

# Securitisation Data Report

## European Structured Finance

Q2: 2018



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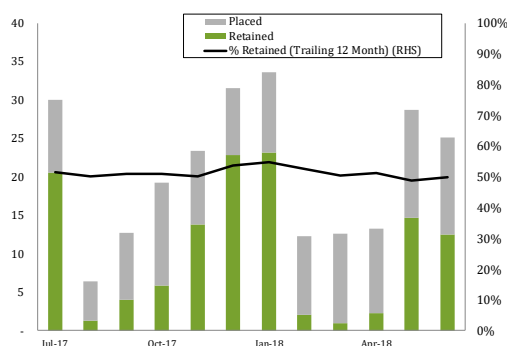
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## Market Highlights and Commentary

### Market Environment

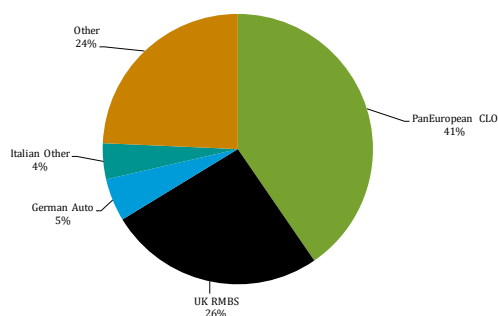
#### European Securitisation Issuance (EUR mn)



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

*“In Q2 2018, EUR 67.2 billion of securitised product was issued in Europe, an increase of 14.8% from Q1 2018 but a decline of 8.0% from Q2 2017.”*

#### European Securitisation Placed Issuance



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

### Economic conditions

According to Eurostat, GDP rose 0.3% quarter-over-quarter (QoQ) in the Euro zone (EU19) and by 0.4% in the EU28 during the second quarter of 2018. The unemployment rate stood at 8.3% (EU19) and 6.9% (EU28) as of the end of June 2018, the lowest rate recorded since December 2008 (EU19) and May 2008 (EU28).

### Term Issuance and Outstanding Volumes

In Q2 2018, EUR 67.2 billion of securitised product was issued in Europe, an increase of 14.8% from Q1 2018 but a decline of 8.0% from Q2 2017. Of the EUR 67.2 billion issued, EUR 37.7 billion was placed, representing 56.1% of issuance, compared to the 55.1% of issuance in Q1 2018 and the 54.2% of issuance in Q2 2017.

CLO refinancing (“refis”) activity continued in the second quarter of 2018; according to Thomson Reuters LPC, the combined amount of European CLO resets and refinancings totalled EUR 5.1 bn in Q2 2018 (EUR 4.3 bn in Q1 2018). Among placed issuance, PanEuropean CLO and UK RMBS led issuance totals, with EUR 15.2 billion and EUR 9.7 billion of issuance, respectively.

Outstanding volumes rose slightly to EUR 1.2 trillion outstanding at the end of Q2 2018, an increase of 0.7% QoQ and an increase of 8.0% YoY.

### Credit Quality

In Europe, upgrades outpaced downgrades in Q2 2018, with upgrades concentrated in prime RMBS.

### ABCP Trends

European asset backed commercial paper (ABCP) issuance was EUR 109.4 billion in Q2 2018, an increase of 60.3% QoQ (from EUR 68.2 billion in Q1 2018) and a 59.8% increase YoY (from EUR 68.4 billion in Q2 2017). Multiseller conduits continue to dominate as the largest category of issuer in the ABCP market, particularly from France and Ireland in the second quarter. European ABCP outstandings increased slightly from the previous quarter, ending the second quarter at EUR 17.9 billion, up by 9.4% from Q1 2018.

## Major upcoming regulatory, legislative and policy initiatives

### STS framework - Level 2 legislation

On 30 July 2018, the EBA published its final draft Regulatory Technical Standards (RTS) on risk retention and homogeneity, which, together with ESMA’s technical standards on disclosures and STS Notification, form key parts of the STS Securitisation reform. ESMA published in July the final draft of technical standards on STS Notification and published on 22 August its final draft RTS on disclosures (including the reporting templates). ESMA’s final draft RTS on disclosures contains substantial changes from the version which was previously consulted on, for

example, special arrangements for private transactions are no longer included and the flexibility with regards to the use of “no data” (ND) fields has been significantly reduced. The final drafts of the EBA’s and ESMA’s technical standards will be submitted for the European Commission’s endorsement and are later subject to the scrutiny period by the European Parliament and the Council. Therefore, it is possible for these RTS to enter into force before the 1 January 2019 start date of the STS regime, but this is by no means a certainty, especially in case of the RTS on disclosures.

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On 19 July 2018, AFME responded to the two EBA consultations on its draft Guidelines on harmonised interpretation of the criteria for securitisations to be eligible for the STS label. The Guidelines are developed for both non asset-backed commercial paper (ABCP) securitisation and ABCP. The final text of the Guidelines is expected to be published later in 2018.

On 19 June 2018, the EBA published its consultation on the RTS for conditions for the use of KIRB (a capital requirement calculation), which will be necessary for banks in applying the SEC-IRBA methodology. AFME will be responding to this consultation by its deadline on 19 September 2018.

Connected with these RTS is the EBA’s set of guidelines, which include (i) guidelines (and a report) on practices on hierarchy of approaches; (ii) on the computation of KIRB for dilution risk; (iii) on the determination of tranche maturity and weighted average life (“WAL”); and (iv) on estimates of probability of default and loss given default using incremental risk capital. The EBA is expected to consult on these guidelines at a later stage.

### **Commission’s proposals on EMIR Refit and treatment of STS**

Following the adoption by the ECON committee in the European Parliament (EP) of its final reports on the EMIR Refit and EMIR 2.0 proposal, which keeps the exclusion of securitisation special purpose entities from the “financial counterparties” (FC) definition, it is expected that the definition of the FC will not change in the Trilogues.

### **Libor and benchmark rates**

Following the announcement by the UK FCA that it would stop compelling banks to support Libor by the end of 2021, AFME continues to be engaged in work on transition to a new risk-free rate. Pending a final determination on what the replacement for Libor will be, AFME is working with several other trade associations to coordinate the industry’s efforts on Libor replacement. We have published Model Wording to create uniform transitional language for new securitisation transactions which is now available on our website.

### **Liquidity Coverage Ratio (LCR)**

On 13 July 2018, the Commission published the final text of revisions to the Liquidity Coverage Ratio (LCR) Delegated Act which, disappointingly, falls short of improving the treatment of STS securitisations (which remain classified as Level 2b assets). Furthermore, the revised text of the Delegated Act allows only for STS transactions to be LCR eligible and it does not provide grandfathering provisions. Consequently, a “cliff-edge” effect will

be caused as the existing LCR-eligible transactions will have their eligibility removed once the revised LCR enters into force. In terms of next steps, the adoption launches a three-month scrutiny period for the European Parliament and the Council (which can be extended). Once the scrutiny period, the new LCR DA will apply 18 months after the text's publication in the Official Journal (OJ) of the EU.

### **Prospectus Regulation**

Further to the Prospectus Regulation, which was published in the OJ on 30 June 2017 (and in large part is effective from July 2019), ESMA was mandated to issue Level 2 regulations. Following consultation, in July 2018 ESMA issued the regulatory technical standards specifying the implementation of certain provisions in the Prospectus Regulation, such as key financial information to be disclosed by issuers for the prospectus summary, publication of a prospectus and arrangements for the notification portal used for passporting prospectuses. The draft RTS have been sent to the European Commission for endorsement. Also, in July ESMA launched two public consultations: on minimum information content for prospectus exemption and on guidelines on risk factors. The two consultations close on 5 October 2018 and are not securitisation specific. AFME is preparing a response.

