

# **Securitisation Data Report**

# **European Structured Finance**

Q2: 2016







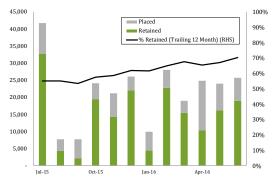
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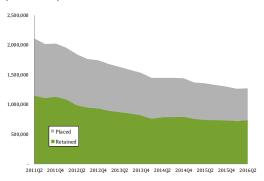
#### **European Securitisation Issuance** (EUR m)



Sources: AFME/SIFMA Members, AFME, Bloomberg, Dealogic, Thomson Reuters, SIFMA

# "In Q2 2016, EUR 74.5 billion 2015 (representing 56.8%). issued in Europe"

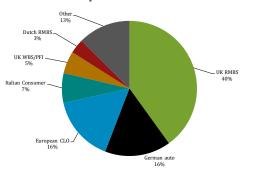
#### **European Securitisation Outstanding** (EUR m)



Sources: AFME/SIFMA Members, AFME, Bloomberg, Dealogic Thomson Reuters, SIFMA

Note: Retained outstandings do not contain retained, then subsequently placed, issues when data are available. Placed deals include bank

#### Placed European Issuance: 2Q 16



Sources: Bloomberg, AFME & SIFMA Member Firms, Dealogic, AFME SIFMA

### Market Highlights and Commentary

#### **Market Environment**

#### **Economic conditions**

According to Eurostat, GDP rose by 0.3% quarter-over-quarter (QoQ) in the Euro zone (EU19) and by 0.4% in the EU28 during the second quarter of 2016. The unemployment rate stood at 10.1% (EU19) and 8.6% (EU28) as of the end of June 2016, the lowest rate recorded since 2011 (EU19) and 2009 (EU28).

#### Term Issuance and Outstanding Volumes

In Q2 2016, EUR 74.5 billion of securitised product was issued in Europe, an increase of 31.0% from Q1 2016 (EUR 56.9 billion) and an increase of 49.2% from Q2 2015 (EUR 49.9 billion). Of the EUR 74.5 billion issued, EUR 29.1 billion was placed, representing 39.0% of issuance, compared to EUR 14.3 billion placed in Q1 2016 (representing 25.2%) and EUR 28.4 billion placed in Q2

of securitised product was For the second quarter, UK RMBS continued to lead placed totals (EUR 11.6 billion), followed by German auto (EUR 4.6 billion) and European CLO (EUR 4.6 billion). Notably, the first peer-to-peer / marketplace lending securitisation appeared in Europe, a UK SME deal comprised of loans funded through the Funding Circle platform.

> Net issuance was positive for the first time since the third quarter of 2014, with EUR 1.271 outstanding at the end of 20'16, up from EUR 1.267 trillion at the end of 1Q'16. Of this, approximately EUR 733.7 billion, or 57.7%, was retained.

#### **Credit Quality**

In Europe, upgrades outpaced downgrades in Q2 2016 among European securitised product, with upgrades concentrated in European CLOs and prime RMBS.

#### **ABCP Trends**

European asset backed commercial paper (ABCP) issuance was EUR 120.1 billion in Q2 2016, an increase of 25.3% QoQ and 16.7% YoY. Multiseller conduits continue to dominate as the largest category of issuer in the ABCP market, particularly from Ireland and France. European ABCP outstandings decreased slightly from the previous quarter, ending the second quarter at EUR 15.3 billion, down by 14.7% from EUR 17.9 billion in Q1 2016.

## Major upcoming regulatory, legislative and policy initiatives

On 8 March 2016 the European Supervisory Authorities (ESAs) published final draft regulatory technical standards (RTS) on margin requirements for non-centrally cleared derivatives under the European Market Infrastructure Regulation (EMIR). The RTS address the risk mitigation techniques related to the exchange of collateral to cover exposures arising from non-centrally cleared over-the-counter (OTC) derivatives. The implementation of the new rules has been postponed to March 2017.

#### **Market Highlights and Commentary**

"The EP reports have been published in *Iune* 2016, **MEPs** followed the by STS amendments to both **CRR** Regulation and **Amendments** which have been released in August 2016. The bulk of the amendments is around the key political issues of risk retention, ABCPs and third party certification."

On 24 March 2016, the Basel Committee released a new consultation on removing internal modelling flexibility for the calculation of banks' risk weighted assets. The proposal contains some provisions which may have an effect on securitisation by increasing the risk weights to calculate the capital associated with securitisation exposures. AFME responded to the consultation by its deadline on 24 June 2016.

On 6 April 2016 the Basel Committee proposed revisions to the Basel III leverage ratio framework, which, among other aspects, addressed the treatment of securitisations under Basel III leverage ratio. AFME (via GFMA) responded to this consultation on 6 July 2016.

The legislative process for the European Commission's (EC) proposal for a Securitisation Framework has now moved to the European Parliament (EP). The proposed Framework defines "Simple, Standard and Transparent securitisation" (STS) and introduces a revised regulatory framework for capital charges for credit institutions and investment firms originating, sponsoring or investing in securitisation products (CRR Amendments). The EP reports have been published in June 2016, followed by the MEPs amendments to both STS Regulation and CRR Amendments which have been released in August 2016. The bulk of the amendments is around the key political issues of risk retention, ABCPs and third party certification. The ECON committee vote is scheduled for November 2016, followed by the Plenary session in December 2016. The Trilogues are expected to start in January 2017.

Together with its proposals for Securitisation Framework, the EC published as well the Prospectus Directive review. The ECON committee adopted the draft report in July 2016. The next step in the legislative process is the EP's plenary session, which is likely to take place in September 2016. Trilogue negotiations between the Parliament, Council and Commission will start thereafter.

Following its final report on criteria for identifying Simple, Transparent and Comparable (STC) securitisations, in July 2016 the BCBS published an updated standard for the regulatory capital treatment of STC securitisations. This standard amends the Committee's 2014 capital standards and sets the minimum risk weight for senior, STC positions at 10%, and 15% for non-senior STC positions, while the risk weight floor for non-STC bonds remains at 15%. These minimum risk weights are the same as those outlined for STS and non-STS positions under the proposed amendments to the CRR

The legislative process on Money Market Funds Regulation moved into the Trilogues stage in September 2016. AFME is currently focused on the securitisation/ABCP aspects of the proposals.

"These minimum risk weights are the same as those outlined for STS and non-STS positions under the proposed amendments to the CRR."

### 1 Issuance

#### **€ BILLIONS**

#### 1.1 Issuance European Historical Issuance

#### **Q4** TOTAL 2007 179.9 594.9 151.9 167.2 96.0 2008 419.2 818.7 47.3 194.7 157.5 2009 131.0 83.8 113.2 95.8 423.8 2010 75.5 32.5 110.7 159.2 377.9 2011 115.2 67.1 57.1 136.5 375.9 2012 67.7 60.2 63.9 253.4 61.6 2013 32.8 53.2 38.4 56.4 180.8 2014 99.5 37.7 59.8 217.0 20.0 2015 35.3 49.9 57.1 71.4 213.8 2016 56.9 74.5 131.4

# 1.2 US and Australia Historical Issuance

	US	AU
2007	2,080.5	34.3
2008	934.9	6.6
2009	1,385.3	9.7
2010	1,203.7	15.5
2011	1,056.6	20.4
2012	1,579.2	14.8
2013	1,515.1	22.4
2014	1,131.5	22.1
2015	1,620.7	19.9
2016	720.7	7.2

Sources: Bloomberg, Citigroup, Dealogic, Bank of America-Merrill Lynch, Deutsche Bank, JP Morgan, Macquarie, Thomson Reuters, Unicredit, AFME, SIFMA

#### 1.3 European Issuance by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
ABS	10.5	28.1			38.6
CDO/CLO	2.8	4.6			7.4
CMBS	0.3	0.5			0.8
RMBS	38.7	39.3			78.0
SME	4.6	0.5			5.0
WBS/PFI		1.6			1.6
Total	56.9	74.5			131.4

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
9.9	17.6	11.5	25.9	64.8
3.2	5.0	2.5	3.5	14.2
0.7	3.0	1.9	0.4	6.0
16.6	19.6	35.7	29.1	101.0
4.1	4.8	5.5	12.6	27.0
0.8				0.8
35.3	49.9	57.1	71.4	213.8

#### 1.4 European Issuance by Retention

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Placed	14.3	29.1			43.4
Retained	42.5	45.4			88.0
Total <sup>2</sup>	56.9	74.5			131.4

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
19.7	28.4	18.1	15.6	81.8
15.5	21.6	39.0	55.9	132.0
35.3	49.9	57.1	71.4	213.8

#### 1.5 Australia Issuance by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
ABS	0.6	1.7			2.2
RMBS	2.3	2.6			4.9
CMBS	-	-			0.0
Total	2.9	4.3			7.2

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
1.4	1.0	0.5	1.3	4.2
6.4	3.4	4.7	1.0	15.5
-	0.0	0.19	-	0.2
7.8	4.4	5.4	2.3	19.9

#### 1.6 US Issuance by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
ABS	35.7	43.4			79.2
CDO	6.9	9.6			16.5
Agency MBS	250.9	323.6			574.5
Non-Agency CMBS	17.0	9.9			26.9
Non-Agency RMBS	9.5	14.3			23.7
Total	320.0	400.7			720.7

