

# Securitisation Data Report

## European Structured Finance

Q2: 2017

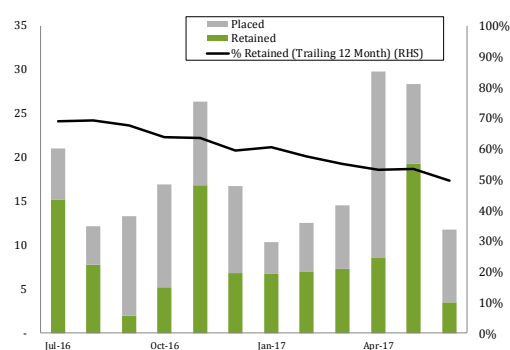


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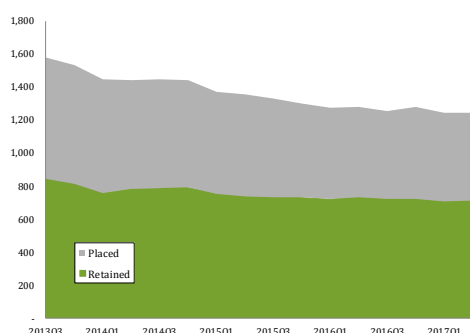
## European Securitisation Issuance (EUR m)



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

*“In Q2 2017, EUR 71.6 billion of securitised product was issued in Europe, an increase of 91.2% from Q1 2017 but a decline of 4.9% from Q2 2016.”*

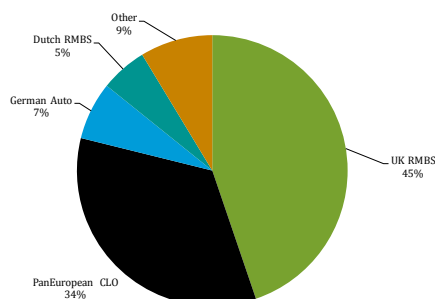
## European Securitisation Outstanding (EUR bn)



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 tenders.

## Placed European Issuance: 2Q 17



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

## Market Highlights and Commentary

### Market Environment

#### Economic conditions

According to Eurostat, GDP rose by 0.6% quarter-over-quarter (QoQ) in the Euro zone (EU19) and by 0.4% QoQ in the EU28 during the second quarter of 2017. The unemployment rate stood at 9.1% (EU19) and 7.7% (EU28) as of the end of March 2017, the lowest rate recorded since February 2009 (EU19) and December 2008 (EU28).

#### Term Issuance and Outstanding Volumes

In Q2 2017, EUR 71.6 billion of securitised product was issued in Europe, an increase of 91.2% from Q1 2017 but a decline of 4.9% from Q2 2016. Of the EUR 71.6 billion issued, EUR 38.6 billion was placed, representing 54.0% of issuance, compared to the 44.0% of issuance in Q1 2017 and the 39.3% of issuance in Q2 2016.

CLO refinancing (“refis”) activity continued at a robust pace in the second quarter of 2017. Refis were concentrated on the 2014 and 2015 vintages in the second quarter. For the second quarter of 2017, UK RMBS led placed totals (EUR 17.3 billion), followed by PanEuropean CLO (EUR 13.2 billion) and German auto (EUR 2.7 billion).

Outstanding volumes were essentially unchanged from the prior quarter at EUR 1.24 trillion outstanding at the end of Q2 2017. Of this, approximately EUR 714.6 billion, or 57.4%, was retained.

#### Credit Quality

In Europe, upgrades outpaced downgrades in Q2 2017, with upgrades concentrated in European CLOs and prime RMBS.

#### ABCP Trends

European asset backed commercial paper (ABCP) issuance was EUR 68.4 billion in Q2 2017, a decline of 16.9% QoQ (from €82.3 billion in Q1 2017) and 43.0% YoY (from €120.1 billion in Q2 2016). Multiseller conduits continue to dominate as the largest category of issuer in the ABCP market, particularly from Ireland and France. European ABCP outstandings declined from the previous quarter, ending the second quarter at EUR 15.9 billion, down by 9.8% from Q1 2017.

## Major upcoming regulatory, legislative and policy initiatives

On 4 May 2017, the European Commission published a legislative proposal to amend the European Market Infrastructure Regulation (EMIR), reflecting the outcome of its review. The EC proposal will now undergo the usual EU legislative process before being finalised (likely towards the end of 2018). One of the key changes proposed is the expansion of the “financial counterparty” definition to include Securitisation Special Purpose Entities (SSPEs). This was an unexpected development and AFME will engage in the forthcoming legislative process.

*“At the end of May 2017 [...] the European Commission, European Parliament and the Council have reached the political agreement on the proposals for Simple Transparent and Standardised (STS) Securitisation framework. [...] The attention has turned now to implementation and development of the secondary legislation”*

At the end of May 2017, following the six-month Trilogue process, the European Commission, European Parliament and the Council have reached the political agreement on the proposals for Simple Transparent and Standardised (STS) Securitisation framework. The political deal was subsequently approved by the COREPER (Committee of Permanent Representatives in the EU) on 28 June and by the ECON committee on 11 July. Both pieces of the STS framework (Securitization Regulation and CRR Amendment) are now subject to jurist-linguist review process and are expected to receive an EP Plenary and Council final approval in Q4 2017. The publication in the Official Journal will take place shortly after that. The implementation date has been set for 1 January 2019. The attention has turned now to implementation and development of the secondary legislation, including variety of technical standards, guidelines as well as revisions to Solvency II. While most of the controversial proposals – such as changes to the risk retention – have been eased, some aspects of the framework remain problematic.

Perhaps the most troubling at present is new wording of Article 17 which prohibits entirely any securitisation (not just STS securitisation) which includes mortgages that do not meet certain underwriting standards. Further concerns arise from impossibly high standards of due diligence for investors in purchased portfolios - a hurdle which seems inappropriate in the wider context of legislative efforts to build and develop secondary market for non-performing loans in Europe.

Following the finalisation to the Prospectus Regulation, on the 6<sup>th</sup> of July, ESMA has published three consultation papers relating to the following level 2 measures in the prospectus regulation: 1) Format and content of the prospectus, 2) Format and content of the EU Growth prospectus, and 3) Scrutiny and approval of the prospectus. AFME will be responding to all three consultations together by their deadline on 28 September 2017.

On 10 July 2017, the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) released the consultative document on criteria for identifying simple, transparent and comparable short-term securitisations (the short-term STC criteria) as well as the BCBS’s consultative document which sets out additional guidance and requirements for the purpose of applying preferential regulatory capital treatment for banks acting as investors in or as sponsors of simple, transparent and comparable (STC) short-term securitisations, typically in asset-backed commercial paper (ABCP) structures. The consultation deadline is the 5 October 2017. AFME will be responding to this consultation via GFMA.

# 1 Issuance

€ BILLIONS

## 1.1 Issuance European Historical Issuance

	Q1	Q2	Q3	Q4	TOTAL
2008	47.3	194.7	157.5	419.2	818.7
2009	131.0	83.8	113.3	95.8	423.9
2010	75.5	32.6	110.7	159.2	378.0
2011	115.2	67.3	57.1	137.2	376.8
2012	64.3	67.7	62.0	63.9	257.8
2013	32.8	53.2	38.4	56.4	180.8
2014	20.0	99.5	37.7	59.8	217.0
2015	35.7	50.3	57.8	72.8	216.6
2016	57.0	75.3	46.5	60.0	238.8
2017	37.4	71.6			109.0

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

## 1.2 US and Australia Historical Issuance

	US	AU
2008	979.0	6.6
2009	1,401.7	9.7
2010	1,225.7	15.5
2011	1,052.8	20.4
2012	1,568.5	14.8
2013	1,517.4	22.4
2014	1,144.3	22.1
2015	1,635.4	19.9
2016	1,796.7	16.4
2017	825.2	13.9

## 1.3 European Issuance by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
ABS	6.2	9.4			15.6
CDO/CLO	5.8	13.2			19.0
CMBS	0.3				0.3
RMBS	23.1	41.8			64.9
SME	2.0	7.2			9.2
WBS/PFI					0.0
Total	37.4	71.6			109.0

