

# How to measure credit risk transfer in the EU

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## 1. Introduction

“The recent financial turmoil highlights the impact of globalisation on the various areas of competence of central banks. It also illustrates the trade-off between the statistical response burden of reporting agents and a lack of consistent information to analyse the current economic and financial situation. In particular, there is a lack of sufficiently harmonised statistics to accurately measure the allocation of credit risk within the economy and the impact of cross-sector and cross-border credit risk transfers.”

*José Manuel González-Páramo, Member of the Executive Board of the European Central Bank, ECB Statistics Conference (2008a).*

Financial markets have been under considerable stress over the last 12 months, experiencing strains associated with a risk reappreciation of financial instruments designed to allow credit risk transfer (CRT). The opaque characteristics of these financial instruments, especially those issued to securitise the US mortgage market, and the absence of sufficient and reliable information on the distribution of risks related to these instruments, have made it difficult and cumbersome to identify the exact size and location of losses. This lack of information has, in turn, contributed to a loss of investors' confidence, exacerbating the financial stress.

Against this background, the ECOFIN, at its meeting in October 2007, endorsed a roadmap to deal with the turmoil. One of the main follow-up actions was to enhance the availability of information on credit markets. Among other actions, ECOFIN invited the industry to increase transparency in the credit markets<sup>2</sup> and, inter alia, the ECB and the Committee of European Banking Supervisors (CEBS) to contribute to the follow-up work proposed in this area.<sup>3</sup>

In parallel, the ECB and national central banks (NCBs, which together with the ECB form the European System of Central Banks) discussed the statistical implications of the financial turmoil, and reflected on the statistical gaps and needs arising from it. As a result, the ESCB initiated or contributed to a number of statistical initiatives at international and European level in order to identify possible further enhancements of data availability at the international

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<sup>2</sup> As a follow-up, on 17 July 2008 nine European and global trade associations released “Ten industry initiatives to increase transparency in the European Securitisation Markets”. Out of these ten initiatives, two (the “Draft industry good practice guidelines on securitisation disclosures under Pillar 3 of the CRD” and the creation of a new industry quarterly securitisation data report) are a direct response to the call by the ECOFIN. In addition, the eight additional issuer- and investor-focused initiatives that go beyond the ECOFIN request are designed to standardise issuer disclosure practices, broaden and facilitate investor access to transaction information, enhance usability and comparability of information, and strengthen good practice among investors.

<sup>3</sup> Following a request from the ECOFIN, on 18 June 2008 the CEBS published its technical advice on banks' transparency on activities and products affected by the recent market turmoil. (CEBS, 2008a)

level, in particular by coordinating its work on enhancing credit risk transfer data with similar initiatives carried out in other global committees and fora.<sup>4</sup>

The main step undertaken to fill in the statistical gap is the development of harmonised statistics on Monetary Financial Institutions' (MFIs) securitisation and loan sales, integrated with balance statistics on Financial Vehicle Corporations (FVCs) engaged in securitisation. Steps were also taken to share with the ECB the EU countries' contributions to the BIS over-the-counter (OTC) derivatives and to the BIS Triennial Survey statistics (subject to confidentiality constraints), to analyse the underlying data from an EU and euro area perspective better. Furthermore, consideration may be given to ad hoc surveys of key players in the (highly concentrated) CRT market, possibly coordinated with the BIS and IMF as well.

While the ESCB statistical initiatives will be a significant step in providing CRT data in the EU, these statistics will not generally be available in the short term and will not be sufficient to provide a full picture of credit risk transfer. Against this background, the ECB is investigating the possibility of providing statistics in the short term based on existing data within the ESCB and the industry, and from commercial data providers. By combining granular data provided by the European Securitisation Forum (ESF) and the ESCB, the coverage of the existing publicly available data on EU securitisation can be expanded, and the related information on country of issuance and origination, sector of issuance and asset characteristics can be enhanced. On this basis, some first results can be provided on the developments that occurred during the summer 2007 turmoil and its impact on the EU securitisation market.

The remainder of this paper is organised as follows. Section 2 presents the key statistical issues at stake and briefly reviews user requirements for CRT related data. Section 3 describes the way forward to satisfy these statistical requirements currently undertaken at the ESCB level in the medium term. The final section elaborates a practical example of the work being done in the short term to develop a first measure of securitisation business in Europe using existing information.

## **2. Scope of CRT and users' requirements for CRT data**

Innovation in financial markets is accepted as increasing market efficiency, enabling better diversification of portfolios and providing a wider range of techniques for risk management. Among the new financial instruments, those transferring credit risk have been the most important contributors in terms of market growth over the last decade. Yet, as already discussed in a report by the Committee on the Global Financial System (CGFS), "CRT instruments typically change the relationship between borrowers and lenders and establish new relationships between lenders and those to whom they may pass on credit risk" (2003). Traditionally, credit risk arising from creditor-debtor relationships has remained intrinsic to loans that were held by the originating bank until maturity. Credit risk was predominantly transferred or shared via insurance/banking products, such as credit insurance, loan syndication, loan sales and financial guarantees. The development of structured credit

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<sup>4</sup> This coordinated approach aims to improve statistical data availability and quality while keeping the reporting burden to a minimum. Where statistical needs can be satisfied only by imposing reporting requirements via an ECB Regulation, the ESCB follows a well-established procedure for carefully checking the balance between the merits and costs of such reporting requirements. The multiple dimensions of the current turmoil, in particular those related to the cross-sectoral/cross-border transfer of risk and to the valuation of complex, illiquid instruments, indeed call for more intensive statistical work to be undertaken at international level.

instruments has created new and potentially more complex channels for the transfer of credit risk, which has in turn raised new challenges for the CRT monitoring and assessment.

