

# S&P Global Ratings

## Credit Ratings, Research & Insights

### Providing Invaluable Research and Opinions for Investors and Markets

S&P Global Ratings is a leading provider of credit ratings. The firm's research and analysis are essential to driving growth, providing transparency, and helping educate market participants so they can make decisions with confidence. Its ratings offer opinions and research about relative credit risk and help support the growth of transparent, liquid capital markets worldwide.

S&P Global Ratings regularly updates and refines its processes to align with new developments in the marketplace. To incorporate the changing needs of investors, issuers, and markets, S&P Global Ratings has invested in systems, analytics, and training and regularly assesses its ratings methodologies.

[spglobal.com/ratings](http://spglobal.com/ratings)

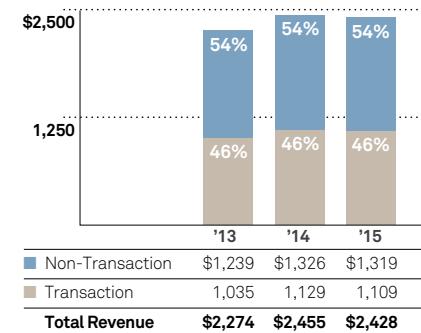
#### How S&P Global Ratings Generates Revenue

Surveillance of a credit rating, annual fees for customer relationship-based pricing programs, and fees for entity credit ratings and ancillary services (e.g., Rating Evaluation Services) (non-transaction revenue)

Ratings for new issuance of corporate, government, and structured finance debt instruments; bank loan ratings; and corporate credit estimates (transaction revenue)

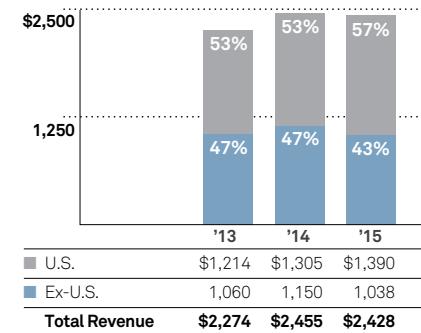
#### Revenue by Type

(dollars in millions)



#### Global Revenue

(dollars in millions)



S&P Global Ratings rates more than \$46 trillion\* of global debt and has approximately 1.1 million ratings outstanding

\*Data as of 12/31/2015. S&P Global Ratings (NRSRO)

The S&P Global Ratings division includes S&P Global Ratings, which is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization ("NRSRO"); CRISIL, a global analytical company incorporated in India; and certain other ratings-related businesses

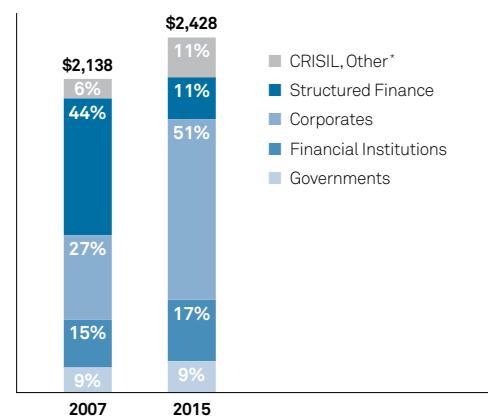
**Note:** Division revenues do not include interdivision revenue elimination

Spanning 27 countries, S&P Global Ratings is a leading provider of credit ratings, research, and insights essential to driving growth and transparency. S&P Global Ratings' analysts offer a combination of global perspective and local insight.

### Corporate Ratings are Now a Larger Portion of the Business

#### Change in Revenue Mix: 2007 vs. 2015

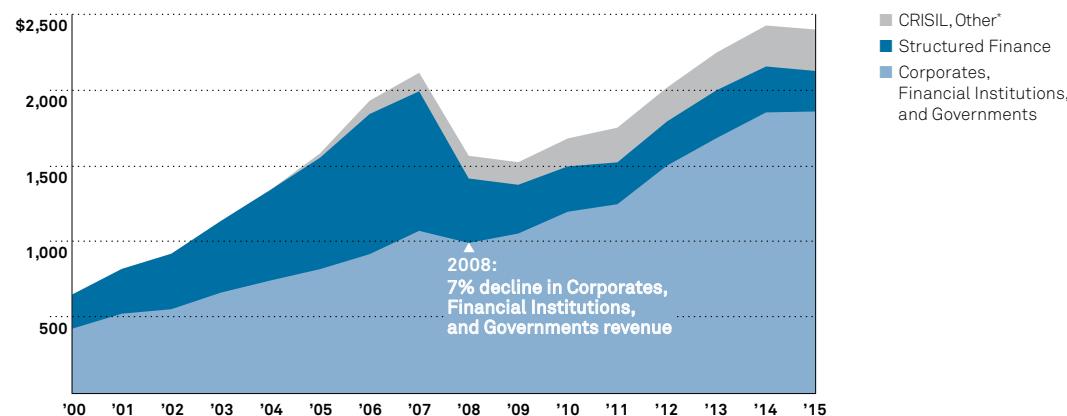
(dollars in millions)



### Financial Crisis had Modest Impact on Corporate, Financial Institution & Government Revenue

#### Revenue: 2000–2015

(dollars in millions)



\*Other includes interdivision royalty, Taiwan Ratings Corporation and adjustments

Details may not sum to total due to rounding

Corporate ratings are now a larger portion of S&P Global Ratings' business

## S&P Global Ratings' Footprint

S&P Global Ratings plays a leading role in contextualizing the **financial impact of aging populations on sovereign creditworthiness**. The latest edition of its biennial “Global Aging” report was published in 2016 and encompasses the demographic challenges facing 58 rated sovereign nations.

S&P Global Ratings also partnered with the Principles for Responsible Investment to produce the **“Statement on ESG in Credit Ratings,”** a set of principles that support a union to enhance systematic and transparent consideration of ESG factors.

The Company’s analysts have provided invaluable market insights on the impact of the British referendum to leave the European Union (“Brexit”), the declining credit quality and increasing defaults in Greater China, and the evolving nature of the climate finance and green bond markets.

In 2016, S&P Global Ratings acquired 49% of **TRIS Ratings**, a leading provider of credit ratings based in Bangkok, Thailand, and opened a new office in Santiago, Chile



## Broad and Deep Analytical Coverage

S&P Global Ratings’ credit ratings are tools that evaluate credit risk by expressing opinions about the relative likelihood that debt issued by companies and governments will be repaid on time and in full. Its ratings reflect in-depth analysis of the issuers and their debt obligations.