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	10.5	28.2	13.7	18.2	70.6
	2.8	4.8	4.6	9.3	21.6
	0.3	0.5	2.8	0.0	3.7
	38.8	39.4	20.1	21.9	120.2
	4.6	0.7	4.8	9.8	19.9
		1.6	0.5	0.8	2.9
	57.0	75.3	46.5	60.0	238.8

## 1.4 European Issuance by Retention

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Placed	16.5	38.7			55.1
Retained	21.0	32.9			53.9
Total <sup>2</sup>	37.4	71.6			109.0

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	14.5	29.6	21.5	31.2	96.7
	42.5	45.7	25.0	28.8	142.1
	57.0	75.3	46.5	60.0	238.8

## 1.5 Australia Issuance by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
ABS	2.4	0.3			2.8
RMBS	5.1	6.1			11.2
CMBS					0.0
Total	7.5	6.4			13.9

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	0.6	1.7	0.0	0.7	3.0
	2.3	2.6	2.1	5.9	13.0
			0.3	0.2	0.5
	2.9	4.3	2.4	6.8	16.4

## 1.6 US Issuance by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
ABS	54.5	52.8			107.3
CDO	17.5	19.5			36.9
Agency MBS	325.7	280.9			606.6
Non-Agency CMBS	13.1	17.7			30.8
Non-Agency RMBS	16.7	27.0			43.6
Total	427.4	397.7			825.2

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	34.0	44.0	45.8	38.2	162.0
	6.6	9.6	7.0	2.2	25.4
	259.6	335.9	411.9	452.4	1,459.8
	17.0	10.2	17.6	25.5	70.4
	13.2	19.5	25.2	21.2	79.1
	330.4	419.1	507.5	539.6	1,796.7

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

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Belgium		11.7			11.7		3.6			3.6
Denmark					0.0					-
France	8.6	12.6			21.2		8.2	10.2	2.7	21.0
Germany	0.5	3.4			3.9	2.2	5.8	4.4	5.2	17.6
Greece					0.0			0.6	0.7	1.3
Ireland	0.7	0.9			1.6	2.0	0.0	0.6	2.0	4.6
Italy	5.1	1.9			7.1	11.8	9.1	9.2	11.2	41.3
Netherlands	6.6	3.2			9.9	9.6	17.4	3.4	3.1	33.4
Portugal		0.3			0.3			0.6	0.7	1.3
Spain	4.4	2.7			7.1	17.3	3.6	4.2	8.9	34.0
UK	4.8	21.3			26.0	11.0	20.6	8.2	15.3	55.1
Other EU	0.6				0.6	0.2	0.2	0.4	0.6	1.4
Other Europe	0.3	0.1			0.3	0.1	1.6	0.0	0.2	2.0
PanEurope	5.8	13.4			19.2	2.6	5.2	4.7	9.6	22.1
Multinational	0.0				0.0					-
European Total	37.4	71.6			109.0	57.0	75.3	46.5	60.0	238.8
Australia Total	7.5	6.4			13.9	2.9	4.3	2.4	6.8	16.4
US Total	427.4	397.7			825.2	330.4	419.1	507.5	539.6	1,796.7

### 1.8 Issuance by Collateral Type and Country of Collateral: 2Q 17

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Belgium				6.0	5.7		11.7
Denmark							-
France	1.1			11.5			12.6
Germany	3.0				0.4		3.4
Greece							-
Ireland	0.2			0.8			0.9
Italy	1.9						1.9
Netherlands				3.2			3.2
Portugal	0.3						0.3
Spain	1.5				1.2		2.7
UK	1.1			20.2			21.3
Other EU							-
Other Europe				0.1			0.1
PanEurope	0.2	13.2					13.4
Multinational							-
European Total	9.4	13.2	-	41.8	7.2	-	71.6

	ABS	CDO	AGENCY MBS	NON-AGENCY CMBS	NON-AGENCY RMBS	TOTAL
Australia Total	0.3				6.1	6.4
US Total	52.8	19.5	280.9	17.7	27.0	397.7

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

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
AAA	20.1	49.9			70.0
AA	8.6	6.7			15.3
A	3.3	3.9			7.2
BBB & Below	1.8	3.1			4.8
Not Rated	3.6	8.1			11.7
<b>European Total2</b>	<b>37.4</b>	<b>71.6</b>			<b>109.0</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	21.7	47.7	18.6	26.2	114.1
	4.5	7.2	5.2	9.8	26.7
	20.0	6.0	9.6	9.2	44.8
	4.7	3.0	3.1	3.8	14.6
	6.2	11.4	10.0	11.0	38.6
	57.0	75.3	46.5	60.0	238.8

### 1.10 Australia Issuance by Rating

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
AAA	6.6	6.1			12.7
AA	0.4	0.1			0.5
A	0.2	0.1			0.3
BBB & Below	0.2	0.0			0.2
Not Rated	0.1	0.0			0.2
<b>US Total</b>	<b>7.5</b>	<b>6.4</b>			<b>13.9</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	2.3	3.7	2.2	6.0	14.2
	0.4	0.3	0.1	0.4	1.2
	0.1	0.1	0.1	0.1	0.3
	0.0	0.1	0.1	0.1	0.3
	0.1	0.2	0.0	0.1	0.4
	2.9	4.3	2.4	6.8	16.4

### 1.11 US Issuance by Rating

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
AAA	56.1	59.7			115.9
AA	7.1	7.7			14.8
A	5.9	9.0			15.0
BBB & Below	8.3	12.3			20.6
Not Rated	24.2	28.2			52.3
Agency MBS	325.7	280.9			606.6
<b>US Total</b>	<b>427.4</b>	<b>397.7</b>			<b>825.2</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	34.0	42.1	51.5	41.9	169.6
	4.7	4.0	4.3	5.4	18.4
	5.2	4.9	5.8	8.5	24.5
	7.9	9.8	7.9	11.8	37.3
	19.0	22.5	26.2	19.5	87.1
	259.6	335.9	411.9	452.4	1,459.8
	330.4	419.1	507.5	539.6	1,796.7

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: 2Q17

INCLUDING RETAINED DEALS						
	EUROPE		Australia		US	
	# of Issues	€ Billions	# of Issues	€ Billions	# of Issues	€ Billions
<b>Less than 0.01 Billion</b>	0%	0%	0%	0%	0%	0%
<b>0.01-0.1 Billion</b>	7%	1%	0%	0%	5%	1%
<b>0.1-1.0 Billion</b>	79%	38%	75%	48%	51%	47%
<b>More than 1.0 Billion</b>	14%	61%	25%	52%	6%	18%
<b>Agency MBS</b>	0%	0%	N/A	N/A	38%	35%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Sources: Dealogic, Macquarie

## 2 Outstanding

€ BILLIONS

### 2.1 European Outstandings by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
ABS	206.5	200.8		
CDO/CLO	119.8	119.5		
CMBS	64.2	61.5		
RMBS	699.9	710.5		
SME	86.6	86.2		
WBS/PFI	68.5	66.7		
<b>Total</b>	<b>1,245.5</b>	<b>1,245.2</b>		

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
	194.8	204.4	203.1	213.3
	108.2	109.0	109.6	124.4
	77.1	75.1	70.6	67.6
	738.0	738.5	715.6	713.7
	89.5	84.5	84.6	89.6
	70.0	71.3	70.2	70.0
<b>Total</b>	<b>1,277.6</b>	<b>1,282.8</b>	<b>1,253.6</b>	<b>1,278.6</b>

### 2.2 Australia Outstandings by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
ABS	7.8	6.6		
CMBS	0.7	0.5		
RMBS	51.5	48.0		
<b>Total</b>	<b>60.0</b>	<b>55.2</b>		

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
	6.6	7.7	6.8	6.6
	0.3	0.3	0.5	0.7
	49.3	48.0	46.2	47.3
<b>Total</b>	<b>56.2</b>	<b>55.9</b>	<b>53.6</b>	<b>54.5</b>

### 2.3 US Outstandings by Collateral

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
ABS	1,307.6	1,170.4		
Agency MBS	6,223.0	6,003.9		
Non-Agency RMBS	774.1	700.3		
Non-Agency CMBS	476.3	428.4		
<b>Total</b>	<b>8,781.0</b>	<b>8,303.0</b>		