Looking at the ways in which credit risk recently became transferable, two rather distinct developments can be identified. First, credit risk is transferred by making the underlying loan negotiable. This has occurred through the use of true-sale securitisations that involved the issuance of securities in the form of asset-backed securities (ABS) by FVCs<sup>5</sup> or securitisation special purpose entities (SSPEs)<sup>6</sup> and via loan originators issuing (cash) collateralised debt obligations (CDO), in particular collateralised loan obligations (CLO). Second, a more recent phenomenon: credit risk is transferred by making the credit risk underlying those loans negotiable but not the loans themselves, which remain on the balance sheets of the originators. The credit risk is isolated from the underlying loans by stipulating credit derivatives contracts and is packaged into separate tranches according to different risk classes and OTC traded. This has occurred through the use of synthetic securitisations via FVCs and directly by originators, through the issuance of securities in the form of synthetic CDOs as well as credit derivatives (in particular credit default swaps, CDS), and hybrid instruments.<sup>7</sup> These developments form the so-called “originate-to-distribute” (OTD) model, where banks do not hold the loans they originate (and/or the implicit credit risk) but repackage and securitise them.

The ECB has identified a number of high-priority data requirements on CRT for euro area monetary policy analysis and monetary operations, as well as for (macro) financial stability analysis. The key question is the identification of (and the size of CRT flows among) macroeconomic economic sectors/areas that originate and ultimately accept credit risk transfers (euro area MFIs, other resident sectors, non-residents). In measuring these CRT flows, valuation problems may arise in respect of both CDO and CDS since the markets in

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<sup>5</sup> The following definition of FVC is currently being developed for statistical purposes.

“FVC” means an undertaking:

- (a) which is organised to carry out one or more securitisation transactions; and
- (b) which issues, or may issue, securities and/or which holds, or may hold, assets underlying the issue of securities that are offered for sale to the public or sold on the basis of private placements; and
- (c) which is constituted pursuant to national or Community law under:
  - (i) contract law (as a common fund managed by management companies);
  - (ii) trust law;
  - (iii) company law (as a public limited company); or
  - (iv) any other similar mechanism;

The following are not included in the definition of FVC:

- MFIs within the meaning of Annex I to Regulation (EC) No 2423/2001 of the European Central Bank of 22 November 2001 concerning the consolidated balance sheet of the monetary financial institutions sector (ECB/2001/13); and
- IFs within the meaning of Article 1 to Regulation (EC) No 958/2007 of the European Central Bank of 27 July 2007 concerning statistics on the assets and liabilities of investment funds (ECB/2007/8).

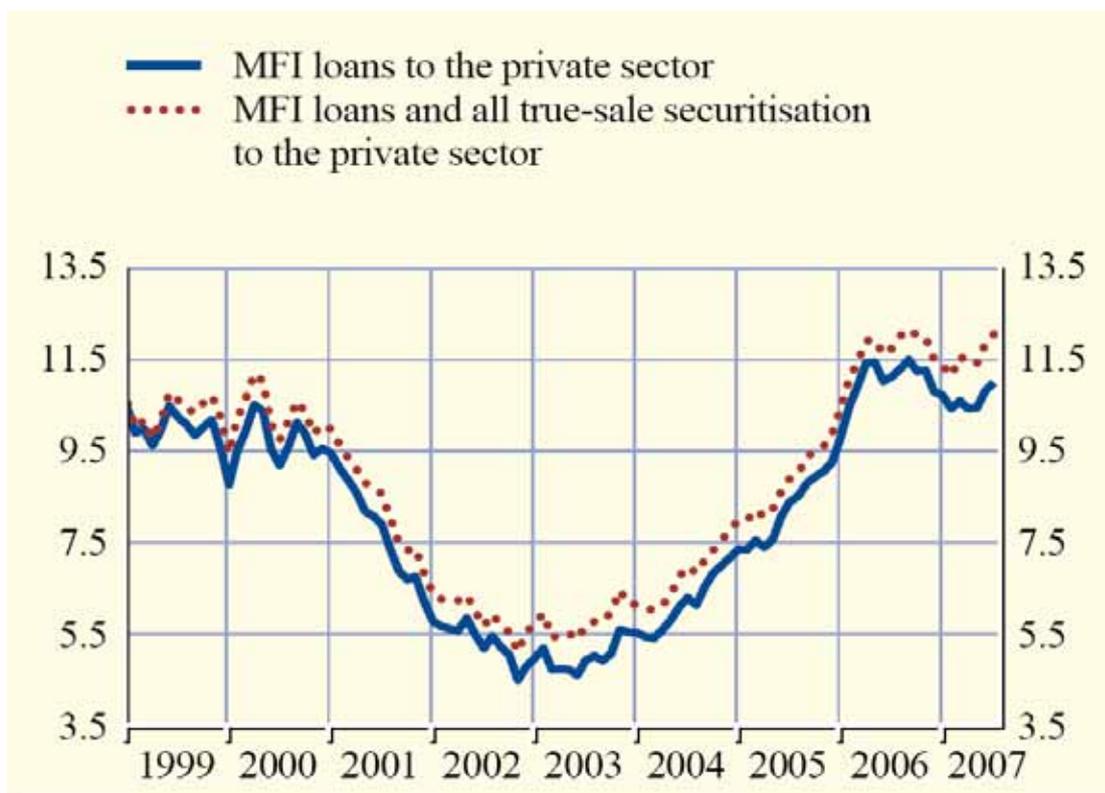
<sup>6</sup> SSPE is the term used in the context of the Capital Requirements Directive (2006/48/EC), which is the EU transposition of the Basel II Accord, while the FVC definition will be contained in a forthcoming ECB regulation. Essentially, EU credit institutions will apply the FVC definition only for entities resident in the EU/euro area, while they apply the SSPE definition to any securitisation entities, regardless of their residence. Moreover, while FVCs may perform securitisation as a secondary activity (eg this case is relevant in Portugal), SSPEs are required to limit their activity to securitisation. In the Portuguese case, an entity may meet only the FVC definition but not the SSPE definition.

