



EUROPEAN CENTRAL BANK

EUROSYSTEM

# THE INCENTIVE STRUCTURE OF THE 'ORIGINATE AND DISTRIBUTE' MODEL

DECEMBER 2008

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DECEMBER 2008

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# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>5</b>	<b>3 MITIGATING CONFLICTS OF INTEREST: MARKET SOLUTIONS AND POLICY PROPOSALS</b>	<b>21</b>
<b>INTRODUCTION</b>	<b>7</b>	3.1 Possible impact of the turmoil on the incentive structure of the 'originate and distribute' model	21
<b>1 THE EMERGENCE OF THE 'ORIGINATE AND DISTRIBUTE' BUSINESS MODEL AND THE EVOLUTION OF THE STRUCTURED FINANCE MARKET UP TO THE TURMOIL</b>	<b>8</b>	3.2 Possible measures by market participants and competent authorities	21
1.1 The structured finance market in Europe and structural differences vis-à-vis the United States	8	<b>GLOSSARY</b>	<b>24</b>
1.2 The structured finance market has shown great impetus for complexity	10	<b>CHARTS</b>	
1.3 The period of exuberance before the turmoil and the reversal of mood during the turmoil	12	1 RMBS issuance volumes in the EU, the euro area and the United States since 1992	9
1.4 The current situation in the structured finance markets	13	2 ABS CDO issuance volumes in Europe and the United States since 2006	9
<b>2 ASSESSMENT OF THE MISALIGNMENT OF INCENTIVES IN THE 'ORIGINATE AND DISTRIBUTE' MODEL</b>	<b>15</b>	3 US, European and euro area banks' write-downs in the period from December 2007 to October 2008	9
2.1 Fundamentals of agency problems	15	4 Write-downs from structured finance products, broken down by region and sector	10
2.2 Actors in the 'originate and distribute' model and the possible misalignment of incentives	15	5 Structure of a mezzanine ABS CDO	10
2.2.1 Possible conflicts of interest between originators and intermediaries and/or investors (point A in the table)	16	6 SIVs' senior debt situation, 4th quarter of 2007	13
2.2.2 Possible conflicts of interest between intermediaries and investors (point B in the table)	17	7 Publicly-versus privately placed issuance of structured finance products	13
2.2.3 Possible conflicts of interest between third parties and investors and/or intermediaries (point C in the table)	18	8 Major actors in the 'originate and distribute' model	15
2.2.4 The role of investors as principals	20	<b>TABLES</b>	
		1 Comparison of European and US issuance volumes in 2007	8
		2 Conflicts of interest between types of actor	16







## EXECUTIVE SUMMARY

Since mid-2007 the financial system has been experiencing considerable turbulence that was triggered by rising delinquencies in the US subprime mortgages and that has led to dislocation in many segments of the money and credit markets. From the early stages of this turmoil, public authorities at the EU and the international level have sought to identify the weaknesses in the financial system, to draw policy lessons and to develop policy responses in order to strengthen financial stability and avoid the recurrence of similar events in the future. In the EU, the Ecofin Council mandated the European Central Bank (ECB), in cooperation to the Banking Supervision Committee (BSC) to assess “... *how the so-called ‘originate and distribute’ model, where banks do not hold the loans they originate but repackage and securitise them, has impacted on the incentives structures of credit markets, in a context characterised by a shift from the more traditional retail to interbank borrowing.*”

The prevalence of the ‘originate and distribute’ model<sup>1</sup> over the past twenty years led to a significant growth of the structured finance market in Europe, albeit at lower levels than in the United States. It must be underscored that, over recent years, the ‘originate and distribute’ model has delivered numerous benefits. However, along with the size of the market, the level of innovation and complexity has also increased. This, coupled with the opacity of information on complex structured finance products, posed challenges for appropriate risk assessment and valuation by investors, thus raising financial stability concerns. In fact, the substantial rating downgrades witnessed, in particular in July 2007, cast doubts on the valuation practices for (especially complex) structured finance products and the quality of underlying assets, resulting in a loss of investors’ confidence. In the aftermath of these events, a significant proportion of the structured finance products was re-intermediated in banks’ balance sheets, public issuance froze and the majority of structured finance products was either retained by banks or placed privately. Projections for the issuance of structured finance products in 2008

are pessimistic, predicting a significant decline in most types of instruments. Indeed, new securitisation issuance in Europe and the United States stood low in the first quarter of 2008, namely at only 12.8% of the activity observed in the same period of the previous year.

The aforementioned developments could partly be attributed to the incentive structure of the ‘originate and distribute’ model. Indeed, the securitisation process involves transactions among participants, with diverse incentives, that can be characterised as principal-agent relationships. As such, they are fundamentally vulnerable to certain adverse behaviour since agents seek to maximise their benefits while principals cannot fully observe and control the agents’ actions. In order to analyse the structure of incentives in the context of the ‘originate and distribute’ model, the report identifies four major types of participants, namely originators, intermediaries (including arrangers and collateral managers), third parties (the most important of which are credit rating agencies, as well as servicers, underwriters and trustees) and investors. The incentive for market participants (agents) to maximise their revenues (benefits) could have the following effects: *originators* may reduce their efforts in screening and/or monitoring borrowers and select originated assets in the event of their being sold to intermediaries; *intermediaries’* interests may conflict with investors’ objectives of balancing the risk/return trade-off; credit rating agencies (CRAs) may be less willing to effect timely downgrades; and servicers may not be inclined to adopt the most efficient measures with respect to problem loans. Moreover, *investors* may not have the proper incentives to conduct their own risk assessment of structured finance products, thus relying excessively on external ratings and failing to play an effective disciplining role with respect to the other actors in the ‘originate and distribute’ model. Finally, different types

<sup>1</sup> While the ‘originate and distribute’ model provides banks with the option to bear or to transfer risk, the report focuses on the latter in view of its greater potential for misalignment of incentives among market participants.

of investors (i.e. senior, mezzanine and equity investors) may have different incentives depending on the priority in the payment “waterfall” of the structured finance products. These points are elaborated upon further in the report, while evidence of conflicts of interest is provided for each of the four major types of participants in the ‘originate and distribute’ model.

There are various measures that could mitigate conflicts of interest in the ‘originate and distribute’ model. The lessons of the *turmoil in the financial market, and reputation concerns, could have disciplining effects on the behaviour of market participants*. However, they may not suffice in addressing the misalignment of incentives, and other market solutions or policy measures could thus play an important role in this respect. *Retaining ownership* of some risk can be a powerful device, although there could be problems in the practical implementation of this measure on account of e.g. the possibility for hedging and the potential accounting and prudential impacts it would imply. *Reviewing remuneration schemes and improving the documentation* of securitisation transactions could also be used to this end, especially in the case of possibly unanticipated conflicts that arise in adverse market conditions or in situations where the transaction documentation has not yet been “tested”. *Enhancing transparency* would facilitate the assessment and valuation of structured finance products and of counterparty risk, as well as the monitoring of the related markets. Determining the appropriate information to be disclosed and establishing the centralisation and timely dissemination of aggregated data would allow market trends and systemic risks to be monitored. *Enhancing corporate governance* can also play a pivotal role through the requirement to identify, address and disclose the potential conflicts of interest that market participants face and the ways in which they are addressing them; this could increase the awareness of market participants regarding conflicts of interest. Finally, *improving the framework for CRAs* has attracted a great deal of attention in the wake of

recent events, and relevant policy bodies have put forward proposals aimed at, among other, enhancing the information content of structured product ratings and maintaining the scrutiny of CRAs over the whole life of the transaction.

Since mid-2007, the financial system has been experiencing considerable turbulence that was triggered by rising delinquencies in the US subprime mortgages and that has led to disruption in various segments of the money and credit markets at the international level. From the early stages of this turmoil, public authorities at the EU and international level have sought to identify the weaknesses in the financial system, to draw policy lessons and to develop policy responses in order to avoid the recurrence of such events in the future. In the EU, the Economic and Financial Committee (EFC) prepared a note on key issues and follow-up actions, and the informal October Ecofin Council meeting endorsed a strategic roadmap, mandating, among other, work on the incentives structure of the ‘originate and distribute’ model, i.e. the business model according to which banks do not hold the credit assets they originate until maturity, but distribute them to different types of investors through the issuance of structured finance products.