# 1 Issuance

€ BILLIONS

## 1.1 Issuance European Historical Issuance

	Q1	Q2	Q3	Q4	TOTAL
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	37.8	59.8	217.1
2015	35.7	50.3	57.8	72.8	216.6
2016	57.0	75.8	46.6	60.1	239.6
2017	40.2	73.0	49.1	74.1	236.5
2018	58.5	67.2			125.7

## 1.2 US and Australia Historical Issuance

	US	AU
2009	1,447.2	9.7
2010	1,245.9	15.5
2011	1,068.9	20.4
2012	1,609.0	14.8
2013	1,565.1	22.4
2014	1,190.9	22.1
2015	1,744.5	19.9
2016	1,860.4	16.4
2017	1,899.3	29.2
2018	779.1	9.1

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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
ABS	13.0	18.5			31.5
CDO/CLO	12.6	15.2			27.8
CMBS	0.4	2.0			2.4
RMBS	29.3	29.4			58.6
SME	3.1	2.1			5.2
WBS/PFI					0.0
Total	58.5	67.2			125.7

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	7.8	10.0	12.4	22.7	52.9
	6.2	14.0	14.8	13.7	48.7
	0.3			0.6	0.9
	23.1	41.8	21.6	32.5	119.0
	2.8	7.2	0.4	4.5	14.9
	40.2	73.0	49.1	74.1	236.5

## 1.4 European Issuance by Retention

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Placed	32.2	37.7			69.9
Retained	26.2	29.5			55.8
Total <sup>2</sup>	58.5	67.2			125.7

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	16.9	39.6	23.3	31.5	111.3
	23.3	33.5	25.9	42.6	125.2
	40.2	73.0	49.1	74.1	236.5

## 1.5 Australia Issuance by Collateral

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
ABS	0.3	0.6			0.9
RMBS	3.1	5.0			8.1
CMBS					0.0
Total	3.4	5.6			9.1

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	2.4	0.3	1.0	0.8	4.6
	5.1	6.1	6.3	6.6	24.1
			0.3	0.2	0.5
	7.5	6.4	7.7	7.6	29.2

## 1.6 US Issuance by Collateral

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
ABS	53.9	50.0			103.9
CDO	25.9	28.9			54.8
Agency MBS	253.2	270.2			523.4
Non-Agency CMBS	18.8	13.7			32.6
Non-Agency RMBS	20.5	43.9			64.4
Total	372.3	406.8			779.1

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	59.4	63.6	40.1	56.0	219.1
	51.4	86.4	54.4	70.1	262.4
	326.3	280.7	311.2	305.1	1,223.3
	14.4	20.2	23.5	26.3	84.4
	26.3	34.4	21.8	27.6	110.1
	477.9	485.3	451.1	485.1	1,899.3

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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Belgium	0.2				0.2
Denmark					0.0
France	6.9	4.3			11.1
Germany	3.4	2.2			5.6
Greece					0.0
Ireland	0.4	4.3			4.7
Italy	3.1	12.4			15.5
Netherlands	15.9	7.8			23.7
Portugal	2.3	0.7			2.9
Spain	1.0	4.2			5.1
UK	9.1	14.8			23.9
Other EU		1.0			1.0
Other Europe	0.8	0.3			1.1
PanEurope	15.5	15.2			30.7
Multinational					0.0
European Total	58.5	67.2			125.7
Australia Total	3.4	5.6			9.1
US Total	372.3	406.8			779.1

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
		11.7	0.6		12.3
					-
	8.6	12.6	13.9	1.8	36.9
	0.5	3.4	3.6	5.4	12.9
					-
	0.7	0.9		2.8	4.4
	6.7	2.5	2.9	17.4	29.5
	6.6	3.2	6.0		15.9
		0.3		0.8	1.1
	4.4	2.7	3.0	15.5	25.6
	4.8	21.3	7.5	13.6	47.2
	0.6		0.2	0.7	
	0.3	0.1	0.6	1.3	2.3
	6.6	14.2	10.8	13.8	45.4
	0.0				0.0
	39.8	73.0	49.1	73.1	235.0
	7.5	6.4	7.7	7.6	29.2
	477.9	485.3	451.1	485.1	1,899.3

### 1.8 Issuance by Collateral Type and Country of Collateral: 2Q 2018

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Belgium							-
Denmark							-
France	1.6		0.2	2.5			4.3
Germany	2.1				0.1		2.2
Greece							-
Ireland			0.2	4.1			4.3
Italy	9.1		0.6	1.8	0.8		12.4
Netherlands				7.8			7.8
Portugal	0.7						0.7
Spain	2.8			0.4	1.0		4.2
UK	1.4		0.5	12.7	0.3		14.8
Other EU	0.5		0.5				1.0
Other Europe	0.3			0.0			0.3
PanEurope		15.2					15.2
Multinational							-
European Total	18.5	15.2	2.0	29.4	2.1	-	67.2

	ABS	CDO	AGENCY MBS	NON-AGENCY CMBS	NON-AGENCY RMBS	TOTAL
Australia Total	0.6				5.0	5.6
US Total	50.0	28.9	270.2	13.7	43.9	406.8

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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
AAA	39.2	33.4			72.6
AA	6.9	8.0			14.9
A	4.6	6.7			11.2
BBB & Below	2.8	5.3			8.1
Not Rated	5.1	13.8			18.9
<b>European Total2</b>	<b>58.5</b>	<b>67.2</b>			<b>125.7</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	20.1	50.1	23.5	19.3	113.0
	8.6	6.7	13.5	23.3	52.2
	4.5	3.9	4.9	13.9	27.2
	1.8	3.1	2.5	4.8	12.3
	5.2	9.1	4.7	12.7	31.8
	40.2	73.0	49.1	74.1	236.5

### 1.10 Australia Issuance by Rating

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
AAA	3.0	5.3			8.2
AA	0.3	0.2			0.4
A	0.1	0.1			0.2
BBB & Below	0.1	0.1			0.2
Not Rated	0.0	0.0			0.1
<b>US Total</b>	<b>3.4</b>	<b>5.6</b>			<b>9.1</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	6.6	6.1	7.0	6.5	26.3
	0.4	0.1	0.3	0.5	1.4
	0.2	0.1	0.1	0.2	0.6
	0.2	0.0	0.1	0.2	0.6
	0.1	0.0	0.1	0.1	0.4
	7.5	6.4	7.7	7.6	29.2

### 1.11 US Issuance by Rating

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
AAA	62.3	65.4			127.7
AA	7.6	7.2			14.8
A	7.8	9.2			17.1
BBB & Below	14.0	12.1			26.1
Not Rated	27.4	42.7			70.1
Agency MBS	253.2	270.2			523.4
<b>US Total</b>	<b>372.3</b>	<b>406.8</b>			<b>779.1</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	79.7	105.0	75.0	83.8	343.5
	11.2	15.9	11.7	12.5	51.2
	8.6	14.4	8.6	11.3	42.9
	10.5	17.8	14.3	14.6	57.2
	41.6	51.6	30.2	57.8	181.3
	326.3	280.7	311.2	305.1	1,223.3
	477.9	485.3	451.1	485.1	1,899.3

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: 2Q 2018

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%
<b>0.01-0.1 Billion</b>	0%	0%	0%	0%	4%	1%
<b>0.1-1.0 Billion</b>	87%	67%	55%	35%	61%	59%
<b>More than 1.0 Billion</b>	13%	33%	45%	65%	3%	8%
<b>Agency MBS</b>	N/A	N/A	N/A	N/A	33%	33%
<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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
ABS	214.6	220.2		
CDO/CLO	118.2	125.1		
CMBS	51.3	48.7		
RMBS	676.6	677.4		
SME	78.5	76.6		
WBS/PFI	63.8	63.4		
<b>Total</b>	<b>1,203.0</b>	<b>1,211.3</b>		

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
	209.4	204.4	206.8	216.2
	120.3	121.4	111.6	118.9
	64.2	61.5	55.3	54.6
	700.9	711.5	692.1	697.6
	87.4	87.0	81.1	79.1
	68.7	66.9	64.8	64.1
<b>Total</b>	<b>1,250.9</b>	<b>1,252.7</b>	<b>1,211.7</b>	<b>1,230.6</b>

### 2.2 Australia Outstandings by Collateral

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
ABS	6.6	6.4		
CMBS	0.6	0.6		
RMBS	51.5	51.8		
<b>Total</b>	<b>58.7</b>	<b>58.8</b>		

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
	8.0	7.8	7.9	7.3
	0.7	0.5	0.5	0.7
	52.6	51.4	52.7	54.6
<b>Total</b>	<b>61.3</b>	<b>59.7</b>	<b>61.1</b>	<b>62.6</b>