Corporate Ratings	Financial Institution Ratings	Insurance Company Ratings	Government Security Ratings	Structured Finance Ratings
<b>51,105</b>	<b>60,005</b>	<b>6,896</b>	<b>964,704</b>	<b>64,222</b>
Industrials	Banks	Health	International Public Finance	Asset-Backed Commercial Paper
Utilities	Brokers/Dealers	Life	U.S. Public Finance	Asset-Backed Securities
Project Finance	Finance Companies	Property/Casualty	U.S. Public Finance	Collateralized Debt Obligations
	Other Financial Institutions	Reinsurance/Specialty	Sovereigns	Commercial Mortgage-Backed Securities
		Bond		Residential Mortgage-Backed Securities
				Servicer Evaluations

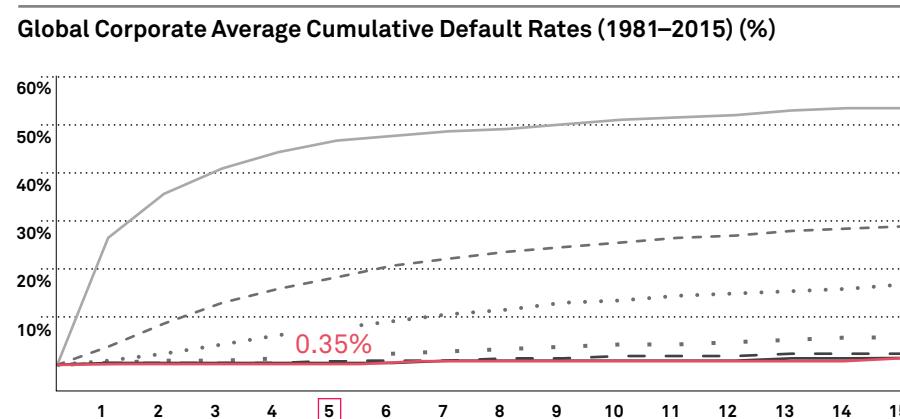
The table above reflects information regarding S&P Global Ratings, which is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (“NRSRO”) and does not include CRISIL and certain other ratings-related businesses.

Globally, S&P Global Ratings rated more than \$3.6 trillion in new debt in 2015

# S&P Global Ratings' Track Record: Standing the Test of Time

## What Are Credit Ratings?

Credit ratings express an opinion about the ability and willingness of an issuer to meet its financial obligations in full and on time. They also speak to the credit quality of an individual debt issue and the relative likelihood that the debt issue may default.



Source: S&P Global Ratings, "Default, Transition, and Recovery: 2015 Annual Global Corporate Default Study and Ratings Transitions," May 2, 2016

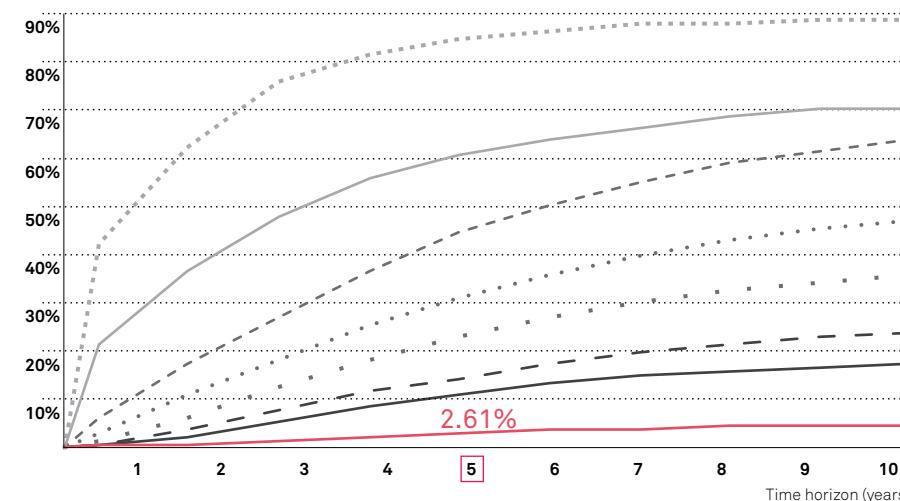
## How S&P Global Ratings' Ratings Perform

The charts to the right show the default rates experienced for each rating category.

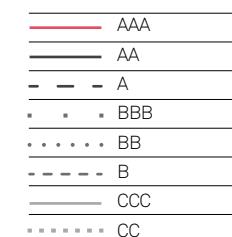
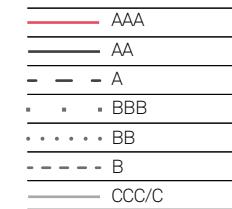
**For example:** The 5-year cumulative default rate for corporate bonds rated AAA has been **0.35%**, or fewer than four defaults for every 1,000 ratings.

The 5-year cumulative default rate for AAA-rated structured finance issues has been **2.61%**.

## Global Structured Finance Average Cumulative Default Rates, Conditional on Survival, 1976–2015 (%)



Source: S&P Global Ratings, "Default, Transition, and Recovery: 2015 Annual Global Structured Finance Default Study and Ratings Transitions," June 27, 2016



(a) Average cumulative default rates are derived by calculating "conditional on survival" marginal default rates from experiences of each static pool and time horizon

(b) AAA ratings from the same transaction are treated as a single rating in the calculation of this table

S&P Global Ratings' data shows that lower-rated issuers and securities have generally exhibited higher default rates

# CRISIL Limited

An S&P Global Company

## CRISIL: India's leading provider of ratings, data and research, analytics, and solutions

CRISIL is a global analytical company that provides ratings, data and research, analytics, and solutions. CRISIL is listed on Indian stock exchanges.