While the ‘originate and distribute’ model provides banks the option to bear or transfer risk, the report will focus on the latter due to its greater potential for misalignment of incentives among market participants. It must be underscored that, over recent years, the ‘originate and distribute’ model delivered numerous benefits. However, the turmoil in the financial markets exposed a number of the weaknesses associated with that model, including incentive problems generated by its disintegrated structure.<sup>2</sup>

The report is structured as follows: the first chapter presents an overview of the emergence of the ‘originate and distribute’ model, especially regarding the differences between the European and US markets in terms of both size and structure, the complexity of products, the exuberance in the market prior to the turmoil, as well as the changes that have taken place over the past few months and predictions for the short-term future. It must be noted that the availability and consistency of data are far lower in Europe than in the United States, rendering analysis more tentative. Recently some private

initiatives<sup>3</sup> were launched to try to centralise relevant information, such as prospectus and servicer reports for a large number of European structured finance products, while there are also initiatives by the industry that are aimed at improving disclosure.<sup>4</sup>

The second chapter provides an assessment of the misalignment of incentives related to the ‘originate and distribute’ model, introducing the major actors, their roles, the possible misalignment of incentives and evidence of conflicts of interest in the structured finance market. Finally, the third chapter presents possible market solutions and policy proposals for mitigating the misalignment of incentives identified in the report.

2 Additional weaknesses relate to the level of complexity and opaqueness of structured credit products, the role of credit rating agencies and issues relating to the prudential framework, such as the treatment of securitisation exposures and off-balance sheet exposures to non-consolidated vehicles and the arbitrage opportunities between banking and trading book. However, these issues are beyond the scope of this report.

3 See for instance the Global ABS Portal of Lewtan Technologies; [www.globalabsportal.com](http://www.globalabsportal.com).

4 For instance, the initiatives on increasing transparency in the reporting of securitisation exposures under Pillar 3 of the Capital Requirements Directive (association leads: EBF, LIBA, ESBG, EACB, EAPB) and on organising comprehensive, frequent and relevant statistical data: new securitisation data report (association leads: ESF, SIFMA, CMSA, ICMA).



## I THE EMERGENCE OF THE 'ORIGINATE AND DISTRIBUTE' BUSINESS MODEL AND THE EVOLUTION OF THE STRUCTURED FINANCE MARKET UP TO THE TURMOIL

### I.1 THE STRUCTURED FINANCE MARKET IN EUROPE AND STRUCTURAL DIFFERENCES VIS-À-VIS THE UNITED STATES

#### THE 'ORIGINATE AND DISTRIBUTE' MODEL IS LESS PREVALENT IN EUROPE THAN IN THE UNITED STATES ...

In spite of its very dynamic development before the turmoil, the European structured finance market remains smaller than the US market and relatively more focused on collateralised debt obligations (CDOs),<sup>5</sup> possibly indicating a higher level of complexity.<sup>6</sup> In 2007, total issuance volumes in the United States, as presented in Table 1, were five times higher than in Europe. In particular, the supply of mortgage products funded through securitisation in Europe has been relatively limited to date, as 50% of US mortgages were funded via securitisation in 2007,<sup>7</sup> compared with 13% in Europe.<sup>8</sup> This is similar to the percentage of mortgages in Europe that were funded through covered bonds (which stood at 11%), but in this case there is usually no credit risk transfer and assets thus remain on the originators' balance sheet. Based on figures, the comparatively low level of mortgages, whose risks are transferred off the balance sheet, could be considered evidence supporting the view that the weakening of credit standards may not be as important in Europe as in the United States.

In terms of the different types of products in the European market, residential mortgage-backed securities (RMBS) and CDOs accounted for three-quarters of total issuance in 2007. Compared with the United States, CDOs

accounted for a more significant part of issuance in Europe (25%, compared with 10 %, in 2007), while the importance of asset-backed securities (ABSs) remained relatively limited.

#### ... RMBS AND ABS CDOS, IN PARTICULAR, HAVE DEVELOPED PREDOMINANTLY IN THE US MARKETS ...

As these segments were among those most affected by the sub-prime mortgage crisis, a specific focus on them helps to better understand differences between the United States and Europe.

Looking at the issuance volumes on the RMBS market since 1990, it could be observed that the activity of EU originators was very limited until 2002. At the same time, the RMBS issuance in the United States was growing

5 All acronyms are defined in the glossary.

6 Note that this section provides an aggregate view of the development of the structured finance market in Europe, as wide differences can be observed among EU Member States. For instance, Chart 1 highlights the very high levels of RMBS issuance for some non-euro area countries. At the same time, issuance of structured finance products in the new Member States has been rather limited due to the abundance of other sources of funding and national specificities (i.e. relatively small markets that are not characterised by large amounts of appropriate assets and local investors).

7 In 2007, total mortgage lending amounted at USD 14,560 billion (according to the Federal Reserve Board), with mortgages worth USD 7,210 billion being funded via agency and non agency securities (according to SIFMA).

8 In the third quarter of 2007, total mortgage lending stood at EUR 5,373 billion (according to the European Mortgage Federation), with EUR 685 billion funded through securitisation (according to the European Securitisation Forum). Data for Europe include issuance in Austria, Belgium, Germany, Denmark, France, Greece, Hungary, Ireland, Italy, the Netherlands, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and multinational issuance.

Table 1 Comparison of European and US issuance volumes in 2007

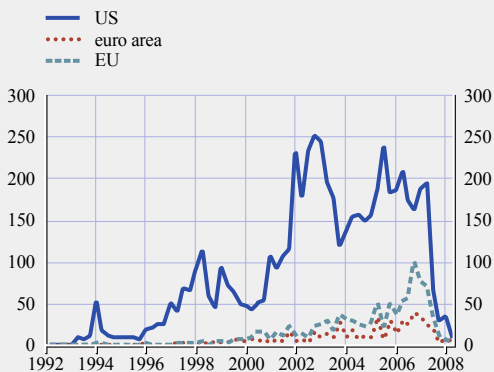
(in EUR billions)			
Financial instrument	Europe	United States	Difference
ABS	57.8	666.9	x11.5
RMBS and CMBS	307.3	1,485.5	x4.8
CDOs	88.7	252.5	x2.8
<b>Total</b>	<b>453.7</b>	<b>2,404.9</b>	<b>x5.3</b>

Source: European Securitisation Forum.

Notes: European ABS issuance includes auto, credit card, leases, loans, receivables and other; European CDO issuance numbers only include euro-denominated issuance regardless of the country of collateral. A substantial percentage of CDOs are backed by multi-jurisdictional collateral; US ABS issuance includes auto, credit card, home equity, student loan, equipment leases, non-jumbo mortgage, and other; US CDO issuance numbers only include US dollar-denominated issuance. US dollar transactions may include European transactions which are denominated in US dollars.

**Chart 1 RMBS issuance volumes in the EU, the euro area and the United States since 1992**

(in EUR billions)



Source: Dealogic/DCM Analytics.  
Notes: Originally, the amounts were reported in US dollars. ECB average rates were used for their conversion to euro.

to reach USD 200 billion (approximately EUR 229.3 billion) in the first quarter of 2002. Although the European market began to expand significantly until the beginning of 2007, the gap vis-à-vis the United States remained very large (see Chart 1). This difference is even larger in comparison with the euro area, which accounted for less than the half of European RMBS issuance in 2007.

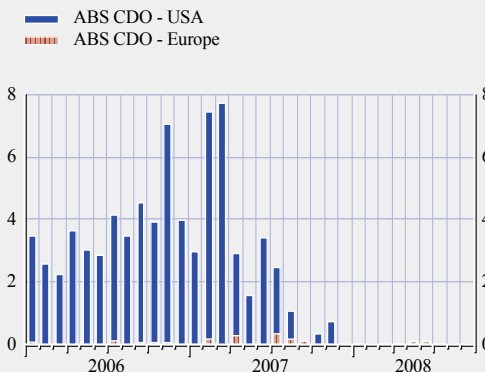
On the ABS CDOs market, the transatlantic difference was even larger, as European issuance of these products was close to zero, while monthly US issuance was significantly higher and exceeded USD 10 billion (EUR 7.7 billion) in March 2007 (see Chart 2).