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
55.7	54.6	35.9	30.4	176.5
22.4	19.8	15.8	14.9	72.9
267.6	335.6	325.9	275.0	1,204.2
26.5	23.9	22.1	20.0	92.5
24.8	16.7	12.4	15.4	69.4
397.0	450.7	412.1	355.7	1,615.4

Sources: Bank of America Merrill-Lynch, Bloomberg, Citigroup, Dealogic, Deutsche Bank, JP Morgan, Macquarie, Thomson Reuters, Unicredit, AFME, SIFMA

#### **€ BILLIONS**

### 1.7 Issuance by Country of Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Belgium		3.6			3.6
Denmark					0.0
France		8.2			8.2
Germany	2.2	5.8			8.1
Greece					0.0
Ireland	2.0	0.0			2.0
Italy	11.8	8.8			20.6
Netherlands	9.6	17.4			27.0
Portugal					0.0
Spain	17.3	3.6			20.9
UK	11.0	20.6			31.6
PanEurope	2.6	4.9			7.6
Other Europe	0.2	1.6			1.8
Multinational					0.0
European Total	56.9	74.5			131.4
Australia Total	2.9	4.3			7.2
US Total	320.0	400.7			720.7

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
0.0	-	-	1.2	1.2
-	-	-	-	-
1.3	2.9	0.7	12.2	17.0
3.6	7.8	25.5	8.2	45.1
-	-	-	-	-
0.2	0.2	-	0.3	0.7
1.3	8.9	10.0	12.3	32.5
9.9	3.9	6.6	1.1	21.4
1.6	0.8	0.6	1.8	4.9
3.0	10.6	2.7	9.9	26.2
10.9	7.8	8.0	19.0	45.7
3.2	5.2	3.0	3.6	15.0
0.2	0.7	0.1	1.8	2.8
-	1.2	-	-	1.2
35.3	49.9	57.1	71.4	213.7
7.8	4.4	5.4	2.3	19.9
397.0	450.7	412.1	355.7	1,615.4

### 1.8 Issuance by Collateral Type and Country of Collateral: 2Q 16

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Belgium				3.6			3.6
Denmark							-
France	8.2						8.2
Germany	5.6		0.2				5.8
Greece							-
Ireland	0.0						0.0
Italy	8.8						8.8
Netherlands	0.2			17.2			17.4
Portugal							-
Spain	1.3			2.3			3.6
UK	2.6			16.2	0.2	1.6	20.6
PanEurope		4.6	0.1		0.3		4.9
Other Europe	1.4		0.2				1.6
Multinational							-
European Total	28.1	4.6	0.5	39.3	0.5	1.6	74.5

	ABS	CDO	AGENCY MBS	NON- AGENCY CMBS	NON- AGENCY RMBS	TOTAL
Australia Total	1.7				2.6	4.3
US Total	43.4	9.6	323.6	9.9	14.3	400.7

Sources: Bloomberg, Citigroup, Dealogic, Bank of America-Merrill Lynch, Deutsche Bank, JP Morgan, Macquarie, Thomson Reuters, Unicredit, AFME, SIFMA

#### **€ BILLIONS**

### 1.9 European Issuance by Rating

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
AAA	21.7	47.5			69.2
AA	4.5	7.2			11.6
A	20.0	5.9			25.9
BBB & Below	4.7	3.0			7.6
Not Rated	6.1	10.9			17.0
European Total2	56.9	74.5			131.4

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
24.4	17.2	16.4	33.5	91.5
1.7	11.6	25.2	13.3	51.7
4.9	7.4	6.0	10.7	29.1
2.1	4.3	1.9	4.0	12.4
2.2	9.4	7.6	9.8	29.0
35.3	49.9	57.1	71.4	213.7

### 1.10 Australia Issuance by Rating

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
AAA	2.3	3.7			6.0
AA	0.4	0.3			0.6
Α	0.1	0.1			0.2
BBB & Below	0.0	0.1			0.1
Not Rated	0.1	0.2			0.2
US Total	2.9	4.3			7.2

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
7.1	3.6	4.9	1.9	17.5
0.3	0.4	0.2	0.3	1.2
0.2	0.1	0.1	0.0	0.4
0.0	0.1	0.1	0.0	0.2
0.2	0.2	0.1	0.1	0.6
7.8	4.4	5.4	2.3	19.9

### 1.11 US Issuance by Rating

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
AAA	34.2	40.4			74.6
AA	4.8	3.9			8.7
A	5.2	4.8			10.0
BBB & Below	6.7	7.0			13.7
Not Rated	18.3	21.1			39.3
Agency MBS	250.9	323.6			574.5
US Total	320.0	400.7			720.7

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
61.9	45.4	38.5	41.6	187.4
6.0	5.0	4.9	5.9	21.8
8.0	6.9	3.4	5.5	23.8
12.3	9.1	5.0	7.7	34.1
41.1	48.8	34.4	19.9	144.1
267.6	335.6	325.9	275.0	1,204.2
397.0	450.7	412.1	355.7	1,615.4

Sources: Bank of America-Merrill Lynch, Bloomberg, Citigroup, Dealogic, Deutsche Bank, JP Morgan, Macquarie, Thomson Reuters, Unicredit, AFME, SIFMA

### 1.12 Securitisation Issuance by Deal Size: 2Q16

INCLUDING RETAINED DEALS								
	EUR	ОРЕ	Australia		US			
	# of Issues	<b>€</b> Billions	# of Issues	<b>€</b> Billions	# of Issues	<b>€</b> Billions		
Less than 0.01 Billion	0%	0%	0%	0%	0%	0%		
0.01-0.1 Billion	1%	0%	0%	0%	2%	0%		
0.1-1.0 Billion	66%	21%	75%	48%	66%	54%		
More than 1.0 Billion	33%	79%	25%	52%	10%	22%		
Agency MBS	N/A	N/A	N/A	N/A	22%	24%		
Total	100%	100%	100%	100%	100%	100%		

Sources: Dealogic, Macquarie

# 2 Outstanding

#### **€** BILLIONS

#### 2.1 European Outstandings by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
ABS	185.5	195.3		
CDO/CLO	109.0	109.8		
CMBS	77.1	75.1		
RMBS	737.0	737.3		
SME	89.4	84.1		
WBS/PFI	68.7	70.1		
Total	1,266.6	1,271.6		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
196.0	202.4	191.6	199.4
108.5	108.1	102.1	105.0
82.9	82.9	81.7	79.3
812.5	791.9	786.8	751.5
100.1	97.0	95.8	94.5
72.5	72.4	70.2	69.6
1,372.6	1,354.7	1,328.4	1,299.2

#### 2.2 Australia Outstandings by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
ABS	6.6	7.7		
CMBS	0.3	0.3		
RMBS	49.3	48.0		
Total	56.2	55.9		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
7.7	7.5	6.4	7.1
0.3	0.3	0.4	0.3
57.4	54.9	49.6	50.4
65.4	62.7	56.4	57.8

### 2.3 US Outstandings by Collateral

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
ABS	1,221.5	1,258.8		
Agency MBS	5,502.6	5,692.7		
Non-Agency RMBS	756.2	752.8		
Non-Agency CMBS	519.2	509.6		
Total	7,999.5	8,213.9		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
1,284.7	1,268.4	1,257.7	1,283.8
5,609.3	5,449.7	5,499.5	5,725.9
893.4	842.1	812.3	814.9
587.3	563.3	552.0	553.7
8,374.7	8,123.4	8,121.4	8,378.3

Sources: Bloomberg (US & Europe), Fannie Mae (US), Federal Reserve (US), Freddie Mac (US), Ginnie Mae (US), Loan Performance (US), Dealogic (US), Macquarie (Australia), Thomson Reuters (US), AFME & SIFMA Estimates (US & Europe)

#### **€ BILLIONS**

### 2.4 Outstandings by Country of Collateral: 2014-2015

	2015:Q1	2015:Q2	2015:Q3	2015:Q4
Austria	2.2	1.9	1.8	2.1
Belgium	69.8	67.7	65.8	65.7
Finland	1.1	1.0	1.0	1.2
France	70.3	70.4	69.6	78.6
Germany	71.2	68.5	88.7	88.1
Greece	24.2	24.2	21.4	20.6
Ireland	35.9	34.7	33.5	32.0
Italy	157.1	158.3	155.1	149.5
Netherlands	247.0	243.5	240.3	222.3
Portugal	34.5	34.0	32.1	32.1
Russia	0.5	0.4	0.4	0.4
Spain	170.4	170.5	163.6	161.7
Turkey	1.6	1.5	1.5	1.5
UK	374.0	365.2	347.4	334.6
Other	4.4	4.7	4.1	4.7
PanEurope	52.0	54.2	54.0	59.4
Multinational	56.5	53.8	47.9	44.7
European Total	1,372.6	1,354.7	1,328.4	1,299.2
Australia Total	65.4	62.7	56.4	57.8
US Total	8,374.7	8,123.4	8,121.2	8,378.1