<sup>7</sup> See Annex 1 for a stylised typology of CRT instruments and an overview of the current data availability.

which CDO are traded may be illiquid, while CDS are traded over the counter, so that in both cases it may not be easy to obtain an accurate valuation.<sup>8</sup>

For monetary policy analysis, aggregated data on structured securities (ABS/CDO) holdings/issues by sector/region would be required, at a quarterly (or even monthly) frequency and on a timely basis. Graph 1 shows how the available securitisation data should be factored in the analysis of credit developments, particularly in certain periods.<sup>9</sup>

Graph 1  
**Impact of true-sale securitisation on loans to the private sector**  
 Annual percentage changes



Sources: ECB, ECB estimates.

For the conduct of monetary operations, more disaggregated and higher frequency (even daily) micro data on individual structured securities (CDO, ABS etc) are needed, particularly those that may be eligible as collateral for market operations, as well as data on banks' positions in credit default swaps.

<sup>8</sup> The scope of this paper does not allow the issue of valuation to be discussed in detail. For background information, see CEBS report, *Issues regarding the valuation of complex and illiquid financial instruments*, 18 June 2008. CEBS (2008b).

<sup>9</sup> In certain periods, the impact of securitisation on the MFI data can be significant, eg in 2002–03 and 2006–07.

### 3. ESCB medium-term initiatives to improve the measurement of CRT

The ESCB is undertaking several medium-term initiatives to meet most of the above-mentioned data needs. The main focus of these initiatives is on enhancing the existing ESCB statistical framework. However, consideration is also being given to integrating and utilising other official statistical sources (specifically the BIS) and the ESCB Centralised Securities Database (CSDB).<sup>10</sup> Furthermore, to the extent possible, it is intended to reuse supervisory data sources for statistical purposes, as well as to exploit other potential data sources (such as commercial databases and clearing houses) and to support market initiatives aiming at increasing transparency of market data.

The most important of these initiatives concerns integrated and harmonised euro area statistics on MFI loan securitisation (and loan sales) and FVC balance sheets. These statistics will be collected on the basis of ECB Regulations.<sup>11</sup> The ECB already collects harmonised statistical information (balance sheet and interest rates) from MFIs, and will in the near future also collect them from Investment Funds. Some unharmonised statistics on securitisation are also collected; these allow the compilation of estimates for the euro area, as shown above in Graph 1. The forthcoming harmonised statistics on securitisation will replace the current unharmonised data.<sup>12</sup>

The first reporting of the new data set is envisaged by mid-2010 (with reference to end-2009 data). In particular, MFIs will report quarterly information (gross flows and, if acting as servicers, also stocks) on traditional loan securitisations undertaken through an FVC; and on loans sales, with breakdowns by (original) maturity, purpose, residency/sector of debtors, and residency of these FVCs. Moreover, MFIs will report data on their own holdings of securities issued by FVCs, as well as further details to accommodate the reporting of securitisation under different accounting standards. This information will provide users with important insights into credit developments. Furthermore, the MFI securitisation statistics represent a measure of the share of MFI loans whose credit risk has been transferred, net of the FVC securities repurchased by MFIs.

With respect to FVCs resident in the euro area, complete balance sheet information covering their loan portfolio broken down by residency/sector of the originator, residency/sector of loan debtors, and (original) maturity, as well as a breakdown of their holdings of securities by (original) maturity and sector/residency of issuers will be compiled on a quarterly and timely basis (T + 28 working days).<sup>13</sup> Within the balance sheet instrument breakdown, gross positions/flows in financial derivatives will be identified, as well as debt securities issued, broken down by (original) maturity, and deposits. When the FVC Regulation is issued, the ESCB will request FVCs to register in a list, which will be published. In the list, FVCs involved in true-sale and synthetic securitisations will be separately identified, thus enabling separate statistics for the two types of intermediaries (a hybrid category may be considered too).

Consideration may also be given to a possible collection of data on credit derivatives (reusing data already available at NCBs, or if insufficient, via a specific survey of the large

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<sup>10</sup> The CSDB is an ESCB-wide reference database on individual (debt and equity) securities and issuers. In the future, it may also support FVC statistics, securities issues statistics, and euro area financial accounts.

<sup>11</sup> The draft Regulation on FVC balance sheet statistics, which is currently being finalised, provides flexibility for national central banks to address reporting requirements directly to the FVCs or to use available information of comparable quality.

<sup>12</sup> Cf the securitisation reporting scheme for MFI in Annex 2.

<sup>13</sup> Cf the securitisation reporting scheme for FVCs in Annex 3. It is intended to collect the information directly from FVCs or through other sources if they have an equivalent quality.

market players in the euro area). This could include separate information on gross positions in credit derivatives taken by MFIs and FVCs, broken down by residency and sector of counterparties. At the same time, the initiatives to expand the coverage and the detail of BIS derivatives statistics are supported and closely monitored, to avoid any double collection.