**... BUT THE RISKS THAT ORIGINATED IN THE UNITED STATES WERE WIDELY DISTRIBUTED ABROAD AND NOTABLY IN EUROPE**

Despite the relatively smaller size of the structured finance market in Europe, European actors are exposed to related risks since they invested in US structured finance products with underlying sub-prime assets. Compared with US transactions where a third of the issuance remained on US banks' balance sheets, approximately 60% of the issuance in Europe remained in European hands.<sup>9</sup> As credit risk flowing out of the United States ended up in the hands of global investors, this

**Chart 2 ABS CDO issuance volumes in Europe and the United States since 2006**

(in EUR billions)



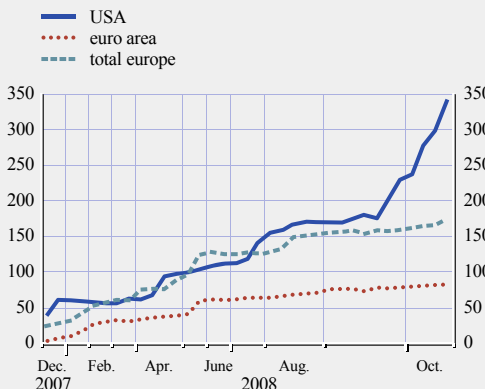
Source: JP Morgan Global ABS/CDO Weekly Market Snapshot, 3 July 2008.  
Notes: Originally, the amounts were reported in US dollars. ECB average rates were used for their conversion to euro.

explains why the recent events in the United States have impacted financial intermediaries in Europe. Indeed, although the aggregate amount of write-downs is higher in the United States, the amount of write-downs of European banks (including UK and Swiss banks) is remarkable despite the fact that problematic assets were originated in the US (see Chart 3).

<sup>9</sup> Basel Committee on Banking Supervision, The Joint Forum, "Credit Risk Transfer", April 2008.

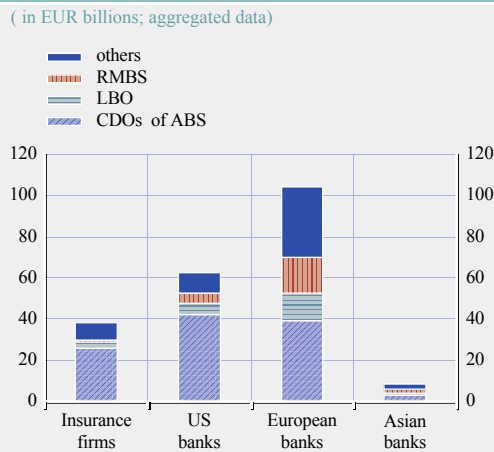
**Chart 3 US, European and euro area banks' write-downs in the period from December 2007 to October 2008**

(in EUR billions)



Source: Bloomberg.  
Notes: Originally, the amounts were reported in US dollars. ECB average rates were used for their conversion to euro.

**Chart 4 Write-downs from structured finance products, broken down by region and sector of May 2008**



Source: Creditflux.  
Notes: Originally, the amounts were reported in US dollars. ECB average rates were used for their conversion to euro.

Looking only at issuance, the importance of European write-downs would have appeared paradoxical. However, focusing on the details of the write-downs, it can be understood when taking the investment channel into consideration. European banks' write-downs were due to their holdings of ABS CDOs and RMBSs based on US collateral (see Chart 4). In addition, while risks were geographically dispersed, a significant part did remain in the banking sector, instead of being transferred to other financial sectors. In May 2008, only a residual part of the write-downs was supported by insurance companies.<sup>10</sup> Nonetheless, it could be argued that, for some countries, the latter were not subject to "fair value" valuation rules that limited the continuous spiral of depreciation.

### 1.2 THE STRUCTURED FINANCE MARKET HAS SHOWN GREAT IMPETUS FOR COMPLEXITY

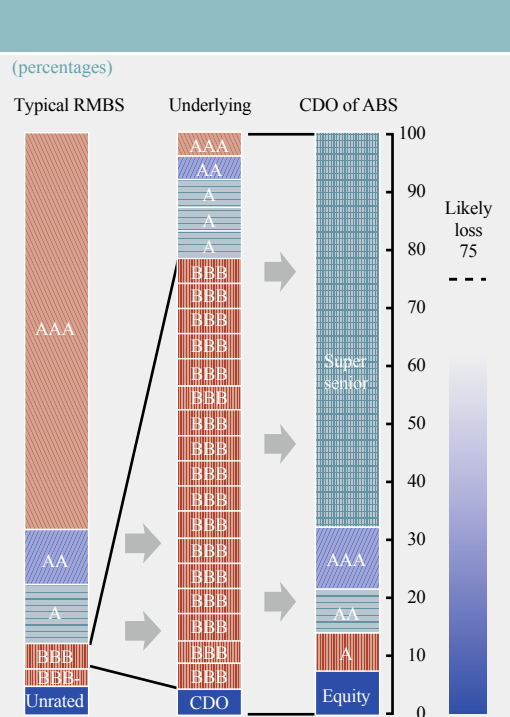
Since 2004, the market for structured finance products has developed rapidly both in the United States and in Europe. The level of complexity of structured finance products has increased substantially with innovations blurring the distinction between market and credit risk. Highly complex products that demonstrate this trend include ABS CDOs, CDO-squared,

leveraged super-senior products, constant proportion portfolio insurance (CPPI) and constant proportion debt obligations (CPDOs).

For illustrative purposes, we will shortly elaborate on ABS CDOs. Contrary to standard ABS products, ABS CDO is a "two-layer" securitisation, meaning that the underlying assets of the CDO are RMBS tranches of diversified pools of mortgages. Therefore, the risk characteristics of ABS CDOs are far more difficult to apprehend, and the impact of defaults is more severe in periods of stress. By construction, losses could be much larger, especially for super senior tranches.<sup>11</sup> Indeed the latter are partly made of non-AAA tranches of other structured products (see Chart 5), meaning

10 In particular, the vast majority of the write-downs for insurance companies (more than 90%) concern monoline insurers and one individual insurance company.  
11 For more details, see Annex C of Basel Committee on Banking Supervision, The Joint Forum, "Credit Risk Transfers", April 2008, and International Monetary Fund, "The Influence of Credit Derivative and Structured Credit Markets on Financial Stability", *Global Financial Stability Review*, April 2008.

**Chart 5 Structure of a mezzanine ABS CDO**



Source: Citi.

that holders of super-senior tranches of ABS CDOs are indirectly exposed to lower-quality tranches (e.g. BBB). They benefit from credit enhancements, which may not be sufficient, however, to absorb losses in some extreme market conditions, especially as historical data on losses cover an only very short period (i.e. less than five years) and correspond to a benign part of the credit cycle.

#### WHAT WERE THE DRIVERS OF COMPLEXITY?

Product innovation in structured finance was motivated by different factors, including the following:

- As in other markets, investors had a greater risk appetite in recent years that was due to the *benign macroeconomic conditions* and were most willing to invest in “new” products that offered a different risk/return profile than conventional assets/products. Structured finance products filled this gap, and thus experienced high growth and a large increase in complexity. In this period of exuberance, market participants were tempted to relax their standards with respect to risk management, which could have an adverse impact on their financial results, as well as on their standing in terms of liquidity and solvency in the event of a turn in the economic cycle.
- *Search for yield* – the market was characterised by low interest rates, ample liquidity and small differences in the yields of assets bearing different levels of risk. This led investors to embark on a search for yield, increasing their willingness to invest in new and/or exotic instruments and to increase the leverage of their investment without keeping in mind that higher yield means higher risk.
- *Growing investor base for structured products* – the aforementioned search for yield created a wide range of investors who had an appetite for increasingly complex structured finance products. For instance, hedge funds became important players in the structured finance market and their
- willingness to trade mezzanine and equity tranches contributed to greater liquidity in the secondary markets. Pension funds and insurance companies, on the other hand, invested primarily in senior tranches and tended to have a longer-term investment horizon. Finally, money market funds invested in short-term paper issued by asset-backed commercial paper (ABCP) conduits. Furthermore, due to the different treatment of the trading book and the banking book, financial institutions had incentives to move positions from the banking book to the trading book. During a period of low volatility, such a move would result in lower capital charges and increased market value of assets, possibly leading to increased demand for structured finance products.
- *Market completeness* – new products were developed to allow banks and investors to hedge their positions. For instance, dealers developed indices<sup>12</sup> which gained broad market acceptance on account of transparent rules, liquidity and operational efficiency, and thus facilitated the development of specific securitisation structures. Those products also completed markets because they enabled investors to gain direct exposure to assets that had traditionally been the preserve of banks.
- *Search for fees* – in this respect, complex structures offered opportunities for increased revenues for various market participants. For instance, large banks could act as originators, arrangers and sponsors of ABCP conduits and structured investment vehicles (SIVs), as well as sellers of structured finance products, market-makers and proprietary traders, without necessarily retaining the associated credit risk. In addition, as both the size and the level of complexity in the structured finance market grew, CRAs increased their influence and earnings through fees for credit assessments of structures, as well as through consulting fees for structuring deals.