### 2.3 US Outstandings by Collateral

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
ABS	1,199.2	1,289.5		
Agency MBS	5,674.9	6,049.5		
Non-Agency RMBS	631.4	676.8		
Non-Agency CMBS	419.1	444.8		
<b>Total</b>	<b>7,924.6</b>	<b>8,460.5</b>		

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
	1,318.5	1,250.3	1,212.3	1,226.7
	6,223.0	5,870.5	5,762.8	5,768.0
	789.0	720.6	681.0	659.1
	479.9	433.4	420.0	423.6
<b>Total</b>	<b>8,794.4</b>	<b>8,260.6</b>	<b>8,061.3</b>	<b>8,048.5</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: 2016-2017

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4
Austria	1.8	1.7	1.7	1.6	1.9	1.8	1.8	1.8
Belgium	60.8	66.4	65.8	64.5	64.5	66.6	65.2	62.1
Finland	1.3	1.2	1.1	1.6	1.1	1.0	0.9	1.4
France	85.0	95.8	102.5	100.9	76.7	81.2	85.0	85.4
Germany	76.0	73.6	73.7	76.1	84.2	83.2	81.7	85.1
Greece	19.3	19.2	17.5	18.6	20.4	20.4	19.0	19.6
Ireland	30.3	27.4	26.3	28.6	33.4	32.5	30.9	30.8
Italy	147.4	139.4	135.5	144.0	150.3	144.6	145.9	149.3
Netherlands	201.1	194.4	179.0	173.1	207.3	216.0	212.7	202.3
Portugal	27.7	26.6	25.9	25.8	29.8	29.2	29.0	28.8
Russia	1.4	1.4	1.1	1.9	1.5	1.7	1.4	1.5
Spain	168.6	165.2	161.1	166.8	171.0	169.8	166.2	168.9
Turkey	1.1	1.1	1.1	1.3	1.4	1.2	1.2	1.1
UK	307.1	316.0	304.2	305.2	326.9	325.9	305.3	318.5
Other	5.6	5.1	5.5	5.6	4.8	5.5	5.3	5.1
PanEurope	89.3	93.9	88.8	96.6	66.3	69.4	72.3	90.1
Multinational	27.1	24.4	20.8	18.5	40.6	37.9	34.9	31.8
European Total	1,250.9	1,252.7	1,211.7	1,230.6	1,282.3	1,287.7	1,258.6	1,283.3
Australia Total	61.3	59.7	61.1	62.6	56.2	55.9	53.5	55.2
US Total	8,794.4	8,260.6	8,061.3	8,048.5	8,034.3	8,252.7	8,204.1	8,851.5

## 2018

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Austria	1.6	1.5		
Belgium	60.7	57.8		
Finland	1.4	1.3		
France	101.0	102.4		
Germany	55.6	54.9		
Greece	18.9	18.7		
Ireland	27.5	25.5		
Italy	137.3	138.2		
Netherlands	182.8	185.6		
Portugal	27.2	27.6		
Russia	1.8	1.6		
Spain	162.9	160.7		
Turkey	1.5	1.4		
UK	303.4	308.0		
Other	5.6	5.5		
PanEurope	98.7	106.7		
Multinational	15.1	13.8		
European Total	1,203.0	1,211.3		
Australia Total	58.7	58.8		
US Total	7,924.6	8,460.5		

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)

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Aaa/AAA	49.38%	50.33%			47.41%	48.22%	48.56%	48.45%
Aa/AA	29.81%	30.74%			29.49%	28.60%	29.23%	30.18%
A/A	12.66%	11.15%			13.38%	13.81%	13.27%	12.97%
Baa/BBB	3.41%	3.13%			4.20%	4.05%	3.66%	3.61%
Ba/BB	1.95%	2.19%			1.78%	1.72%	1.73%	1.70%
B/B	1.28%	1.20%			1.24%	1.56%	1.54%	1.55%
Caa/CCC	0.93%	0.69%			1.66%	1.28%	1.32%	0.96%
Ca/CC	0.33%	0.33%			0.52%	0.47%	0.42%	0.33%
C/C	0.25%	0.25%			0.33%	0.29%	0.26%	0.25%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>			<b>100.01%</b>	<b>100.00%</b>	<b>99.99%</b>	<b>100.00%</b>

## 2.6 Australia Outstandings by S&P Global Ratings

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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Aaa/AAA	87.32%	87.23%			86.80%	87.33%	87.47%	87.71%
Aa/AA	5.33%	5.44%			5.42%	5.15%	5.27%	5.07%
A/A	2.50%	2.54%			2.68%	2.58%	2.42%	2.46%
Baa/BBB	0.95%	1.00%			0.86%	0.86%	0.86%	0.90%
Ba/BB	0.47%	0.51%			0.34%	0.33%	0.36%	0.41%
B/B	0.21%	0.21%			0.13%	0.13%	0.16%	0.18%
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	0.02%	0.02%			0.03%	0.03%	0.02%	0.02%
D	0.00%	0.00%			0.00%	0.00%	0.00%	0.00%
NR	3.21%	3.05%			3.74%	3.61%	3.45%	3.25%
<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)

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	2017:Q1	2017:Q2	2017:Q3	2017:Q4
Aaa/AAA	31.95%	32.35%			28.35%	28.58%	29.25%	30.39%
Aa/AA	4.85%	4.78%			5.46%	5.36%	5.21%	5.04%
A/A	5.57%	5.68%			6.09%	6.07%	5.77%	5.57%
Baa/BBB	8.02%	8.07%			8.56%	8.39%	8.24%	8.20%
Ba/BB	5.63%	5.45%			6.63%	6.49%	6.45%	6.30%
B/B	5.26%	5.24%			5.83%	5.77%	5.74%	5.52%
Caa/CCC	20.39%	20.43%			20.45%	20.69%	20.67%	20.51%
Ca/CC	11.91%	11.79%			12.05%	12.03%	12.03%	11.94%
C/C	6.42%	6.20%			6.57%	6.61%	6.63%	6.54%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>			<b>100.00%</b>	<b>100.00%</b>	<b>99.99%</b>	<b>100.01%</b>

Sources: Macquarie, Moody's Investors Service, S&P Global Ratings

€ BILLIONS

## 2.8 Australian Outstandings by Vintage

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
2018	2.9	6.4		
2017	22.5	22.8		
2016	8.5	8.5		
2015	7.7	7.7		
2014	6.7	6.5		
2013	4.1	4.1		
2012	1.7	1.7		
2011	2.2	2.2		
2010	1.1	1.1		
2009	0.4	0.4		
2008	0.0	0.0		
2007	0.2	0.2		
2006	0.4	0.4		
2005	0.1	0.1		
2004	0.1	0.1		
2003	0.0	0.0		
Prior	0.1	0.1		
<b>Total</b>	<b>58.7</b>	<b>62.3</b>		

2017:Q1	2017:Q2	2017:Q3	2017:Q4
N/A	N/A	N/A	N/A
7.9	14.3	19.5	24.8
13.3	11.7	10.6	9.6
12.3	10.6	9.6	8.7
10.3	9.0	8.2	7.5
6.9	5.8	5.3	4.9
2.6	2.2	2.0	1.8
3.2	2.8	2.6	2.4
1.8	1.5	1.4	1.2
0.8	0.6	0.6	0.5
0.0	0.0	0.0	0.1
1.0	0.4	0.3	0.2
0.5	0.4	0.4	0.4
0.2	0.2	0.2	0.1
0.1	0.1	0.1	0.1
0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1
61.3	59.7	61.1	62.6

## 2.9 European Outstandings by Vintage

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
2018	56.2	114.9		
2017	226.1	220.1		
2016	186.2	177.7		
2015	110.3	103.8		
2014	94.7	90.7		
2013	58.0	55.8		
2012	33.5	31.2		
2011	31.3	30.4		
2010	90.1	84.3		
2009	44.9	44.3		
Prior	271.7	258.2		
<b>Total</b>	<b>1,203.0</b>	<b>1,211.3</b>		