CRISIL helps markets and market participants to become more transparent and efficient by enabling them to mitigate and manage risk, make pricing decisions, reduce time to market, and enhance returns

CRISIL helps lenders and borrowers, issuers and investors, regulators, governments, and market intermediaries make better-informed investment and business decisions

[spglobal.com/CRISIL](http://spglobal.com/CRISIL)

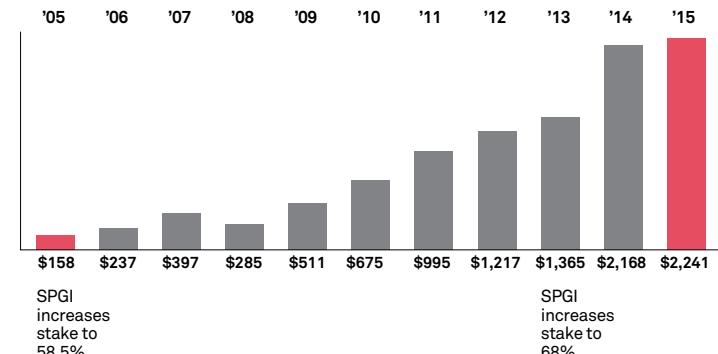
### CRISIL: Revenue by Segment

(dollars in millions)



### CRISIL Market Capitalization

(dollars in millions)

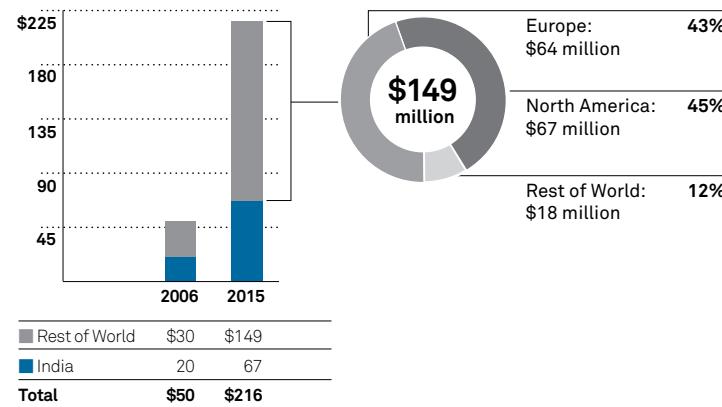


Note: S&P Global acquired an initial 9.6% interest in CRISIL Limited in 1997  
Constant INR/USD exchange rate is INR 0.016 = 1 USD

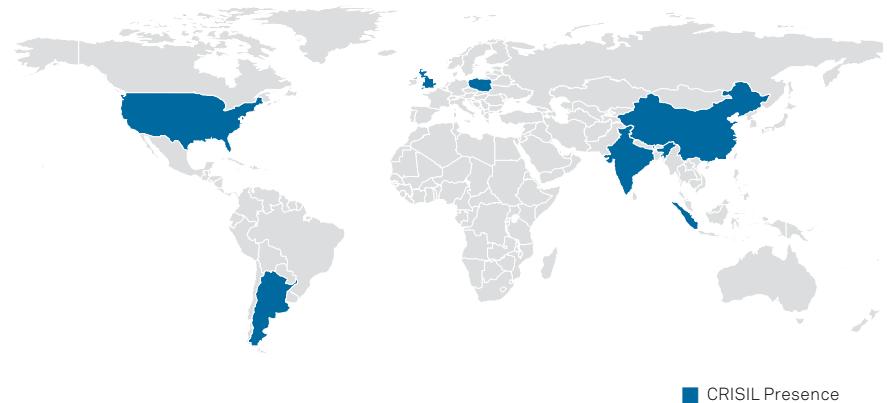
## CRISIL's Global Presence and Diversifying Geographic Revenue Mix

### Almost 70% of CRISIL's Revenue is from Outside India

(dollars in millions)



Source: CRISIL Limited, Annual Report 2015  
USD/INR conversion rate is 1USD = INR64.08



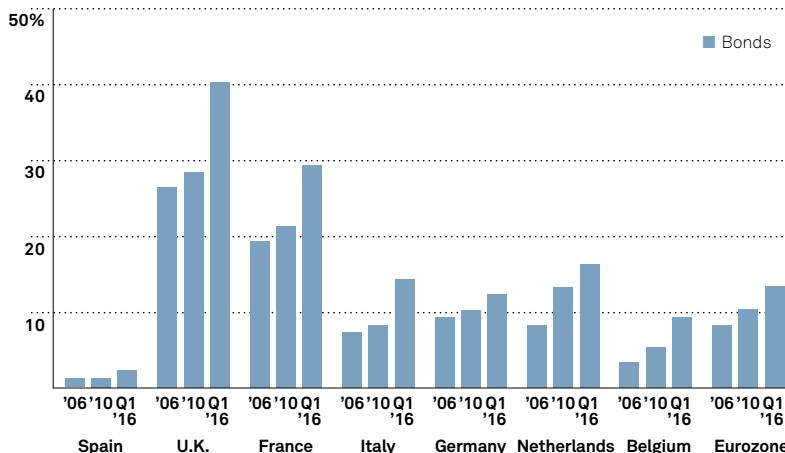
# Drivers of Long-Term Growth in Debt Issuance

## Banking Disintermediation Continues in Europe

As banking disintermediation progresses in Europe, overall bank lending volume is continuously losing ground.

### Bonds Increasing as a Percent of Corporate Funding

(bonds as a percent of total corporate funding; selected countries)



Note: Amounts outstanding at end of period. Source for outstanding credit data: European Central Bank, U.S. Federal Reserve, Bank of England. Data as of July 2016

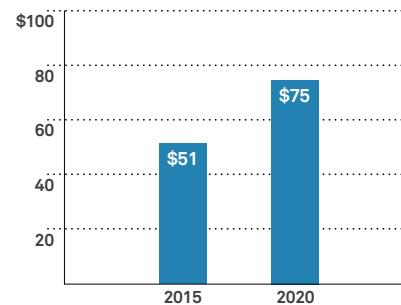
Source: S&P Global Ratings

## Global Corporate Debt Demand: 2016–2020

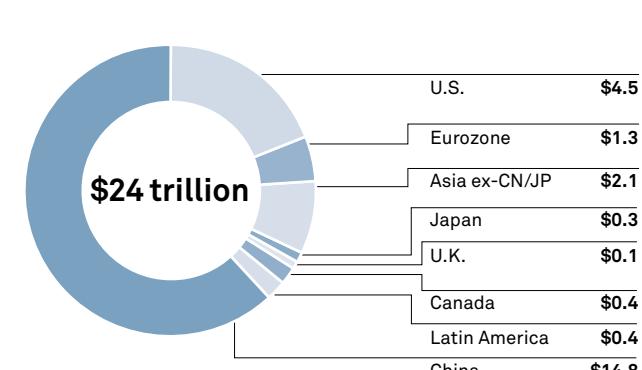
S&P Global Ratings' study of non-financial corporates (rated and unrated) projects global corporate credit demand (flow) of \$62 trillion over 2016–2020, with new debt representing \$24 trillion and the remaining \$38 trillion as refinancing. Outstanding debt is projected to expand by half to \$75 trillion by the end of 2020.