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
	1,190.7	1,226.5	1,207.5	1,270.7
	5,502.6	5,692.7	5,716.9	6,207.3
	792.6	794.6	773.0	805.3
	519.8	510.4	475.7	503.0
<b>Total</b>	<b>8,005.7</b>	<b>8,224.3</b>	<b>8,173.0</b>	<b>8,786.3</b>

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: 2015-2016

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	2015:Q1	2015:Q2	2015:Q3	2015:Q4
Austria	2.1	2.0	1.9	1.9	2.2	1.9	1.8	2.1
Belgium	64.5	66.6	65.2	62.1	69.8	67.7	65.8	65.7
Finland	1.1	1.0	0.9	1.4	1.1	1.0	1.0	1.2
France	76.7	81.2	85.0	85.4	70.3	70.4	69.6	78.6
Germany	84.2	83.2	81.7	85.1	71.2	68.5	88.7	88.1
Greece	20.4	20.4	19.0	19.6	24.2	24.2	21.4	20.6
Ireland	33.4	32.5	30.9	30.8	35.9	34.7	33.5	32.0
Italy	145.8	140.2	141.6	145.4	157.5	158.3	155.2	150.7
Netherlands	207.5	216.2	213.0	202.5	247.0	243.5	240.3	222.3
Portugal	29.8	29.2	29.0	28.8	34.5	34.0	32.1	32.1
Russia	1.5	1.6	1.2	1.2	0.9	1.2	1.5	1.4
Spain	171.0	169.8	166.2	168.9	170.4	170.5	163.7	161.8
Turkey	1.4	1.2	1.2	1.1	1.6	1.5	1.5	1.5
UK	326.7	325.5	305.0	318.1	374.1	365.3	347.5	334.8
Other	4.8	5.5	5.2	5.1	4.4	4.7	4.4	5.0
PanEurope	65.6	68.7	71.6	89.3	51.7	53.9	54.3	59.7
Multinational	40.8	38.1	35.1	32.0	56.6	53.9	48.0	44.8
European Total	1,277.6	1,282.8	1,253.6	1,278.6	1,373.2	1,355.4	1,330.3	1,302.5
Australia Total	56.2	55.9	53.6	54.5	65.4	62.7	56.4	57.8
US Total	8,005.7	8,224.3	8,173.0	8,786.3	8,378.8	8,127.3	8,125.9	8,384.9

## 2017

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Austria	1.9	1.8		
Belgium	60.8	66.4		
Finland	1.3	1.2		
France	85.0	95.8		
Germany	76.0	73.6		
Greece	19.3	19.2		
Ireland	30.3	27.3		
Italy	143.2	134.6		
Netherlands	201.4	194.7		
Portugal	27.7	26.6		
Russia	1.2	1.2		
Spain	168.6	165.2		
Turkey	1.1	1.1		
UK	306.5	315.4		
Other	5.6	5.0		
PanEurope	88.5	91.5		
Multinational	27.3	24.5		
European Total	1,245.5	1,245.2		
Australia Total	60.0	55.2		
US Total	8,781.0	8,303.0		

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)

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	47.41%	48.22%			46.37%	46.33%	47.64%	48.03%
Aa/AA	29.49%	28.60%			28.46%	29.75%	29.65%	29.07%
A/A	13.38%	13.81%			13.82%	13.42%	12.74%	13.07%
Baa/BBB	4.20%	4.05%			5.26%	4.81%	4.35%	4.22%
Ba/BB	1.78%	1.72%			2.08%	1.91%	1.87%	1.89%
B/B	1.24%	1.56%			1.19%	1.04%	1.17%	1.18%
Caa/CCC	1.66%	1.28%			1.82%	1.77%	1.63%	1.68%
Ca/CC	0.52%	0.47%			0.64%	0.60%	0.59%	0.52%
C/C	0.33%	0.29%			0.36%	0.37%	0.35%	0.34%
<b>Total</b>	<b>100.01%</b>	<b>100.00%</b>			<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## 2.6 Australia Outstandings by Standard and Poor's Ratings

(as a percentage of total S&P rated securitisations)

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	86.80%	87.33%			86.54%	87.01%	86.60%	86.62%
Aa/AA	5.42%	5.15%			6.26%	5.48%	5.57%	5.42%
A/A	2.68%	2.58%			2.53%	2.61%	2.72%	2.81%
Baa/BBB	0.86%	0.86%			0.76%	0.78%	0.82%	0.85%
Ba/BB	0.34%	0.33%			0.29%	0.32%	0.34%	0.36%
B/B	0.13%	0.13%			0.11%	0.10%	0.13%	0.14%
Caa/CCC	0.00%	0.00%			0.00%	0.00%	0.00%	0.00%
Ca/CC	0.00%	0.00%			0.00%	0.00%	0.00%	0.00%
C/C	0.03%	0.03%			0.02%	0.02%	0.03%	0.03%
D	0.00%	0.00%			0.00%	0.00%	0.00%	0.00%
NR	3.74%	3.61%			3.49%	3.68%	3.80%	3.77%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>			<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## 2.7 US Outstandings by Moody's Investors Service Ratings

(as a percentage of total Moody's rated securitisations)

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Aaa/AAA	28.35%	28.58%			28.68%	28.75%	28.37%	27.92%
Aa/AA	5.46%	5.36%			4.99%	5.30%	5.53%	5.44%
A/A	6.09%	6.07%			6.20%	6.09%	6.07%	6.11%
Baa/BBB	8.56%	8.39%			8.04%	7.95%	7.91%	8.62%
Ba/BB	6.63%	6.49%			6.15%	6.08%	6.12%	6.46%
B/B	5.83%	5.77%			6.55%	5.73%	5.88%	5.82%
Caa/CCC	20.45%	20.69%			19.49%	20.19%	20.26%	20.34%
Ca/CC	12.05%	12.03%			11.67%	11.72%	11.77%	11.85%
C/C	6.57%	6.61%			8.22%	8.20%	8.10%	7.45%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>			<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.01%</b>

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

€ BILLIONS

## 2.8 Australian Outstandings by Vintage

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
2017	7.3	10.3		
2016	12.6	11.0		
2015	12.3	10.6		
2014	10.3	9.0		
2013	6.9	5.8		
2012	2.6	2.2		
2011	3.2	2.8		
2010	1.8	1.5		
2009	0.8	0.6		
2008	0.0	0.0		
2007	1.0	0.4		
2006	0.5	0.4		
2005	0.2	0.2		
2004	0.1	0.1		
2003	0.0	0.0		
2002	0.0	0.0		
Prior	0.1	0.1		
<b>Total</b>	<b>59.9</b>	<b>55.2</b>		

2016:Q1	2016:Q2	2016:Q3	2016:Q4
N/A	N/A	N/A	N/A
2.6	6.9	8.6	13.0
15.9	14.6	13.7	12.7
13.4	12.3	11.5	10.7
9.1	8.4	7.8	7.2
3.6	3.2	2.9	2.7
4.1	3.6	3.5	3.3
2.4	2.2	2.1	1.9
1.2	1.1	1.0	0.9
0.3	0.2	0.1	0.1
2.2	1.8	1.2	1.0
0.9	0.8	0.5	0.4
0.2	0.2	0.2	0.2
0.2	0.2	0.2	0.1
0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1
<b>56.1</b>	<b>55.8</b>	<b>53.5</b>	<b>54.5</b>

## 2.9 European Outstandings by Vintage

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
2017	36.9	103.9		
2016	230.1	223.5		
2015	174.6	163.7		
2014	133.5	124.2		
2013	77.2	70.4		
2012	69.4	62.1		
2011	43.5	37.4		
2010	95.4	94.6		
2009	50.3	49.2		
2008	88.2	85.1		
Prior	246.5	231.1		
<b>Total</b>	<b>1,245.5</b>	<b>1,245.2</b>		

2016:Q1	2016:Q2	2016:Q3	2016:Q4
N/A	N/A	N/A	N/A
58.2	115.3	155.0	235.4
200.1	194.4	189.1	183.8
168.8	163.4	153.8	147.8
106.6	99.0	89.0	82.9
98.2	92.0	87.1	78.5
79.2	70.7	60.6	48.9
104.7	103.2	99.1	97.9
59.9	56.4	53.8	51.9
101.6	98.4	94.0	90.8
300.3	290.0	272.1	260.6
<b>1,277.6</b>	<b>1,282.8</b>	<b>1,253.6</b>	<b>1,278.6</b>