The measures described so far may however not be sufficient to provide a complete picture of CRT in the euro area, as such a picture would also require data covering the financial positions/transactions of key institutional investors' sectors. In this respect, the ESCB may consider the feasibility of separately identifying Investment Funds (IF) and Insurance Corporations and Pension Funds (ICPF) holdings of structured securities issued by MFIs and FVCs as a medium-term objective. Finally, the feasibility of collecting statistical data on MFIs' contingent credit exposures, such as those related to credit lines and other lending commitments, is also being investigated, with the possible reuse of data already collected by the national supervisory frameworks.

#### **4. A first measure of securitisation business in Europe**

The above-mentioned ESCB statistical initiatives will represent a significant step ahead in providing data on CRT. However, these statistics will be available only from 2010 onwards. Furthermore, they would not provide a full picture of credit risk transfer, for three reasons. First, by their very nature, ESCB statistics cannot provide a global perspective, ie beyond the euro area/EU. Second, the harmonised statistics may provide only a rather crude picture of (positions in) credit derivatives (synthetic securitisation). Third, as mentioned above, more information on holders of structured credit instruments would be needed.

Given the complex characteristics of CRT instruments, aggregated data may not suffice, with more micro-level and market data possibly providing significant value-added. This is discussed next.

##### **4.1 Methodology**

Apart from commercial data providers, the data provided by the ESF are currently the most used publicly available source of data on securitisation business in Europe. The ESF has provided data on European securitisation issuance since autumn 2001 and on outstanding amounts since the summer of 2007. Securities included in the calculations have collateral originating from a European country. For CDOs, only euro-denominated issuance is provided, regardless of the country of collateral. The ESF publishes a quarterly market data report in which it reports aggregate values by country, by collateral, and more recently by rating categories. The primary data source is a voluntary disclosure by securitisation desks of financial institutions. The ESF receives information on new issuances, which they accumulate in their database, and thereafter retrieve data on Bloomberg using the ISIN of the asset issued. The data cover all securitisation assets issued worldwide that are backed by EU collateral (this data source is henceforth referred to as the "ESF list").

In parallel, the ECB has asked the NCBs to identify resident FVCs and possibly to retrieve information on their securities issuance. The ECB has therefore built a provisional list of EU FVCs for end-2006 and end-2007 (the "FVC list").

By combining these two sources of information using ISIN codes as a matching device, it is possible to provide a broader picture of the securitisation business in the EU than has

hitherto been available.<sup>14</sup> The two data sources have complementary characteristics: while the ESF data source covers securitisation assets based on EU collateral, it does not cover what is issued in the EU based on non-EU collateral. Conversely, the FVC list covers all securitisation assets issued in EU regardless of the country of collateral.

## 4.2 Some preliminary results

After carefully cross-checking the different data sources, a clean “golden copy” of the data was created and, on this basis, some first results were computed based on two reference dates, end-2006 and end-2007.

It should be noted, however, that a comparison of the 2007 results with those for 2006 is hampered by the fact that the quality and coverage of the information is significantly higher in the more recent year.

For securities issued in the EU by end-2006, the size of the securitisation business amounted to around €0.8 trillion for the euro area and €1.1 trillion for the EU. This compares to the ESF figure of €0.9 trillion for the EU at end-2006 (see Graph 2).<sup>15</sup> Overall, the number of ISIN codes covered is over 11,000: 3,800 ISINs were found only in the ESF list, 3,700 in both the ESF and the FVC lists, and 3,500 only in the FVC list (see Graph 2). Around 1,000 ISINs were issued outside the EU with EU collateral. The reasons why some of the ISINs from the ESF list are not captured by the FVC list and vice versa are multiple: first, as explained above, the ESF list also covers securities issued outside EU and the FVC list covers securities issued in EU regardless of the collateral. Second, while the FVC list has gained in quality between the two reference dates, possibly capturing some private deals, this might not be the case for the ESF list.

Two thirds of the securities were issued in euro; the equivalent of around €230 billions is issued in sterling and €100 billion in USD, the latter mostly issued outside the euro area (see Graph 3). The original maturity of these securities appears to be rather long: on average around 15 years and with a median of 21 years. However, this result should be viewed with caution, as it is possible that a significant part of short-term paper has not yet been captured by the database, because these securities do not bear an ISIN code. Regarding coupon type and frequency, more than half of the securities have floating quarterly coupons. Turning to the country of issuance, the following five countries (in alphabetical order) make up 85% of total issuance: Ireland, Italy, the Netherlands, Spain and the UK. These countries, except Ireland, also dominate the origination of these securities. More than 95% of the issuers are categorised as FVCs. Around 65% of securities are originated by MFIs, the rest being originated by asset management companies, holding companies, mortgage loan brokers etc.

The same exercise was conducted using end-2007 data. Overall, the number of ISINs issued in EU covered increased to 14,000 in 2007. The FVC list coverage showed a significant increase of 35%, from 7,900 to 10,800 ISINs, indicating the increasing quality of reporting from NCBs. When matching the reference sources, 3,600 ISINs (–200) were found only in the ESF list, 5,100 (+1400) were contained in both the ESF and the FVC lists, and 5,300 (+1800) were found only in the FVC list (see Graph 2). As in 2006, around 1,000 ISINs were issued outside the EU with EU collateral in 2007. The increased reporting population from the FVC list induced a strong growth in outstanding amounts. The market was evaluated at end-2007 at €1.1 trillion for the euro area and €1.6 trillion for the EU (see Graph 4). The ESF evaluated the size of the market of all securities backed by EU collateral at €1.3 trillion. Regarding the currency of issuance, most of the new securities were issued in euros. While