2014:Q1	2014:Q2	2014:Q3	2014:Q4
2.3	2.2	2.2	2.2
80.3	77.2	76.6	74.5
1.0	0.9	0.8	1.2
32.9	68.8	69.3	72.0
73.4	70.5	74.7	72.0
26.3	25.7	25.1	25.1
37.3	36.7	35.3	36.6
176.1	170.2	169.7	165.5
258.7	259.5	258.2	254.7
37.7	36.1	36.0	35.2
1.2	1.1	0.9	0.5
168.7	162.5	167.6	176.3
2.0	1.8	1.8	1.7
420.7	411.7	408.4	406.5
4.7	4.7	5.1	4.7
49.0	46.9	50.1	50.9
74.7	68.0	65.0	61.4
1,446.9	1,444.6	1,446.8	1,441.0
57.9	59.6	60.2	59.8
6,449.1	6,439.8	7,057.3	7,407.5

#### 2016

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Austria	2.1	2.0		
Belgium	64.5	66.6		
Finland	1.1	1.0		
France	76.7	81.2		
Germany	84.2	83.2		
Greece	20.4	20.4		
Ireland	33.4	32.5		
Italy	144.2	138.7		
Netherlands	207.5	216.2		
Portugal	29.8	29.2		
Russia	0.4	0.4		
Spain	163.7	162.5		
Turkey	1.4	1.1		
UK	324.9	323.7		
Other	4.6	5.2		
PanEurope	64.1	67.1		
Multinational	43.6	40.8		
European Total	1,266.6	1,271.6		
Australia Total	56.2	55.9		
US Total	7,999.5	8,213.9		

Sources: Bloomberg (US & Europe), Fannie Mae (US), Federal Reserve (US), Freddie Mac (US), Ginnie Mae (US), Loan Performance (US), Dealogic (US), Macquarie (Australia), Thomson Reuters (US), AFME & SIFMA Estimates (US & Europe)

# 2.5 European Outstandings by Moody's Investors Service Ratings (as a percentage of total Moody's rated securitisations)

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	46.37%	46.33%		
Aa/AA	28.46%	29.75%		
A/A	13.82%	13.42%		
Baa/BBB	5.26%	4.81%		
Ba/BB	2.08%	1.91%		
B/B	1.19%	1.04%		
Caa/CCC	1.82%	1.77%		
Ca/CC	0.64%	0.60%		
C/C	0.36%	0.37%		
Total	100.00%	100.00%		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
44.63%	45.48%	46.42%	47.29%
23.14%	26.00%	28.49%	28.69%
17.61%	15.63%	13.43%	13.18%
8.01%	6.65%	5.74%	5.14%
2.95%	2.13%	1.96%	1.91%
1.62%	2.04%	1.16%	1.21%
0.97%	1.02%	1.73%	1.63%
0.75%	0.71%	0.73%	0.62%
0.33%	0.34%	0.35%	0.34%
100.00%	100.00%	100.00%	100.00%

# 2.6 Australia Outstandings by Standard and Poor's Ratings (as a percentage of total S&P rated securitisations)

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	86.54%	87.00%		
Aa/AA	6.26%	5.48%		
A/A	2.53%	2.61%		
Baa/BBB	0.76%	0.78%		
Ba/BB	0.29%	0.32%		
B/B	0.11%	0.10%		
Caa/CCC	0.00%	0.00%		
Ca/CC	0.00%	0.00%		
C/C	0.02%	0.02%		
D	0.00%	0.00%		
NR	3.49%	3.68%		
Total	100.00%	100.00%		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
88.44%	87.80%	87.99%	87.30%
4.92%	5.34%	5.20%	5.58%
2.63%	2.66%	2.51%	2.60%
0.79%	0.76%	0.74%	0.73%
0.33%	0.32%	0.32%	0.31%
0.07%	0.08%	0.09%	0.10%
0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%
0.02%	0.02%	0.02%	0.02%
0.00%	0.00%	0.00%	0.00%
2.80%	3.02%	3.13%	3.36%
100.00%	100.00%	100.00%	100.00%

# 2.7 US Outstandings by Moody's Investors Service Ratings (as a percentage of total Moody's rated securitisations)

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	28.68%	28.75%		
Aa/AA	4.99%	5.30%		
A/A	6.20%	6.09%		
Baa/BBB	8.04%	7.95%		
Ba/BB	6.15%	6.08%		
B/B	6.55%	5.73%		
Caa/CCC	19.49%	20.19%		
Ca/CC	11.67%	11.72%		
C/C	8.22%	8.20%		
Total	100.00%	100.00%		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
28.30%	28.67%	28.90%	28.72%
4.61%	4.88%	4.61%	4.79%
6.20%	6.21%	6.36%	6.38%
7.65%	7.55%	7.68%	7.82%
6.67%	6.55%	6.37%	6.25%
6.85%	6.79%	6.61%	6.55%
19.85%	19.62%	19.66%	19.65%
11.22%	11.23%	11.43%	11.55%
8.64%	8.50%	8.39%	8.30%
100.00%	100.00%	100.00%	100.00%

Sources: Macquarie, Moody's Investors Service, Standard and Poor's

#### **€** BILLIONS

### 2.8 Australian Outstandings by Vintage

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
2016	2.6	6.9		
2015	15.9	14.6		
2014	13.4	12.3		
2013	9.1	8.4		
2012	3.6	3.2		
2011	4.1	3.7		
2010	2.4	2.2		
2009	1.2	1.1		
2008	0.3	0.2		
2007	2.2	1.8		
2006	0.9	0.8		
2005	0.2	0.2		
2004	0.2	0.2		
2003	0.0	0.0		
2002	0.0	0.0		
2001	0.1	0.1		
Prior	0.0	0.0		
Total	53.6	49.0		

### 2.9 European Outstandings by Vintage

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
2016	57.7	114.5		
2015	196.8	191.3		
2014	168.8	163.4		
2013	99.4	91.9		
2012	98.1	92.0		
2011	79.2	70.7		
2010	104.7	103.2		
2009	59.9	56.4		
2008	101.6	98.4		
2007	101.0	97.2		
2006	88.5	85.3		
2005	34.9	33.4		
2004	27.5	27.0		
2003	18.7	18.3		
2002	7.9	7.8		
2001	8.4	7.8		
Prior	13.3	13.2		
Total	1,208.9	1,157.1		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
7.8	11.5	14.7	17.0
7.8	11.5	14.7	17.0
19.2	17.3	14.5	14.3
13.5	12.1	10.0	9.8
5.8	5.0	4.1	4.0
6.1	5.4	4.3	4.3
3.6	3.2	2.6	2.6
1.7	1.6	1.3	1.3
0.4	0.4	0.3	0.3
3.6	3.3	2.4	2.3
2.6	2.0	1.4	1.2
0.5	0.4	0.3	0.3
0.3	0.3	0.2	0.2
0.0	0.0	0.0	0.0
0.1	0.1	0.0	0.0
0.1	0.1	0.1	0.1
0.0	0.0	0.0	0.0
65.4	62.7	56.4	56.4

2015:Q1	2015:Q2	2015:Q3	2015:Q4
N/A	N/A	N/A	N/A
35.7	84.3	135.1	200.6
193.3	186.9	181.5	174.8
141.9	135.6	130.4	121.5
137.9	127.1	117.0	104.4
132.0	126.1	117.3	95.3
139.2	133.0	125.3	114.9
82.9	79.7	68.5	66.4
130.1	117.4	112.3	104.5
133.1	125.6	113.9	105.8
111.3	107.7	101.7	93.5
48.4	46.4	44.3	39.4
31.6	30.8	29.9	28.1
21.6	21.0	19.9	19.4
9.0	8.9	8.5	8.2
10.5	10.3	8.7	8.5
14.3	14.1	14.0	13.8
1,372.3	1,354.4	1,328.1	1,245.6

Sources: Bloomberg, Macquarie, AFME, SIFMA

#### **€ BILLIONS**

### 2.10 European Outstandings by Country and Collateral: 1Q 2016

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.5			1.6			2.1
Belgium	0.2		0.1	46.7	17.4		64.5
Finland	0.6					0.5	1.1
France	17.1		0.4	58.4	0.2	0.5	76.7
Germany	44.4	0.2	6.4	26.3	6.7	0.0	84.2
Greece	9.6	1.8	0.2	2.5	6.3		20.4
Ireland	0.3	0.0	0.2	33.0			33.4
Italy	46.8	1.7	8.7	66.4	20.2	0.3	144.2
Netherlands	3.7	0.6	1.3	195.6	6.4		207.5
Portugal	3.1			20.7	6.0		29.8
Russia				0.4			0.4
Spain	14.6	0.5	0.1	130.2	18.3	0.0	163.7
Turkey	1.4						1.4
UK	37.9	8.5	50.3	154.3	7.3	66.6	324.9
Other	3.6	0.2		0.7			4.6
PanEurope	1.2	55.6	6.5	0.2	0.4	0.2	64.1
Multinational	0.5	39.8	2.7			0.5	43.6
European Total	185.5	109.0	77.1	737.0	89.4	68.7	1266.6

#### 2Q 2016

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.5			1.5			2.0
Belgium	0.2		0.1	49.0	17.3		66.6
Finland	0.5					0.5	1.0
France	22.3		0.4	57.7	0.2	0.6	81.2
Germany	43.7	0.2	6.3	26.2	6.6	0.0	83.2
Greece	9.6	1.8	0.2	2.5	6.3		20.4
Ireland	0.25	0.0	0.2	32.0			32.5
Italy	49.3	1.7	8.0	61.7	17.7	0.3	138.7
Netherlands	3.2	0.5	1.3	205.2	6.1		216.2
Portugal	3.0			20.3	5.9		29.2
Russia				0.4			0.4
Spain	16.3	0.5	0.1	129.3	16.4	0.0	162.5
Turkey	1.1						1.1
UK	39.7	8.5	49.6	150.8	7.2	68.0	323.7
Other	4.1	0.2	0.18	0.7			5.2
PanEurope	1.2	59.1	6.0	0.2	0.3	0.2	67.1
Multinational	0.4	37.2	2.7			0.5	40.8
European Total	195.3	109.8	75.1	737.3	84.1	70.1	1271.6