Sources: Bloomberg, Macquarie, AFME, SIFMA

€ BILLIONS

## 2.10 European Outstandings by Country and Collateral: 1Q 2017

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.4			1.4			1.9
Belgium	0.2		0.1	43.6	16.8		60.8
Finland	0.8					0.5	1.3
France	21.6		0.4	62.8	0.2		85.0
Germany	40.7	0.2	2.4	25.9	6.7	0.0	76.0
Greece	8.6	1.8	0.3	1.3	7.4		19.3
Ireland	0.3	0.0	0.0	29.8	0.19		30.3
Italy	56.7	1.6	7.2	58.6	18.8	0.3	143.2
Netherlands	3.4	0.4	0.8	191.9	4.9		201.4
Portugal	3.1			18.7	5.9		27.7
Russia	0.2			1.0	0.00		1.2
Spain	23.2	0.4	0.1	126.8	18.2	0.0	168.6
Turkey	1.1						1.1
UK	40.6	7.4	47.7	136.8	7.0	67.0	306.5
Other	4.1	0.2	0.18	1.1			5.6
PanEurope	1.2	81.4	5.1	0.2	0.4	0.1	88.5
Multinational	0.4	26.4				0.5	27.3
<b>European Total</b>	<b>206.5</b>	<b>119.8</b>	<b>64.2</b>	<b>699.9</b>	<b>86.6</b>	<b>68.5</b>	<b>1245.5</b>

## 2Q 2017

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.4			1.4			1.8
Belgium	0.2		0.1	45.6	20.5		66.4
Finland	0.7					0.5	1.2
France	21.7		0.4	73.5	0.2		95.8
Germany	38.8	0.2	1.7	25.8	7.0	0.0	73.6
Greece	8.6	1.8	0.3	1.3	7.4		19.2
Ireland	0.42	0.0	0.0	26.7	0.19		27.3
Italy	55.6	0.4	6.7	55.3	16.2	0.3	134.6
Netherlands	2.9	0.4	0.7	186.0	4.5		194.7
Portugal	3.2			18.3	5.1		26.6
Russia	0.2			1.0	0.00		1.2
Spain	22.8	0.4	0.1	124.0	17.9		165.2
Turkey	1.1						1.1
UK	38.8	7.3	46.8	150.4	6.8	65.2	315.4
Other	3.8	0.2	-	1.1			5.0
PanEurope	1.2	85.0	4.7	0.1	0.4	0.1	91.5
Multinational	0.4	23.7				0.4	24.5
<b>European Total</b>	<b>200.8</b>	<b>119.5</b>	<b>61.5</b>	<b>710.5</b>	<b>86.2</b>	<b>66.7</b>	<b>1245.2</b>

Sources: Bloomberg, AFME, SIFMA

### 3 Credit Quality – Rating Changes

#### Upgrades/Downgrades by Country

##### 3.1 DBRS

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
France	0/0	2/0			2/0
Germany	3/0	4/0			7/0
Italy	4/3	30/4			34/7
Netherlands	1/0	0/0			1/0
Spain	0/1	23/4			23/5
UK	0/0	0/1			0/1
Multinational	2/11	6/3			8/14
European Total	10/15	65/12			75/27
US	518/286	593/37			1111/323

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	0/0	1/0	1/0	2/0	4/0
	2/0	6/0	6/0	5/0	19/0
	9/0	14/1	14/1	9/2	46/4
	0/0	0/0	0/0	0/0	0/0
	3/1	41/3	41/3	2/0	87/7
	0/0	2/1	2/1	0/0	4/2
	2/0	6/0	6/0	7/0	21/0
	16/1	70/5	70/5	25/2	181/13
	413/3	538/5	538/5	277/2	1766/15

##### 3.2 Fitch Ratings

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
France	0/1	5/2			5/3
Germany	7/8	3/16			10/24
Italy	12/6	15/125			27/131
Netherlands	2/24	10/9			12/33
Spain	30/14	37/8			67/22
UK	154/17	71/10			225/27
Multinational	0/0	7/0			7/0
European Total	208/119	158/172			366/291
US	852/438	369/171			1221/609

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	1/0	3/0	3/0	17/4	24/4
	8/6	4/13	7/8	21/4	40/31
	3/0	14/0	15/5	3/2	35/7
	1/2	9/1	1/13	9/11	20/27
	4/7	33/1	41/17	8/5	86/30
	51/11	92/12	19/5	41/20	203/48
	0/1	0/0	0/0	2/0	2/1
	69/27	157/31	97/48	118/50	441/156
	436/400	512/132	443/770	2714/692	4105/1994

##### 3.3 Moody's Investors Service

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
France	1/0	0/0			1/0
Germany	4/1	1/1			5/2
Italy	1/0	14/0			15/0
Netherlands	3/0	6/0			9/0
Spain	33/0	6/1			39/1
UK	1/2	11/1			12/3
Multinational	29/3	32/2			61/5
European Total	78/8	73/0			151/8
US	612/82	694/0			1306/82

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	4/0	2/0	0/0	6/0	12/0
	0/2	5/3	4/1	0/1	9/7
	0/0	0/0	13/1	0/1	13/2
	2/0	25/0	0/4	1/0	28/4
	0/0	203/0	4/2	0/0	207/2
	0/9	10/3	11/7	10/1	31/20
	152/2	65/7	56/3	44/9	317/21
	167/13	337/15	112/19	66/12	682/59
	1562/628	1182/301	1472/745	1322/236	5538/1910

##### 3.4 Standard & Poor's

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
France	2/0	0/0			2/0
Germany	5/4	2/4			7/8
Italy	5/4	1/1			6/5
Netherlands	13/3	3/0			16/3
Spain	41/5	23/3			64/8
UK	44/8	33/12			77/20
Multinational	63/16	72/15			135/31
European Total	173/40	134/35			307/75
US	385/308	437/206			822/514

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	0/0	1/0	0/0	0/0	1/0
	1/5	2/4	6/9	4/1	13/19
	0/1	3/0	4/0	0/2	7/3
	17/7	32/16	8/6	0/1	57/30
	52/7	1/6	2/0	2/0	57/13
	33/5	47/33	123/17	51/17	254/72
	161/19	53/13	110/14	77/26	401/72
	264/44	139/72	253/46	134/47	790/209
	394/381	569/588	750/269	662/475	2375/1713

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

Upgrades/Downgrades by Collateral

3.5 DBRS - Europe

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	5/0	9/0			14/0
CDO	0/10	13/3			13/13
CMBS	0/2	0/4			0/6
Credit Card	1/1	18/1			19/2
RMBS (prime)	3/1	20/4			23/5
RMBS (non-prime)	0/1	1/0			1/1
Other ABS	1/0	4/0			5/0
<b>Total</b>	<b>10/15</b>	<b>65/12</b>			<b>75/27</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	2/0	9/0	9/0	9/0	29/0
	8/0	12/0	12/0	0/2	32/2
	0/0	1/1	1/1	0/0	2/2
	0/0	5/0	5/0	6/0	16/0
	5/1	33/4	33/4	10/0	81/9
	1/0	5/0	5/0	0/0	11/0
	0/0	5/0	5/0	0/0	10/0
	16/1	70/5	70/5	25/2	181/13

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

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	1/0	5/7			6/7
Credit Card	0/0	3/0			3/0
Other ABS	7/48	10/19			17/67
CDO	21/10	40/27			61/37
CMBS	6/12	8/25			14/37
RMBS (prime)	36/40	33/88			69/128
RMBS (non-conforming)	125/0	57/6			182/6
Other RMBS	12/9	2/0			14/9
<b>Total</b>	<b>208/119</b>	<b>158/172</b>			<b>366/291</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	0/0	7/0	11/0	12/1	30/1
	0/0	0/0	0/0	0/0	0/0
	9/1	4/0	18/0	2/3	33/4
	5/3	19/8	22/0	68/4	114/15
	4/11	15/14	3/6	0/13	22/44
	16/12	35/0	35/17	31/10	117/39
	35/0	75/5	0/14	4/18	114/37
	8/5	2/0	8/1	1/1	19/7
	69/27	157/31	97/48	118/50	441/156

