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**Article**

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# Securitizations are Dead—Long Live Securitizations?

by Georg Erber

After the financial markets slumped worldwide in 2008, securitizations were seen as a major cause of the conflagration. The securitization market dried up because this financial instrument was no longer trusted. At the time, no one thought securitizations had any future as a financial innovation. However, just three years after the financial meltdown, the securitization market in the US has made a recovery, despite its continued systemic risks. There is still no unified regulatory framework nor binding transparency. Hardly anything has been learnt from the financial crisis of 2008.

Securitizations are tradable financial products. They allow the risk to be diversified by pooling credit contracts.<sup>1</sup> The next step is to break down these credit pools accordingly into different liability tranches.<sup>2</sup> The different liabilities are related to respective risk categories in the case of credit defaults (box). In practice, a special-purpose vehicle (SPV) is created as an intermediary between creditors and debtors.<sup>3</sup> This is established by the investment bank (arranger) as a separate legal entity to manage the securitized assets (Figure 1).<sup>4</sup>

The parent company's liability risks in respect of the SPV were not typically included in the bank's balance sheet as contingent claims. The extent of off-balance sheet activities was not limited by regulatory constraints and could exceed the bank's equity. This enabled the bank as parent company of the SPV to generate a larger volume of liabilities uncovered by their equity base and therefore achieve higher profitability but associated with higher risks.

<sup>1</sup> Coval, Joshua, Jakub Jurek, and Erik Stafford, "The Economics of Structured Finance," *Journal of Economic Perspectives*, vol. 23, no. 1 (2009): 3-25.

<sup>2</sup> Individual debtors no longer have a direct debtor-creditor relationship with their respective creditor; rather, they are now part of the pool of debt obligations.

<sup>3</sup> The SPV is a temporary legal entity whose sole purpose is to manage the creditor-debtor contractual relationships of the securitized assets. Once the last payments of securitized assets have taken place, the SPV is dissolved. In general, these SPVs have no equity but are secured by an open line of credit from the parent company, i.e. the investment bank, to supply liquidity and compensation in the event of unexpected losses. Report on Special Purpose Entities. Bank for International Settlements. Basel, BIZ, September 2009.

<sup>4</sup> This also has the advantage for the investment bank that there are no capital requirements for the credit pools securing the SPV. As a result, this is known as an off-balance-sheet operation. The SPV is not included in the investment bank's balance sheet due to it having its own legal status. However, when needed, this only works if the investment bank has sufficient cash reserves or can obtain these from the money market. This was no longer the case in particular after the crash of Lehman Brothers and the collapse of the money market before the central banks intervened.

Box

### Breakdown of Securitizations Into Different Risk Classes

Overall, risks present in the credit pool are structured in a securitization into different risk classes, i.e. tranches, (usually senior tranche—very low risk, mezzanine—intermediate risk and junior tranche—high risk). Accordingly, this is associated with different interest payments to the respective investors in such assets. Through this, the credit market can be supplied with different investment risks according to the risk preferences of investors.

By allocating different liabilities to different tranches of the securitization these tranches obtain different credit ratings. Usually the senior tranche obtains the highest credit rating level. At Moody's this is Aaa. Mezzanine and Junior tranche obtain lower ratings due to their higher riskiness. From the arranger perspective, the securitization process produces an overall value that is higher than the sum of the single values of the individual contracts if they were treated separately. As a result, the investment bank can obtain higher profits through securitization compared to the single contracts.

Since only a limited percentage share of defaults is expected in the overall credit pool, based on model calculations and experience values, buyers of senior tranches could be totally exempted from the resulting potential losses. The two lower risk tranches (mezzanine and junior tranches) are liable for expected payment losses.

Rating classifications at Moody's  
The rating codes used are:<sup>1</sup>

- Investment grade
  - Aaa—reliable and stable debtors of the highest quality
  - Aa—good debtors, slightly higher risk (especially in the long term)
  - A—general economic situation should be monitored
  - Baa—average quality debtors currently operating satisfactorily
  - Not suitable for investment (junk bonds)
  - Ba—very dependent on the overall economic situation
  - B— financial situation is notoriously changeable
  - Caa—speculative bonds, low debtor income
  - Ca—usually has payment problems
  - C—in default of payment
  - NR—no rating
- Not suitable for investment (junk bonds)
  - Ba—very dependent on the overall economic situation
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  - C—in default of payment
  - NR—no rating

<sup>1</sup> Moody's, Rating Symbols and Definitions. New York: Moody's Investors Service.

### Securitization Boom in the Shadow Banking System

Due to the decoupling of any legal obligations with the arrangers, SPVs became part of the shadow banking system.<sup>5</sup> Shadow banks did not have to deposit a certain percentage of their equity as collateral, like commercial banks with their on-balance sheet operations. It was this particular competitive advantage which resulted in the dynamic growth of securitizations before the financial crisis broke out.

Special-purpose vehicles located abroad can be difficult for supervisory authorities to control. Access to necessary information is usually only possible with the cooperation of supervisory authorities in offshore financial centers.<sup>6</sup> This was well known before the international financial crisis. Even if the national supervisory authorities and central banks were in the possession of information about such transactions, these transactions were, however, explicitly excluded from regulation and therefore not under the responsibility of financial supervisory authorities. This encouraged regulatory arbitrage. A uniform global regulatory framework, or even comprehensive mandatory transparency, is not currently on the horizon, making it even more difficult to enforce stricter regulations at national level.<sup>7</sup>

### Risks in the Securitization Model were Underestimated

When debtors defaulted, the creditors could do little to assert their claims as owners of the securitizations. Alt-

<sup>5</sup> "The emergence of a shadow banking system is not a new phenomenon. What was new over recent decades was the scale of its activities, which is closely related to the rapid expansion of securitization. The securitization of previously illiquid items in banks' balance sheets gave perhaps the strongest boost to the financial sector. Securitization allows traditional banking assets to be transformed into tradable instruments, thus creating tradable assets. It acts as a multiplier of negotiable financial claims or, more simply, a multiplier of finance." See Lorenzo Bini Smaghi, "Monetary policy transmission in a changing financial system: Lessons from the recent past, Thoughts about the future." Speech by Lorenzo Bini Smaghi, Member of the Executive Board of the ECB at the Barclays Global Inflation Conference, New York City, June 14, 2010.