### 46% Increase in New Credit Projected Over Five Years Ending 2020<sup>(1,2)</sup>

(dollars in trillions)



### \$23.9 Trillion in New Corporate Debt Demand (2016–2020)<sup>(1,2)</sup>



(1) Based on S&P Global Ratings' projections of local currency GDP growth using constant 2015 US\$ exchange rate

(2) Assumes debt grows over 2016–2020 at specific multiples of nominal local currency GDP rate. Total is debt-weighted

Source for 2015 outstanding credit data: Bank for International Settlements, Banco Central do Brasil, Statistics Canada, European Central Bank, Banco de Mexico, U.S. Federal Reserve, and U.K. Office for National Statistics. Source for other data: S&P Global Ratings

Source: S&P Global Ratings, "2016 Global Corporate Debt Demand," July 2016

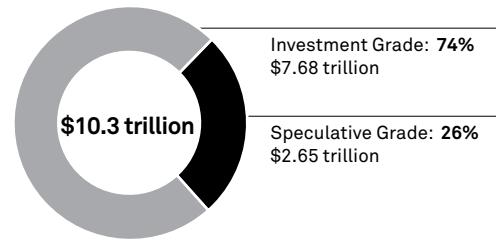
More than half of debt outstanding at the end of 2015 will be refinanced over the next five years

# Global Corporate Debt Maturities through 2021

Annual Estimate Published by S&P Global Fixed Income Research

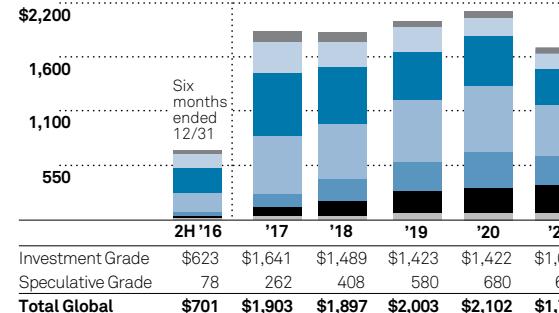
S&P Global Ratings estimates that nearly \$10.3 trillion in rated global corporate debt is scheduled to mature between the second half of 2016 and the end of 2021 (see charts below).

**Global Corporate Debt Maturities by Grade (2H 2016–2021)**

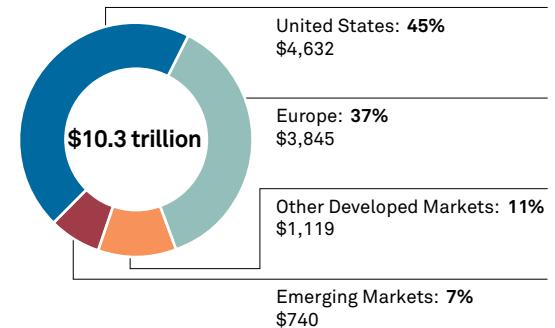


**Global Debt Maturities by Rating Category (2H 2016–2021)**

(dollars in billions)

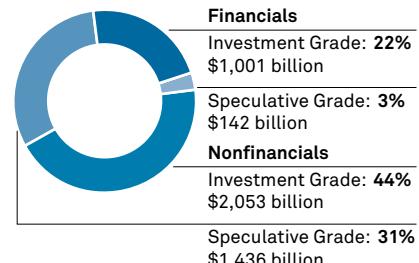
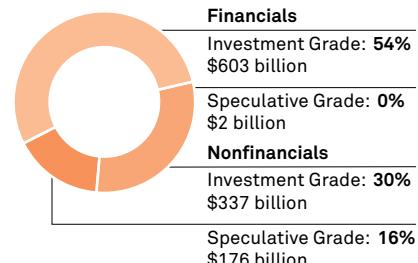
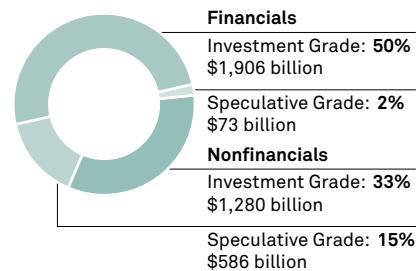
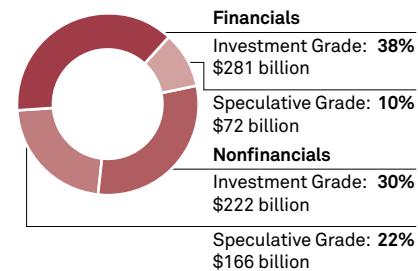


**Global Corporate Debt Maturities by Region (2H 2016–2021)** (dollars in billions)



Over the next five years, the level of high-yield debt maturing is expected to significantly increase each year

Estimated Global Schedule for Maturing Corporate Debt Through 2021 (2H 2016–2021)							
(dollars in billions)	2H 2016	2017	2018	2019	2020	2021	Total
<b>United States</b>							
<b>Financials</b>							
Investment grade	\$ 85	\$233	\$216	\$187	\$ 151	\$129	\$1,001
Speculative grade	4	26	24	29	32	28	142
<b>Nonfinancials</b>							
Investment grade	135	337	371	397	457	356	2,053
Speculative grade	27	109	214	309	386	392	1,436
<b>Total United States</b>	<b>\$251</b>	<b>\$705</b>	<b>\$825</b>	<b>\$922</b>	<b>\$1,026</b>	<b>\$905</b>	<b>\$4,632</b>
<b>Europe</b>							
<b>Financials</b>							
Investment grade	\$161	\$508	\$394	\$313	\$ 294	\$238	\$1,906
Speculative grade	6	14	15	11	12	15	73
<b>Nonfinancials</b>							
Investment grade	89	248	220	257	279	187	1,280
Speculative grade	21	51	82	146	155	131	586
<b>Total Europe</b>	<b>\$277</b>	<b>\$821</b>	<b>\$711</b>	<b>\$727</b>	<b>\$ 740</b>	<b>\$571</b>	<b>\$3,845</b>
<b>Other Developed Markets</b>							
<b>Financials</b>							
Investment grade	\$ 84	\$142	\$120	\$107	\$ 92	\$ 57	\$ 603
Speculative grade	–	–	–	–	1	1	2
<b>Nonfinancials</b>							
Investment grade	30	75	69	66	52	47	338
Speculative grade	7	19	30	39	47	34	176
<b>Total Other Developed Markets</b>	<b>\$121</b>	<b>\$236</b>	<b>\$219</b>	<b>\$212</b>	<b>\$ 192</b>	<b>\$139</b>	<b>\$1,119</b>
<b>Emerging Markets</b>							
<b>Financials</b>							
Investment grade	\$ 20	\$ 63	\$ 58	\$ 54	\$ 55	\$ 32	\$ 281
Speculative grade	7	14	18	16	12	5	71
<b>Nonfinancials</b>							
Investment grade	21	35	42	43	43	38	222
Speculative grade	7	29	25	31	35	39	166
<b>Total Emerging Markets</b>	<b>\$ 55</b>	<b>\$141</b>	<b>\$143</b>	<b>\$144</b>	<b>\$ 145</b>	<b>\$114</b>	<b>\$ 740</b>