Sources: Bloomberg, AFME, SIFMA

## 3 Credit Quality – Rating Changes

### **Upgrades/Downgrades by Country**

#### 3.1 DBRS

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
France	0/0	1/0			1/0
Germany	2/0	6/0			8/0
Italy	9/0	14/1			23/1
Netherlands	0/0	0/0			0/0
Spain	3/1	41/3			44/4
UK	0/0	2/1			2/1
Multinational	2/0	6/0			8/0
European Total	16/1	70/5			86/6
US	413/3	538/5			951/8

#### 2015:Q1 | 2015:Q2 | 2015:Q3 | 2015:Q4 | TOTAL 0/0 0/0 0/0 0/0 0/0 1/0 0/0 5/0 0/0 6/0 3/0 8/0 9/0 25/1 5/1 0/0 0/0 0/0 0/0 0/0 26/18 20/0 0/3 1/7 5/8 0/0 0/0 0/0 1/1 1/1 0/7 4/0 6/15 0/3 2/5 4/6 26/9 16/12 18/8 64/35 391/18 485/36 12/4 24/9 912/67

#### 3.2 Fitch Ratings

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
France	1/0	3/0			4/0
Germany	8/6	4/13			12/19
Italy	3/0	14/0			17/0
Netherlands	1/2	9/1			10/3
Spain	4/7	33/1			37/8
UK	51/11	92/12			143/23
Multinational	0/1	0/0			0/1
European Total	69/27	157/31			226/58
US	436/400	512/132			948/532

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
0/0	0/2	0/0	5/0	5/2
19/10	3/6	8/12	22/14	52/42
2/7	5/10	9/7	1/6	17/30
2/3	3/3	2/3	1/8	8/17
11/24	35/6	24/17	18/4	88/51
34/17	76/28	102/8	28/13	148/66
0/0	0/0	0/0	0/0	0/0
68/62	127/67	167/69	85/47	447/245
330/602	365/109	364/690	1,251/332	2310/1733

#### 3.3 Moody's Investors Service

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
France	4/0	2/0			6/0
Germany	0/2	5/3			5/5
Italy	0/0	0/0			0/0
Netherlands	2/0	25/0			27/0
Spain	0/0	203/0			203/0
UK	0/9	10/3			10/12
Multinational	152/2	65/7			217/9
European Total	167/13	337/15			504/28
US	1562/628	1182/301			2744/929

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
1/2	0/0	0/0	0/0	1/2
4/3	1/2	6/4	1/1	12/10
124/6	69/0	7/2	31/5	231/13
3/7	8/0	30/0	0/0	41/7
420/7	0/0	257/7	14/5	691/19
12/12	223/1	59/12	219/0	513/25
107/7	86/10	87/2	132/3	412/22
671/44	387/13	446/27	407/14	1911/98
1258/440	1744/404	1183/261	1707/336	5892/1441

#### 3.4 Standard & Poor's

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
France	0/0	1/0			1/0
Germany	1/5	0/4			1/9
Italy	0/1	3/0			3/1
Netherlands	17/7	32/16			49/23
Spain	51/7	1/6			52/13
UK	33/5	33/30			66/35
Multinational	161/19	42/13			203/32
European Total	263/44	112/69			375/113
US	394/381	563/584			957/965

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
2/2	1/1	0/0	2/0	5/3
2/2	2/8	4/7	3/2	11/19
9/47	0/4	3/0	0/4	12/55
0/0	1/2	0/0	1/5	2/7
17/99	0/0	0/0	35/16	52/115
31/18	56/40	30/316	26/84	143/458
68/37	115/24	113/24	138/24	434/109
129/205	175/79	150/347	205/135	659/766
403/482	290/726	738/729	943/695	2374/2632

Sources: DBRS, Fitch Ratings, Moody's Investors Service, Standard & Poor's

#### **Upgrades/Downgrades by Collateral**

#### 3.5 DBRS - Europe

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	2/0	9/0			11/0
CDO	8/0	12/0			20/0
CMBS	0/0	1/1			1/1
Credit Card	0/0	5/0			5/0
RMBS (prime)	5/1	33/4			38/5
RMBS (non-prime)	1/0	5/0			6/0
Other ABS	0/0	5/0			5/0
Total	16/1	70/5			86/6

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
1/0	4/0	6/0	3/0	14/0
3/1	18/0	1/1	6/4	28/6
0/2	1/8	0/5	0/0	1/15
0/0	0/0	6/0	5/2	11/2
0/3	0/0	3/5	4/2	7/10
0/0	0/1	0/1	0/0	0/2
0/0	3/0	/0	0/0	3/0
4/6	26/9	16/12	18/8	64/35

#### 3.6 Fitch Ratings - Europe<sup>1</sup>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	0/0	7/0			7/0
Credit Card	0/0	0/0			0/0
Other ABS	9/1	4/0			13/1
CDO	5/3	19/8			24/11
CMBS	4/11	15/14			19/25
RMBS (prime)	16/12	35/0			51/12
RMBS (non-conforming)	35/0	75/5			110/5
Total	69/27	157/31			226/58

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
2/0	2/0	6/0	3/0	13/0
0/0	2/0	0/0	0/1	2/1
5/3	7/4	5/5	8/1	25/13
15/4	33/16	35/8	32/8	115/36
11/18	1/26	2/16	2/21	16/81
18/27	82/14	46/40	21/9	167/90
17/10	0/7	73/0	19/7	109/24
68/62	127/67	167/69	85/47	447/245

#### 3.7 Moody's Investors Service - Europe

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	0/0	7/0			7/0
CDO	152/2	65/3			217/5
CMBS	0/2	0/7			0/9
Credit Card	0/0	0/0			0/0
RMBS (prime)	14/1	238/4			252/5
RMBS (non-conforming)	1/8	27/1			28/9
Total	167/13	337/15			504/

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
17/0	2/0	2/0	0/1	21/1
102/5	85/8	87/0	132/3	406/16
7/15	2/2	12/19	12/1	33/37
0/0	1/0	0/0	0/0	1/0
595/43	151/18	335/19	51/8	1132/88
38/9	165/1	65/1	212/1	480/12
759/72	406/29	501/39	407/14	2073/154

#### 3.8 Standard & Poor's - Europe

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	2/0	0/0			2/0
CDO	191/15	49/3			240/18
CMBS	1/13	0/37			1/50
Credit Card	0/0	2/0			2/0
RMBS (prime)	67/14	26/20			93/34
RMBS (non-conforming)	2/2	35/9			37/11
Total	263/44	112/69			375/113

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
2/0	2/0	1/0	1/0	6/0
84/37	139/26	137/18	161/27	521/108
6/32	3/28	2/20	9/37	20/117
0/0	0/0	0/0	0/0	0/0
26/136	0/3	6/127	34/19	66/285
11/0	31/22	4/182	0/52	46/256
129/205	175/79	150/347	205/135	659/766

Sources: DBRS, Fitch Ratings, Moody's Investors Service, Standard & Poor's

<sup>&</sup>lt;sup>1</sup> The European totals may not match the constituent parts as a small number of European RMBS transactions are not categorised as either Prime or Nonconforming.

#### **Upgrades/Downgrades by Collateral**

#### 3.9 DBRS - US

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	40/0	2/0			42/0
CDO	0/0	5/0			5/0
CMBS	13/3	52/2			65/5
Credit Card	0/0	0/0			0/0
RMBS	339/0	476/2			815/2
Other ABS	21/0	3/1			24/1
Total	413/3	538/5			951/8

#### 0/1 21/0 0/0 4/0 2/0 4/1 10/1 14/9 12/3 20/7 53/23 7/4 0/0 0/0 0/0 0/0 0/0 0/0 346/14 446/26 0/0 792/40 0/0 12/0 2/1 0/1 14/2 391/18 485/36 12/4 24/9 912/67

#### 3.10 Fitch Ratings - US

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	0/0	21/0			21/0
Credit Card	0/0	0/0			0/0
Other ABS	26/70	93/41			119/111
CDO	22/15	55/12			77/27
CMBS	148/115	93/27			241/142
RMBS (prime)	0/93	80/1			80/94
RMBS (subprime)	20/24	5/2			25/26
Other RMBS	220/83	165/49			385/132
Total	436/400	512/132			948/532

201	5:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
0	/0	0/0	1/0	0/0	1/0
0	/0	0/0	0/0	0/0	0/0
2	5/3	51/5	50/12	38/1	164/21
34	4/6	58/18	49/10	29/14	170/48
159	9/97	114/64	65/56	99/55	437/272
4/	171	0/0	180/500	11/100	195/771
20	/90	3/1	0/37	933/43	956/171
88	/235	139/21	19/75	141/119	387/450
330	/602	365/109	364/690	1,251/332	2310/1733

#### 3.11 Moody's Investors Service - US

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	101/0	4/0			105/0
CDO	132/28	44/16			176/44
CMBS	210/85	139/41			349/126
Credit Card	13/0	0/0			13/0
RMBS	1106/515	995/244			2101/759
Total	1562/628	1182/301			2744/929