2017:Q1	2017:Q2	2017:Q3	2017:Q4
N/A	N/A	N/A	N/A
39.3	108.5	165.5	232.3
230.6	224.1	203.6	196.5
175.7	164.9	150.1	140.9
134.0	124.6	111.3	104.2
77.6	70.9	68.3	64.4
69.5	62.2	39.5	34.5
43.8	37.7	36.3	33.8
95.4	94.6	92.5	90.9
50.3	49.2	47.4	45.6
334.6	316.1	297.2	287.5
1,246.3	1,246.9	1,204.9	1,224.9

Sources: Bloomberg, Macquarie, AFME, SIFMA

€ BILLIONS

## 2.10 European Outstandings by Country and Collateral: 1Q 2018

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.3			1.3			1.6
Belgium	0.4		0.1	41.9	18.3		60.7
Finland	0.9					0.5	1.4
France	22.8	0.07		78.1	0.0		101.0
Germany	39.1	0.2	1.4	7.8	7.1	0.0	55.6
Greece	8.5	1.8	0.2	1.2	7.2		18.9
Ireland	0.4		0.0	26.8	0.19		27.5
Italy	59.6	0.5	5.3	58.0	13.6	0.3	137.3
Netherlands	3.0	0.1	0.1	175.8	3.9		182.8
Portugal	3.5			19.1	4.6		27.2
Russia				1.8	-		1.8
Spain	22.8	0.3	0.1	122.7	17.1		162.9
Turkey	1.5						1.5
UK	46.4	7.4	40.2	141.2	5.8	62.4	303.4
Other	4.1	0.2	0.03	0.9	0.31		5.6
PanEurope	1.1	93.2	3.8	0.1	0.3	0.1	98.7
Multinational	0.2	14.5				0.4	15.1
<b>European Total</b>	<b>214.6</b>	<b>118.2</b>	<b>51.3</b>	<b>676.6</b>	<b>78.5</b>	<b>63.8</b>	<b>1203.0</b>

## 2Q 2018

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Austria	0.3			1.2			1.5
Belgium	0.4		0.1	39.6	17.7		57.8
Finland	0.8					0.5	1.3
France	22.8	0.07	0.2	79.4	0.0		102.4
Germany	38.6	0.2	1.3	7.7	7.0	0.0	54.9
Greece	8.5	1.8	0.2	1.1	7.2		18.7
Ireland	0.40		0.0	24.9	0.19		25.5
Italy	64.2	0.5	2.7	57.2	13.2	0.3	138.2
Netherlands	2.8	0.0	0.1	179.2	3.5		185.6
Portugal	4.0		0.53	18.6	4.5		27.6
Russia				1.6	-		1.6
Spain	24.7	0.3	0.3	118.7	16.8		160.7
Turkey	1.4						1.4
UK	46.1	7.3	39.6	147.0	6.0	62.0	308.0
Other	4.0	0.2	0.03	0.9	0.31		5.5
PanEurope	1.1	101.5	3.6	0.1	0.3	0.1	106.7
Multinational	0.2	13.2				0.4	13.8
<b>European Total</b>	<b>220.2</b>	<b>125.1</b>	<b>48.7</b>	<b>677.4</b>	<b>76.6</b>	<b>63.4</b>	<b>1211.3</b>

Sources: Bloomberg, AFME, SIFMA

## 3 Credit Quality – Rating Changes

### Upgrades/Downgrades by Country

#### 3.1 DBRS

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
France	1/0	3/0			4/0
Germany	15/0	1/0			16/0
Italy	12/0	19/9			31/9
Netherlands	4/0	6/0			10/0
Spain	4/0	49/0			53/0
UK	1/1	1/21			2/22
Multinational	12/0	7/0			19/0
European Total	49/1	86/30			135/31
US	480/23	442/16			922/39

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	0/0	2/0	11/0	7/0	20/0
	3/0	4/0	11/0	7/0	25/0
	4/3	30/4	18/1	14/0	66/8
	1/0	0/0	0/0	1/4	2/4
	0/1	23/4	1/0	5/0	29/5
	0/0	0/1	0/0	19/3	19/4
	2/11	6/3	4/0	7/0	19/14
	10/15	65/12	45/1	60/7	180/35
	518/286	593/37	338/7	352/24	1801/354

#### 3.2 Fitch Ratings

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
France	3/3	4/7			7/10
Germany	3/4	2/3			5/7
Italy	26/0	18/4			44/4
Netherlands	46/6	4/0			50/6
Spain	137/8	83/5			220/13
UK	39/3	21/15			60/18
Multinational	0/0	0/0			0/0
European Total	279/28	164/34			443/62
US	847/260	1184/732			2031/992

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	0/1	5/2	3/0	8/4	16/7
	7/8	3/16	2/0	7/9	19/33
	12/6	15/125	12/1	3/0	42/132
	2/24	10/9	2/13	16/1	30/47
	30/14	37/8	23/7	15/5	105/34
	154/17	71/10	29/2	60/25	314/54
	0/0	7/0	1/0	0/0	8/0
	208/119	158/172	81/23	125/45	572/359
	852/438	369/171	314/991	1589/642	3124/2242

#### 3.3 Moody's Investors Service

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
France	0/0	0/0			0/0
Germany	0/0	4/1			4/1
Italy	4/0	0/0			4/0
Netherlands	2/3	0/0			2/3
Spain	0/0	151/0			151/0
UK	24/1	7/3			31/4
Multinational	13/1	10/0			23/1
European Total	72/8	172/4			244/12
US	568/86	518/68			1086/154

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	1/0	0/0	4/0	4/0	9/0
	4/1	1/1	7/0	7/0	19/2
	1/0	14/0	9/0	9/0	33/0
	3/0	6/0	1/1	1/1	11/2
	33/0	6/1	30/3	30/3	99/7
	1/2	11/1	126/14	126/14	264/31
	29/3	32/2	60/1	60/1	181/7
	78/8	73/0	291/0	461/0	903/8
	612/82	694/0	694/0	694/0	2694/82

#### 3.4 S&P Global Ratings

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
France	0/0	1/0			1/0
Germany	0/0	5/0			5/0
Italy	9/0	0/0			9/0
Netherlands	3/5	1/0			4/5
Spain	22/3	134/0			156/3
UK	39/4	33/8			72/12
Multinational	7/2	8/11			15/13
European Total	80/14	182/19			262/33
US	856/241	793/1141			1649/1382

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	2/0	0/0	0/0	0/0	2/0
	5/4	2/4	7/0	2/1	16/9
	5/4	1/1	8/0	91/3	105/8
	13/3	3/0	9/4	3/0	28/7
	41/5	23/3	10/2	5/2	79/12
	44/8	33/12	50/12	206/1	333/33
	63/16	72/15	37/22	9/8	181/61
	173/40	134/35	121/40	316/15	744/130
	385/308	437/206	268/468	336/235	1426/1217

Sources: DBRS, Fitch Ratings, Moody's Investors Service, S&P Global Ratings



Upgrades/Downgrades by Collateral

3.5 DBRS - Europe

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	8/0	4/26			12/26
CDO	5/0	5/4			10/4
CMBS	16/1	1/0			17/1
Credit Card	1/0	15/0			16/0
RMBS (prime)	15/0	23/0			38/0
RMBS (non-prime)	1/0	2/0			3/0
Other ABS	2/0	36/0			38/0
<b>Total</b>	<b>48/1</b>	<b>86/30</b>			<b>134/31</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	5/0	9/0	12/0	12/0	38/0
CDO	0/10	13/3	10/0	10/0	33/13
CMBS	0/2	0/4	0/0	0/4	0/10
Credit Card	1/1	18/1	2/0	10/0	31/2
RMBS (prime)	3/1	20/4	18/1	24/3	65/9
RMBS (non-prime)	0/1	1/0	3/0	3/0	7/1
Other ABS	1/0	4/0	0/0	1/0	6/0
<b>Total</b>	<b>10/15</b>	<b>65/12</b>	<b>45/1</b>	<b>60/7</b>	<b>180/35</b>