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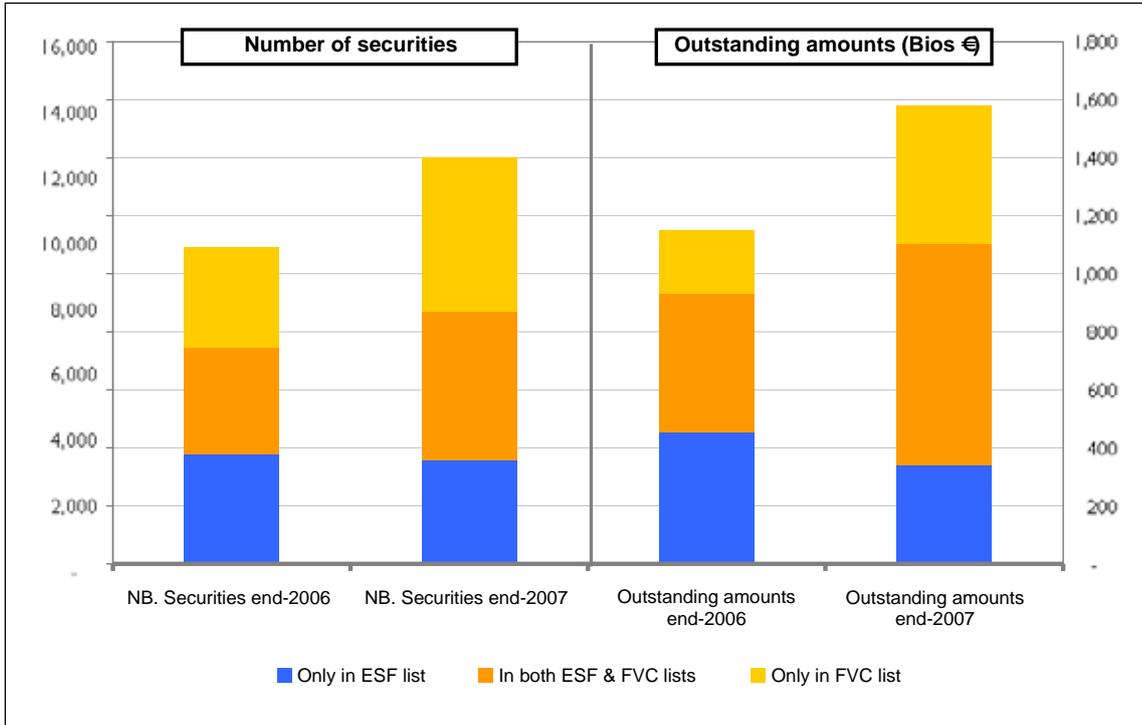
<sup>14</sup> Both data sources have limitations in terms of coverage of private deals.

<sup>15</sup> All securities backed by EU collateral amounted to €1.2 trillion according the ESF by end-2006 (ESF, 2008).

the share of sterling remained stable, the share of the USD increased from 9 to 11% of the total outstanding amount (see Graph 3). Regarding coupon type and frequency, 60% of the securities have floating quarterly coupons (see Graph 4). Finally, between end-2006 and end-2007, most of the new issuances were CDO and RMBS assets (see Graph 5).

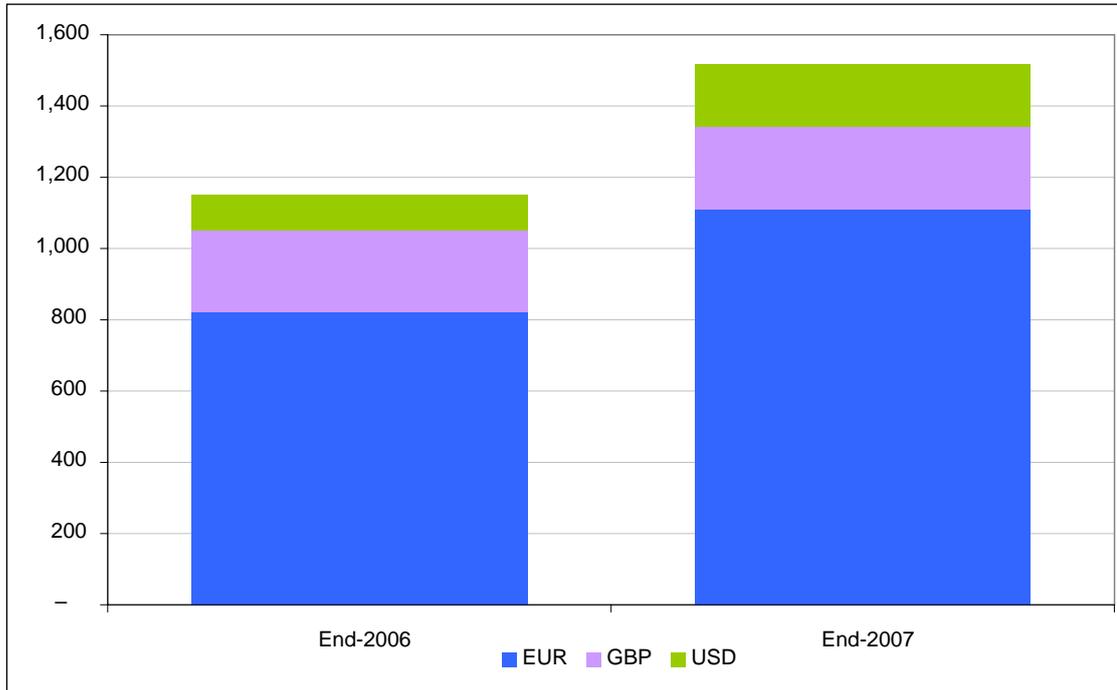
Graph 2

**Coverage (number of ISINs – left-hand scale) and outstanding amounts (€billion – right-hand scale) of securities issued in EU**