<sup>6</sup> Financial Stability Board: Financial Security Forum announces a new process to promote further improvements in offshore financial centers (OFCs). Financial Stability Board, Bank for International Settlements, Basel, March 11, 2005. IMF, Offshore Financial Centers The Assessment Program—A Progress Report. Washington DC, International Monetary Fund, February 25, 2005. The IMF has since then integrated this program into the Financial Sector Assessment Program (FSAP). Consequently, a separate survey of offshore financial centers is no longer available.

<sup>7</sup> "Global finance cannot realistically be submitted to a single rulebook. The Basel Accord itself sets a minimum standard, not an optimum one. Several jurisdictions, from Switzerland to China, are considering higher requirements." Nicolas Veron, "After the G20: time for realism in global financial regulation," Brussels, Bruegel, November 2010. Since the Seoul Summit, the G20 is now committed to the gradual implementation of Basel III from 2013 to 2019.

though they are able in principle to claim legally a rescission of the contract against the arranger of the securitization, this fails de facto when the issuing investment bank is illiquid or insolvent. Since it was usually very large investment and commercial banks that were active as arrangers in the securitization business, it was generally expected that they would be able to provide compensation even for larger losses in single cases. Therefore, the risk was considered minimal and negligible.

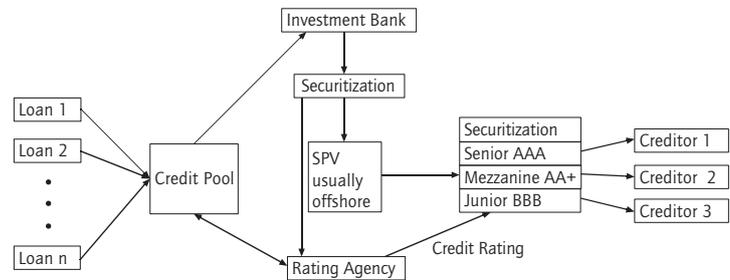
### An Unexpected Shock Destroys the Securitization Model Assumptions

The largely unregulated SPVs got involved more and more in the risky US real estate market, in particular the subprime mortgage market. These securitizations were implicitly linked to each other through joint market risks, i.e. a general decline in real estate prices and liquidity risks. In the course of the financial crisis, it was not only individual securities but the securitization model itself that was therefore called into question.<sup>8</sup> A broad mistrust of securitizations arose due to the lack of transparency for providers and even more so for buyers. At the same time, demand from large commercial banks active in the securitization market for additional liquidity to cover unexpected obligations soared in order for them to offer sufficient funds for potential claims. The interbank market for short-term liquidity, the centerpiece of the entire global financial system, was rapidly drying up because of this sudden excess liquidity demand.

The international liquidity crunch is reflected in the development of LIBOR.<sup>9</sup> The Libor is used as a benchmark interest rate for a number of medium to long-term credit agreements with a corresponding interest rate mark-up for longer maturities on variable-rate interest rate contracts. Usually, there is a very close relationship between the LIBOR rate and the discount rate of the central bank—in this case, the US Federal Reserve (Fed). However, this relationship collapsed completely for some time due to the serious malfunctions in the money markets (Figure 2). A collapse of global financial markets was only prevented through the intervention of the central banks in the US and Europe, which

Figure 1

### Securitization of Loans



Source: chart by DIW Berlin.

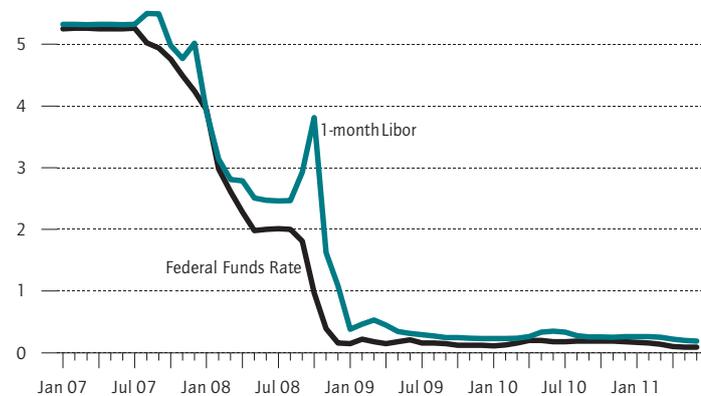
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With a securitization, the creditor no longer has a direct relationship with the debtor.

Figure 2

### Development of LIBOR Interest Rate<sup>1</sup> and Federal Funds Rate

In percent



1 One-month term.

Source: British Bankers Association.

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The close relationship between the central bank and interbank interest rates broke up during the financial market crisis.

have since made available almost unlimited liquidity at interest rates close to zero.

This revealed the interdependence of accumulated risks in the large pool of securitized assets. This invalidated the securitization model's basic assumption—the non-existent or minimal correlation of the risks between single credit contracts—due to macroeconomic events such as the dramatic rise in mortgage interest rates and fal-

<sup>8</sup> The crisis was triggered by the closure of a hedge fund of the investment bank Bear Stearns in 2007 and this gave rise to further speculations about other problematic securitizations.