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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	2/0	12/1			14/1
Credit Card	0/0	3/0			3/0
Other ABS	33/0	7/0			40/0
CDO	14/1	16/2			30/3
CMBS	0/6	7/3			7/9
RMBS (prime)	178/17	106/8			284/25
RMBS (non-conforming)	42/4	11/0			53/4
Other RMBS	10/0	2/0			12/0
<b>Total</b>	<b>279/28</b>	<b>164/34</b>			<b>443/62</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	1/0	5/7	10/0	9/0	25/7
Credit Card	0/0	3/0	0/0	10/0	13/0
Other ABS	7/48	10/19	9/0	9/3	35/70
CDO	21/10	40/27	21/0	48/1	130/38
CMBS	6/12	8/25	8/2	0/14	22/53
RMBS (prime)	36/40	33/88	30/21	41/8	140/157
RMBS (non-conforming)	125/0	57/6	3/0	6/19	191/25
Other RMBS	12/9	2/0	0/0	2/0	16/9
<b>Total</b>	<b>208/119</b>	<b>158/172</b>	<b>81/23</b>	<b>125/45</b>	<b>572/359</b>

3.7 Moody's Investors Service - Europe

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	0/1	7/0			7/1
CDO	10/0	5/0			15/0
CMBS	0/1	1/2			1/3
Credit Card	0/0	0/0			0/0
RMBS (prime)	43/4	143/0			186/4
RMBS (non-conforming)	19/2	16/2			35/4
<b>Total</b>	<b>72/8</b>	<b>172/4</b>			<b>244/12</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	11/0	0/1	0/5	9/8	20/14
CDO	29/2	32/1	60/1	130/1	251/5
CMBS	0/4	2/4	0/15	5/15	7/38
Credit Card	0/0	0/0	2/0	2/0	4/0
RMBS (prime)	33/2	29/6	100/7	133/50	295/65
RMBS (non-conforming)	5/0	10/1	129/4	182/6	326/11
<b>Total</b>	<b>78/8</b>	<b>73/13</b>	<b>291/32</b>	<b>461/80</b>	<b>903/133</b>

3.8 S&P Global Ratings - Europe

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	2/0	12/0			14/0
CDO	7/3	8/7			15/10
CMBS	0/3	9/12			9/15
Credit Card	0/0	0/0			0/0
RMBS (prime)	33/3	128/0			161/3
RMBS (subprime / non-conforming)	38/5	25/0			63/5
<b>Total</b>	<b>80/14</b>	<b>182/19</b>			<b>262/33</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	6/0	2/0	3/0	1/0	12/0
CDO	69/9	78/14	51/16	20/8	218/47
CMBS	2/18	0/16	7/22	5/2	14/58
Credit Card	0/0	0/0	0/0	0/0	0/0
RMBS (prime)	61/10	24/4	27/2	92/5	204/21
RMBS (subprime / non-conforming)	35/3	30/1	33/0	198/0	296/4
<b>Total</b>	<b>173/40</b>	<b>134/35</b>	<b>121/40</b>	<b>316/15</b>	<b>744/130</b>

Sources: DBRS, Fitch Ratings, Moody's Investors Service, S&P Global Ratings

<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

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	112/1	30/0			142/1
CDO	12/0	15/0			27/0
CMBS	18/3	15/13			33/16
Credit Card	26/0	1/0			27/0
RMBS	302/19	299/3			601/22
Other ABS	10/0	82/0			92/0
<b>Total</b>	<b>480/23</b>	<b>442/16</b>			<b>922/39</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	17/0	54/0	70/0	20/0	161/0
CDO	17/0	2/28	5/0	9/15	33/43
CMBS	56/271	36/7	23/3	45/3	160/284
Credit Card	2/0	8/0	0/0	0/0	10/0
RMBS	418/13	463/2	204/0	265/6	1350/21
Other ABS	8/2	30/0	36/4	13/0	87/6
<b>Total</b>	<b>518/286</b>	<b>593/37</b>	<b>338/7</b>	<b>352/24</b>	<b>1801/354</b>

3.10 Fitch Ratings - US

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	24/0	33/0			57/0
Credit Card	0/0	0/0			0/0
Other ABS	14/34	6/0			20/34
CDO	24/10	57/29			81/39
CMBS	44/55	102/46			146/101
RMBS (prime)	91/0	98/380			189/380
RMBS (subprime)	15/9	544/140			559/149
Other RMBS	635/152	344/137			979/289
<b>Total</b>	<b>847/260</b>	<b>1184/732</b>			<b>2031/992</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	33/0	22/0	16/0	34/0	105/0
Credit Card	0/0	0/0	11/0	0/0	11/0
Other ABS	37/68	27/6	61/14	45/31	170/119
CDO	26/9	92/8	21/5	10/2	149/24
CMBS	58/87	78/35	38/51	30/36	204/209
RMBS (prime)	3/71	41/45	162/602	15/53	221/771
RMBS (subprime)	28/21	0/27	0/214	1101/400	1129/662
Other RMBS	667/182	109/50	5/105	354/120	1135/457
<b>Total</b>	<b>852/438</b>	<b>369/171</b>	<b>314/991</b>	<b>1589/642</b>	<b>3124/2242</b>

3.11 Moody's Investors Service - US

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	41/0	22/0			63/0
CDO	18/6	14/8			32/14
CMBS	42/17	28/12			70/29
Credit Card	0/0	0/0			0/0
RMBS	467/63	454/48			921/111
<b>Total</b>	<b>568/86</b>	<b>518/68</b>			<b>1086/154</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	48/0	36/0	80/0	154/0	318/0
CDO	74/7	69/0	115/5	168/10	426/22
CMBS	59/34	50/0	119/81	165/117	393/232
Credit Card	0/0	0/0	0/0	0/0	0/0
RMBS	431/41	539/0	276/50	975/112	2221/203
<b>Total</b>	<b>612/82</b>	<b>694/0</b>	<b>590/136</b>	<b>1462/239</b>	<b>3358/457</b>

3.12 S&P Global Ratings - US

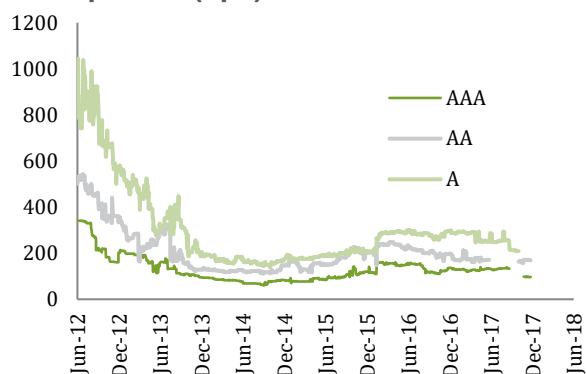
	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Auto	67/0	115/0			182/0
CDO	16/6	24/5			40/11
CMBS	24/33	50/36			74/69
Credit Card	0/0	17/0			17/0
RMBS (prime)	284/120	143/117			427/237
RMBS (subprime / nonconforming)	465/82	444/983			909/1065
<b>Total</b>	<b>856/241</b>	<b>793/1141</b>			<b>1649/1382</b>

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
Auto	38/0	101/0	106/0	74/0	319/0
CDO	105/16	76/7	37/4	34/10	252/37
CMBS	59/51	139/33	69/32	61/37	328/153
Credit Card	0/0	0/0	0/0	12/0	12/0
RMBS (prime)	116/162	38/113	32/316	43/100	229/691
RMBS (subprime / nonconforming)	67/79	83/53	24/116	112/88	286/336
<b>Total</b>	<b>385/308</b>	<b>437/206</b>	<b>268/468</b>	<b>336/235</b>	<b>1426/1217</b>