**United States: \$4,632 billion****Other Developed Markets: \$1,119 billion****Europe: \$3,845 billion****Emerging Markets: \$740 billion**

## Notes for pages 16 and 17:

Data as of June 30, 2016

**Note:** 2016 includes maturities from 7/1/2016–12/31/2016. Includes bonds, loans and revolving credit facilities. Foreign currencies are converted to U.S. dollars at the exchange rate at the close of business on June 30, 2016

Details may not sum to total due to rounding

Source: S&amp;P Global Fixed Income Research

# Global Debt Markets: Dollar Volume by New-Issue Category

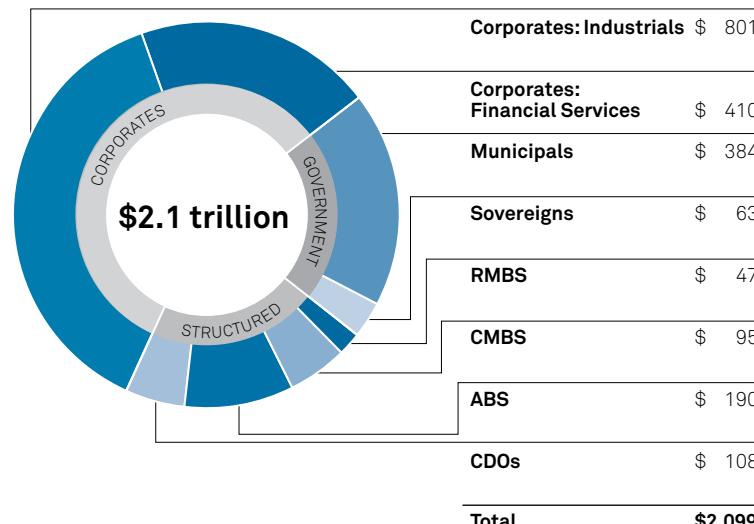
## U.S. Debt Market

In 2015, S&P Global Ratings rated approximately 84% of the \$2.1 trillion of addressable debt issued in the U.S. market compared to 85% of the addressable market in 2014. Rated debt issuance by dollar volume in the U.S. rose approximately 9% from 2014 to 2015, while the number of issues increased by approximately 13%.

The rated debt market is a component of the total debt market and includes only the debt securities issued with a rating. The rated U.S. debt market is primarily comprised of six new-issue categories (shown below):

- (1) Corporates (Industrials and Financial Services), (2) Municipals, (3) Sovereigns, (4) Mortgage-Backed Securities (Residential and Commercial), (5) Asset-Backed Securities, and (6) Collateralized Debt Obligations.

### Rated U.S. Debt Market: 2015 Dollar Volume by New Issue Category<sup>(a, b, c, d, e)</sup>



**Notes:** Annual figures; dollar volume in billions; data by domicile of issuer/assets

Details may not sum to total due to rounding

Historical percentages calculated based on unrounded figures

Data as of March 31, 2016, and subject to revision to reflect final deal information

#### Notes for debt issuance:

- (a) Excludes municipal student loans and private placements

(b) Excludes confidential transactions

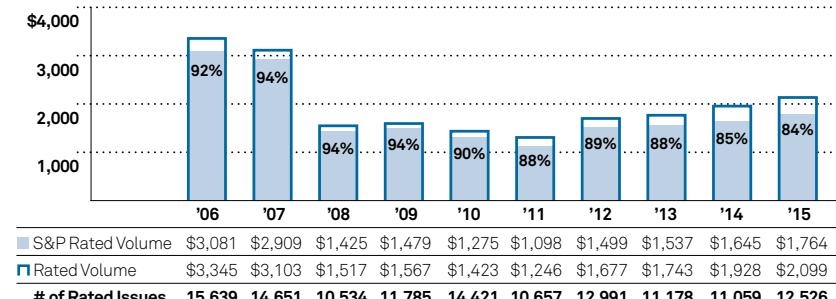
(c) Includes Rule 144a (private placements), MTN takedowns, convertibles and preferred stocks. Excludes private placements (except Rule 144a issues), retail notes, commercial paper and all agency issues

(d) Excludes agency deals. Includes home equity loans

(e) Excludes asset-backed commercial paper and letters of credit

### Rated U.S. Debt Market<sup>(a, b, c, d, e)</sup>

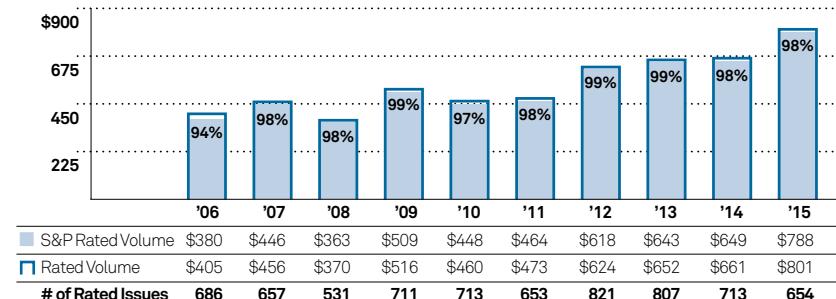
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, Harrison Scott Publications, S&P Global Ratings