<sup>9</sup> The London Interbank Offered Rate (LIBOR) is the daily reference interest rate for the interbank market which is fixed on each working day at 11.00 am London time. These are interest rates, determined by major international banks in the British Bankers' Association in London, at which they borrow money from other banks in the market.

Table 1

**Securitized Issued in Europe and the US<sup>1</sup>**

|                   | US <sup>2</sup> |                   | Europe          |                   |
|-------------------|-----------------|-------------------|-----------------|-------------------|
|                   | in EUR billions | Change in percent | in EUR billions | Change in percent |
| 2000              | 1 088.0         | –                 | 78.2            | –                 |
| 2001              | 2 308.4         | 112.2             | 152.6           | 95.1              |
| 2002              | 2 592.7         | 12.3              | 157.7           | 3.3               |
| 2003              | 2 914.5         | 12.4              | 217.3           | 37.8              |
| 2004              | 1 956.6         | -32.9             | 243.5           | 12.1              |
| 2005              | 2 650.6         | 35.5              | 327.0           | 34.3              |
| 2006              | 2 455.8         | -7.3              | 481.0           | 47.1              |
| 2007              | 2 404.9         | -2.1              | 453.7           | -5.7              |
| 2008              | 933.6           | -61.2             | 711.1           | 56.7              |
| 2009              | 1 358.9         | 45.6              | 414.1           | -41.8             |
| 2010              | 1 276.7         | -6.0              | 382.9           | -7.5              |
| 2011 <sup>3</sup> | 265.3           | –                 | 114.4           | –                 |

<sup>1</sup> Based on quarterly surveys.

<sup>2</sup> Converted using exchange rates at the end of each quarter.

<sup>3</sup> 1st quarter of 2011 only.

Sources: Bloomberg, Citigroup, Dealogic, Deutsche Bank, JP Morgan, Bank of America-Merrill Lynch, RBS, Thomson Reuters, Unicredit, AFME & SIFMA and calculations by DIW Berlin.

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In the US, emissions fell sharply in 2008, but did not fall in Europe until 2009.

ling property prices.<sup>10</sup> Before tradable securitizations had become illiquid and by this toxic assets. Nobody could plausibly determine the actual value of a securitization with the previous now invalidated valuation rules.<sup>11</sup>

**Development of Securitized since the Outbreak of the Crisis**

A recent report by the Association for Financial Markets in Europe (AFME) showed that in 2008, new issuances of securitizations in the US fell by 61.2 percent from EUR 2,404.9 billion to EUR 933.6 billion compared to the previous year.<sup>12</sup> Since then, values have gradually recovered to EUR 1,276.7 billion in 2010 (Table 1). As a result, the market volume of new issues is still only about half as large as before the bankruptcy of Lehman Brot-

**10** David X. Li, "On Default Correlation: A Copula Function Approach," The Journal of Fixed Income, vol. 9, (March 2000): 43-54.

**11** Georg Erber, "Verbriefungen: Eine Finanzinnovation und ihre fatalen Folgen," DIW Berlin Weekly Report no. 43/2008.

**12** AFME, Securitization data report Q1: 2011. London, 2011.

Table 2

**Outstanding Securitized by Country**  
in EUR billion

|                       | 2007           | 2008           | 2009           | 2010           | 4th Quarter 2010 | 1st Quarter 2011 | Share in percent |                  |
|-----------------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|
|                       |                |                |                |                |                  |                  | 4th Quarter 2010 | 1st Quarter 2011 |
| Austria               | 3.6            | 3.3            | 3.0            | 2.6            | 2.5              | 2.4              | 0.1              | 0.1              |
| Belgium               | 8.6            | 50.5           | 61.9           | 69.5           | 76.4             | 75.1             | 3.6              | 3.6              |
| Finland               | 0.0            | 7.7            | 6.4            | 5.0            | 4.6              | 4.3              | 0.2              | 0.2              |
| France                | 26.4           | 32.0           | 34.0           | 33.9           | 34.6             | 38.7             | 1.7              | 1.9              |
| Germany               | 93.8           | 133.8          | 125.7          | 97.0           | 93.3             | 87.4             | 4.5              | 4.2              |
| Greece                | 9.9            | 20.7           | 37.5           | 38.2           | 35.1             | 31.9             | 1.7              | 1.5              |
| Ireland               | 26.2           | 58.0           | 64.6           | 71.7           | 72.1             | 68.6             | 3.4              | 3.3              |
| Italy                 | 131.1          | 198.5          | 222.2          | 222.6          | 214.2            | 203.0            | 10.2             | 9.8              |
| Netherlands           | 236.7          | 293.7          | 308.0          | 317.4          | 319.6            | 319.1            | 15.3             | 15.4             |
| Portugal              | 32.2           | 41.4           | 48.5           | 50.1           | 57.3             | 60.1             | 2.7              | 2.9              |
| Russia                | 4.2            | 4.4            | 4.5            | 4.4            | 4.3              | 4.1              | 0.2              | 0.2              |
| Spain                 | 231.9          | 294.9          | 306.5          | 291.1          | 297.4            | 301.1            | 14.2             | 14.5             |
| Turkey                | 6.8            | 6.6            | 6.3            | 4.9            | 4.8              | 4.5              | 0.2              | 0.2              |
| UK                    | 549.9          | 693.5          | 681.1          | 647.8          | 622.1            | 625.0            | 29.7             | 30.1             |
| Others                | 8.2            | 7.0            | 6.3            | 2.7            | 2.8              | 4.2              | 0.1              | 0.2              |
| Pan-Europe            | 41.7           | 56.6           | 68.4           | 58.7           | 57.9             | 52.5             | 2.8              | 2.5              |
| Multinational         | 206.2          | 232.4          | 226.9          | 205.5          | 193.5            | 194.2            | 9.2              | 9.4              |
| <b>Europe overall</b> | <b>1 617.5</b> | <b>2 134.9</b> | <b>2 211.7</b> | <b>2 123.3</b> | <b>2 092.6</b>   | <b>2 076.3</b>   | <b>100.0</b>     | <b>100.0</b>     |
| <b>US</b>             | <b>-</b>       | <b>7 056.3</b> | <b>7 023.4</b> | <b>8 027.1</b> | <b>8 264.2</b>   | <b>6 792.0</b>   | <b>-</b>         | <b>-</b>         |