Sources: DBRS, Fitch Ratings, Moody's Investors Service, S&P Global Ratings

## 4 CMBS Spreads

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



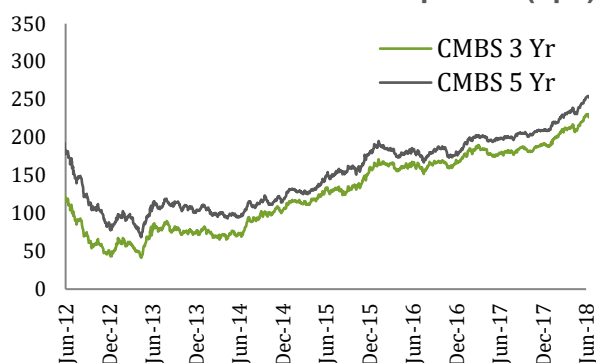
Sources: IHS Markit

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



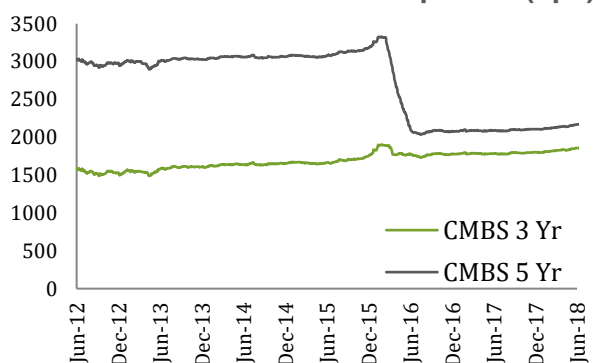
Sources: IHS Markit

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



Sources: Trepp LLC

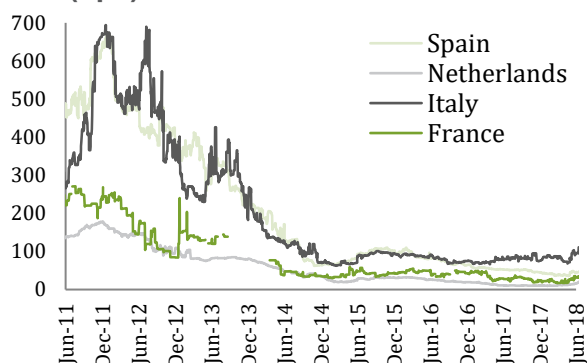
### 4.4 US 3 & 5 Yr BBB CMBS Spreads (bps)



Sources: Trepp LLC

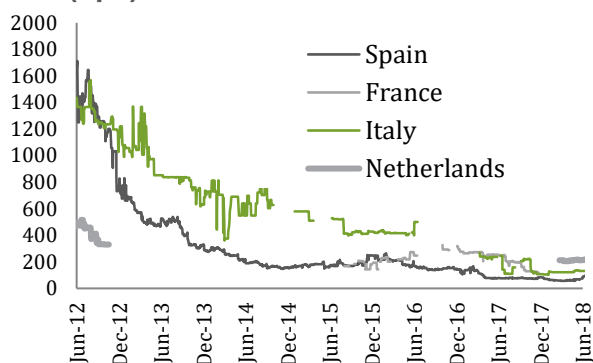
## 5 RMBS Spreads

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



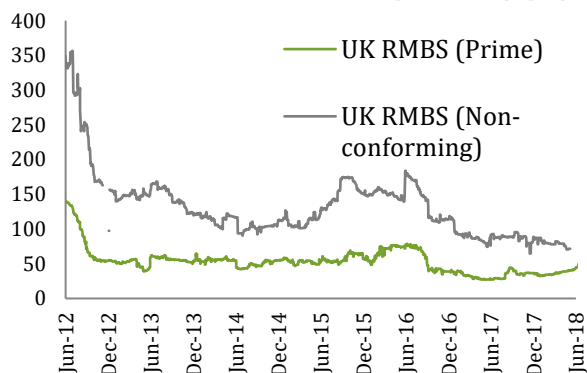
Sources: IHS Markit

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



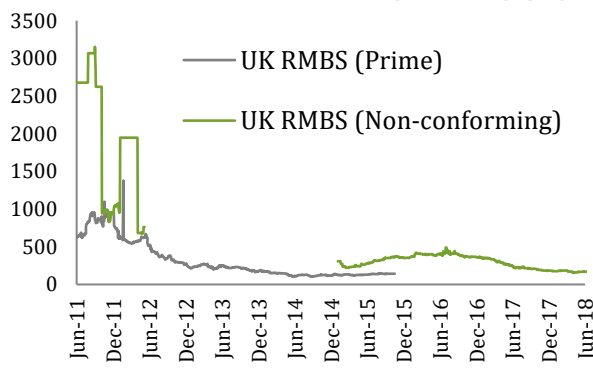
Sources: IHS Markit

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



Sources: IHS Markit

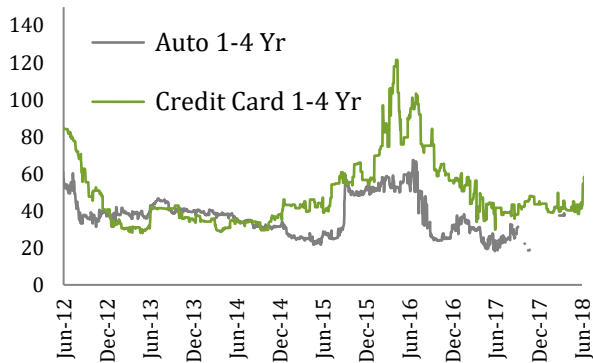
5.4 UK 3-5 Yr BBB RMBS Spreads (bps)



Sources: IHS Markit

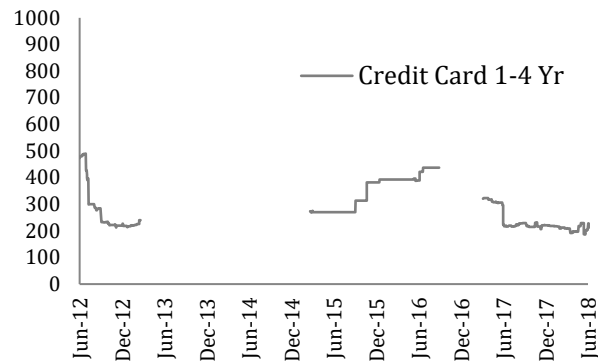
## 6 ABS Spreads

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



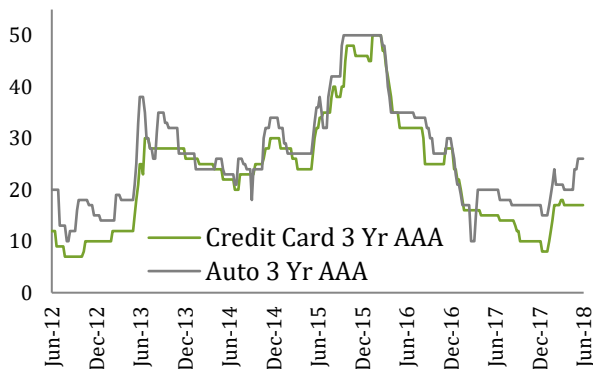
Sources: IHS Markit

6.2 European 1-4 Yr BBB Spreads (bps)



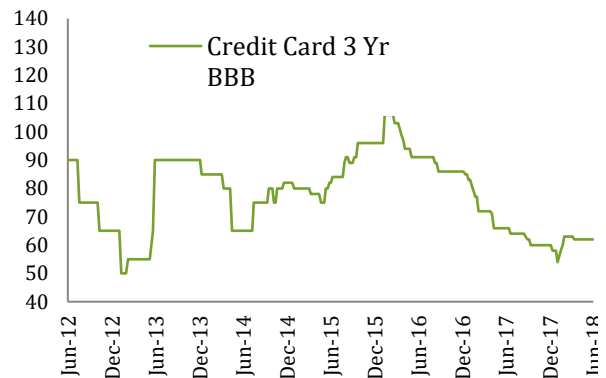
Sources: IHS Markit

6.3 US 3 Yr AAA ABS Spreads (bps)



Sources: JP Morgan

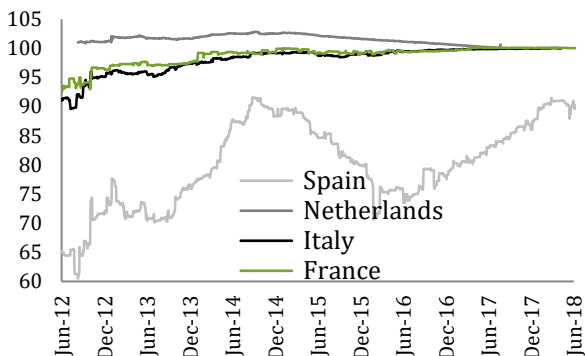
6.4 US 3 Yr BBB ABS Spreads (bps)



Sources: JP Morgan

# 7 RMBS Prices

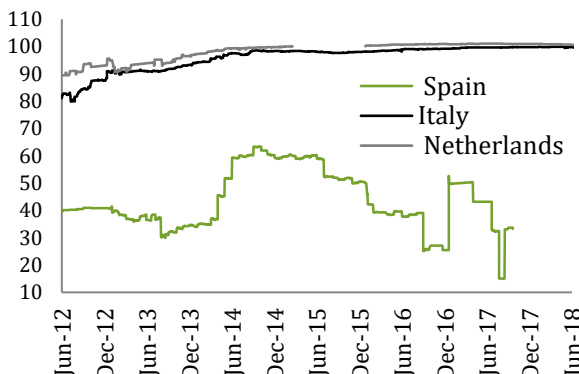
## 7.1 European 3-5 Yr AAA RMBS Prices



Sources: IHS 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.