3.7 Moody's Investors Service - Europe

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	11/0	0/1			11/1
CDO	29/2	32/1			61/3
CMBS	0/4	2/4			2/8
Credit Card	0/0	0/0			0/0
RMBS (prime)	33/2	29/6			62/8
RMBS (non-conforming)	5/0	10/1			15/1
<b>Total</b>	<b>78/8</b>	<b>73/13</b>			<b>151/21</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	0/0	7/0	1/0	0/0	8/0
	152/2	65/3	56/3	41/9	314/17
	0/2	0/7	1/8	1/2	2/19
	0/0	0/0	0/0	0/0	0/0
	14/1	238/4	40/3	11/1	303/9
	1/8	27/1	14/5	13/0	55/14
	167/13	337/15	112/19	66/12	682/

3.8 Standard & Poor's - Europe

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	6/0	2/0			8/0
CDO	69/9	78/14			147/23
CMBS	2/18	0/16			2/34
Credit Card	0/0	0/0			0/0
RMBS (prime)	61/10	24/4			85/14
RMBS (non-conforming)	35/3	30/1			65/4
<b>Total</b>	<b>173/40</b>	<b>134/35</b>			<b>307/75</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	2/0	2/0	5/0	3/0	12/0
	191/15	64/3	128/11	86/22	469/51
	1/13	0/37	6/27	0/16	7/93
	0/0	2/0	0/0	2/6	4/6
	68/14	26/20	21/6	2/2	117/42
	2/2	45/12	93/2	41/1	181/17
	264/44	139/72	253/46	134/47	790/209

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

<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 Non-conforming.



Upgrades/Downgrades by Collateral

3.9 DBRS - US

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	17/0	54/0			71/0
CDO	17/0	2/28			19/28
CMBS	56/271	36/7			92/278
Credit Card	2/0	8/0			10/0
RMBS	418/13	463/2			881/15
Other ABS	8/2	30/0			38/2
<b>Total</b>	<b>518/286</b>	<b>593/37</b>			<b>1111/323</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	40/0	2/0	2/0	28/0	72/0
CDO	0/0	5/0	5/0	30/0	40/0
CMBS	13/3	52/2	52/2	23/2	140/9
Credit Card	0/0	0/0	0/0	0/0	0/0
RMBS	339/0	476/2	476/2	187/0	1478/4
Other ABS	21/0	3/1	3/1	9/0	36/2
<b>Total</b>	<b>413/3</b>	<b>538/5</b>	<b>538/5</b>	<b>277/2</b>	<b>1766/15</b>

3.10 Fitch Ratings - US

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	33/0	22/0			55/0
Credit Card	0/0	0/0			0/0
Other ABS	37/68	27/6			64/74
CDO	26/9	92/8			118/17
CMBS	58/87	78/35			136/122
RMBS (prime)	3/71	41/45			44/116
RMBS (subprime)	28/21	0/27			28/48
Other RMBS	667/182	109/50			776/232
<b>Total</b>	<b>852/438</b>	<b>369/171</b>			<b>1221/609</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	0/0	21/0	29/0	18/0	68/0
CDO	0/0	0/0	0/0	0/0	0/0
Other ABS	26/70	93/41	20/11	19/88	158/210
CDO	22/15	55/12	20/10	22/2	119/39
CMBS	148/115	93/27	31/72	41/46	313/260
RMBS (prime)	0/93	80/1	282/636	20/47	382/777
RMBS (subprime)	20/24	5/2	0/0	2281/160	2306/186
Other RMBS	220/83	165/49	61/41	313/349	759/522
<b>Total</b>	<b>436/400</b>	<b>512/132</b>	<b>443/770</b>	<b>2714/692</b>	<b>4105/1994</b>

3.11 Moody's Investors Service - US

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	48/0	36/0			84/0
CDO	74/7	69/0			143/7
CMBS	59/34	50/0			109/34
Credit Card	0/0	0/0			0/0
RMBS	431/41	539/0			970/41
<b>Total</b>	<b>612/82</b>	<b>694/0</b>			<b>1306/82</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	101/0	4/0	48/0	61/2	214/2
CDO	132/28	44/16	145/8	98/4	419/56
CMBS	210/85	139/41	193/100	153/64	695/290
Credit Card	13/0	0/0	0/0	0/0	13/0
RMBS	1106/515	995/244	1086/637	1010/166	4197/1562
<b>Total</b>	<b>1562/628</b>	<b>1182/301</b>	<b>1472/745</b>	<b>1322/236</b>	<b>5538/1910</b>

3.12 Standard & Poor's - US

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	38/0	101/0			139/0
CDO	105/16	0/76			105/92
CMBS	59/51	76/7			135/58
Credit Card	0/0	7/139			7/139
RMBS (prime)	116/162	139/33			255/195
RMBS (subprime)	67/79	33/0			100/79
<b>Total</b>	<b>385/308</b>	<b>356/255</b>			<b>741/563</b>

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
Auto	9/0	88/0	56/0	190/0	343/0
CDO	235/13	153/20	166/18	95/7	649/58
CMBS	63/13	123/49	116/35	138/52	440/149
Credit Card	0/0	0/0	0/0	1/0	1/0
RMBS (prime)	36/244	117/271	130/143	147/277	430/935
RMBS (subprime)	51/111	88/248	282/73	91/139	512/571
<b>Total</b>	<b>394/381</b>	<b>569/588</b>	<b>750/269</b>	<b>662/475</b>	<b>2375/1713</b>

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

## 4 CMBS Spreads

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



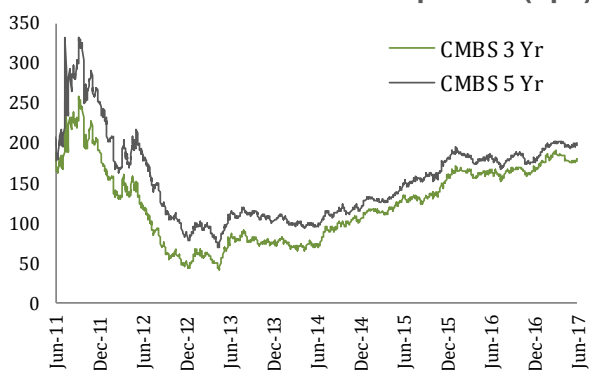
Sources: Markit

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



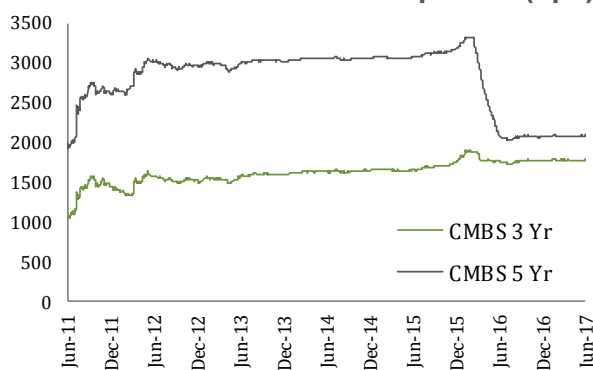
Sources: Markit

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



Sources: Trepp LLC

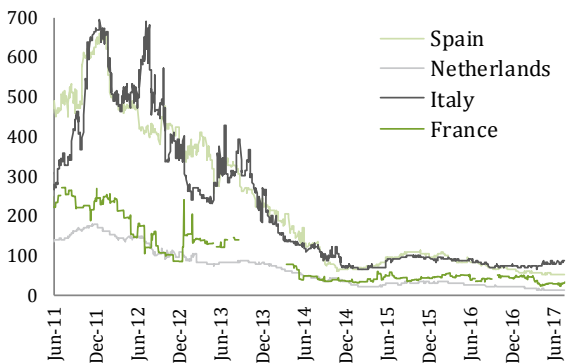
### 4.4 US 3 & 5 Yr BBB CMBS Spreads (bps)