Sources: Bloomberg (USA & Europe), Fannie Mae (USA), Freddie Mac (USA), Ginnie Mae (USA), Thomson Reuters (USA), SIFMA (USA & Europe) and calculations by DIW Berlin.

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In 2011, securitization portfolios fell sharply in the US while the decline in Europe since 2009 has been moderate.

hers. But it has not resulted in the securitization market in the US drying up completely.

In Europe, the decline of new issueings of securitizations only occurred after a significant delay. In 2008, new issues reached an all-time high of EUR 711.1 billion. The first significant decline to EUR 414.1 billion took place in 2009. Since then, the volume of new issues continued to fall, but was still at quite a considerable level in 2010 at EUR 382.9 billion. When considering the results of the first quarter of 2011, it appears that this level might be reached again in 2011.

This development of the securitization before the Lehman bankruptcy is even more evident in the outstanding issuances of the securitizations. Apparently, not least because of the problems in dealing with toxic outstanding securitizations, the reduction of pre-crisis securitizations is very slow (Table 2). In 2008, the securitization portfolios in the US were at EUR 7,056 billion and as a result of continuing new issues, this figure was still rising even in the last quarter of 2010 to EUR 8,264 billion.<sup>13</sup> It is amazing that there are no significant reductions of outstanding issuances, instead there is again an increase in securitizations in the US. The securitization market is therefore obviously indispensable as a tool for sufficient liquidity supply to the US economy, despite the continuing systemic risks associated with securitization model. Only since the first quarter of 2011, a significant reduction of the volume to EUR 6,792 billion has occurred.

The trade-off between the economic consequences of a credit crunch due to stricter regulation of the financial markets and the consequences of another financial market crisis due to a lack of strict regulation prevails. Supporters of stricter regulation could not push through their demands for a comprehensive regulatory framework in particular for securitizations.<sup>14</sup> This would have led to a significant increase in equity requirement ratios in the financial sector, thereby reducing the capability to create sufficient credits, i.e. causing a credit crunch. Obviously, in the US and Europe it is hoped that there will be no recurrence of such a dramatic event as the

bankruptcy of Lehman Brothers soon.<sup>15</sup> The financial industry has been granted long transition periods to meet the new regulatory obligations, particularly with regard to higher equity requirements.

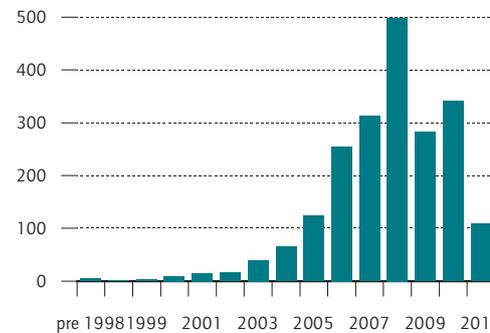
In Europe, however, the overall outstanding issuance of securitizations since 2008 has remained almost stable. In 2008, it had peaked at EUR 2135 billions, in the first quarter of 2011 it has again recovered to EUR 2,076 billion. Meanwhile, there have been no remarkable fluctuations in the outstanding issuances. However, it appears that single countries in Europe have responded differently. In Germany, the volume of outstanding issuances in 2008 was EUR 133.8 billion but this figure fell to EUR 87.4 billion in the first quarter of 2011. In the UK, there was only a slight decrease from EUR 693.6 billion in 2008 to EUR 625 billion in the first quarter of 2011. In contrast, volumes of outstanding issuances in Spain, the Netherlands, Italy, and Belgium have grown significantly. Crisis countries such as Ireland (2007: EUR 26.2 billion, first quarter 2011: EUR 68.6 billion), Portugal (2007: EUR 32.2 billion, first quarter 2011: EUR 60.1 billion) and Greece (2007: EUR

<sup>15</sup> Nassim Nicholas Taleb, *Black Swan: The Impact of the highly Improbable*. London, 2007. In his book, the author argues that the financial crisis of 2008 was a once-in-a-century event that will not happen again soon. Consequently, there was no need to push forward more urgently a comprehensive regulation of the securitization markets. This view also seems to be held by Alan Greenspan. Alan Greenspan, "Der Fluch der vielen Sicherheitspuffer," *Financial Times Deutschland*, July 27, 2011.

Figure 3

**Outstanding Securitizations in Europe by Year of Issue<sup>1</sup>**

In EUR billion



<sup>1</sup> In the first quarter of 2011. Based on rates at the time of issue. Subsequent restructuring does not affect securitizations in the year of issue.

Source: Sifma.

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The largest share of the outstanding securitizations in Europe occur in the year 2008.

<sup>13</sup> These figures are partially misleading due to exchange rate effects resulting from their conversion from US dollars into euros using current exchange rates.

<sup>14</sup> Hyman P. Minsky, *Stabilizing an unstable Economy*. New York, 1986. Hyman P. Minsky, *Can „It“ Happen Again? Essays on Instability and Finance*. New York, June 1982.