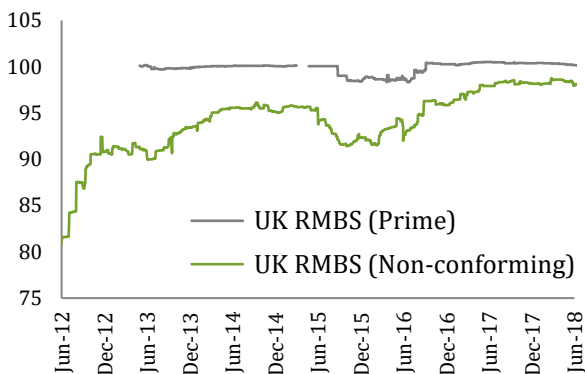
## 7.2 European 3 - 5 Yr BBB RMBS Prices



Sources: IHS 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.

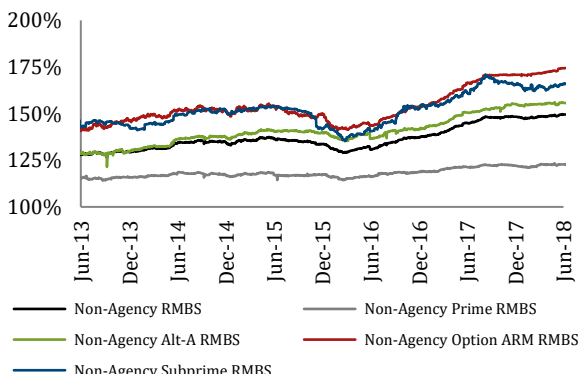
## 7.3 UK 3-5 Yr AAA RMBS Prices



Sources: IHS 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.

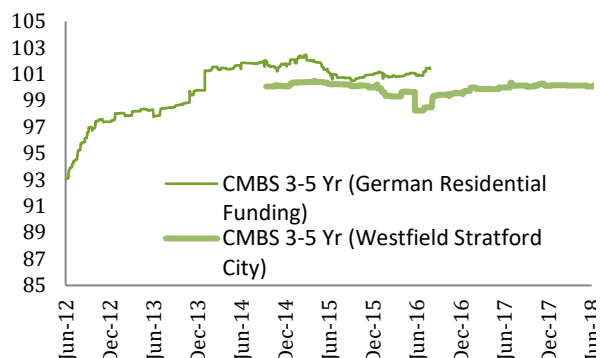
## 7.4 Markit RMBS iBoxx



Sources: IHS Markit

## 8 CMBS and ABS Prices

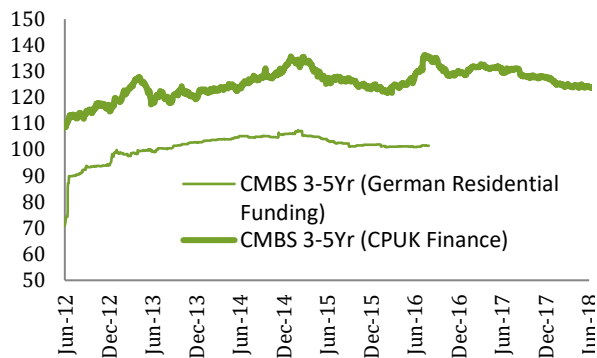
### 8.1 Pan-European 3-5 Yr AAA CMBS Prices



Sources: IHS Markit

1. Pan-European AAA CMBS provided: German Residential Funding, Class A, Series 2013-1. ISIN# XS0944452563 (paid off in 2H 16, kept in the chart for reference), EUR-denominated. and Westfield Stratford City Finance PLC, WSCF14 1 Note, GBP-denominated, ISIN# XS1093970751.

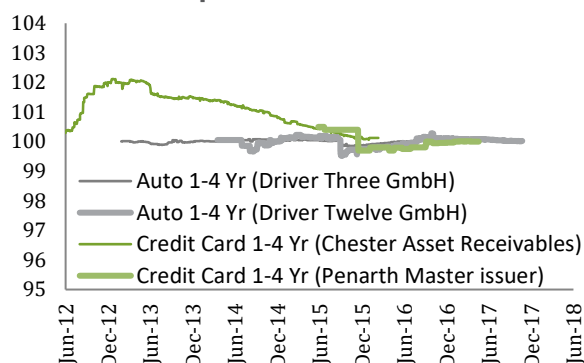
### 8.2 Pan-European 3-5 Yr BBB CMBS Prices



Sources: IHS Markit

1. Pan-European BBB CMBS provided: German Residential Funding, Class D, Series 2013-1. ISIN# XS0944454858 (paid off in 2H 16, kept in the chart for reference). EUR-denominated, and CPIUK Finance Limited, Class A2, GBP-denominated, ISIN# XS0749350798.

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

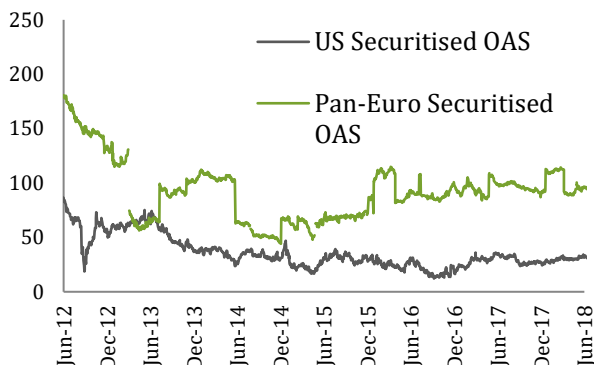


Sources: IHS Markit

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.