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
95/0	36/0	78/0	110/0	319/0
273/5	388/2	249/2	320/1	1230/10
226/61	246/70	143/53	370/73	985/257
0/0	17/0	0/0	0/0	17/0
664/374	1057/332	713/206	907/262	3341/1174
1258/440	1744/404	1183/261	1707/336	5892/1441

#### 3.12 Standard & Poor's - US

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	9/0	88/0			97/0
CDO	235/13	149/17			384/30
CMBS	63/13	122/48			185/61
Credit Card	0/0	0/0			0/0
RMBS (prime)	36/244	116/271			152/515
RMBS (subprime)	51/111	88/248			139/359
Total	394/381	563/584			957/965

2	015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
	5/0	54/0	87/0	22/0	168/0
L	296/11	136/24	176/12	122/22	730/69
L	28/19	36/72	76/52	120/63	260/206
	0/0	0/0	0/0	0/0	0/0
L	37/334	19/322	240/460	121/265	417/1381
	37/118	45/308	159/205	558/345	799/976
4	103/482	290/726	738/729	943/695	2374/2632

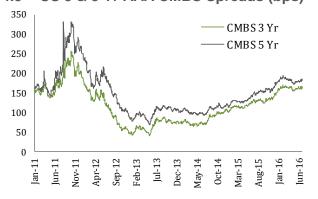
 $\textbf{Sources:} \ \textit{DBRS, Fitch Ratings, Moody's Investors Service, Standard \& Poor's \\$ 

## 4 CMBS Spreads

# 4.1 European 3-5 Yr AAA CMBS Spreads (bps)

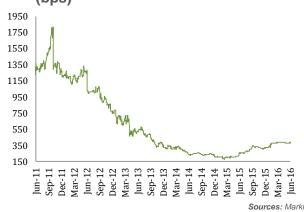


### 4.3 US 3 & 5 Yr AAA CMBS Spreads (bps)

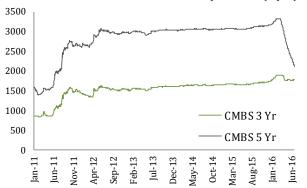


Sources: Trepp LLC

# 4.2 European 3-5 Yr BBB CMBS Spreads (bps)



#### 4.4 US 3 & 5 Yr BBB CMBS Spreads (bps)



Sources: Trepp LLC

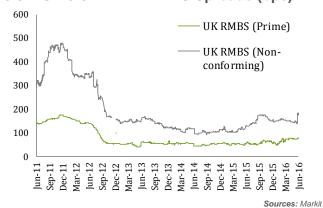
## 5 RMBS Spreads

# 5.1 European 3-5 Yr AAA RMBS Spreads (bps)

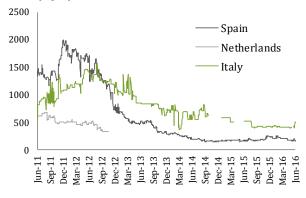


Sources: Markit

#### 5.3 UK 3-5 Yr AAA RMBS Spreads (bps)

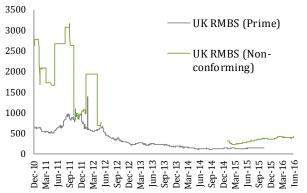


5.2 European 3-5 Yr BBB RMBS Spreads (bps)



Sources: Markit

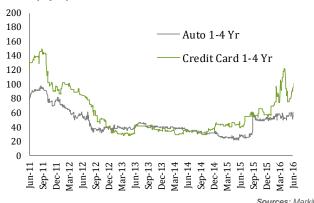
#### 5.4 UK 3-5 Yr BBB RMBS Spreads (bps)



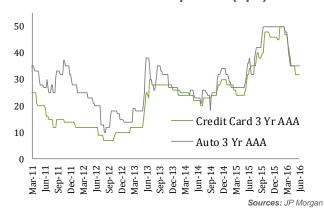
Sources: Markit

## 6 ABS Spreads

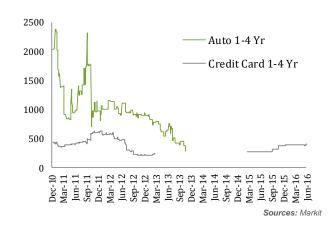
# 6.1 European 1-4 Yr AAA ABS Spreads (bps)



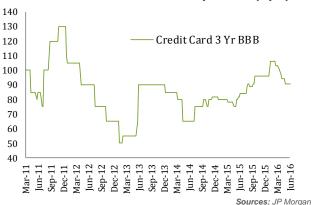
#### 6.3 US 3 Yr AAA ABS Spreads (bps)



#### 6.2 US 3 Yr AAA ABS Spreads (bps)

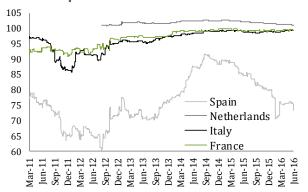


#### 6.4 US 3 Yr BBB - AA ABS Spreads (bps)



### 7 RMBS Prices

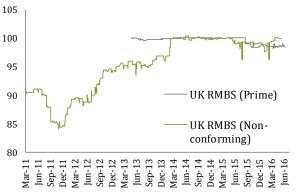
#### 7.1 European 3-5 Yr AAA RMBS Prices



Sources: Markit

- Spanish AAA RMBS provided: IM Pastor 3, Fondo de Titulizacion Hipotecaria, Class A, Series 3. ISIN# ES0347862007. EURdenominated
- Italian AAA RMBS provided: Vela Home S.r.l. 3, Class A, Series 3. ISIN# IT0003933998. EUR-denominated.
- 3. French AAA RMBS provided: FCC Loggias Compartment 2003, Class A, Series 1. ISIN# FR0010029231. EUR-denominated.
- Dutch AAA RMBS provided: Storm 2012-IV BV, Class A2, Series 4 ISIN# XS0815105472. EUR-denominated.

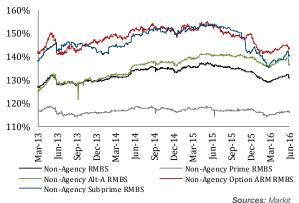
#### 7.3 UK 3-5 Yr AAA RMBS Prices



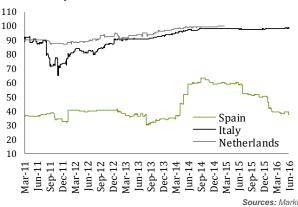
Sources: Marki

- UK AAA prime RMBS provided: Permanent Financing (No. 9) PLC, Class A3, Series 2009-1. ISIN# XS0454744458. EUR-denominated.
- UK AAA non-conforming RMBS provided: First Flexible No. 4 PLC, Class A, Series 4. ISIN#XS0132692384. GBP-denominated.

#### 7.5 Markit RMBS iBoxx

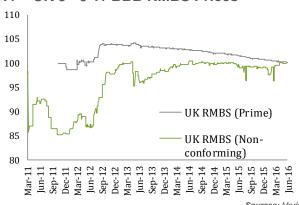


7.2 European 3 - 5 Yr BBB RMBS Prices



- Spanish BBB RMBS provided: Hipocat 8, Fondo de Titulizacion Activos, Class D, Series 1: ISIN# ES0345784047. EUR-denominated
- Dutch BBB RMBS provided: Holland Mortgage-Backed Securities (HERMES) X B.V., Class C, Series 10. ISIN# XS0228806831. EURdenominated
- Italian BBB RMBS provided: Vela Home S.r.I. 4, Class A2, Series 4, ISIN# IT0004102007. EUR-denominated.

#### 7.4 UK 3 - 5 Yr BBB RMBS Prices



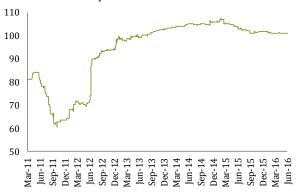
- UK BBB prime RMBS provided: Permanent Financing PLC, Class 2A, Series 2011-2. ISIN# XS0700016750. GBP-denominated.
- UK BBB subprime RMBS provided: Leek Finance Number Seventeen Plc, Class Cc, Series 1. ISIN# XS0249478073. EUR-denominated.

#### 8.1 Pan-European 3-5 Yr AAA CMBS Prices



 Pan-European AAA CMBS provided: German Residential Funding, Class A, Series 2013-1. ISIN# XS0944452563. EUR-denominated

#### 8.3 Pan-European 1-4 AAA ABS Prices



Sources: Markit

- Pan-European AAA Auto ABS provided: Driver Three GmbH, Class A, Series 3. ISIN# XS0270108573. EUR-denominated.
- Pan-European AAA Credit Card ABS provided: Chester Asset Receivables DGS 2004-1, Class A, Series UK2004-1. ISIN# XS0188611783. GBP-denominated.

#### 8.2 Pan-European 3-5 Yr BBB CMBS Prices



Sources: Markit

 Pan-European BBB CMBS provided: German Residential Funding, Class D, Series 2013-1. ISIN# XS0944454858. EUR-denominated.

#### 8.4 Pan-European 1-4 Yr BBB ABS Prices

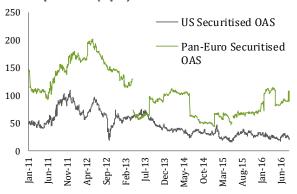


Sources: Markit

 Pan-European BBB Credit Card ABS provided: Chester Asset Receivables DGS 2004-1, Class C, Series UK2004-1. ISIN# XS0188612245. GBP-denominated.