<sup>12</sup> For instance, CDS indices, leveraged-loan CDS indices and indices on ABSs.

While the aforementioned factors provided incentives for increased complexity, existing *regulation* did not mitigate them through significantly differentiating between the prudential treatment of complex instruments and that of more standardised products.<sup>13</sup>

### 1.3 THE PERIOD OF EXUBERANCE BEFORE THE TURMOIL AND THE REVERSAL OF MOOD DURING THE TURMOIL

#### INCREASED COMPLEXITY CHALLENGED THE ABILITY OF MARKET PARTICIPANTS TO EFFECTIVELY MONITOR AND VALUE RISKS, GIVING RISE TO FINANCIAL STABILITY CONCERNS

Many investors (including large global banks) did not fully take into account all types of the risk inherent in structured finance products and relied too heavily on the assessment of other market participants, mainly CRAs. While this over-reliance could in some cases be attributed to inadequate diligence on the part of the investor, the challenge of an ongoing screening and monitoring of risks should not be underestimated, especially in view of the insufficient information on the underlying assets through the life of the transaction. Investors usually received information at the issuance stage (i.e. in the prospectus) and, subsequently, some elements on asset performance. However, this information was neither standardised nor digitised, and thus difficult to use for valuation purposes.

Nevertheless, even for transactions where information was available, some investors did not conduct proper risk monitoring, since the return was not enough to compensate for such an investment in terms of time and resources.<sup>14</sup>

The complexity of some multiple-layered, structured finance products, such as ABS CDO tranches, also posed significant challenges regarding valuation. As recent events have indicated, the valuation of such products relied heavily on market prices, assuming smooth and liquid markets. However, the substantial downgrades of ratings, both in number and in terms of their severity,<sup>15</sup> cast significant doubts

on the robustness of the rating methodology for these products, leading to uncertainty about the quality of underlying assets and resulting in a loss in investors' confidence. Moreover, under these conditions, price discovery was virtually impossible, forcing banks to increasingly resort to models based on unobservable inputs, which becomes evident in the proportion of assets that fell from Level 2 to Level 3<sup>16</sup> in their last reporting periods.

#### THESE DEVELOPMENTS LED TO A RE-INTERMEDIATION OF TRANSFERRED STRUCTURED FINANCE PRODUCTS INTO THE BALANCE SHEETS OF CERTAIN BANKS

The sharp widening of credit spreads caused the market value of many products to hit their respective triggers.<sup>17</sup> Some investors were forced to liquidate (forced sales), some restructured and others, especially those who had invested in ABCP with full support, drew on the backup liquidity lines provided by their sponsoring bank. Consequently, some structured finance products had to be re-intermediated in banks' balance sheets. Moreover, the sudden and sharp loss of confidence on financial markets affected even structures having a very small or no exposure to the US subprime market that faced difficulties in rolling over debt, and thus had to be integrated in banks' balance sheets (see Chart 6).

13 However, the implementation and further improvement of the Basel II framework/Capital Requirements Directive will result in a different treatment of these instruments.

14 For instance, one bank stated that losses were attributed mainly to an over-reliance on the AAA rating of the portfolio securities that, in retrospect, did not perform in line with the rating.

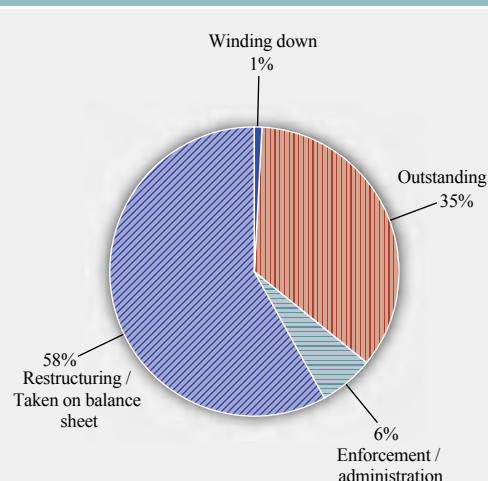
15 In particular, the avalanche of downgrades in July 2007, when Moody's downgraded 184 tranches of CDOs backed by RMBS on 11 July, while Standard & Poor's downgraded 562 classes of RMBS on 12 July and 93 tranches of CDOs on 19 July.

16 The Financial Accounting Standards Board (FASB) has introduced a three-level taxonomy to categorise marking to market. Level 1 is for assets that have observable market prices, Level 2 for less frequently traded securities that can be priced by reference to similar assets and Level 3 for assets with unobservable inputs where the value is based on models.

17 When the market value of the underlying portfolio falls below a trigger threshold, the trading strategy changes to one aimed at protecting senior liability holders, typically requiring a de-leveraging or liquidation of the portfolio. SIVs, CPDOs, CPPI, market value CDOs and leveraged super-senior products are examples of market value products.



Chart 6 SIVs' senior debt situation, 4th quarter of 2007



Source: Lehman Brothers, European Securitised Products Weekly, 11 January 2008.

Note: The values shown for SIVs indicate the estimated total size of the vehicle.

**PUBLIC ISSUANCE VOLUMES WERE AFFECTED SIGNIFICANTLY AND ARE EXPECTED TO DECLINE FURTHER, WHILE A SIGNIFICANT PROPORTION OF SECURITISED PRODUCTS IS BEING RETAINED OR PRIVATELY PLACED**

The second half of 2007 was characterised by the disappearance of primary issuance. Overall issuance in Europe stood at EUR 454 billion in 2007. RMBS accounted for more than half of total issuance, while the share of CMBS remained at approximately 10% in 2007. In the extreme case of ABS CDOs, the market froze completely. New securitisation issuance also stood low in the first quarter of 2008, amounting (for Europe and the United States) to only 12.8% of the activity observed in the previous year. Looking at the European market, the European Securitisation Forum forecasts predict a marked decrease in the general volume of securitisation issuance in 2008 (-41%), with predominantly the amount of RMBS being affected.

**1.4 THE CURRENT SITUATION IN THE STRUCTURED FINANCE MARKETS**

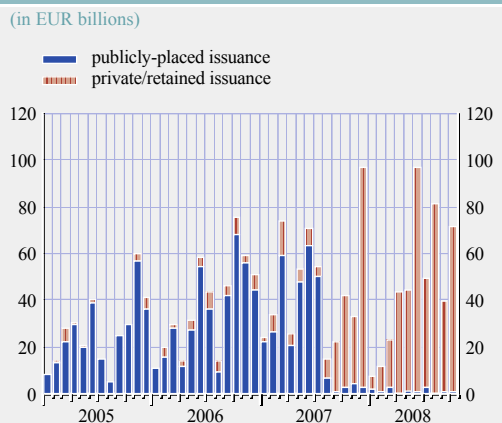
**A LOW DEMAND FOR STRUCTURED FINANCE PRODUCTS, EVEN IN THE CASE OF AAA RATINGS**

The pendulum swung back during the turmoil. Most investors lost confidence in structured finance products and risk aversion increased. As a result, issuance of many products came to a halt. Demand remains very limited, even in the case of AAA-rated products. In general, this can be explained by:

- broad-based circumspection towards CRAs, which has generated uncertainty among investors with respect to the inherent risks in structured finance products;
- the impact of the turmoil on ABCP conduits and SIVs, which were major buyers of AAA-rated products; and
- changes in investors' behaviour, in particular money market funds or corporate treasurers, who shifted to more traditional products, such as certificates of deposits.

Since August 2007, a substantial proportion of new issuance has been retained by banks, whereas the majority of the issuance had

Chart 7 Publicly-placed versus private/retained issuance of structured finance products



Sources: Bloomberg, International Insider, Informa GM, IFR and Citi.

Note: Publicly-placed issuance includes only deals that have been publicly marketed. Private/Retained issuance includes deals that have been privately-placed or retained by the originator. The Private/Retained issuance figures include all such deals to Citi's knowledge, but may not include such deals where there is no public information available. For some deals priced since August 2007 it has not been clear whether the deal has been fully placed.

previously been publicly placed (see Chart 7). A possible explanation is that these new transactions are being used mostly for funding purposes through the repo market or the central banks' discount window and to a lesser extent for credit risk transfer.

**2 ASSESSMENT OF THE MISALIGNMENT OF INCENTIVES IN THE 'ORIGINATE AND DISTRIBUTE' MODEL**

This section first describes the fundamentals of principal-agent problems in the 'originate and distribute' model. It then highlights the roles of the different actors in this model and describes specific agency problems that affect certain relationships among the actors. It also provides practical examples of agency problems, indicating how they have either materialised or how they have been addressed by the market.