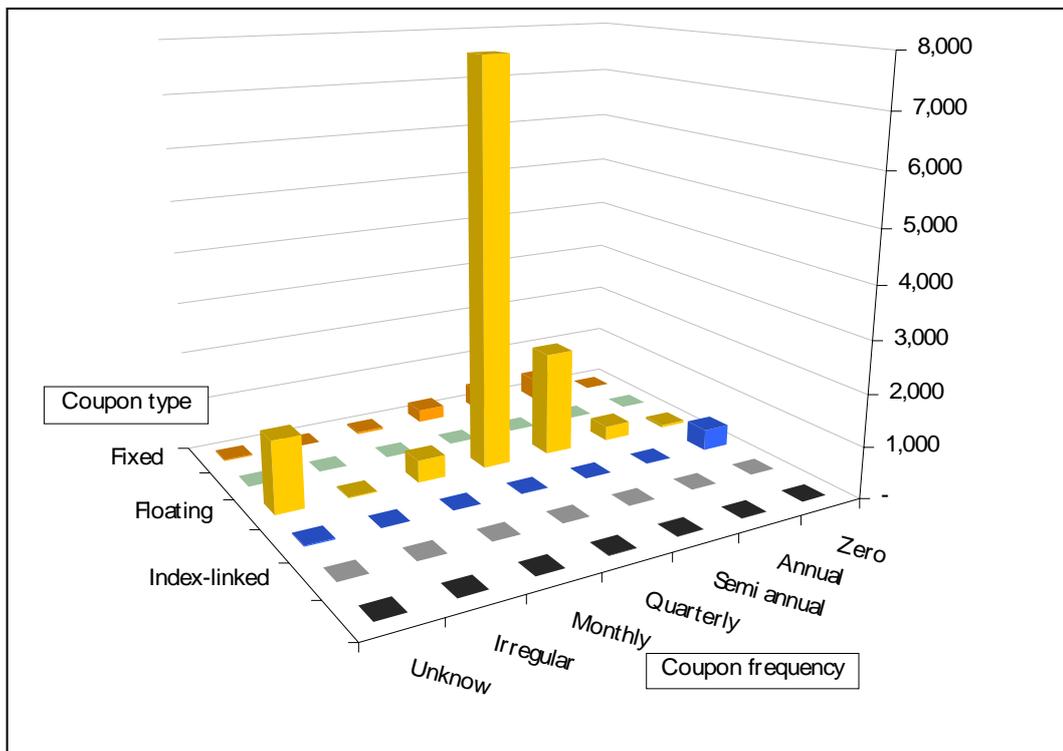
Source: ESF, ECB and ECB calculations.

Graph 3  
**Principal currency of issuance in outstanding amounts (€billion)  
of securities issued in EU**



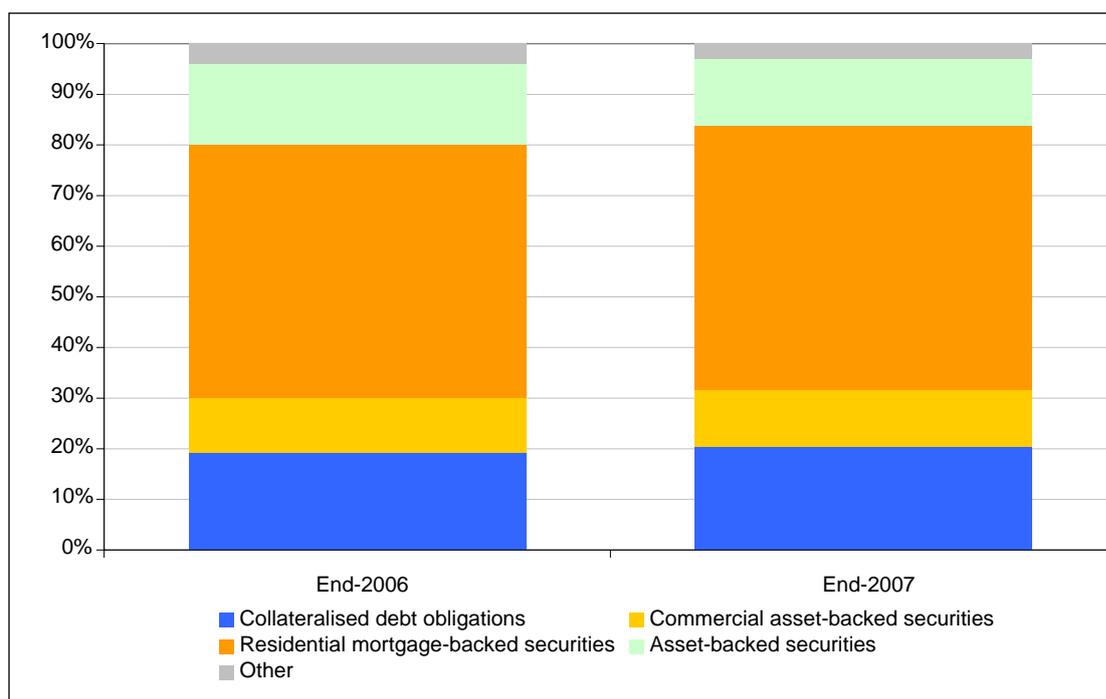
Source: ESF, ECB and ECB calculations.