### U.S. Corporates: Industrials<sup>(c)</sup>

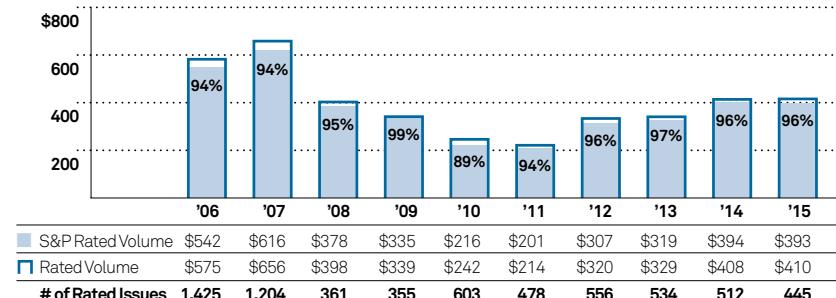
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, Harrison Scott Publications, S&P Global Ratings

### U.S. Corporates: Financial Services<sup>(c)</sup>

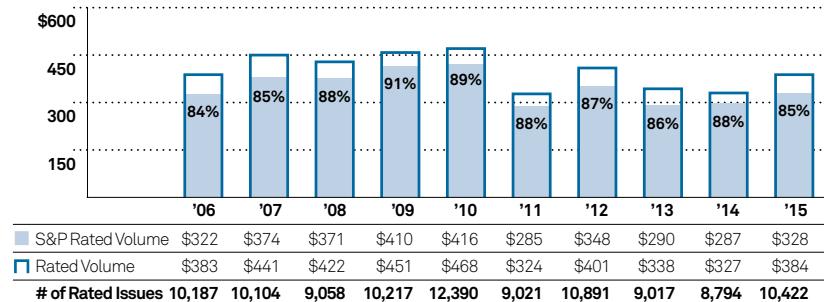
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&P Global Ratings

**U.S. Municipals<sup>(a)</sup>**

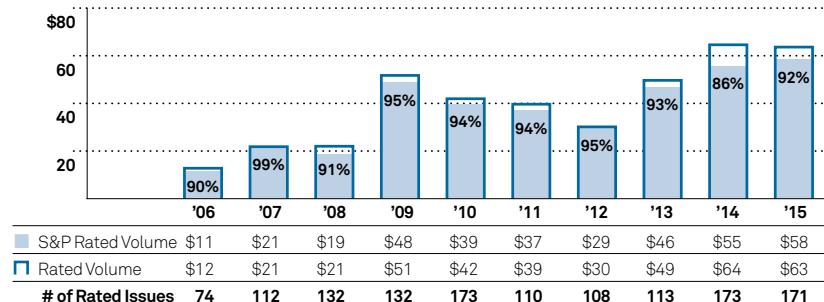
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&amp;P Global Ratings

**U.S. Sovereigns**

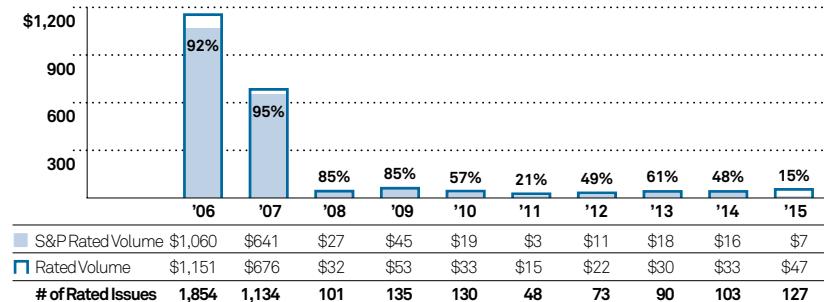
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&amp;P Global Ratings

**U.S. Residential Mortgage-Backed Securities (RMBS)<sup>(b, d)</sup>**

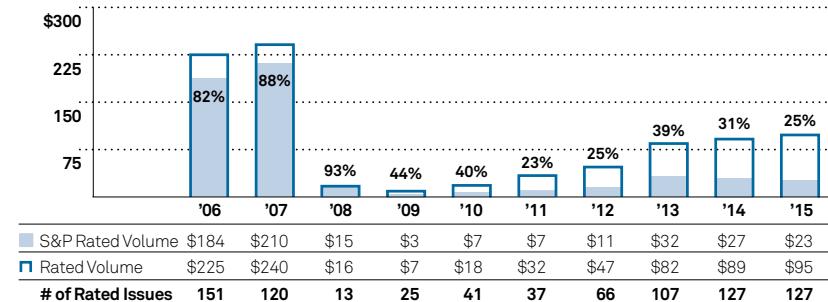
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**U.S. Commercial Mortgage-Backed Securities (CMBS)<sup>(b)</sup>**

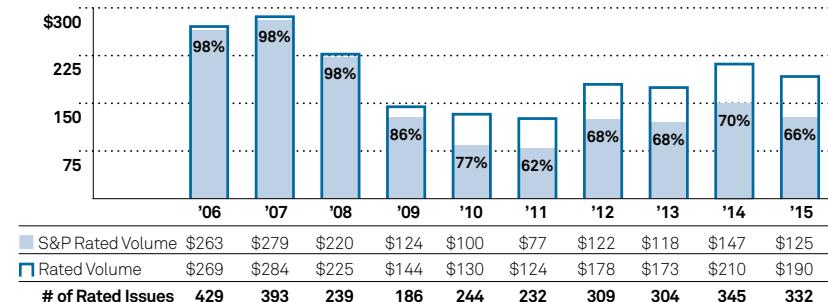
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**U.S. Asset-Backed Securities (ABS)<sup>(b, e)</sup>**

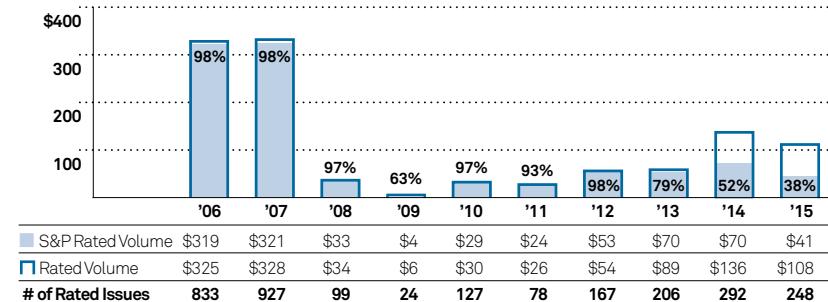
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**U.S. Collateralized Debt Obligations (CDOs)<sup>(b)</sup>**