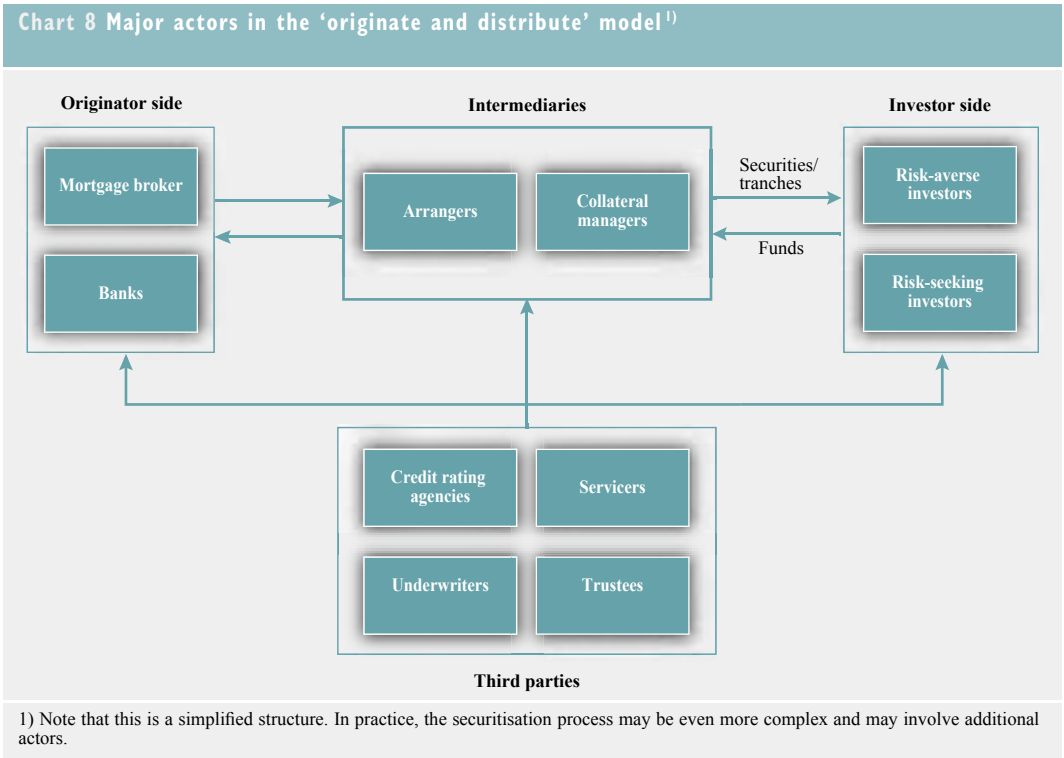
**2.1 FUNDAMENTALS OF AGENCY PROBLEMS**

The 'originate and distribute' model involves transactions among participants dealing with each other at arm's length and according to market principles; hence, the efficient functioning of the relationships between the various participants is crucial. Many of these relationships can be characterised as principal-agent relationships, where one actor (the agent) is supposed to act in the best interest of another actor (the principal). Such relationships are fundamentally vulnerable to certain inefficient and adverse behaviour. This is due to the fact that agents usually seek to maximise their own

benefits even when they do not coincide with those of the principals. In addition, principals usually cannot perfectly observe and control the agents' actions. In other words, agency problems are caused by two factors: differences in the objectives (incentives) of the parties and differences in the information available to them. Agency problems are sometimes referred to as conflicts of interest or, when clearly unaddressed, a misalignment of incentives. A proper alignment of incentives and an adequate flow of information between the participants in the 'originate and distribute' model are crucial for the efficient performance of structured finance markets.

**2.2 ACTORS IN THE 'ORIGINATE AND DISTRIBUTE' MODEL AND THE POSSIBLE MISALIGNMENT OF INCENTIVES**

How important are agency problems in the 'originate and distribute' model and between which actors can they arise? A broad categorisation leads to the identification of four major groups of actors in the 'originate and



**Table 2 Conflicts of interest between types of actors**

Type of actor	Intermediaries	Third parties (CRAs and servicers)	Investors
Originators	A		A
Intermediaries		C	B
Third parties (CRAs and servicers)			C

distribute' model (see Chart 8): originators, intermediaries, investors and third parties. Originators interact directly with borrowers and generate the assets that are subsequently sold to the intermediaries. The latter then set up special purpose vehicles (SPVs), which purchase the originated assets and issue securities backed by these assets. Investors buy the asset-backed securities issued by the SPVs according to their respective risk appetites. In addition, the 'originate and distribute' model involves a number of third-party service providers and external evaluators, such as CRAs, trustees, underwriters and servicers, who perform specific tasks for the various participants, but do not buy or sell assets themselves.<sup>18</sup>

The organisation of the 'originate and distribute' model thus implies that there are many bilateral relationships at work. The following table summarises the pairs of actors between which agency problems may arise. The conflicts indicated in Table 2 are described in more detail below. The section concludes with a discussion on investors as the ultimate principal of the securitisation process.

### 2.2.1 POSSIBLE CONFLICTS OF INTEREST BETWEEN ORIGINATORS AND INTERMEDIARIES AND/OR INVESTORS (POINT A IN THE TABLE)

*Role of Originator:* originators underwrite and initially fund assets. Some originators, such as independent mortgage brokers, focus exclusively on the underwriting and funding business. Since their profit increases with the volume of originated assets, such originators

typically seek to achieve a high turnover by selling assets quickly to free capacity. Banks and other regulated financial institutions also play an important role as originators.

*Potential misalignment of incentives between originators and intermediaries/investors:* the fundamental agency problem involving originators is potentially reduced effort in screening and/or monitoring borrowers and in selecting assets when the originated assets are sold to intermediaries. Such conflicts may be muted for originators who hold a portion of assets on their balance sheet, act as intermediaries and/or perform other tasks of the 'originate and distribute' model. However, almost by definition, the 'originate and distribute' model implies that the originators most often seek to sell the originated assets to intermediaries. In this respect, to the extent that screening and monitoring deteriorate, investors will suffer from the lower quality and performance of the assets.

*Some evidence of conflicts involving originators:* conflicts of interest involving originators in the US subprime mortgage markets are beginning to be well documented. For example, Mian and Sufi report that the expansion of US mortgage loans to weak borrowers during the period 2001-2006 was largely due to the entry into the market of independent brokers. In addition, default rates of mortgage loans were higher in regions where a higher proportion of these loans were securitised. This study thus provides some indirect support for the conjecture that originators of securitised loans have an incentive to boost volumes at the expense of average loan quality.<sup>19</sup>

<sup>18</sup> Participants in the securitisation process may serve multiple roles. For example, an originator of residential mortgages may also serve as the servicer of the securitised assets. An investment bank may act simultaneously as the originator and arranger for certain transactions such as synthetic CDOs.

<sup>19</sup> Atif Mian and Amir Sufi, "The Consequences of Mortgage Credit Expansion: Evidence from the 2007 Mortgage Default Crisis", National Bureau of Economic Research, NBER Working Paper No 13936, April 2008.

Keys et al find that US originators made little effort to collect “soft” information on borrowers, which would have been useful in gauging the borrowers’ quality when the loans were securitised. The authors also found that the default rates of such loans were around 20% higher than those of comparable non-securitised loans. This study thus provides direct evidence concerning originators’ reduced efforts in the screening of the loans to be securitised.<sup>20</sup>

The deterioration of lending standards in the US subprime mortgage markets may have been due, in part, to the fact that, in recent years, originators sold the first-loss tranches of securitisations rather than retained them, as had been the practice earlier. By contrast, in other structured finance markets that have not experienced deterioration in lending standards, such as that for credit card loans, originators still regularly hold onto a portion of the transaction.<sup>21</sup> Abstracting from the possibility for hedging, the evidence thus suggests that retention of ownership (which may be in the form of holding the first-loss tranche, but also granting warranties or responsibilities with respect to credit losses) can be effective in aligning incentives.

### 2.2.2 POSSIBLE CONFLICTS OF INTEREST BETWEEN INTERMEDIARIES AND INVESTORS (POINT B IN THE TABLE)

*Role of intermediaries:* the most important intermediaries are arrangers and transaction managers.

Arrangers purchase assets and bundle them into pools. Arrangers play a critical role in designing transaction structures, which include defining the “waterfall”, or the cash flows to the differing tranches of securities backing a transaction. Arrangers are also a key source of innovation in the ‘originate and distribute’ model. Their role as intermediaries is important, as the transaction structures are designed and their marketing is timed to meet the demands of investors. Arrangers are typically compensated through fees charged to investors.