## SECURITIZATIONS ARE DEAD—LONG LIVE SECURITIZATIONS?

Table 3

### Outstanding Securitizations in the US and Europe According to Moody's Rating Categories

In percent<sup>1</sup>

|                                      | 2011        | 2010        |             |             |             | 2009        |             |             |             | 2008        |             |             |             |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                      | 1st Quarter | 4th Quarter | 3rd Quarter | 2nd Quarter | 1st Quarter | 4th Quarter | 3rd Quarter | 2nd Quarter | 1st Quarter | 4th Quarter | 3rd Quarter | 2nd Quarter | 1st Quarter |
| <b>Europa</b>                        |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Aaa/AAA                              | 70.2        | 73.4        | 72.9        | 72.9        | 75.6        | 78.0        | 79.6        | 80.7        | 81.1        | 84.3        | 84.1        | 85.5        | 70.2        |
| Aa/AA                                | 11.5        | 10.6        | 10.3        | 11.0        | 9.8         | 8.7         | 8.1         | 6.9         | 6.5         | 5.4         | 5.8         | 5.2         | 11.5        |
| A/A                                  | 7.5         | 5.8         | 6.5         | 6.1         | 5.9         | 5.0         | 4.4         | 4.7         | 5.6         | 4.9         | 4.8         | 4.4         | 7.5         |
| Baa/BBB                              | 5.8         | 5.5         | 5.3         | 5.3         | 3.8         | 3.6         | 3.5         | 4.0         | 4.2         | 3.6         | 3.6         | 3.9         | 5.8         |
| <b>Investment grade (Aaa to Baa)</b> | <b>94.9</b> | <b>95.3</b> | <b>95.0</b> | <b>95.2</b> | <b>95.1</b> | <b>95.3</b> | <b>95.6</b> | <b>96.3</b> | <b>97.4</b> | <b>98.2</b> | <b>98.3</b> | <b>98.9</b> | <b>94.9</b> |
| Ba/BB                                | 1.4         | 1.5         | 1.7         | 1.4         | 1.5         | 1.4         | 1.4         | 1.3         | 1.2         | 1.0         | 1.1         | 0.8         | 1.4         |
| B/B                                  | 1.0         | 0.8         | 0.7         | 0.8         | 0.9         | 0.8         | 0.8         | 0.8         | 0.4         | 0.2         | 0.2         | 0.1         | 1.0         |
| Caa/CCC                              | 1.4         | 1.1         | 1.2         | 1.2         | 1.2         | 1.1         | 0.9         | 0.8         | 0.6         | 0.3         | 0.1         | 0.1         | 1.4         |
| Ca/CC                                | 0.8         | 0.9         | 0.9         | 0.9         | 0.9         | 0.9         | 0.9         | 0.7         | 0.2         | 0.1         | 0.1         | 0.0         | 0.8         |
| C/C                                  | 0.4         | 0.4         | 0.5         | 0.5         | 0.5         | 0.5         | 0.4         | 0.2         | 0.2         | 0.2         | 0.1         | 0.1         | 0.4         |
| <b>Junk Bonds (Ba to C)</b>          | <b>5.1</b>  | <b>4.7</b>  | <b>5.0</b>  | <b>4.8</b>  | <b>4.9</b>  | <b>4.7</b>  | <b>4.4</b>  | <b>3.7</b>  | <b>2.6</b>  | <b>1.8</b>  | <b>1.7</b>  | <b>1.1</b>  | <b>5.1</b>  |
| Total                                | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         |
| <b>USA</b>                           |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Aaa/AAA                              | 30.2        | 33.7        | 35.3        | 33.7        | 37.8        | 37.9        | 41.2        | 46.2        | 63.0        | 70.4        | 73.7        | 81.8        | 30.2        |
| Aa/AA                                | 9.4         | 9.8         | 10.3        | 9.8         | 10.4        | 10.1        | 8.1         | 7.5         | 8.7         | 8.3         | 7.3         | 5.4         | 9.4         |
| A/A                                  | 5.7         | 6.1         | 6.7         | 6.1         | 7.6         | 7.8         | 6.9         | 6.2         | 6.8         | 6.6         | 5.7         | 3.9         | 5.7         |
| Baa/BBB                              | 5.7         | 5.4         | 6.3         | 5.4         | 7.3         | 7.5         | 7.6         | 8.0         | 7.6         | 5.1         | 4.7         | 4.8         | 5.7         |
| <b>Investment grade (Aaa to Baa)</b> | <b>50.9</b> | <b>55.0</b> | <b>58.5</b> | <b>55.0</b> | <b>63.1</b> | <b>63.3</b> | <b>63.7</b> | <b>67.9</b> | <b>86.0</b> | <b>90.4</b> | <b>91.3</b> | <b>95.9</b> | <b>50.9</b> |
| Ba/BB                                | 4.2         | 4.0         | 5.1         | 4.0         | 6.0         | 6.0         | 6.7         | 5.3         | 3.1         | 2.4         | 2.1         | 1.4         | 4.2         |
| B/B                                  | 7.3         | 6.1         | 7.7         | 6.1         | 8.5         | 8.6         | 8.0         | 7.2         | 2.7         | 2.5         | 2.7         | 1.1         | 7.3         |
| Caa/CCC                              | 16.9        | 15.4        | 14.6        | 15.4        | 11.2        | 11.0        | 9.9         | 10.3        | 3.0         | 1.3         | 1.6         | 0.7         | 16.9        |
| Ca/CC                                | 9.9         | 9.4         | 7.3         | 9.4         | 5.6         | 5.6         | 5.9         | 4.9         | 2.6         | 2.2         | 1.3         | 0.5         | 9.9         |
| C/C                                  | 10.7        | 10.1        | 6.7         | 10.1        | 5.6         | 5.5         | 5.8         | 4.4         | 2.7         | 1.3         | 1.0         | 0.5         | 10.7        |
| <b>Junk Bonds (Ba to C)</b>          | <b>49.1</b> | <b>45.0</b> | <b>41.5</b> | <b>45.0</b> | <b>36.9</b> | <b>36.7</b> | <b>36.3</b> | <b>32.1</b> | <b>14.0</b> | <b>9.6</b>  | <b>8.7</b>  | <b>4.1</b>  | <b>49.1</b> |
| Total                                | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         | 100         |

