the specific pool of assets (loans) that are put into the SPV. It is this SPV that then issues bonds to investors not the original lenders. Therefore any problems with the corporate that generated the loans are isolated from the SPV, as it is a separate legal entity.
- An SPV makes it easier for investors to get details on every borrower, loan and the characteristics of the borrower and loan. That information helps identify geography, current indexed loan-to-value, product type, performance, credit history and affordability.
- An SPV is 'bankruptcy remoted' which means it is isolated from the originator's operations – sitting outside the balance sheet. As such, should the original originator go bankrupt or need a government rescue, investments in assets securitised through an SPV will not suddenly find themselves being subordinated to government debt or private deposit investors. This is also known as prevention from 'bail in' risk.

## Investor Thinking: Securitisation – prudence not paralysis

### b) Tranching – a process that helps investors refine their risk-return choices

The financial structure of a securitised product is a function of the type of the instrument that needs to be issued from it. There are usually two options, **issuing pass through certificates or issuing debt certificates (more commonly referred to as tranching)**.

In case of pass through certificates, investors received an undivided interest in the assets of the SPV. The cash flows (principal, interest, pre-payments from the underlying) are all simply passed on to investors on a pro rata basis (after deducting the servicing fee etc.) **without any reconfiguration**. Depending on the cash-flow pattern of the underlying asset, this might mean for the investors, less predictable cash flows.

The tranching method, on the other hand is about the SPV issuing debt securities i.e. bonds / debentures designed for variable maturities and yield to suit the needs of different investors (the tranches have a hierarchy from a credit risk perspective). As such, cash flows are not simply passed on to investors but instead need to be reconfigured to match the maturity profile of the debt securities. This means more predictable cash flows and also, relative to pass through certificates, a more reliable estimate of average life/maturity.

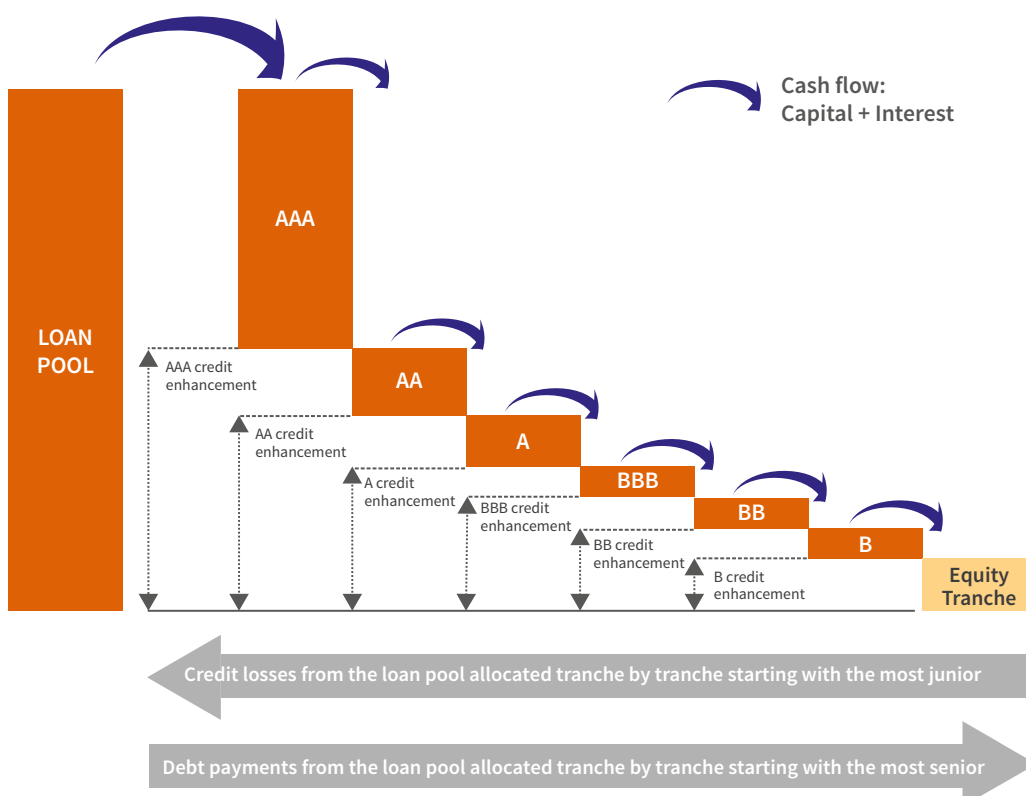
A good structure will put a lot of emphasis on creating watertight rules about how the cashflows generated by the underlying loan asset pool are distributed amongst the investors who hold these layered tranches.

Benefits of tranching to the end investor:

- Helps ensure that cash flows generated by the collateral are able to cover the cash flow promised to the investors
- Ensures credit risk is well managed and distributed commensurate to return level across the various layers
- Provides credit protection to the senior debt holders as payments from the underlying pool of assets are allocated down the structure from the most senior to the most junior tranches. Credit losses, on the other hand, flow up the structure with the junior tranches needing to be written down to zero before losses are recorded to the next tranche above. **For example a double-B tranche will have to be written down completely before losses are allocated to a triple-B tranche above it.** Please see Figure 2.