Transaction managers manage the special purpose vehicles (SPVs) set up for the purposes of the securitisation transaction, manage the pool of assets on behalf of investors. This often involves trading assets in the portfolio or replacing non-performing assets with assets of higher quality. By managing vehicles that have issued tranches of securities, managers must cater for investors with differing risk appetites. Managers often make decisions with respect to the risk and return of the portfolio, taking into consideration the different preferences that investors have in relation to the type of tranche they hold. Their compensation typically comprises management and incentive fees, with differing components usually linked to the different tranches and, hence, types of investors. In addition, managers sometimes hold a portion of the equity notes.

*Potential misalignment of incentives between intermediaries and investors can be attributed, to a large extent, to the remuneration schemes of intermediaries and a possible bias towards certain tranche holders:* the agency problem between intermediaries and investors derives from the intermediaries’ objective of maximising revenues from providing services, which may conflict with investors’ objectives of balancing the risk/return trade-off. Intermediaries may thus put together securitisation pools or structured finance transactions that are riskier than investors desire or realise. For example, arrangers may seek to maximise returns for a given credit rating by marketing innovative and complex structures. Transaction managers, in their effort to maximise the portfolio’s return, may take excessive risks or build a portfolio of suboptimal quality. The conflict of interests between intermediaries and investors is made more complicated by the different claim

20 Benjamin J. Keys, Tanmoy Mukherjee, Amit Seru and Vikrant Vig, “Did Securitisation Lead to Lax Screening? Evidence From Subprime Loans 2001-2006”, mimeo, 2008.

21 See Edward M. Desear, “Credit Card Structures and their Ability to Weather Hard Times”, *The Journal of Structured Finance*, Spring 2008.



structures of the tranches. Each tranche is characterised by a given priority in the payment “waterfall”, which implies that the investors in the different tranches (i.e. the senior, mezzanine and equity tranches) have differing, or even conflicting, objectives (“tranche warfare”).<sup>22</sup> This implies that the conflicts of interest between intermediaries and investors may involve both strategies where the intermediary acts to the detriment of all investors, or in favour of some but to the detriment of other investors. For example, equity tranche investors normally benefit from products composed of assets with high default correlations, as any default eats into their investment. By contrast, the senior tranche investors benefit more from assets with low default correlations, as the first few defaults are absorbed by equity investors. To the extent that intermediaries participate in the residual profits that accrue to equity tranche holders (e.g. by holding a portion of the equity tranche), a concern may then be that intermediaries favour equity tranche holders over senior tranche holders.

*Some evidence of conflicts involving intermediaries:* evidence on conflicts involving intermediaries is rather scarce. In 2005, a large bank that arranged and managed CDOs was sued by an investor for mismanagement of the CDO. The lawsuit arose because of losses incurred in the CDO structure, in which the asset manager had included some tranches from other of its own poorly performing CDOs.<sup>23</sup> A more recent court case involves the allegation of mismanagement of a synthetic CDO, including the violation by the manager of the rules for substituting assets in the portfolio.<sup>24</sup> More indirect evidence on the importance of balancing the interests of the different investors (and hence scope for the misalignment of incentives) are the numerous structural features of securitisation transactions that seek to protect certain investors. Two examples of such features are the “waterfall”, which governs the redemption of tranches and ensures that senior tranche holders enjoy priority over equity tranche holders, and remuneration schemes that link the intermediaries’ fees to the performance of all

tranche holders. The importance of such conflicts is also witnessed by the fact that rating agencies explicitly take such investor conflicts into account.<sup>25</sup>

### 2.2.3 POSSIBLE CONFLICTS OF INTEREST BETWEEN THIRD PARTIES AND INVESTORS AND/OR INTERMEDIARIES (POINT C IN THE TABLE)

*Role of third parties:* third parties include CRAs, servicers, underwriters and trustees. The focus here is on CRAs and servicers.

CRAs provide assessments of credit risk and the payoffs for securitisation and structured finance transactions, both initially and during the lifetime of the transaction. A credit rating represents the agency’s opinion regarding credit quality, either in terms of default probability or in terms of expected loss. CRAs receive fees from arrangers in order to deliver an initial rating before issuance and subsequently in order to monitor the rating.

Servicers, which are generally used for mortgage-backed and consumer ABS transactions, are responsible for the collection of interest and principal payments from the borrowers. If a borrower is unable to fulfil its obligations and defaults, the servicer must decide on the appropriate measure to apply, which might include the modification of loan terms or foreclosure. Servicers receive a periodic fee, which is usually calculated as a flat percentage of the outstanding principal balance of the loans. They also receive additional fees if they manage defaulted assets.

<sup>22</sup> Risk-seeking investors such as hedge funds often target the riskiest tranche (equity), while more risk-averse investors such as pension funds, insurance companies or banks are typically buyers of the high-rated senior tranches.

<sup>23</sup> Since the allegations were settled privately between the parties, it is not possible to say whether this was a case where an intermediary acted to the detriment of investors.

<sup>24</sup> See [http://www.daviddoble.com/data/assets/pdf\\_file/53207/newsletter\\_dec.pdf](http://www.daviddoble.com/data/assets/pdf_file/53207/newsletter_dec.pdf)

<sup>25</sup> See Standard & Poor’s, “Balancing Debtholder and Equityholder Interests in CDOs”, 13 November 2002, as an example of how rating agencies address the problem of “tranche warfare” in the case of CDOs.

*Potential misalignment of incentives between third party providers and investors can largely be attributed to the fee-based compensation schemes:* since third parties receive all or at least a large part of their compensation through fees, they might be biased towards maximising fee revenues rather than acting in the best interests of intermediaries and investors.

In the case of CRAs, concerns have been raised that, since such a large percentage of their revenues is attributable to structured finance transactions, they might be tempted to expand rating coverage to structured products that are exceedingly difficult to evaluate, such as highly innovative and complex structures, or to products containing assets for which very few historical data is available. Rating such products increases CRAs' revenues; however, doubts may exist about the reliability of the ratings. The "issuer pays" model may also have led the CRAs to be too compliant with arrangers, potentially harming the interests of investors. In addition, there is a concern that CRAs have been reluctant to undertake timely downgrades of some structured products. Finally, the CRAs may have not adequately communicated information to investors regarding the likely differences in the rating performance of structured finance products and traditional bonds.

Where servicers are concerned, a conflict of interests between them and intermediaries or investors may arise when the servicers' remuneration scheme does not adequately reflect the different costs that they incur when they perform certain tasks, such as modifying loan terms or liquidating assets. Unless servicers receive adequate compensation for the different actions that are possible, they may not be inclined to adopt the most appropriate measures with respect to problem loans. For example, servicers may postpone foreclosure to avoid the costs associated with asset liquidations. Inefficient servicer decisions may reduce the value of a pool of assets and, in particular, the recovery rates of assets that ultimately default.

*Some evidence of conflicts involving CRAs:* the Committee of European Securities Regulators

(CESR) prepared a report for the European Commission in which it addresses the role of rating agencies in structured finance and the relevant conflicts of interest.<sup>26</sup> Drawing on market views, the CESR has emphasised, among other things, the need for greater control of the relationships between the CRAs and intermediaries and for greater transparency regarding the different business activities and the fees the agencies receive from given issuers. The Securities and Exchange Commission (SEC) in the United States also investigated potential conflicts of interest faced by CRAs in relation to the rating of mortgage-backed securities.<sup>27</sup> One of the findings of the probe is that, in some instances, CRA employees who were involved in the pitching of business and fee negotiation were also involved in the credit analysis.<sup>28</sup> The current debate on the AAA ratings assigned to CPDOs by two of the three main rating agencies may also offer some insight into potential conflicts of interest that affect the CRAs.

*Some evidence of conflicts involving servicers:* evidence on servicer performance suggests that conflicts of interest can materialise between servicers and intermediaries and/or investors. An empirical study of servicers in mortgage securitisations has found that servicers make more efficient decisions when they hold a portion of the equity tranche.<sup>29</sup> This is also reflected in the market valuation of tranches of such structured deals, in that the spreads of the lower-rated bonds in these deals are significantly lower when the servicer keeps the first loss position.

26 Committee of European Securities Regulators, "CESR's Second Report to the European Commission on the compliance of credit rating agencies with the IOSCO Code and The role of credit rating agencies in structured finance", May 2008, available at <http://www.cesr-eu.org/index.php?page=groups&mac=0&id=43>.