Sources: Trepp LLC

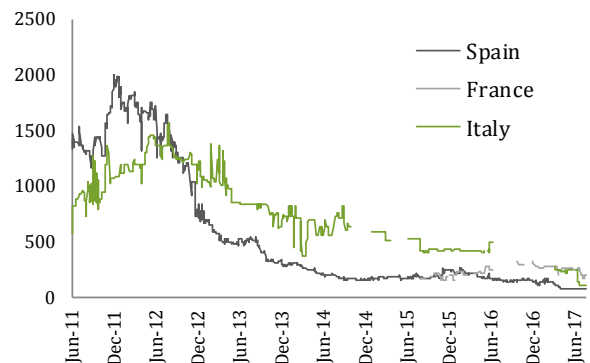
## 5 RMBS Spreads

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



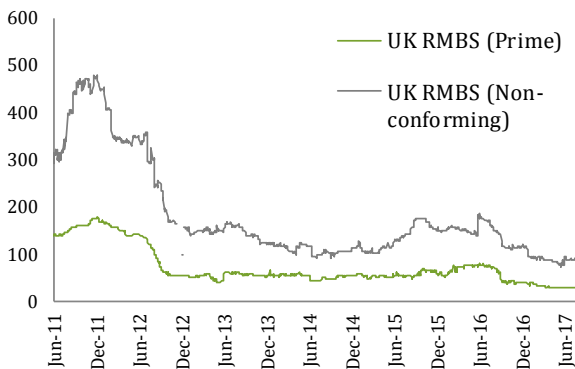
Sources: Markit

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



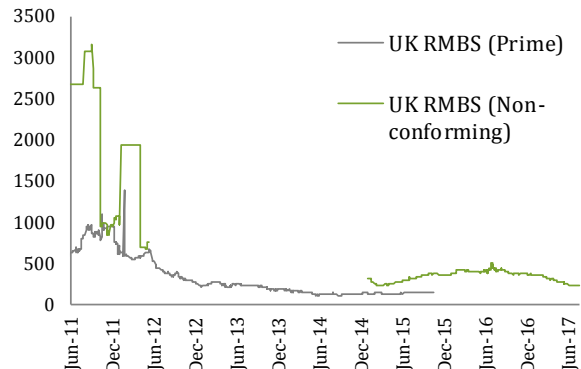
Sources: Markit

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



Sources: Markit

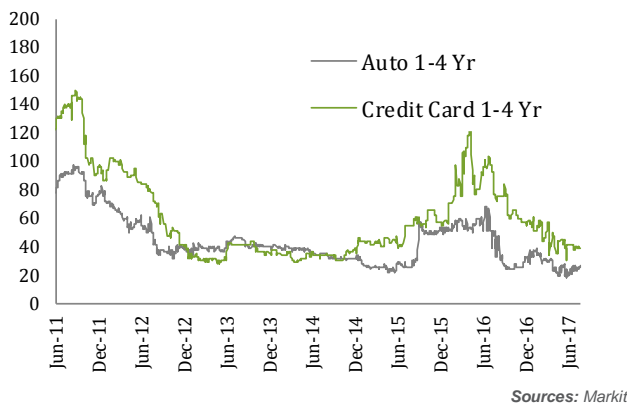
### 5.4 UK 3-5 Yr BBB RMBS Spreads (bps)



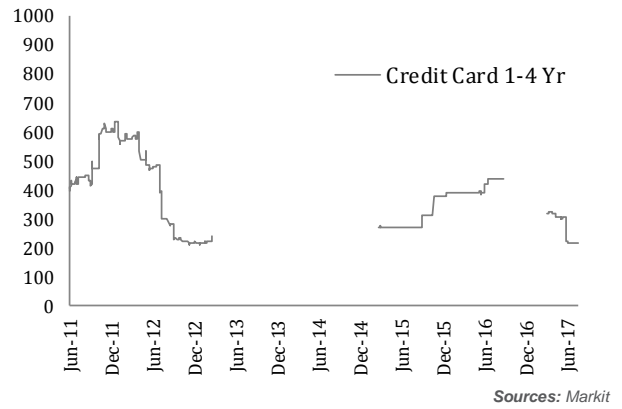
Sources: Markit

## 6 ABS Spreads

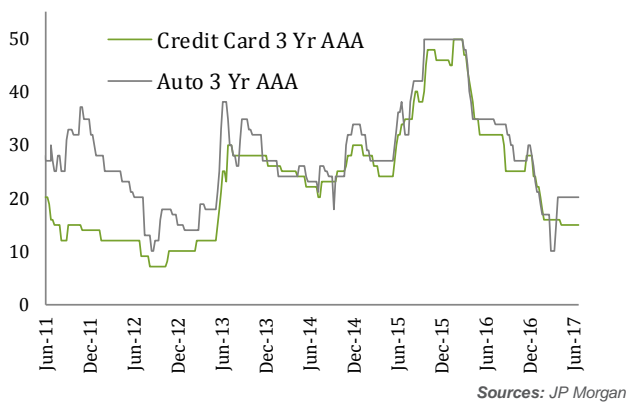
### 6.1 European 1-4 Yr AAA ABS Spreads (bps)



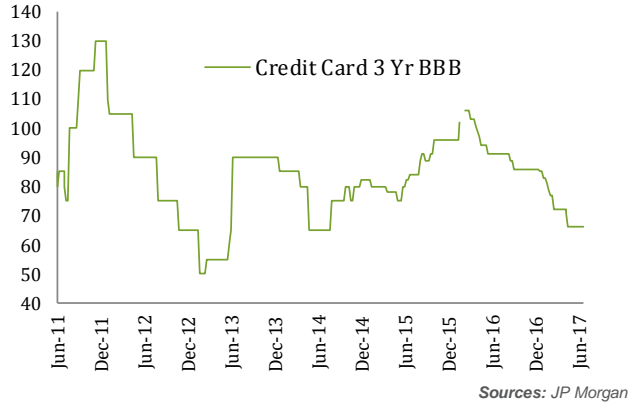
### 6.2 European 1-4 Yr BBB Spreads (bps)



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

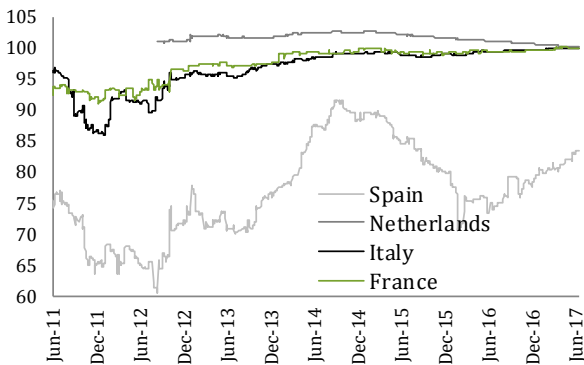


### 6.4 US 3 Yr BBB - AA ABS Spreads (bps)



## 7 RMBS Prices

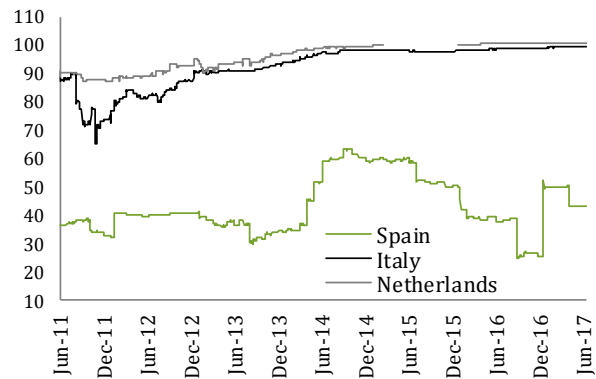
### 7.1 European 3-5 Yr AAA RMBS Prices



Sources: Markit

1. Spanish AAA RMBS provided: IM Pastor 3, Fondo de Titulizacion Hipotecaria, Class A, Series 3. ISIN# ES0347862007. EUR-denominated.
2. 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.
4. Dutch AAA RMBS provided: Storm 2016-I BV, Class A2, Series 2016-I ISIN# XS1336738221. EUR-denominated.