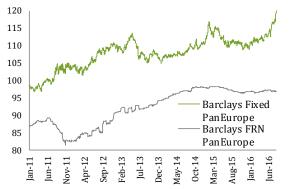
### 9 Indices Data

# 9.1 Securitised Index Option-Adjusted Spreads (bps)



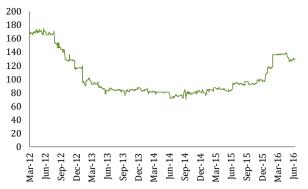
Sources: Barclays Capital

# 9.2 Barclays PanEurope Fixed and Floating Prices



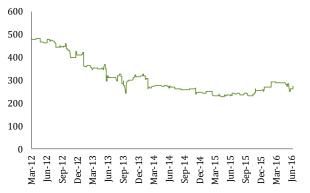
Sources: Barclays Capital

#### 9.3 Australia AAA



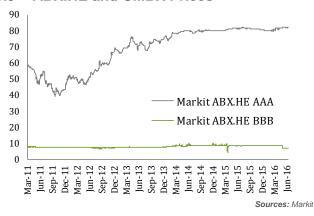
Sources: Macquarie

#### 9.4 Australia AA

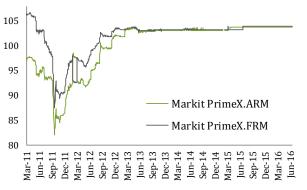


Sources: Macquarie

#### 9.5 ABX.HE and CMBX Prices



9.6 PrimeX.ARM and FRM Prices

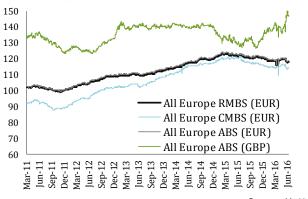


Sources: Markit

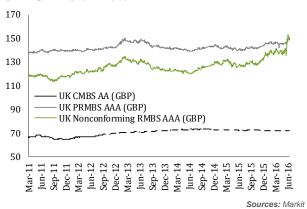
#### **CMBX 6 AAA Prices** 9.7 99 98 97 96 95 94 Jun-13 0ct-13 0ct-15 Jun-16 Feb-13 Feb-14 Jun-14 Feb-15 Jun-15 Feb-16 Sources: Markit

## 10 Total Return Benchmark Data

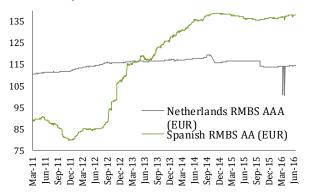
#### 10.1 European Total Return



#### 10.2 UK Total Return



#### 10.3 Europe ex UK RMBS AAA



Sources: Markit

# 11 Asset-Backed Commercial Paper

#### **€ BILLIONS**

#### 11.1 European ABCP Historical Issuance

	Q1	Q2	Q3	Q4	TOTAL
2007	111.0	108.5	100.9	129.9	450.2
2008	75.0	66.8	73.8	86.2	301.8
2009	46.1	39.9	39.0	32.1	157.2
2010	32.1	35.7	38.8	38.8	145.4
2011	35.4	38.6	56.7	100.0	230.7
2012	117.0	106.1	80.3	53.8	357.2
2013	45.4	50.2	54.0	38.1	187.7
2014	53.9	62.6	68.7	81.8	267.2
2015	82.3	102.9	100.1	114.3	399.5
2016	95.8	120.1			215.9

### 11.2 European ABCP Issuance by Nationality of Issuer

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
France	55.8	54.8			110.5
Germany	3.0	4.8			7.8
Ireland	34.7	57.3			92.0
Italy	-	-			0.0
Luxembourg	1.6	1.5			3.1
Netherlands	-	-			0.0
Spain	-	-			0.0
UK	0.7	1.8			2.5
Total	95.8	120.1			215.9

### 11.3 European ABCP Issuance by Programme Type

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Hybrid	1.2	1.1			2.3
SIVs	-	-			0.0
Single-Seller Conduits	-	-			0.0
Multi-Seller Conduits	82.4	106.7			189.1
Unspecified	12.2	12.3			24.5
Total	95.8	120.1			215.9

### 11.4 ABCP Outstandings by Nationality of Issuer

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
France	6.5	7.0		
Germany	1.2	1.3		
Ireland	9.0	6.5		
Italy	-	-		
Luxembourg	0.6	0.5		
Netherlands	-	-		
Spain	-	-		
UK	0.6	-		
European Total	17.9	15.3		
US Total	215.8	221.3		

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
31.3	49.4	47.3	54.5	182.5
4.1	5.0	4.4	6.1	19.7
44.0	46.1	45.1	51.4	186.5
-	-	-	-	0.0
2.9	2.3	2.1	1.4	8.7
-	-	-	-	0.0
-	-	-	-	0.0
-	-	1.2	0.9	2.1
82.3	102.9	100.1	114.3	399.5

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
-	3.44	1.96	1.05	6.5
-	-	-	-	0.0
-	-	-	-	0.0
63.8	83.5	82.6	98.7	328.6
18.5	15.9	15.5	14.5	64.4
82.3	99.4	98.1	113.2	393.0

2015:Q1	2015:Q2	2015:Q3	2015:Q4
6.1	6.8	8.1	7.2
1.0	1.0	0.9	0.9
10.7	10.9	9.9	9.0
-	-	-	-
1.0	0.8	0.7	0.6
-	-	-	-
-	-	-	-
-	-	0.6	0.6
18.8	19.4	20.2	18.3
218.1	190.6	205.3	219.2

Sources: Dealogic, Moody's Investors Service

### 11.5 European ABCP Outstandings by Programme Type

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Hybrid	1.0	0.7		
SIVs	-			
Single-Seller	-			
Multi-Seller	14.2	16.0		
Unspecified	2.7	2.3		
Total	17.9	19.0		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
-	1.69	1.04	0.20
-	-	-	-
-	-	-	-
13.1	13.9	15.8	14.9
5.7	3.8	3.4	3.2
18.8	19.4	20.2	18.3

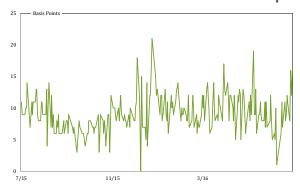
### 11.6 US ABCP Outstandings by Programme Type

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Loan-Backed	-			
SIVs	-			
Single-Seller	6.6	7.0		
Multi-Seller	176.5	177.6		
Other	32.7	36.8		
Total	215.8	221.3		

2015:Q1	2015:Q2	2015:Q3	2015:Q4
-	-	-	-
-	-	-	-
6.1	7.7	6.0	6.4
157.0	140.8	155.9	178.9
55.0	42.1	43.4	33.9
18.3	18.3	18.3	18.3

Sources: Dealogic, Moody's Investors Service

### 11.7 US ABCP to AA Non-financial CP Spread



Sources: US Federal Reserve

# 12 Global Comparative Data

#### **€ BILLIONS**

#### 12.1 Global High Grade Corporate Bond Issuance

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
US	220.7	224.3			445.0
Europe	208.5	152.4			360.9
Asia	264.9	219.9			484.8
Total	694.1	596.7			1290.8

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
236.8	235.3	178.2	168.4	818.6
199.0	140.3	99.6	111.1	550.0
158.7	220.5	206.9	236.3	822.4
594.6	596.1	484.6	515.7	2191.0

#### 12.2 Global Government Bond Issuance

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
US	100.6	139.2			239.8
Europe	176.4	144.9			321.3
Asia	40.0	51.2			91.2
Total	317.0	335.3			652.3

2015:Q1	2015:Q2	2015:Q3	2015:Q4	TOTAL
98.6	97.7	82.8	87.7	366.9
196.9	95.1	91.0	79.2	462.2
40.5	35.8	41.3	39.1	156.7
336.0	228.6	215.1	206.0	985.8

# Summary of the Methodologies Adopted for this Report

#### 1. Issuance

# 1.1. – 1.2. European, Australian, and US Historical Issuance

The tables covering historical issuance in Europe and the US are denominated in EUR billions. Historical issuance volumes are calculated by adding all transactions in different asset classes including, among others, asset-backed securities (ABS), collateralised debt obligations/collateralised (CDOs/CLOs), loan obligations commercial mortgage-backed securities (CMBS), and residential mortgage-back securities (RMBS). Please note that numbers may not add due to independent rounding and that historical or prior period numbers are revised to reflect changes in classification, refined selection methodology, or information submitted to our data sources after the prior period cut-off dates.

Australian data are contributed by Macquarie.

#### 1.3. -1.6. Issuance by Collateral

The European issuance volumes are determined based on the review of several data sources: Bloomberg, JP Morgan, Thomson Reuters, and UniCredit starting from Q1 2009; and Deutsche Bank starting from Q1 2010; Citigroup from Q2 2010; and Dealogic from Q1 2011. In prior quarters our sources were Bloomberg, JP Morgan, Merrill Lynch, RBS, and Thomson Reuters. RMBS, CMBS and ABS are defined as European by having underlying assets located in a European country. European securities included in the calculation are the ones for which there is a specific match in terms of size, name, country of collateral and collateral type from at least two sources. Securities that fail to meet these criteria are excluded. With respect to CDOs/CLOs, securities are designated as European if they are issued in any European currency, regardless of their country of collateral. A substantial percentage of CDOs/CLOs are backed by multi-jurisdictional collateral. Historical CDO/CLO issuance totals have been revised due to periodic updates of the sector.