The waterfall structure shows us that there is substantial credit protection for the senior tranches, it also means, holders of tranches are either completely protected up to a certain level of losses of the underlying assets or completely wiped out if additional losses (above a certain level) have already wiped out junior tranches. **The main point of this illustration is to show that debt payments flow down the structure while credit losses flow up the structure.**

Figure 2: Securitised asset waterfall structure and cashflows



Source: AXA Investment Managers, 2018. For illustrative purposes only.

### c) Credit support

The third and final element of structuring that we believe is important to understand is credit support for investors. Credit support amounts to features in a tranching process that ensure losses in the underlying loan pool are not allocated to investors in the absolute first instance.

Benefits of credit support to the end investor

Credit support essentially provides protection against late payments, acts as a loss absorbing cushion or helps smooth the effects of delinquencies/defaults through either:

- the difference between the interest that is charged to the borrowers and the financing cost of the portfolio
- the use of reserve funds which are usually funded by the originator or
- through overcollateralisation (ensuring the face value of the underlying loan portfolio is greater than the value of the securities issued against them).

### Balancing the collateral maturity and credit quality with the benefits of a deal structure

By taking advantage of the various levers available to investors through the structuring process (benefits of an SPV, tranching and especially credit support mechanisms) a good deal structure could provide additional benefits in certain market conditions. For example in:

- **a rising credit spread environment**, a CLO manager would have the opportunity to replace maturing loans by higher yielding ones and/ or purchase loans at discount (as spread rises knock down loan prices). This could increase the level of excess cash flow and improve the valuation of the equity CLO tranches. This is only possible due to the CLO structure.
- **a recovering housing market**, investors in RMBS could go down the capital structure to be leveraged to the housing recovery – capturing more of the potential upside

### Risks

In the context of securitised assets, risks depend on the combination of the quality of the underlying collateral pool, the features of the deal structuring and the counterparties involved. The assessment of securitised assets is an assessment of these risks and how well the deal structure mitigates them.

A guide to the main potential risks associated with various types of structured securities is provided below. Although this is not an exhaustive list, it gives an overview of some of the main risks of securitised assets.

**Valuation risk:** Valuing securitised assets requires assumptions on default, prepayment and recovery rates need to be made on an ongoing basis. Different market participants might use different assumptions for their models. This could create a valuation risk for the investor.

**Liquidity risk:** Although in this paper we have covered the more liquid end of the securitised market, which is becoming more and more liquid, it is fair to say that the frequency of trading in such a market might be irregular and could impact the level of liquidity. Less frequent trading does not necessarily translate into 'no' liquidity as broker/dealers may be ready to offer bid/ask spreads, but it important to remember that these spreads would reflect normal and turbulent market conditions, with risks heightened in extreme conditions.

**Concentration risk:** In some cases (such as CMBS) it is possible that a securitised asset portfolio could be concentrated on a limited number of underlying loans. This could mean underperformance of a given loan in a concentrated portfolio and result in meaningful underperformance of the portfolio as a whole.

**Credit risk:** We have discussed credit enhancements to help mitigate credit risks. However, it is important to know that certain tranches can be completely wiped out when defaults reach beyond a certain level (of underlying collateral) and the cushioning from any initial loss absorbing tranches have been exhausted.

**General economic and market conditions:** The success of an investment strategy may be affected by general economic and market conditions, such as interest rates, prepayment rates, availability of credit, unemployment, exchange rates, inflation rates, economic growth (or uncertainty) and changes in laws, etc.

## Conclusion

The total outstanding float of the liquid securitised market (ABS, CLOs, RMBS and CMBS) in the US and Europe is approximately €3.5 trillion<sup>6</sup> as opposed to the size of traditional bond markets which is approximately €15 trillion and a total credit universe of approximately €26 trillion<sup>7</sup>.

The size and diversity of the securitised market give investors choice, which in turn means that these securitised assets have the **potential to cover various investors' needs in terms of underlying credit risk, associated risk premium, liquidity, maturity and cash flow.**

These securitised assets can also help investors **diversify** into deeper corporate and consumer credit with lower duration risk (being floating rate instruments) and have the potential to offer **higher yields** than traditional credit at similar rating levels.

Finally, given that:

- regulators have worked hard towards mitigating agency risk in this market;
- some proportion of securitised assets are retained on bank balance sheets as HQLA (High Quality Liquid Assets) for use as funding tools, and
- market reform has introduced more transparency, investor protection, management of conflict of interests and better alignment of incentives to the asset class,

investors willing to tackle the concept of securitisation could be in a better position to make informed decisions and take advantage of the benefits of this market.

<sup>6</sup> Source: SIFMA, data as at Q4 2017. <sup>7</sup> Source: AXA IM, SFD as of September 2017; based on Bloomberg; SIFMA; Thomson Reuters, Leveraged Loans Monthly; Preqin Quarterly Update: Private Debt 2016; White Clarke Group Global Leasing Report 2017; Artemis: Q2 2017 Catastrophe Bond & ILS Market Report; ICC Global Trade Finance Survey 2016; SFD External Managers Research team. Dollar amount converted to Euro using exchange rates as on 14.06.18, €0.86 to \$1.

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