<sup>1</sup> The distribution is based on current ratings and the original volume of securitizations issued. "Unrated" and "defaulted" securitizations are included. After the slash is the equivalent rating category from Standard & Poor's.

Source: Moody's Investors Service.

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In Europe, only about five percent of securitizations are categorized as junk bonds. But in the US they make up almost half.

9.9 billion, first quarter 2011: EUR 31.9 billion), whose credit ratings have recently been downgraded to junk bond status because of high public debt, have actually registered a significant increase in securitizations since the outbreak of the crisis. Apparently, the risk of securitizations is assessed differently among the individual EU member countries.

The distribution of outstanding issuances of securitizations in Europe according to the year of issue shows that there is still a considerable legacy from the years

before the Lehman collapse included (Figure 3). However, they diminish in importance in coming years, particularly due to new issuances.

Since the outbreak of the financial crisis, Moody's has not dramatically downgraded the credit rating of securitizations in Europe (Table 3). Considering the sum of all shares with investment grade credit ratings, there is a slight decline in shares from 98.9 percent in the first quarter of 2008 to 94.9 percent in the first quarter of 2011. However, this decline of four percentage points

is extremely moderate against the background of the financial crisis.

### US: Significant Old Debt from the Pre-crisis Period

The picture is somewhat different in the US. Here, the proportion of outstanding securitizations with an investment grade rating was still a respectable 95.9 percent in the first quarter of 2001. However, since then this figure has fallen steadily to 50.9 percent in the first quarter of 2011. Looking at outstanding issuance figures for the US in the first quarter of 2011 shows that there is approximately EUR 3.335 trillion of junk bonds present in the US securitization market. This obviously cannot solely be an outcome of the subprime crisis in the securitization market for residential mortgage-backed securities (RMBS).<sup>16</sup> Unfortunately, there is no information about the maturity structure of outstanding securitizations in the US so the share of old debt from the period before the financial crisis cannot be separated from the new issuances afterwards. However, these results at least show that there is still a significant need for revaluations and write-downs in the US securitization market, especially with regard to RMBS.<sup>17</sup>

Evidently, ratings adjustment in both the US and in Europe have fallen significantly (Table 4). In 2008, Moody's made 49,565 downgrades and only 863 upgrades in the US, so after a peak in 2009 with 53,543 downgrades, there was a significant decline in 2010 to 26,483 downgrades. Apparently, however, the rating of securitizations in the US is still very error prone as compared to Europe where there are still too many positive ratings. It has apparently still not been possible to reduce the number of incorrect assessments of securitizations in the US to a comparatively low level as in Europe.<sup>18</sup> Obviously, still more risky papers in the US are securitized. Lower equity requirements and variable interest rates probably are important factors here.

<sup>16</sup> Robert J. Shiller, *The Subprime Solution—How Today's Global Financial Crisis Happened, and What to Do about it*. Princeton, 2008.

<sup>17</sup> This ought to be the case in particular at now re-nationalized real estate financiers Freddie Mac, Fannie Mae, and Ginnie Mae, which dominate the market for financing residential properties in the US. Further information can be found in the AFME's *Securitization Data Report Q1:2011*. London, 2011.

<sup>18</sup> But rating agency Fitch now expects greater numbers of payment defaults, especially among European commercial mortgage-backed securities (CMBS). Stefan Schaaf, "Fitch warnt vor neuer Verlustwelle – Ratingagentur sieht steigende Ausfallraten bei älteren forderungsbesicherten Wertpapieren," *Financial Times Deutschland*, August 5, 2011.

Table 4

### Upgrades and Downgrades<sup>1</sup> of Securitizations

|                              | 2008       | 2009       | 2010        | 1st Quarter 2011 |
|------------------------------|------------|------------|-------------|------------------|
| <b>Fitch</b>                 |            |            |             |                  |
| France                       | 0/14       | 0/40       | 1/6         | 1/8              |
| Germany                      | 17/36      | 17/404     | 23/124      | 11/27            |
| Italy                        | 14/30      | 14/47      | 7/41        | 2/9              |
| Netherlands                  | 27/18      | 2/28       | 6/16        | 1/9              |
| Spain                        | 16/41      | 6/269      | 15/141      | 1/77             |
| UK                           | 83/894     | 28/630     | 88/276      | 9/86             |
| Multinational <sup>2</sup>   | 27/141     | 19/790     | 20/183      | 8/33             |
| Europe overall               | 184/1 174  | 86/2 208   | 160/787     | 33/249           |
| US <sup>3</sup>              | 718/27 675 | 198/44 183 | 269/15 753  | 68/3 882         |
| <b>Moody's</b>               |            |            |             |                  |
| France                       | 0/2        | 1/1        | 0/1         | 0/0              |
| Germany                      | 2/43       | 10/59      | 10/23       | 0/4              |
| Italy                        | 0/15       | 2/25       | 3/7         | 0/1              |
| Netherlands                  | 0/5        | 4/42       | 4/20        | 1/0              |
| Spain                        | 1/54       | 2/134      | 0/53        | 1/44             |
| UK                           | 16/211     | 7/342      | 37/134      | 0/27             |
| Multinational <sup>4</sup>   | 79/2 140   | 53/3 326   | 103/356     | 94/42            |
| Europe overall               | 98/2 470   | 79/3 929   | 157/594     | 96/118           |
| US                           | 863/49 565 | 590/53 543 | 1759/26 483 | 696/8 448        |
| <b>Standard &amp; Poor's</b> |            |            |             |                  |
| France                       | 2/18       | 2/28       | 2/3         | 0/2              |
| Germany                      | 18/63      | 2/206      | 24/139      | 11/8             |
| Italy                        | 27/15      | 20/26      | 6/40        | 0/7              |
| Netherlands                  | 6/5        | 27/32      | 2/22        | 0/13             |
| Spain                        | 6/65       | 15/192     | 4/135       | 0/52             |
| UK                           | 65/496     | 34/1.026   | 120/518     | 15/46            |
| Multinational <sup>4</sup>   | 131/2 990  | 73/3 592   | 459/1 806   | 45/120           |
| Europe overall               | 255/3 652  | 173/5 102  | 617/2 663   | 71/248           |
| US                           | 581/29 713 | 363/37 946 | 662/18 461  | 818/2 725        |