European ABS issuance includes auto, credit card, leases, loans, receivables and other.

European whole business securitisation ("WBS") are securitisations where cashflows derive from the whole operating revenues generated by an entire business or segmented part of a larger business. Certain WBS deals may be bucketed in the ABS or CMBS class based on deal specifics. As of 2013 Q4, certain public finance initaitves ("PFI") have been

moved from ABS to WBS and the category renamed "PFI/WBS".

Placed and retained European issuance collateral are sourced from AFME and/or SIFMA dealer member research, Dealogic, Bloomberg, and Thomson Reuters. Placed issuance includes all tranches placed in the public market, private placements, and preplacements. Partial issuance of a tranche is considered to be placed if half or more by euro amount of the tranche is reported placed. Placed and retained issuance will not retroactively consider securities originally issued retained and then placed in the marketplace, and are estimates.

The US non-agency RMBS, CMBS, ABS and CDO/CLO issuance data sources are Dealogic and Thomson Reuters. Agency mortgage-backed securities (MBS) are defined as securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae and are acquired from company statements. US issuance data are generally based on the sum of securities with US collateral; agency issuance numbers do not include securitisations of existing agency securities. US CDO/CLO data are defined as USD-denominated CDOs/CLOs regardless of the country of collateral.

Australian securitisation volumes are contributed by Macquarie.

The US and Australia issuance data are converted to Euros based on the exchange rate at each quarterend indicated below.

Quarter	USD to EUR	AUD to EUR
Q1 2015	0.9318	0.7088
Q2 2015	0.8979	0.6917
Q3 2015	0.8947	0.6278
Q4 2015	0.9210	0.6711
Q1 2016	0.8787	0.6729
Q2 2016	0.9004	0.6708

These same conversion rates, sourced from Bloomberg, are used on all US issuance and outstanding volume data.

US ABS issuance includes auto, credit card, home equity, student loan, equipment leases, manufactured housing, and other. Historical ABS issuance totals have been revised due to periodic updates of the sector.

US CDO issuance numbers only include US-denominated issuance regardless of the country of collateral and may include European transactions which are denominated in US dollars. Historical CDO issuance totals have been revised due to periodic updates of the sector.

#### 1.7. Issuance by Country of Collateral

The tables covering issuance in the US and Europe are presented in EUR billions. For Europe the information is segmented by country of collateral.

The European issuance is segmented by country to the extent that a determination can be made. Securities with the underlying collateral originating from more than one jurisdiction are categorised as Multinational. Almost all CDOs/CLOs are classified under this Multinational group due to the complexity involved in identifying origin of collateral for each specific tranche. The European issuance volumes are determined based on the review of multiple data sources: Deutsche Bank and Bank of America-Merrill Lynch as of Q1 2010, Bloomberg, JP Morgan, Thomson Reuters and UniCredit starting from O1 2009; and RBS starting from Q3 2009. In prior quarters the sources were Bloomberg, JP Morgan, Thomson Reuters and Merrill Lynch.

US CDO/CLO data are defined as USD-denominated issues regardless of country of collateral.

Other includes countries with outstanding securities that are too small to be displayed, such as Georgia, Iceland, Ukraine, Swit-zerland, Sweden, and Hungary.

PanEurope has been pulled out of the Multinational parent category and will be retroactively displayed for Euro-pean outstandings.

Multinational includes all deals in which assets originate from a variety of jurisdictions. This includes the majority of CDOs/CLOs denominated in a European currency.

Australian data are contributed by Macquarie.

# 1.8. Issuance by Collateral Type and Country of Collateral

Issuance information is further specified by country of collateral for European issuance only and by asset class. CDO/CLO classification is the same as above.

#### 1.9. - 1.11. Issuance by Rating

Issuance is presented by credit rating classification (AAA; AA; A; BBB and below; and Not Rated) on a quarterly basis. The credit rating assigned is the lowest of the ratings provided by Fitch Ratings, Moody's Investors Service and/or Standard & Poor's. These ratings are intended to represent their corresponding equivalent at each agency; e.g., an AAA rating is equal to an Aaa Moody's rating, AA equal to Aa1, etc. Securities are classified 'Not Rated' if none of the credit rating agencies have provided an opinion on the underlying credit

quality of a particular tranche, or if the ratings are unknown. US agency MBS issues are generally not rated and therefore grouped separately under Agency MBS.

Australian securitisation data are contributed by Macquarie.

#### 1.12. Issuance by Deal Size

European and US securitisation issuance volume is segmented by transaction size based on data provided by Dealogic. The European data covers all asset classes and EUR-denominated CDOs/CLOs. US non-Agency data includes ABS, non-agency CMBS and RMBS, and USD-denominated CDOs/CLOs. US agency MBS, which includes agency CMBS and RMBS, is shown separately.

All data, except for CDOs/CLOs, are included according to the country of collateral. The number of issues refers to the number of deals, not the number of tranches within each deal.

Australian securitisation issuance volumes are contributed by Macquarie.

#### 2. Balances Outstanding

#### 2.1. – 2.3. Outstandings by Collateral

The outstanding volumes are reported by asset class. Subtotals may not add to totals due to independent rounding and historical or prior period numbers are continuously revised to reflect changes in classification, refined selection methodology, or information submitted to our data sources after the prior period cut-off dates. For Europe, balances outstanding are calculated by the principal balance outstanding on structured product transactions including public, private, rated, unrated, listed and unlisted securities provided by Bloomberg. Balances outstanding are determined by multiplying eligible securities by their pool factor for the quarter and sorted accordingly. Tranches that are non-EURdenominated are converted to EUR by Bloomberg based on the exchange rate at the time of the pricing date (as specified by the lead manager/arranger), or, if missing, the issue date as specified in each security's original offering documentation. Securities included in the calculations, except for CDOs/CLOs, have collateral originated from at least one European country to the extent that a determination can be made. However, for ABS and MBS securities with collateral originated in multiple countries, or where the origin of the underlying collateral is undefined, the following selection criteria apply: securities are considered eligible as European only if they are denominated in a European currency, as defined below, and the

country of issuer (considered to be the country in which the issuing SPV is incorporated) is within Europe. In certain limited cases, the Channel Islands and the Cayman Islands are considered eligible as European jurisdictions for ABS and MBS products if underlying collateral is derived from a variety of jurisdictions and the original currency of issue is EUR only.

For our selection criteria, European currencies include the euro (EUR) and all predecessor currencies, as well as the Turkish lira (TRY), the Danish kroner (DKK), the Swedish krona (SEK), the Swiss franc (CHF), the Polish zloty (PLN), the British pound (GBP), and the Russian ruble (RUB).

Furthermore, our selection criteria consider Europe to include all European Economic Area (EEA) countries and certain non-EEA countries located on the geographic European continent. We have included Turkey, Kazakhstan, Iceland, Georgia and the Russian Federation in these criteria.

European ABS outstanding collateral types include auto loans, credit cards, loans (consumer and student), and other.

For the CDO/CLO sector, only issuance denominated in a European currency (as specified above) is included, regardless of the country of collateral.

Beginning in Q2 2010, the CDO/CLO asset class has been further broken down into the CDO/CLO and SME asset classes. SME securities follow the same criteria application as non-CDOs/CLOs. Revisions during this quarter were retroactively applied and balances outstanding from prior quarters have all been restated accordingly.

The US outstanding calculations are based on information derived from Bloomberg for ABS, nonagency RMBS, and non-agency CMBS; agency balance statements for agency MBS. The following asset classes are segmented: agency MBS, nonagency RMBS, nonagency CMBS, and ABS. The agency MBS figures include both agency RMBS and agency CMBS (i.e., multifamily). US ABS outstanding collateral types include auto loans, credit cards, loans (equipment and student loans), CDOs, and other. CDOs outstanding are included in ABS outstandings and represents dollar-denominated tranches. As of 2013 Q4 home equity and certain other mortgage-related debt has been moved into Non-Agency RMBS.

Australian outstanding figures are contributed by Macquarie. Reverse mortgages are included in RMBS figures, while small balance CMBS are included in CMBS figures.

#### 2.4. Outstandings by Country of Collateral

The European outstanding volumes are segmented by country of collateral based on the above methodology. For our selection criteria, Europe is considered to include all European Economic Area (EEA) countries and certain non-EEA countries located on the geographic European continent (Georgia, Iceland, Turkey, Kazakhstan and the Russian Federation). In certain limited cases, the Channel Islands and the Cayman islands are considered eligible for ABS and MBS products if underlying collateral is derived from a variety of jurisdictions and the original currency of issue is European. CDOs/CLOs issued in a European currency with either collateral from multiple jurisdictions or for which the underlying location of collateral is undefined are categorized under 'Multinational' for the purpose of determining outstanding balances by country. Collateral from multiple European countries is now categorised under 'PanEurope' unless collateral predominantly (over 90%) from one country.

The US outstandings include both agency and non-agency securities.