S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

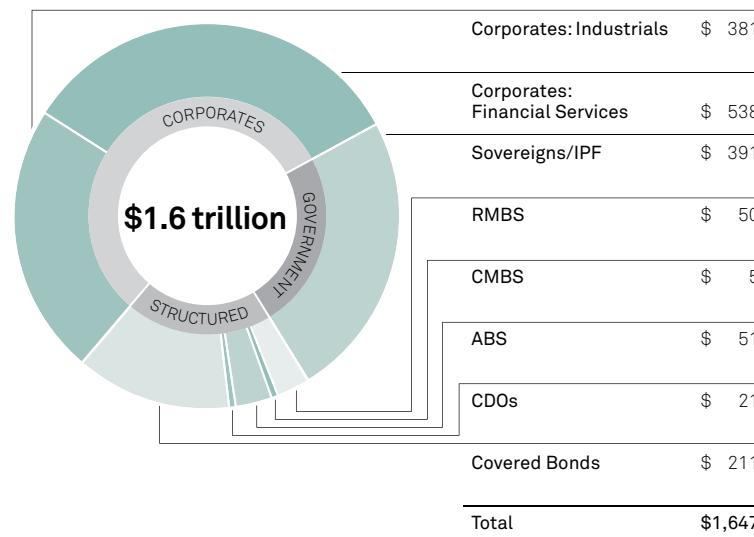
# Global Debt Markets: Dollar Volume by New-Issue Category

## EMEA (Europe, Middle East, Africa) Region Debt Market

In 2015, S&P Global Ratings rated approximately 79% of the \$1.6 trillion of addressable debt issued in the EMEA region market, which includes Europe, the Middle East, and Africa, compared to 81% in 2014. Rated debt issuance by dollar volume in the region decreased approximately 17% from 2014 to 2015, while the number of issues decreased by approximately 18%.

The rated debt market is a component of the total debt market and includes only the debt securities issued with a rating. The rated EMEA debt market is comprised of six new-issue categories (shown below): (1) Corporates (Industrials and Financial Services), (2) Sovereigns/International Public Finance (IPF), (3) Mortgage-Backed Securities (Residential and Commercial), (4) Asset-Backed Securities, (5) Collateralized Debt Obligations, and (6) Covered Bonds.

### Rated EMEA Debt Market: 2015 Dollar Volume by New-Issue Category <sup>(a, b, c, d)</sup>



**Notes:** Annual figures; dollar volume in billions; data by domicile of issuer/assets

Details may not sum to total due to rounding

Historical percentages calculated based on unrounded figures

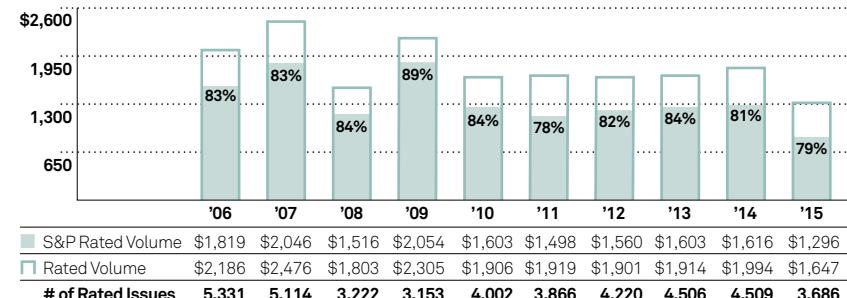
Data as of April 30, 2016, and subject to revision to reflect final deal information

#### Notes for debt issuance:

- (a) Excludes confidential and repo transactions
- (b) Includes Rule 144a (private placements), MTN takedowns, convertibles and preferred stocks. Excludes private placements (except Rule 144a issues), retail notes and commercial paper
- (c) Excludes asset-backed commercial paper and letters of credit
- (d) Includes home equity loans

### Rated EMEA Debt Market <sup>(a, b, c, d)</sup>

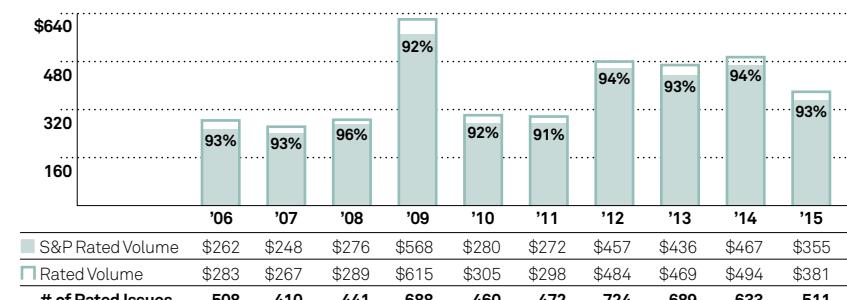
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, Harrison Scott Publications, S&P Global Ratings

### EMEA Corporates: Industrials <sup>(b)</sup>

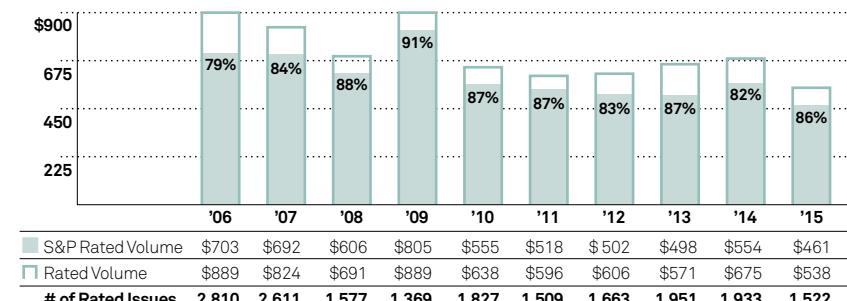
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&P Global Ratings

### EMEA Corporates: Financial Services <sup>(b)</sup>

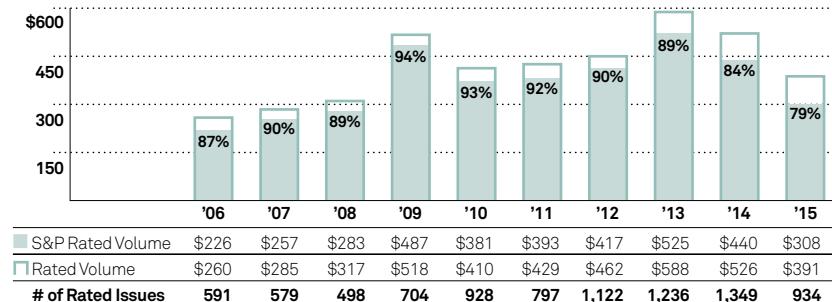
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&P Global Ratings