<sup>1</sup> Upgrades/downgrades. The figures are not comparable due to differences in the rating methodologies of the three rating agencies.

<sup>2</sup> Fitch's multinational classification contains Commercial Mortgage Backed Securities (CMBS) emissions in various legal systems, along with rating measures in EMEA countries, notably Austria, Belgium, Greece, Ireland, Portugal, and the Russian Federation. Fitch assigns CDOs to those countries where the majority of bonds originate.

<sup>3</sup> Canadian securitizations are probably included here.

<sup>4</sup> All emissions with collateral located in several countries, as well as all CDOs denominated in euros are contained in this category.

Sources: Fitch Ratings; Moody's Investors Service; Standard & Poor's.

The number of downgrades outnumbers upgrades many times over.

### Europe: Stability Pact Offers Disincentives

In Europe, when the Stability and Growth Pact was introduced in the Eurozone it created incentives for countries with highly indebted national budgets, to use securitizations and other derivatives to reduce their debt and deficit levels due to accounting rules which kept these transactions off-balance from the statistics.

In 2001, Greece therefore set up a future-flow securitization of expected EU transfer payments from EU struc-

## SECURITIZATIONS ARE DEAD—LONG LIVE SECURITIZATIONS?

tural funds of two billion Euro under the SPV-name Atlas.<sup>19</sup> This securitization was arranged by the French bank BNP Paribas and Deutsche Bank. Its term was seven years, ending in 2008. Only this made it possible for Greece to meet the 3 percent deficit-to-GDP-ratio necessary to enter the Eurozone afterwards.

After these manipulations were disclosed, the rules for calculating public deficits according to the regulations of the Stability and Growth Pact were step by step modified so that such accounting tricks using special de-

rivatives could not longer be used.<sup>20</sup> According to information from Eurostat, none of these financial engineering transactions performed by Greece has so far been fully disclosed to Eurostat.<sup>21</sup> Neither the EU Commission, nor Eurostat, nor participating countries, such as Italy, Greece, and Portugal have ever submitted an official detailed report on their respective activities. It has been the task of the international press and insiders in the financial scene to publish some details.

The focus of securitizations in Europe is underlying mortgage loans from the housing market (Table 5). In addition, collateralized debt obligations (CDOs) are of

**19** Kerin Hope, "Banks Face Scrutiny for Greek Securitization," Financial Times, February 16, 2010.

"Greece's biggest securitization deal, through an SPV named Atlas, took place in 2001 when it raised €2bn backed by grants the finance ministry expected to receive from European Union structural funds over the following seven years."

**20** European Commission/Eurostat, Eurostat Guidance on accounting rules from EDP—Financial Derivatives. Brussels—Luxembourg, March 13, 2008.

**21** Eurostat, Supplementary tables on financial turmoil. Luxembourg, epp. eurostat.ec.europa.eu/portal/page/portal/government\_finance\_statistics/excessive\_deficit/supplementary\_tables\_financial\_turmoil.