#### 2.5. – 2.7. Outstandings by Moody's Rating

The percentage rating distribution for Europe and the US is based on Moody's Investors Service data for balances outstanding, and from Standard and Poor's for Australian data. The data provides current ratings as of the end of the quarter. The data presented are based on original issuance volumes for European, US, and Australian securities, and therefore do not reflect amortised balances. Information on current ratings by outstanding volumes is not currently available. Moody's and Standard and Poor's data have been converted to percentages based on the original issuance size to make it easily comparable with the outstanding volumes provided in this report. Defaulted and unrated issues are excluded from these data.

#### 2.8. - 2.9. Outstandings by Vintage

Outstanding volumes by vintage are determined by year of original pricing date. Restructurings are counted from original pricing date rather than remarketed date.

**2.10. Outstandings by Country and Collateral** European outstanding volumes are segmented by country and collateral based on above methodology.

#### 3. Credit Quality - Rating Changes

#### 3.1. - 3.4. Upgrades/Downgrades by Country

These tables present the aggregate number of upgrades and downgrades for securitisation (including CDOs/CLOs) by country of collateral for European deals and in total for US deals. The information is based on data provided by DBRS, Fitch Ratings, Moody's Investors Service and Standard & Poor's. The upgrade number is shown first followed by the downgrade number. The upgrades and downgrades of each of credit rating agency is shown in separate tables and presented as the number of rating changes. Because the credit rating agencies track different securities and apply different credit rating methodologies, these numbers are not directly comparable.

According to Moody's Investors Service, a security is classified as European or American based on if it is monitored out of Moody's office in Europe or the US. More specifically, European securities are classified within a particular country if all of its assets are located within that country.

Fitch's US category may contain non-US issues (e.g., Canada) from the North American continent.

The Multinational category includes CDOs/CLOs and all other cross-jurisdictional securitisations for both Moody's Investors Service and Standard & Poor's. The Fitch Ratings Multinational classification includes cross-jurisdictional CMBS as well as the aggregated sum of rating actions in other countries including Austria, Belgium, Greece, Ireland, Portugal and the Russian Federation. Fitch Ratings assigns CDO issues to the country in which the majority of the underlying assets are located.

DBRS' "ABS Other" category may include student loans, equipment lease and other securities.

# 3.5. – 3.12. Upgrades/Downgrades by Collateral

These tables present aggregate upgrades and downgrades for securitisation and CDO/CLO issues by securitised product type for Europe and the US. The upgrade number is shown first followed by the downgrade number. The upgrades and downgrades of each agency are shown in separate tables and presented by number rating changes. For Fitch Ratings, the category Other RMBS includes other categories of RMBS transactions such as ALT-A, reverse mortgage, government RMBS, etc. The category 'Other ABS' may include student loans and the whole business securitisations/public finance initiatives (WBS/PFI). For Moody's Investors Service and Standard & Poor's, the total number of European upgrades/downgrades reported by

collateral type are not always comparable with the upgrades/downgrades presented by country because there may be securities that experience rating migrations that are backed by collateral originated from a country outside of those specified and will not be captured under the "Multinational" category.

#### 4 - 6 Spreads

#### 4.1. - 4.4. CMBS Spreads

These graphs present credit spread data for European and US AAA and BBB 3-5 Yr CMBS. European 3-5 year AAA & BBB CMBS data are provided by Markit. Composite spread levels are calculated from dealer contributions which have been subjected to multiple cleaning algorithms. Spread levels are equivalent to the discount margin. The discount margin is defined as the effective spread to maturity of a floating rate security after discounting the yield value of a price other than par over the life of the security. The spread calculation is based on data provided by dealer trading desks.

US CMBS 3 and 5 year spreads are provided by Trepp LLC. US CMBS spreads are quoted as fixed rate bonds based on the yield of US treasury bonds with the same average life.

#### 5.1. - 5.4. RMBS Spreads

European RMBS credit spreads are provided for 3-5 year AAA and BBB securities based on data provided by Markit. European credit spreads cover Spain, Netherlands, Italy, Germany and France. UK RMBS spreads are provided for both prime and nonconforming transactions. Markit spread calculations are based on data provided by dealer trading desks.

As of April 2012, Italian AAA has been replaced with Italian AA due to downgrades. Spanish RMBS 3-5 year AAA and BBB spreads have been replaced with 5-8 years due to lack of bonds.

Due to a lack of bonds populating the WAL 3-5 year sector for UK Prime RMBS BBB, the sector has been replaced with WAL 5-15 UK Granite BBB Float. The UK non-conforming RMBS BBB sector will continue to remain WAL 3-5 years. As of November 2012, UK non-conforming AAA has been replaced with non-conforming AA due to downgrades, while BBB UK non-conforming RMBS are no longer available.

#### 6.1. - 6.4. ABS Spreads

European ABS credit spreads are provided for 1-4 year AAA and BBB securities based on data provided by Markit based on the same calculations described above.

US spreads reflect levels for AAA autos, AAA credit cards, and BBB credit cards; spreads are fixed against swaps and are provided by JP Morgan. US 3 Yr Auto ABS BBB spreads are not available.

#### 7 - 8 Prices

#### 7.1. - 7.4. RMBS Prices

These graphs represent price data for specific European and UK RMBS selected as benchmarks in the respective jurisdictions. The price calculations are provided by Markit and are based on data provided by dealer trading desks.

#### 8.1. - 8.4. CMBS and ABS Prices

The graphs represent price data for specific pan-European CMBS and ABS selected as benchmarks. The price calculations provided by Markit and are based on data provided by dealer trading desks.

#### 9.1. - 9.8. Indices Data

The first graph presents daily option-adjusted spreads provided by Barclays Capital for Europe from a cross-section of securitised products. The second graph, provided by Barclays Capital, presents daily fixed and floating prices of pan-European deals.

The third and fourth graphs present daily prices provided by Macquarie for the Australian AAA and AA securitised market.

The fifth, sixth, and seventh graphs present daily prices provided by Markit for the US synthetic ABS, RMBS, and CMBS indices. The final graph present daily prices, also provided by Markit, for the US cash non-agency RMBS market.

#### 10 Total Return Benchmark Data

#### 10.1. - 10.3. Total Return Data

These graphs represent historical return composites generated by tracking the aggregate asset value on an underlying portfolio of single name bonds. Data are provided by Markit and are preliminary.

#### 11. Asset-Backed Commercial Paper (ABCP)

# 11.1. – 11.2. ABCP Historical Issuance; ABCP Issuance by Nationality of Issuer

Aggregate issuance data covers the period 2008 through 2009 for Europe and the US. European issuance is provided by Dealogic, which identifies the issuer's nationality as the country in which the SPV is domiciled. These data do not represent the seller-servicers of the underlying assets or the bank conduits for the ABCP deals. The US data are provided by Moody's Investors Service. The volumes are converted from dollar to euro based on the end-of-quarter exchange rate.

# 11.3. European ABCP Issuance by Programme Type

ABCP data by programme type is provided by Dealogic. The programme type classifications included are: SIVs, single-seller conduit, multi-seller conduit and 'unspecified'.

Dealogic provides the issuer's nationality as the country in which the SPV is domiciled. This data does not represent the seller-servicers of the underlying assets or the bank conduits for ABCP deals.

# 11.4. ABCP Outstandings by Nationality of Issuer

Outstanding quarterly data are provided from the first quarter of 2008 through 2009 for Europe and the US. The European outstanding is provided by country through the Dealogic database, and the US data are provided by Moody's Investors Service. Dealogic identifies the issuer's nationality as the country in which the SPV is domiciled. The dollar volumes were converted to euro based on the end-of-quarter exchange rate.

US ABCP figures are based on programmes rated by Moody's NY office ABCP Program Index, regardless of market; some euro-denominated ABCP may be included in volume totals.

# 11.5. – 11.6. ABCP Outstandings by Programme Type

Outstanding quarterly data are provided for Europe and the US by, respectively, Dealogic and Moody's Investor Service. The volumes are converted from dollars to euro based on the end-of-quarter exchange rate. The programme type classifications included are: loan-backed, SIVs, single-seller conduit, multi-seller conduit and 'unspecified'.

Unspecified programme types within the US data contain both arbitrage and hybrid programme types.

#### 11.7. ABCP Spreads

The US ABCP spread information is based on data collected and developed by the Federal Reserve. The spread is defined as the difference between AA ABCP and AA nonfinancial CP.

#### 12. Global Comparative Data

# 12.1. - 12.2. Global Corporate Bond and Government Bond Issuance

These statistics are provided by Dealogic and present issuance volumes for corporate bonds and government bonds in Asia, the US and Europe. Government bond and corporate bond figures represent gross, not net issuance. In terms of

geographical description, Europe represents the European, the Middle East and African (EMEA) countries while Asia includes the Pacific countries and Japan.

Global corporate bond issuance is for investment grade bonds, public placements only. Global government bond issuance includes all agency and non-agency issuances and does not include supranationals.

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#### Annex

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**London Office** 

39th Floor 25 Canada Square London E14 5LQ United Kingdom **Brussels Office** 

Rue de la Loi, 82 1040 Brussels Belgium **AFME** 

**Richard Hopkin** - Managing Director, Head of Fixed Income

Anna Bak – Manager,

Securitisation **Julio Suarez** – Manager,

Research

**Kyle Brandon** - Managing Director, Director of

Research

**SIFMA** 

**Sharon Sung** – Assistant Vice President, Research

Switchboard: +44 (0)20 3828 2700

Switchboard: +32 (0) 2 788 3971 www.afme.eu

www.sifma.org

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