27 More information can be found at <http://www.sec.gov/news/studies/2008/craexamination070808.pdf>.

28 See Joanna Chung and Michael Mackenzie, "SEC finds conflicts at rating agencies", *Financial Times*, 8 July 2008.

29 Yingjin Hila Gan and Christopher Mayer, "Agency Conflicts, Asset Substitution and Securitization", National Bureau of Economic Research, NBER Working Paper No 12359, July 2006.

Thus, as in the case of originators of loans, a purely fee-based remuneration scheme for the servicer may not be sufficient: incentives may be better aligned via the retention of ownership in the asset pool.

#### 2.2.4 THE ROLE OF INVESTORS AS PRINCIPALS

*Role of investors:* obviously, investors as the ultimate buyers in the securitisation process represent market demand. Hence, whether and on what terms structured products can be sold depends on the willingness of investors to purchase these products.<sup>30</sup> Or, in the words of the agency terminology, investors are the ultimate principals in the securitisation process.

*The impact of investor behaviour on conflicts of interest between the various actors:* through their decisions, investors can potentially enforce considerable discipline on the various actors of the chain. This implies that they could also have an impact on the extent to which agency problems materialise. For example, by insisting on thorough information on the transaction structure, on the underlying assets and on regular performance reports, investors can limit the scope for intermediaries to structure overly risky portfolios. This might also induce intermediaries to perform more thorough due diligence on originators. Thus, when assessing the conflicts of interest between the various parties, one must also take into account the extent to which investors fulfil their disciplining role. While asymmetric information between the various actors may constrain this disciplinary role, one should not neglect the impact of exuberant or lenient investor behaviour on the other actors in the ‘originate and distribute’ model.

Another potential problem affecting investors in structured products is excessive reliance on external ratings. This, combined with “euphoric behaviour” in boom periods, can undermine market discipline, as already mentioned in Section 1.2. Some evidence that investor behaviour may have changed in recent months comes from the ABCP market, to which some investors are returning, but are demanding

greater clarity from issuers and CRAs, abstaining from ABCP programmes whose reporting is not sufficiently transparent and asking a higher premium for programmes with greater risk.<sup>31</sup>

<sup>30</sup> Note that the demand of some investors for securitisation products may, in turn, also depend on their exposure to regulation and valuation requirements. For example, differences have been observed between investors from the banking sector and those from the insurance sector. The requirement of “fair value” has forced banks to mark some structured products to market, driving them out of the market. Conversely, insurance companies in some countries were not subject to the same rule and thus were less impacted in their holdings and investments in structured products.

<sup>31</sup> Standard & Poor’s, “The U.S. Asset-Backed Commercial Paper Market May Be Down, But It’s Not Out”, 7 July 2008.

### 3 MITIGATING CONFLICTS OF INTEREST: MARKET SOLUTIONS AND POLICY PROPOSALS

#### 3.1 POSSIBLE IMPACT OF THE TURMOIL ON THE INCENTIVE STRUCTURE OF THE 'ORIGINATE AND DISTRIBUTE' MODEL

Although macroeconomic factors and overall market trends played a role in the significant growth of the 'originate and distribute' model, conflicts of interest contributed to the financial turmoil insofar as some actors were able to opportunistically expand their business beyond prudent levels. A lesson that can be drawn is that one should not adopt a black-and-white view of the 'originate and distribute' model: in some cases, such as the US subprime mortgage markets, misaligned incentives have clearly played an important role, while in other markets, such as credit card securitisation or managed CLOs,<sup>32</sup> participants have seemingly acknowledged potential conflicts of interest and have taken measures to alleviate the problems. *The turmoil in the financial markets is also likely to influence the behaviour of market participants.* It could be expected, for example, that intermediaries will now scrutinise originators more carefully and that many investors will rely less on external ratings and will only be willing to buy tranches of structured finance products that have been well-tested and have conservative structures (possibly marking a trend towards "standardisation"). In addition, *reputation* may play a larger role in instilling discipline to the market. When actors want to position themselves in a market over the long term, it is in their interest to act prudently in order to gain a reputation as credible counterparties. However, it may be difficult to assess the extent to which participants in the 'originate and distribute' model will actually consider reputational concerns when tempted by strategies that may promise high short-term profits, even with the possibility of hurting the business in the long run. As actors have tended, since the breakout of the turmoil, to more carefully assess the track record of counterparties, the importance of reputational concerns may increase.

However, reviving the securitisation process is expected to depend on more fundamental changes. Six measures to address conflicts

of interest are discussed below, aimed at directly affecting the incentives of agents (i.e. redesigning remuneration schemes, retaining an ownership stake, improving the CRA framework and enhancing corporate governance) or at facilitating the ability of principals (investors) to monitor the actions of agents and assess risks (i.e. improving documentation and information access both at aggregated and individual levels). They could be implemented jointly by market participants, since some had already been adopted in certain cases in the past, and by competent authorities.

#### 3.2 POSSIBLE MEASURES BY MARKET PARTICIPANTS AND COMPETENT AUTHORITIES

##### REDESIGNING REMUNERATION SCHEMES

As shown above, remuneration schemes play an important role in the 'originate and distribute' model. Indeed, the example of servicers suggests that, in practice, remuneration schemes may not always be ideal. If appropriately designed, remuneration schemes may be effective in aligning incentives. The question, however, is whether redesigning them would be sufficient to align incentives or whether additional measures with respect to monitoring and supervision mechanisms are necessary.

##### RETAINING AN OWNERSHIP STAKE

By retaining an ownership stake in a securitisation transaction, participants have, in principle, a greater incentive to maintain or maximise the value of the securitised asset pool, even if it is transferred to other participants. Retention of ownership may come in various forms, such as holding the

<sup>32</sup> A number of measures are usually taken to alleviate the potential agency problems between the CLO manager and the investors. First, various portfolio quality tests constrain the manager in the choice of assets that can be included in the portfolio. Second, the remuneration scheme of the manager typically contains several components, with one component linked to the performance of senior tranches, while another is conditional on the performance of the equity tranche. Third, managers are sometimes required to hold a part of the equity tranche of the transaction. Finally, reputation may also play an important role in alleviating conflicts of interest (see Joachim Keller, "Agency Problems in Structured Finance – a case study of European CLOs", mimeo, 2008).

first-loss piece (equity tranche) of the securitisation, granting warranties, or retaining responsibility for troubled loans. Retention of ownership can, in theory, be a powerful device for aligning incentives and has proved to be effective in the securitisation of credit cards, for instance.<sup>33</sup> In practice, however, certain obstacles have surfaced, which suggest that a requirement to retain ownership might not always be enforceable. In the case of US subprime mortgage brokers, for example, the requirement to repurchase troubled loans did not prevent excessive lending because the brokers gambled on a continued strong housing market and ultimately escaped their responsibilities in the downturn by declaring bankruptcy. Participants may also hedge the equity tranche, which would offset the incentive effect. Holding the equity tranche can also foster risky behaviour that is not in the interest of the senior tranche holders in a securitisation. In addition, recommending that the originator retains part of the exposures should take into consideration its impact on both accounting<sup>34</sup> and prudential requirements. This issue is of particular importance, since the inability to transfer assets in a collateral pool off the banks' balance sheet may limit the future development of the structured finance market. In the consultation process to amend the Capital Requirements Directive, the European Commission suggested to include a provision requiring that a small part of the credit risk should be retained by the originator. For the time being, the inclusion of this provision is still under consideration.

#### IMPROVING DOCUMENTATION

The legal documentation of securitisation transactions and the requirements set by CRAs often address conflicts of interest, in many cases by simply setting limits on certain actions. Such provisions may be effective when they foresee all relevant conflicts and address them adequately. However, there may remain some unanticipated conflicts that arise in adverse market conditions or in situations where transaction documentation has not yet been "tested".

#### IMPROVING INFORMATION ACCESS BOTH AT THE AGGREGATED AND AT THE INDIVIDUAL LEVEL

While a standardisation of structured products is not always possible, a more detailed and standardised disclosure of information relating to underlying portfolios would bring significant benefits to the market as the turmoil has demonstrated that the information available to properly assess and monitor structured finance markets was limited.<sup>35</sup> European originators and/or servicers should publish periodic, accurate, and comprehensive information on each structured product and the underlying assets. This could be implemented through a two-step approach:

- (i) *Defining information to be disclosed* – a working group comprising representatives of originators, arrangers, CRAs, investors, supervisors and central banks set up to determine appropriate information for disclosure could bring optimal results in this respect. Two key issues need to be taken into consideration: consistency and standardisation, as information should be easily comparable through the use of consistent definitions (e.g. "default", "imminent to default") and, to the extent possible, of similar scope.
- (ii) *Ensuring centralisation and a timely dissemination of this information* – in this regard, public authorities might be entrusted with setting up appropriate schemes to centralise, in a standardised format, a minimum and uniform level of information on all European structured finance transactions, also ensuring that information is disclosed in a similar way. Furthermore, they would check the quality of these elements and ensure the timely dissemination of information.