Table 5

### Securitization Holdings by Country and Collateral Types in Europe in EUR billions

|                            | 4th Quarter 2010 |                  |              |                |                  |                  |                    | 1st Quarter 2011 |                  |              |                |                  |                  |                    |
|----------------------------|------------------|------------------|--------------|----------------|------------------|------------------|--------------------|------------------|------------------|--------------|----------------|------------------|------------------|--------------------|
|                            | ABS <sup>1</sup> | CDO <sup>2</sup> | CMBS         | RMBS           | SME <sup>3</sup> | WBS <sup>4</sup> | Total <sup>5</sup> | ABS <sup>1</sup> | CDO <sup>2</sup> | CMBS         | RMBS           | SME <sup>3</sup> | WBS <sup>4</sup> | Total <sup>5</sup> |
| Austria                    | 0.2              | -                | 0.2          | 2.1            | -                | -                | 2.5                | 0.0              | -                | 0.2          | 2.1            | -                | -                | 2.4                |
| Belgium                    | 0.2              | -                | 0.1          | 61.5           | 14.6             | -                | 76.4               | 0.2              | -                | 0.1          | 60.3           | 14.6             | -                | 75.1               |
| Finland                    | -                | -                | -            | 4.4            | 0.1              | -                | 4.6                | -                | -                | -            | 4.2            | 0.1              | -                | 4.3                |
| France                     | 18.2             | 0.0              | 2.5          | 11.2           | 2.7              | -                | 34.6               | 17.4             | 0.0              | 2.5          | 16.0           | 2.7              | -                | 38.7               |
| Germany                    | 40.0             | 2.3              | 20.1         | 22.6           | 12.2             | 0.1              | 97.3               | 32.4             | 2.3              | 18.9         | 21.7           | 12.1             | 0.1              | 87.4               |
| Greece                     | 12.6             | 2.7              | 0.3          | 6.8            | 12.7             | -                | 35.1               | 12.5             | 3.9              | 0.0          | 5.7            | 9.8              | -                | 31.9               |
| Ireland                    | -                | 2.8              | 0.4          | 68.9           | -                | -                | 72.1               | -                | 2.7              | 0.4          | 65.5           | -                | -                | 68.6               |
| Italy                      | 50.2             | 5.2              | 10.3         | 142.7          | 4.5              | 1.4              | 214.2              | 49.3             | 4.9              | 10.2         | 132.9          | 4.3              | 1.4              | 203.0              |
| Netherlands                | 6.7              | 0.6              | 8.2          | 289.0          | 15.1             | -                | 319.6              | 6.6              | 0.5              | 8.1          | 289.0          | 14.9             | -                | 319.1              |
| Portugal                   | 6.9              | -                | -            | 41.9           | 8.5              | -                | 57.3               | 6.4              | -                | -            | 41.8           | 11.9             | -                | 60.1               |
| Russia                     | 1.3              | -                | -            | 2.9            | -                | -                | 4.3                | 1.2              | -                | -            | 2.9            | -                | -                | 4.1                |
| Spain                      | 19.2             | 2.1              | 0.4          | 190.0          | 85.7             | -                | 297.4              | 23.6             | 2.1              | 0.4          | 188.7          | 86.4             | -                | 301.1              |
| Turkey                     | 4.8              | -                | -            | -              | -                | -                | 4.8                | 4.5              | -                | -            | -              | -                | -                | 4.5                |
| UK                         | 41.2             | 7.0              | 66.3         | 453.9          | 3.6              | 50.1             | 622.1              | 43.7             | 6.9              | 67.5         | 451.7          | 3.1              | 52.1             | 625.0              |
| Others <sup>6</sup>        | 0.1              | 1.9              | -            | 0.4            | 0.4              | -                | 2.8                | 1.5              | 1.9              | -            | 0.4            | 0.4              | -                | 4.2                |
| Pan-Europe <sup>7</sup>    | 1.0              | 20.6             | 32.0         | 0.2            | 4.0              | 0.1              | 57.9               | 1.0              | 19.0             | 28.2         | 0.2            | 4.0              | 0.1              | 52.5               |
| Multinational <sup>8</sup> | 2.2              | 185.7            | 2.6          | 0.2            | 1.9              | 0.9              | 193.5              | 1.8              | 187.4            | 2.5          | 0.2            | 1.4              | 0.9              | 194.2              |
| <b>Europe overall</b>      | <b>204.7</b>     | <b>231.0</b>     | <b>143.4</b> | <b>1 298.8</b> | <b>166.2</b>     | <b>52.5</b>      | <b>2 096.6</b>     | <b>202.0</b>     | <b>231.6</b>     | <b>139.0</b> | <b>1 283.5</b> | <b>165.8</b>     | <b>54.5</b>      | <b>2 076.3</b>     |

<sup>1</sup> European Asset Backed Securities (ABS), in particular consisting of credit purchases of automobiles, credit card debt, consumer credit and student loans.

<sup>2</sup> Collateralized debt obligations (CDOs) denominated in euros regardless of which European country they come from.

<sup>3</sup> CDOs of SMEs have been left out of the overall CDO category.

<sup>4</sup> Whole Business Securitization (WBS). Here, the entire revenue streams of an enterprise or operational part are securitized as future income streams.

<sup>5</sup> These figures may differ from previously published data due to new allocations, classification changes or additional information.

<sup>6</sup> Others includes European countries with outstanding securitizations that are too small to be reported separately. These include for example Georgia, Iceland, Ukraine, Switzerland, and Hungary.

<sup>7</sup> Pan-Europe was separated from the multinational category. It includes securitizations published for the whole of Europe.

<sup>8</sup> Multinational includes all securitizations that do not originate only from a single law sector, such as a country. In particular, it records almost all Euro-denominated CDOs.

Sources: Bloomberg; AFME; SIFMA.

The majority of securitizations in Europe are on mortgages for private residential property. The main focus is the UK, followed by the Netherlands, Spain, and Italy.

significant importance. The latter cannot clearly be assigned to single countries as other asset classes. This creates a gray area with regard to country-specific risks of the CDO-market adding-up to EUR 187.4 billion in the first quarter of 2011. Such CDOs could e.g. refer to collateralized debt from outstanding tax liabilities which are expected to be paid in the future. CDOs could as well refer to collateral of future income streams (future-flow securitizations), as expected income streams from EU structural funds. It would therefore be highly desirable if the current statistics published by AFME would break-down the CDOs to private and public securitizations and allocate these to the single EU countries.

### Conclusion

As demonstrated by current statistical information on market developments in securitizations in the US and Europe, the market has not declined initially as expected. Although there was a temporary marked decline, the market underwent a remarkable recovery especially in the US afterwards. Furthermore, the transparency of securitizations in terms of creditor and debtor structures has not significantly improved. While we know much more—but still not enough—about the supply side, there is still no sufficient information at all about risks on the buyer side .

The statistical data base still urgently needs a significant improvement. Robust and transparent statistics regarding the financial risk exposure of commercial banks as well a state finances are still unavailable. This may again reinforce the currently worsening situation on the international financial markets.

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