Graph 4  
**Distribution of coupon types and frequencies of securities issued in the EU**  
Number of ISINs for end-2007



Source: ESF, ECB and ECB calculations.

Graph 5  
**Distributions of asset types**  
 ESF classification

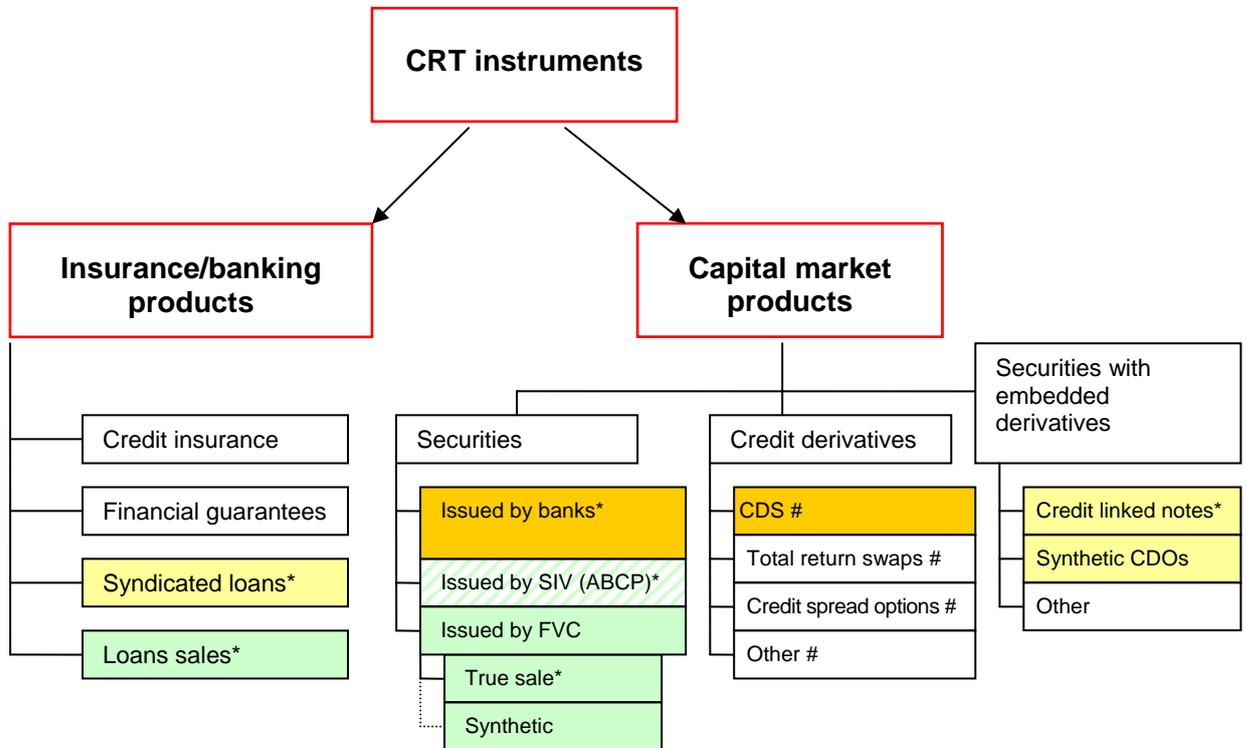


Source: ESF and ECB calculations.

## 5. Conclusion

In the context of the financial turmoil, the lack of sufficient statistical data to measure credit risk transfers (CRT) has emerged as an important issue for central banks. This paper provides an overview of the current ESCB statistical initiatives to improve the measurement of CRT, focusing on plans to introduce timely and harmonised euro area statistics on securitisation (in 2010). The paper also develops a first measure of securitisation business in Europe using existing micro information from commercial data providers, the industry (ESF) and the ESCB. By combining these different data sources, it was possible to reach an improved coverage of the securitisation market in the EU and to provide more granular and aggregated data by country of issuance, sector of issuance, asset type, coupon frequency and type, nominal currency etc. Indeed, it illustrates very well the benefits of maintaining micro databases, as also argued by J M González-Páramo (2008b) in a recent article on ECB statistics. Looking at further developments, the complementary approach discussed in this paper will be integrated into the harmonised securitisation statistics, which will become available in 2010.

## Annex 1: Stylised typology of CRT instruments



\* denotes funded CRT instruments

# denotes breakdown potentially available from supervisory/market disclosure

Data enhancements as priority	Commercial data available	ECB stats may be available, pending classification issue
Low priority data	ECB stats are/will be available	

Table 5a  
Securitisations and other loan transfers: monthly data

BALANCE SHEET ITEMS	A. Domestic						B. Other participating Member States					C. Rest of the world		
	General government (S.11)		Other resident sector				General government (S.11)		Other resident sector					
	Total	Other general government (S.112 + S.113 + S.114)	Total	Other financial intermediaries + financial auxiliaries (S.121 + S.124)	Insurance corporations and pension funds (S.125)	Non-financial corporations (S.11)	Households + non-profit institutions serving households (S.14 + S.15)	Total	Other general government (S.112 + S.113 + S.114)	Total	Other financial intermediaries + financial auxiliaries (S.121 + S.124)		Insurance corporations and pension funds (S.125)	Non-financial corporations (S.11)
1. Net flows of loans securitised or otherwise transferred transactions with impact on reported loan stocks calculated as disposals minus acquisitions														
1.1. Counterparty in the transfer is an FVC														
1.1.1. o/w counterparty in the transfer is a euro area FVC														
1.2. other counterparties in the transfer														
2. Net flows of loans securitised or otherwise transferred transactions without impact on reported loan stocks calculated as disposals minus acquisitions														
2.1. All counterparties in the transfer														
3. Outstanding amounts of loans serviced in a securitisation (?)														
4. Outstanding amounts of securitised loans not derecognised (?)														
4.1. Total														
4.1.1. o/w securitised through a euro area FVC														