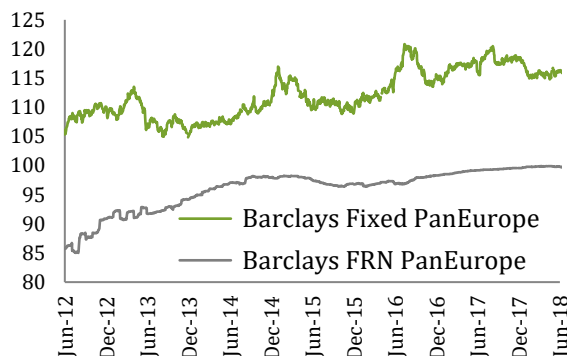
## 9 Indices Data

### 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 (tranche margin for WAL >1.9 & 2.1 yrs) (bps)



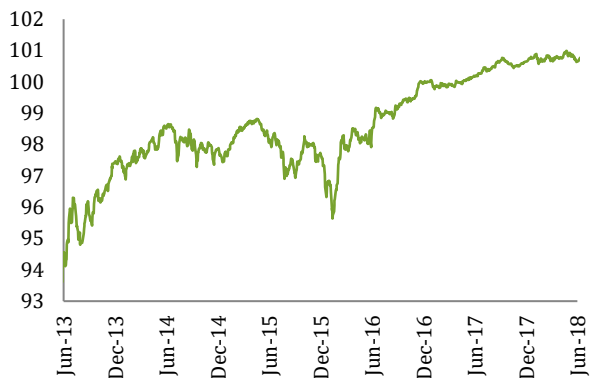
Sources: Macquarie

### 9.4 Australia AA (tranche margin for WAL >4.75 & 5.3 yrs) (bps)



Sources: Macquarie

### 9.5 CMBX 6 AAA Prices

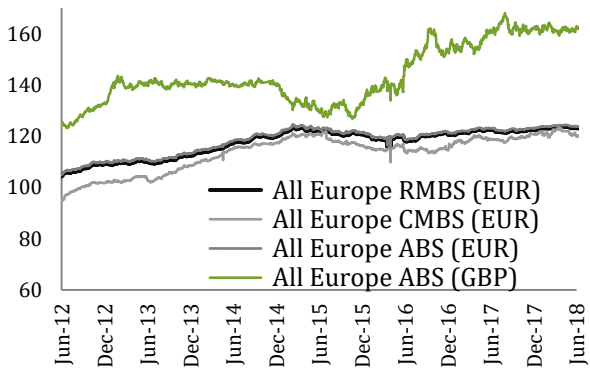


Sources: IHS Markit



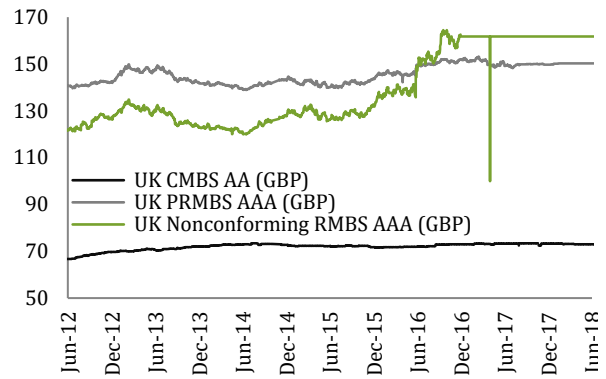
# 10 Total Return Benchmark Data

## 10.1 European Total Return



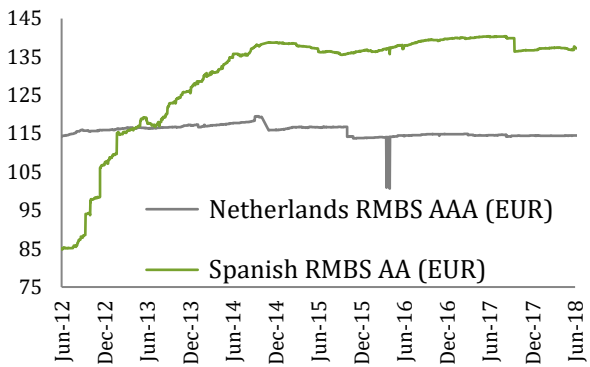
Sources: IHS Markit

## 10.2 UK Total Return



Sources: IHS Markit. Benchmark price not available for 2017 onwards for UK nonconforming RMBS AAA

## 10.3 Europe ex UK RMBS AAA



Sources: IHS Markit

# 11 Asset-Backed Commercial Paper

€ BILLIONS

## 11.1 European ABCP Historical Issuance

	Q1	Q2	Q3	Q4	TOTAL
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	67.2	75.0	293.1
2018	68.2	109.4			177.6

## 11.2 European ABCP Issuance by Nationality of Issuer

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
France	56.2	70.6			126.7
Germany	4.7	4.5			9.2
Ireland	3.3	30.4			33.8
Luxembourg	4.0	3.9			7.9
UK					0.0
Total	68.2	109.4			177.6

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	49.6	52.5	52.8	61.0	215.9
	5.0	5.1	4.9	5.7	20.6
	19.7	4.1	3.6	3.3	30.8
	4.2	4.8	4.3	4.6	17.9
	3.8	2.0	1.7	0.5	8.0
Total	82.3	68.4	67.2	75.0	293.1

## 11.3 European ABCP Issuance by Programme Type

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
Hybrid	0.8	0.8			1.5
Multi-Seller Conduits	66.5	108.1			174.6
Unspecified	1.0	0.5			1.4
Total	68.2	109.4			177.6

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	0.8	0.9	1.0	1.1	3.7
	72.3	66.5	65.6	73.1	277.5
	9.3	1.0	0.7	0.8	11.8
Total	81.6	67.6	66.3	73.9	289.3

## 11.4 ABCP Outstandings by Nationality of Issuer<sup>2</sup>

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
France	9.6	9.1		
Germany	1.6	1.3		
Ireland	3.4	6.1		
Luxembourg	1.7	1.4		
UK				
European Total	16.4	17.9		
US Total	215.2			

	2017:Q1	2017:Q2	2017:Q3	2017:Q4
	8.3	8.3	9.0	10.0
	1.5	1.5	1.4	1.7
	5.0	3.2	2.7	3.2
	1.3	1.6	1.4	1.8
	1.5	1.22	1.3	0.2
	17.6	15.9	15.7	16.7
Total	225.5	214.0	207.6	200.5

Sources: Dealogic, Moody's Investors Service

<sup>2</sup> Data not yet available for the US for Q3'17.

### 11.5 European ABCP Outstandings by Programme Type

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Hybrid	0.8	0.7		
Multi-Seller	14.9	16.7		
Unspecified	0.7	0.5		
<b>Total</b>	<b>16.4</b>	<b>17.9</b>		

2017:Q1	2017:Q2	2017:Q3	2017:Q4
0.8	0.6	0.6	0.9
15.7	14.8	14.7	15.4
1.1	0.5	0.4	0.4
<b>17.6</b>	<b>15.9</b>	<b>15.7</b>	<b>16.7</b>

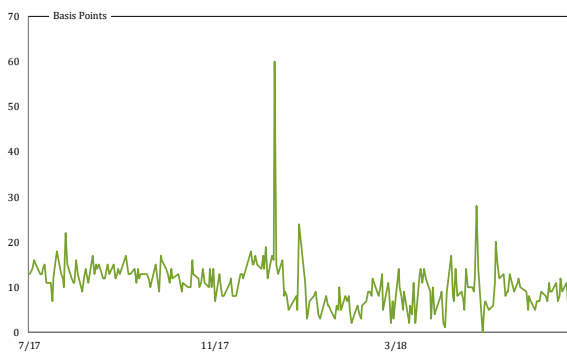
### 11.6 US ABCP Outstandings by Programme Type<sup>3</sup>

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Loan-Backed				
SIVs				
Single-Seller	7.8			
Multi-Seller	165.9			
Other	41.5			
<b>Total</b>	<b>215.2</b>			

2017:Q1	2017:Q2	2017:Q3	2017:Q4
8.4	7.9	7.6	7.5
175.8	167.1	161.8	155.7
41.3	39.0	38.2	37.3
<b>225.5</b>	<b>214.0</b>	<b>207.6</b>	<b>200.5</b>

Sources: Dealogic, Moody's Investors Service

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



Sources: US Federal Reserve

<sup>3</sup> Data not yet available for the US for Q3'17.

## 12 Global Comparative Data

€ BILLIONS

### 12.1 Global High Grade Corporate Bond Issuance

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
<b>US</b>	190.5	170.0			360.4
<b>Europe</b>	212.2	224.3			436.6
<b>Asia</b>	199.4	171.6			371.0
<b>Total</b>	602.2	565.9			1168.0

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	264.8	247.1	190.3	162.4	864.6
	203.8	158.3	118.1	123.2	603.3
	231.4	245.8	286.1	228.7	992.0
	700.1	651.2	594.5	514.3	2460.0

### 12.2 Global Government Bond Issuance

	2018:Q1	2018:Q2	2018:Q3	2018:Q4	TOTAL
<b>US</b>	43.4	41.5			84.9
<b>Europe</b>	185.1	105.4			290.4
<b>Asia</b>	52.9	46.3			99.1
<b>Total</b>	281.3	193.2			474.5

	2017:Q1	2017:Q2	2017:Q3	2017:Q4	TOTAL
	72.9	65.7	65.5	57.3	261.4
	205.6	151.0	108.6	72.0	537.2
	67.5	43.8	48.4	52.7	212.5
	346.1	260.5	222.5	182.0	1011.1

## 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
Q3 2017	0.8464	0.6631
Q4 2017	0.8330	0.6506
Q1 2018	0.8114	0.6235
Q2 2018	0.8558	0.6337

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 S&P Global Ratings. 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 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 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 S&P Global Ratings. 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 S&P Global Ratings. 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 S&P Global Ratings, 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 AA 3-5 years and BBB 5-8 years respectively due to lack of bonds.

As of November 2012, UK non-conforming AAA has been replaced with non-conforming AA due to downgrades, while BBB UK Prime 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 tranche margins, quoted in bps, 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.

### 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

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

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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