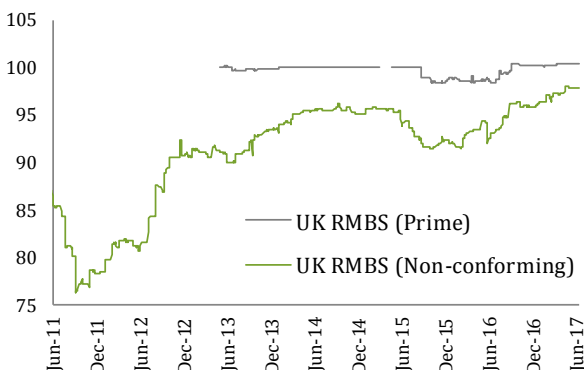
### 7.2 European 3 - 5 Yr BBB RMBS Prices



Sources: Markit

1. Spanish BBB RMBS provided: Hipocat 8, Fondo de Titulizacion Activos, Class D, Series 1: ISIN# ES0345784047. EUR-denominated.
2. Dutch BBB RMBS provided: Holland Mortgage-Backed Securities (HERMES) X B.V., Class C, Series 10. ISIN# XS0228806831. EUR-denominated. From 2016 onwards: Storm 2016-I B.V., Class A2, Series 2016-I, ISIN# XS1336738221.
3. Italian BBB RMBS provided: Vela Home S.r.l. 4, Class A2, Series 4, ISIN# IT0004102007. EUR-denominated.

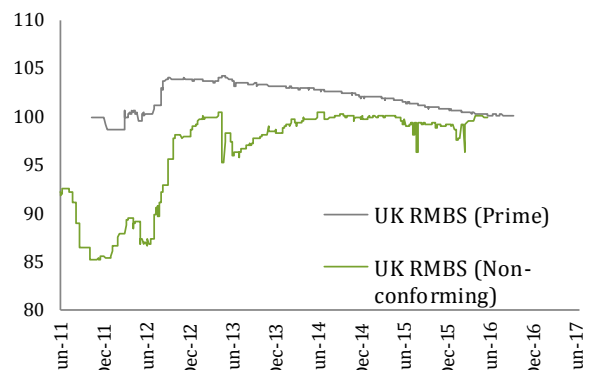
### 7.3 UK 3-5 Yr AAA RMBS Prices



Sources: Markit

1. UK AAA prime RMBS provided: GREAT HALL MORTGAGES No1 PLC, Class Aa, Series 2007-02, ISIN# XS0308354504.
2. UK AAA non-conforming RMBS provided: First Flexible No. 4 PLC, Class A, Series 4. ISIN# XS0132692384. GBP-denominated.

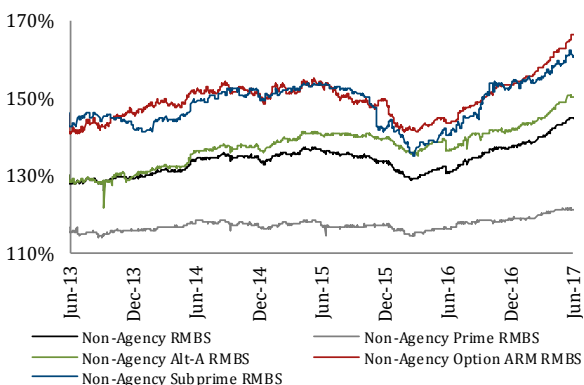
### 7.4 UK 3 - 5 Yr BBB RMBS Prices



Sources: Markit

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

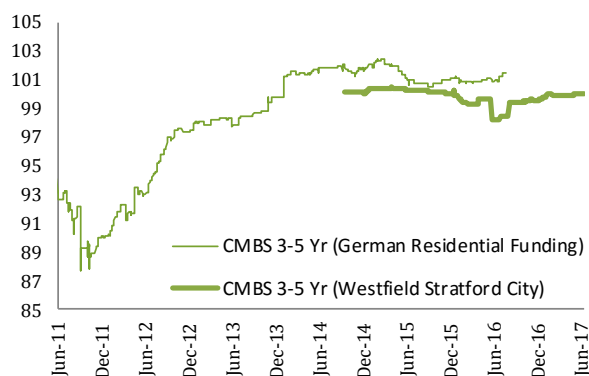
### 7.5 Markit RMBS iBoxx



Sources: Markit

## 8 CMBS and ABS Prices

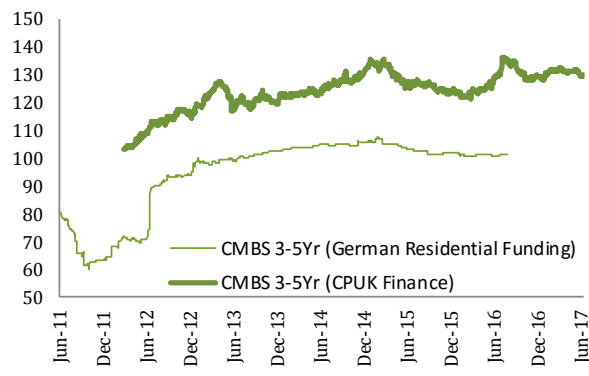
### 8.1 Pan-European 3-5 Yr AAA CMBS Prices



Sources: Markit

1. Pan-European AAA CMBS provided: German Residential Funding, Class A, Series 2013-1. ISIN# XS0944452563, EUR-denominated, and Westfield Stratford City Finance PLC, WSCF14 1 Note, GBP-denominated, ISIN# XS1093970751.

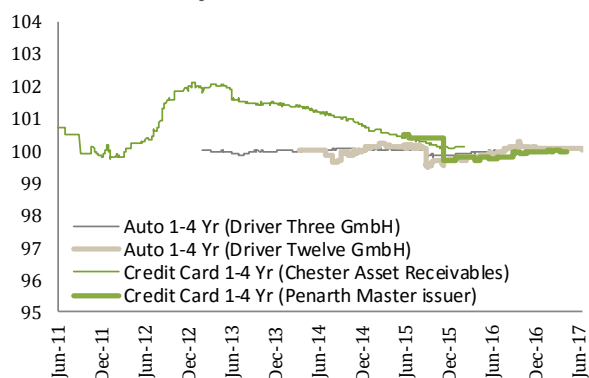
### 8.2 Pan-European 3-5 Yr BBB CMBS Prices



Sources: Markit

1. Pan-European BBB CMBS provided: German Residential Funding, Class D, Series 2013-1. ISIN# XS0944454858. EUR-denominated, and CPMK Finance Limited, Class A2, GBP-denominated, ISIN# XS0749350798.

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

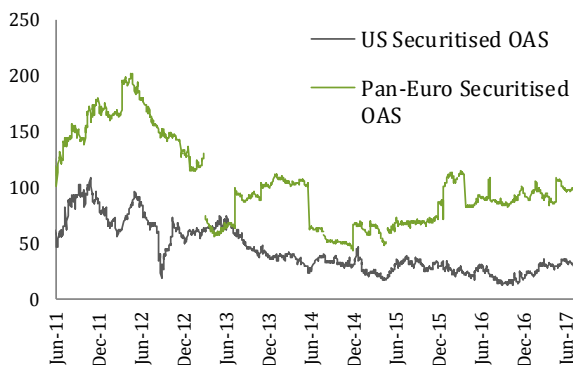


Sources: Markit

1. Pan-European AAA Auto ABS provided: Driver Three GmbH, Class A, Series 3. ISIN# XS0270108573. EUR-denominated and Driver Twelve GmbH, DRV12 12 A, Class A, Series 12. EUR denominated, ISIN# XS1055190950.
2. Pan-European AAA Credit Card ABS provided: Chester Asset Receivables DGS 2004-1, Class A, Series UK2004-1. ISIN# XS0188611783. GBP-denominated. And Penarth Master Issuer PLC Series 2015-2, Class A1, ISIN# XS1237348823.