<sup>33</sup> See Section 2.2.1.

<sup>34</sup> Notably IFRS 39 and SIC 12.

<sup>35</sup> See Section 1.1.



### ENHANCING CORPORATE GOVERNANCE: “DISCLOSE AND ADDRESS” PRINCIPLE

One measure that authorities could take to improve the alignment of incentives among the participants in the ‘originate and distribute’ model would be to require market participants to identify, address, and disclose the potential conflicts of interest they face and the ways in which they are addressing them. In the United States, investment banks are already required to disclose the potential conflicts of interest of their equity analysts; this practice, extended to structured finance markets and to cover potential conflicts of interest among the actors in the ‘originate and distribute’ model, could increase the awareness among market participants and provide incentives for their efficient resolution.

### IMPROVING THE LEGAL FRAMEWORK FOR CRAs

At the international level, the debate concerning CRAs is intense, and regulatory bodies are currently considering possible ways of addressing issues raised by the turmoil, including conflicts of interest. The International Organisation of Securities Commissions (IOSCO) has updated its Code of Conduct and the SEC has issued some guidance. Among the various proposals, some are aimed at enhancing the information content of structured product ratings.<sup>36</sup>

In addition, other measures could have valuable impact in maintaining the scrutiny of CRAs over the whole life of the transaction, such as making a clear distinction between issuance and surveillance fees,<sup>37</sup> or limiting potential conflicts by requiring CRAs to disclose all the credit ratings they assign, thus prohibiting “shadow ratings”.<sup>38</sup> Moreover, authorities might also indirectly improve investors’ incentives by limiting the use of ratings in oversight regimes.<sup>39</sup> When investors cannot simply rely on ratings when calculating the risk exposure for regulatory purposes, but must conduct their own credit analysis, they will scrutinise structured products more carefully. Ultimately, this will improve market discipline.

36 For instance, the Financial Stability Forum and the Committee on the Global Financial System proposed the introduction of a differentiated rating scale for structured products; however, the most important CRAs appear reluctant to implement this idea. At the same time, investors are not pushing in this direction, as they would be forced to change their investment guidelines. CRAs have also suggested a number of measures, including the development of an indicator (“suffix”) reflecting volatility characteristics of each rated tranche (probability to move one, two or more notches).

37 As suggested by the IOSCO Code of Conduct.

38 When an issuer asks several agencies to rate products, with only the best rating being disclosed, so that others ratings are not communicated to investors.

39 See Aaron Lucchetti, Kara Scannell and Craig Karmin, “SEC Aims to Rein In The Role of Ratings”, *The Wall Street Journal*, 24 June 2008, available at [http://online.wsj.com/article/SB121426503930698461.html?mod=hps\\_us\\_whats\\_news](http://online.wsj.com/article/SB121426503930698461.html?mod=hps_us_whats_news).

## GLOSSARY<sup>40</sup>

**ABCP:** Asset-backed commercial paper – commercial paper of typically 90 days to 180 days maturity that is issued by a special purpose vehicle on the basis of a pool of usually short-term receivables such as trade receivables. The vehicle may be a conduit for a single-seller, or for various sellers of receivables, in which case it is referred to as a multi-seller ABCP conduit.

**ABS:** Asset-backed security – generally, any security that is backed by assets rather than by a general obligation to someone to pay. Securitised instruments are asset-backed securities. In US market parlance, a distinction is made between mortgage-backed securities (MBS) and ABS, with the latter referring solely to securities backed by non-mortgage receivables. ABS' performance is dependent on the underlying assets' ability to fulfil their obligations concerning the payment of principal and interest.

**ABS CDO:** A collateralised debt obligation with a pool of collateral that consists of ABS instruments. It is a multi-tranche product, where each tranche has its own risk/reward level. Each tranche has different leverage ratios, amount of subordination, rating, etc. The performance of the tranches is dependent on the performance of the underlying ABS portfolio, as well as on the CDO manager.

**CBO:** Collateralised bond obligation – a bond backed by a pool of corporate bonds.

**CDO:** Collateralised debt obligation – a structured credit product backed by a portfolio of fixed-income assets. Includes sub-groups such as collateralised bond obligations (CBOs), collateralised loan obligations (CLOs) and collateralised mortgage obligations (CMOs).

**CDO-squared:** A collateralised debt obligation that has been re-securitised, i.e. that is backed solely by other CDOs.

**CDS:** Credit default swap – an instrument that allows the transfer and isolation of credit risks linked to bonds or loans. A CDS is a bilateral contract, where buyer of the protection shorts the underlying credit risk and accordingly pays periodic payments to the seller of the protection. In the case of a credit event, the settlement is either a physical or a cash-settlement.

**CLO:** Collateralised loan obligation – a bond backed by a pool of leveraged commercial or personal loans. Loans are bought by the asset manager in the primary or secondary markets. CLOs are sold to investors in tranches, with each tranche having its own risk profile.

**CMBS:** Commercial mortgage-backed security – a security similar to an MBS or RMBS that is backed by a pool of loans collateralised with commercial property. CMBSs are not standardised instruments.

**CMO:** Collateralised mortgage obligation – a multi-class bond issued by an agency and backed by a pool of mortgage pass-through securities or mortgage loans. As a result of a change in the 1986 Tax Reform Act, most CMOs are issued by a real estate mortgage investment conduit (REMIC), which offers the issuer certain tax advantages.

**Conduit:** A legal entity usually operated by third parties as a ready-to use medium for securitisation, usually for assets of multiple originators. Liabilities are short-term commercial paper and lenders

<sup>40</sup> Some elements of this glossary are based on Vinod Kothari, *Securitisation: The Financial Instrument of the Future*, Wiley Finance, 2006.

to conduits have full recourse to a prorated claim on all conduit assets. A conduit's assets are usually composed of loans, structured products, etc.

**CPDO:** Constant proportion debt obligation – a debt instrument with a basic structure that resembles a static funded synthetic CDO. Investors buy assets issued by a special purpose vehicle (SPV), which uses the proceeds to purchase eligible collateral, but all other parts of the structure are done by swaps. Returns from the collateral are transferred to the issuing bank in the form of asset swaps, and the bank then sells protection to the credit market on a portfolio usually comprising credit derivative indices.

**CPPI:** Constant proportion portfolio insurance – leveraged principal protected investments, the return on which is dependent on the performance of the underlying trading strategy.

**CRT:** Credit risk transfer – a term referring to the transfer of credit risk in the financial markets, which can be done by using either banking/capital market solutions or insurance solutions. Banking solutions refer to the use of credit derivatives, asset-backed securities, synthetic products or loan sales and insurance solutions refer to surety bonds, underwriting of guarantees and credit insurance.

**LBO:** Leveraged buyout is an acquisition, for which a large part of the cost is covered by debt issuance, while the assets of the acquired company are often used as collateral.

**MBS:** Mortgage-backed security – a security representing a direct interest in a pool of mortgage loans. The pass-through issuer or servicer collects the payments on the loans in the pool and “passes through” the principal and interest to the security holders on a pro-rata basis. Such securities are also known as participation certificates (PCs).

**Monoline insurer:** Insurance companies that traditionally offer credit insurance for bonds issued by local governments, primarily municipal bonds in the United States. They offer insurance cover for the principal and interest payments to protect investors against the default of the issuer. More recently monoline insurers have also turned to the markets for structured products and have become “financial guarantee insurers” who insure tranches of securitisation transactions.

**Multi-seller conduit:** A conduit in which assets are sold by multiple sellers, are consolidated at the conduit level and then securitised.

**RMBS:** Residential mortgage-backed security – a security backed by a pool of collateral that consists of loans with a lien on residential property.

**SIV:** Structured investment vehicle – legally, a bankruptcy-remote leveraged entity that buys and holds a mix of highly rated securities and relies heavily on short-term funding in purchasing them. The main goal of such a company is to generate profits by maximising the difference between the earnings on its assets and its weighted average cost of funding. SIVs are exposed to liquidity risk in the short-term funding market.

**Synthetic product:** A type of structured product that is formed artificially by using other assets, such as a combination of derivatives, without having any own cash assets, and with exposure gained through derivatives.