Reporting scheme MFI securitisation statistics  
Annex 2:



STATISTICAL REPORTING REQUIREMENTS

Table 1  
Outstanding amounts and transactions

	A. Domestic						B. Other participating Member States						C. Rest of the world	D. Total
	Total	MFIs	Non-MFIs	Total			Total	MFIs	Non-MFIs	Total				
				General Government (S.11)	Other residents	Hazardous + non-profit institutions serving households (S.14 + S.15)				General Government (S.11)	Other residents	Hazardous + non-profit institutions serving households (S.14 + S.15)		
<b>ASSETS</b>														
1 Deposits and loan claims														
2 Securitised loans														
2a euro area MFI as originator														
up to 1 year														
over 1 year and up to 5 years														
over 5 years														
2b euro area General Government as originator														
2c euro area OR (*) and ICFP (†) as originator														
2d euro area NFC (‡) as originator														
2e non-euro area originator														
3 Securities other than shares (*)														
up to 1 year														
over 1 year and up to 2 years														
over 2 years														
4 Other securitised assets														
4a of which euro area General Government as originator														
4b of which euro area NFC as originator														
5 Shares and other equity														
6 Financial derivatives														
7 Fixed assets														
8 Remaining assets														
<b>LIABILITIES</b>														
9 Loans and deposits received														
10 Debt securities issued (†)														
up to 1 year														
over 1 year and up to 2 years														
over 2 years														
11 Capital and reserves														
12 Financial derivatives														
13 Remaining liabilities														

(\*) Other financial intermediaries, except insurance corporations and pension funds.  
 (†) Insurance corporations and pension funds.  
 (‡) Non financial corporations.  
 In accordance with Article 4(2), NCBs may choose to collect these items on a security-by-security basis.

Write-offs/write-downs

	D. Total
ASSETS	
2 Securitized loans	

Attributes	Description
<b>Name</b>	Name / description of the security.
<b>ISIN code</b>	<p>The International Securities Identification Number (ISIN) is a code that uniquely identifies a specific security or other financial instrument. It is based on the ISO 6166 standard and has been created in order to establish a global information network, which ensures that instrument-specific information can be obtained worldwide and within a minimum time delay.</p> <p>ISO standard 6166 defines the ISIN as comprising 12 characters:</p> <ul style="list-style-type: none"> <li>– a prefix, which is the alpha-2 country-code specified in ISO 3166.</li> </ul> <p>The next 9 characters represent the local security identifier assigned by the National Numbering Agency (NNA) in charge, such as the Wertpapierkennnummer (WKN, the CUSIP, the SEDOL etc. The last character is a check digit.</p> <ul style="list-style-type: none"> <li>– the basic number, which is nine characters (letter or digits) in length. Where the existing national number consists of nine characters, this number shall be used. If the national number is less than nine characters, zeros shall be inserted in front of the national number. Where a national check digit exists, it shall be regarded as part of the basic number.</li> <li>– a check digit, computed using the modulus 10 “double-add double” formula.</li> </ul> <p>For countries where a numbering agency exists, the responsible agency shall allocate the ISIN code following the above principles. If there is no numbering agency in a country, the designated substitute agency shall allocate the ISIN codes.</p> <p>A security may only possess one single ISIN code. XS prefix is employed by CLEARSTREAM and EUROCLEAR to identify international bonds (Eurobonds and global bonds).</p>
<b>Short name</b>	Short name given by issuer, to be defined according to the characteristics of the issue and the available information.
<b>Debt type</b>	Types of debt instrument (eg bond, medium-term note, bill, commercial paper, CD, convertible bond).
<b>Asset securitised type</b>	Field coded to indicate the type of secured asset.

Attributes	Description
<b>ESA 95 instrument</b>	Broad categories for the instrument breakdown following the ESA95.
<b>Nominal currency</b>	ISO code of the currency, in which “nominal value” and “amount issued” are given. This is the currency in which the security has been issued. For redenominated securities, this is the currency into which the security has been redenominated. <sup>1</sup>
<b>Amount issued</b>	Amount of this debt instrument that has been raised at issued (nominal value). For a strip this column indicates the amount at which the coupon/principal has been stripped. For a security issued in tranches this column indicates the cumulative amount issued so far. “Nominal currency” indicates the currency in which this amount is given.
<b>Amount outstanding</b>	Outstanding amount (in nominal value). For a security issued in tranches this column indicates the cumulative amount issued so far net of redemptions. “Nominal currency” indicates the currency in which this value is given.
<b>Issue date</b>	The date on which the securities are delivered to the underwriter by the issuer against payment, and the first date that securities are available for delivery to investors.
<b>Coupon type</b>	Type of the coupon (fixed, floating, stepped etc).
<b>Coupon frequency</b>	Number of coupons per year.
<b>Coupon currency</b>	ISO code of the coupon currency.
<b>Issuer country</b>	Describes the country of issuance.
<b>ESA 95 issuer classification</b>	Broad categories for the issuer breakdown following the ESA95.
<b>Maturity date</b>	The date at which the securities will mature.

<sup>1</sup> For example, a bond issued in DEM, which has – after the introduction of the EUR – been redenominated into EUR, should be given in EUR. If it has not been redenominated, it should still be in DEM.

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