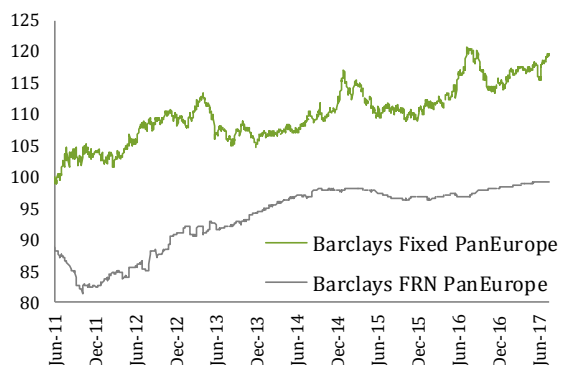
## 9 Indices Data

### 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

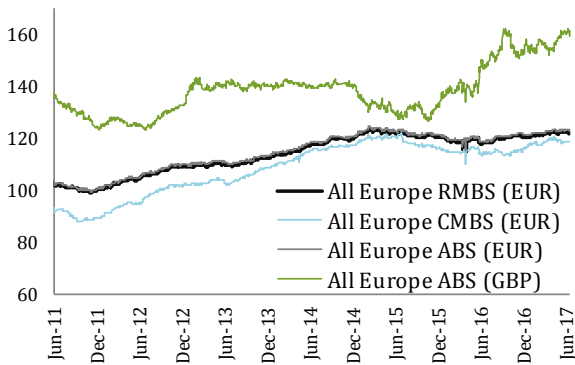
### 9.5 CMBX 6 AAA Prices



Sources: Markit

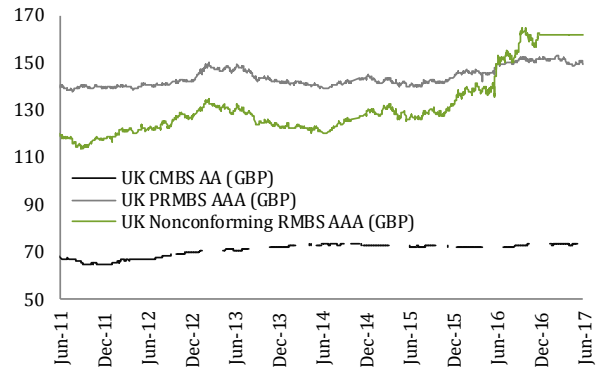
# 10 Total Return Benchmark Data

## 10.1 European Total Return



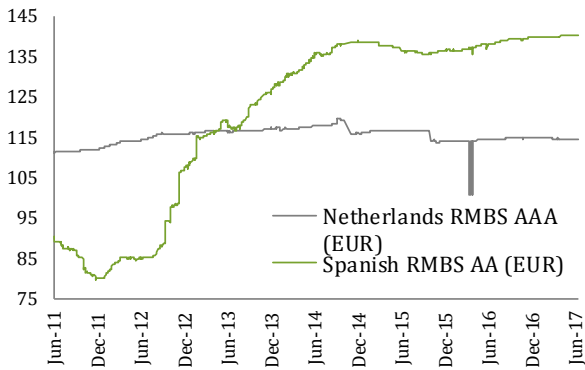
Sources: Markit

## 10.2 UK Total Return



Sources: Markit

## 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
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	135.8	94.1	445.9
2017	82.3	68.4			150.8

## 11.2 European ABCP Issuance by Nationality of Issuer

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
France	49.6	52.5			102.1
Germany	5.0	5.1			10.0
Ireland	19.7	4.1			23.9
Luxembourg	4.2	4.8			9.0
UK	3.8	2.0			5.7
Total	82.3	68.4			150.8

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	55.8	54.8	55.4	54.0	219.9
	3.0	4.8	5.0	6.3	19.1
	34.7	57.3	70.3	23.3	185.6
	1.6	1.5	2.4	4.4	9.9
	0.72	1.81	2.8	6.1	11.4
Total	95.8	120.1	135.8	94.1	445.9

## 11.3 European ABCP Issuance by Programme Type

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Hybrid	0.8	0.9			1.7
Single-Seller Conduits					0.0
Multi-Seller Conduits	72.3	66.5			138.8
Unspecified	9.3	1.0			10.3
Total	82.3	68.4			150.8

	2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
	1.22	1.09	0.76	0.94	4.0
	-	-	-		0.0
	82.4	106.7	128.1	85.3	402.6
	12.2	12.3	7.0	7.9	39.3
Total	94.6	119.0	135.1	93.2	441.9

## 11.4 ABCP Outstandings by Nationality of Issuer

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
France	8.3	8.3		
Germany	1.5	1.5		
Ireland	5.0	3.2		
Luxembourg	1.3	1.6		
UK	1.5	1.2		
European Total	17.6	15.9		
US Total	225.5	214.0		

	2016:Q1	2016:Q2	2016:Q3	2016:Q4
	6.5	7.0	6.7	8.3
	1.2	1.3	1.2	1.5
	9.0	6.5	7.3	7.1
	0.6	0.5	0.9	1.4
	0.6	-	0.9	1.0
	17.9	15.3	16.9	19.3
Total	218.1	190.6	205.3	219.2

Sources: Dealogic, Moody's Investors Service

### 11.5 European ABCP Outstandings by Programme Type

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Hybrid	0.8	0.6		
Multi-Seller	15.7	14.8		
Unspecified	1.1	0.5		
<b>Total</b>	<b>17.6</b>	<b>15.9</b>		

2016:Q1	2016:Q2	2016:Q3	2016:Q4
1.0	0.7	0.6	0.7
14.2	16.0	15.4	16.3
2.7	2.3	0.9	2.3
<b>17.9</b>	<b>19.0</b>	<b>16.9</b>	<b>19.3</b>

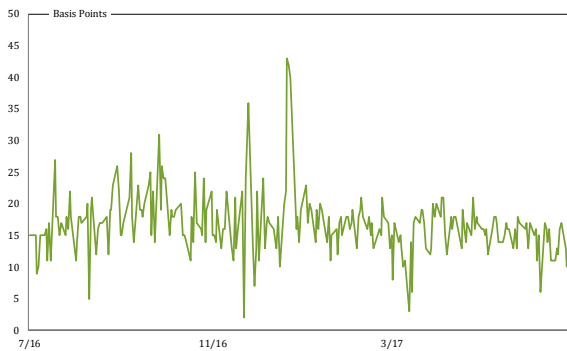
### 11.6 US ABCP Outstandings by Programme Type

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Loan-Backed				
SIVs				
Single-Seller	8.4	7.9		
Multi-Seller	175.8	167.1		
Other	41.3	39.0		
<b>Total</b>	<b>225.5</b>	<b>214.0</b>		

2016:Q1	2016:Q2	2016:Q3	2016:Q4
-	-	-	
-	-	-	
6.6	7.0	7.3	7.9
176.5	177.6	171.5	176.0
32.7	36.8	37.9	40.4
<b>215.8</b>	<b>221.3</b>	<b>216.7</b>	<b>224.3</b>

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

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
US	264.1	244.6			508.8
Europe	203.0	152.3			355.3
Asia	228.8	225.7			454.5
<b>Total</b>	<b>695.9</b>	<b>622.6</b>			<b>1318.5</b>

2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
222.5	228.4	186.1	163.0	799.1
210.7	158.6	148.8	108.1	625.9
272.1	244.4	321.7	233.7	1060.5
<b>704.1</b>	<b>628.8</b>	<b>652.7</b>	<b>499.8</b>	<b>2485.5</b>

### 12.2 Global Government Bond Issuance

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
US	72.9	65.6			138.5
Europe	205.1	149.0			354.2
Asia	66.2	40.6			106.8
<b>Total</b>	<b>344.3</b>	<b>255.2</b>			<b>599.4</b>

2016:Q1	2016:Q2	2016:Q3	2016:Q4	TOTAL
100.6	141.6	162.1	82.9	487.2
176.9	145.9	110.6	76.4	509.8
40.1	51.7	34.6	51.1	177.4
<b>317.6</b>	<b>339.2</b>	<b>307.3</b>	<b>210.4</b>	<b>1174.4</b>

## 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 loan obligations (CDOs/CLOs), 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 initiatives (“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 quarter-end 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
Q3 2016	0.8901	0.6813
Q4 2016	0.9506	0.6843
Q1 2017	0.9385	0.7160
Q2 2017	0.8752	0.6727

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 Q1 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, Switzerland, Sweden, and Hungary.

PanEurope has been pulled out of the Multinational parent category and will be retroactively displayed for European 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-EUR-denominated 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, non-agency RMBS, and non-agency CMBS; agency balance statements for agency MBS. The following asset classes are segmented: agency MBS, non-agency RMBS, non-agency 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 outstanding 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 is 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 non-conforming 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. – 8.3. 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. - 9.5. 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 graph present daily prices provided by Markit for the US synthetic 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.



## Annex

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