**EMEA Sovereigns/International Public Finance (IPF)**

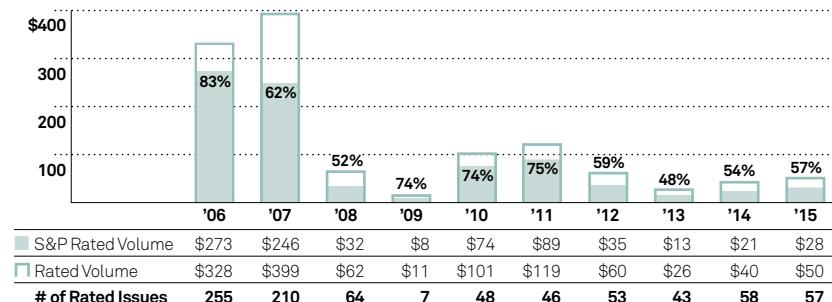
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&amp;P Global Ratings

**EMEA Residential Mortgage-Backed Securities (RMBS) <sup>(a,d)</sup>**

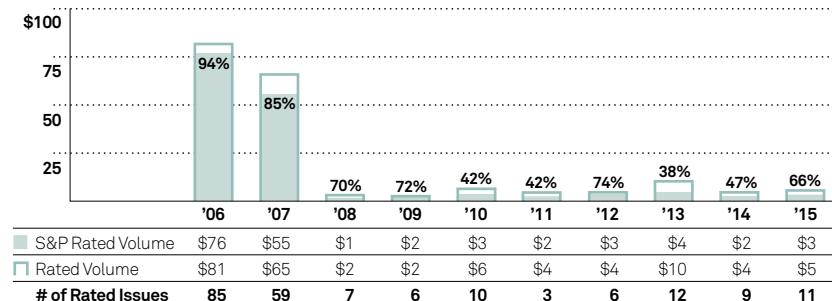
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&amp;P Global Ratings

**EMEA Commercial Mortgage-Backed Securities (CMBS) <sup>(a)</sup>**

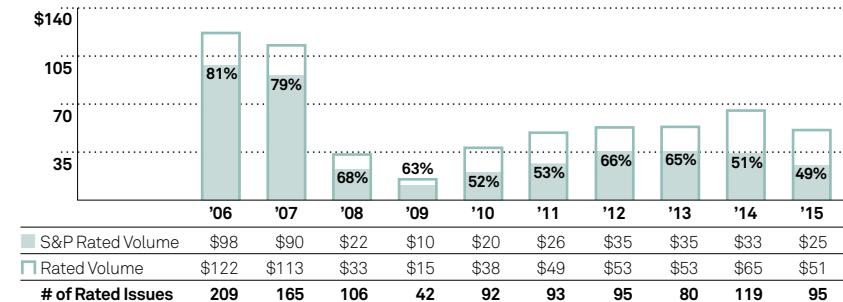
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**EMEA Asset-Backed Securities (ABS) <sup>(a,c)</sup>**

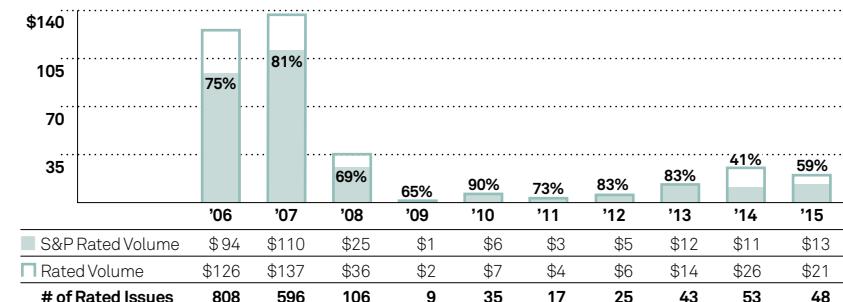
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**EMEA Collateralized Debt Obligations (CDOs) <sup>(a)</sup>**

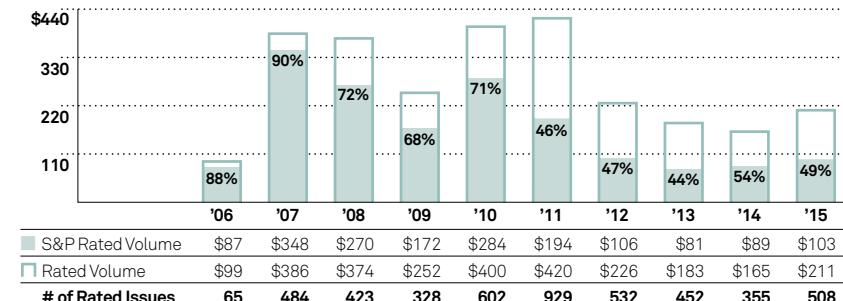
S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

**EMEA Covered Bonds <sup>(a)</sup>**

S&amp;P Global Ratings penetration rate as a % of rated dollar volume



Sources: Harrison Scott Publications, S&amp;P Global Ratings

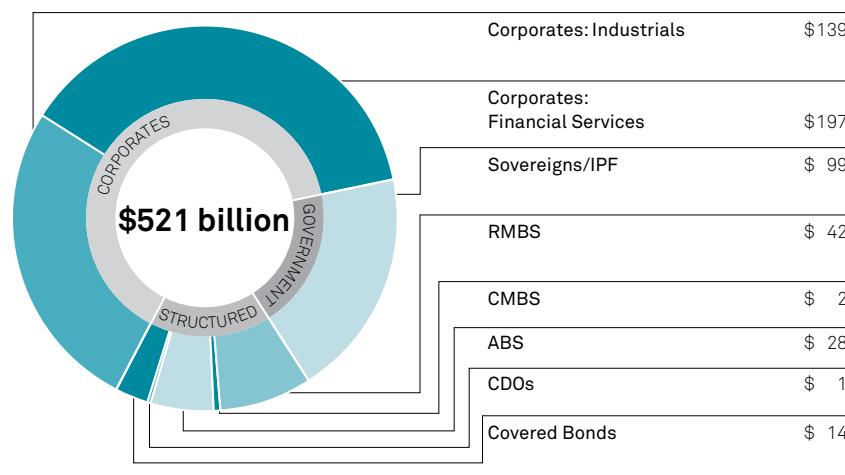
# Global Debt Markets: Dollar Volume by New-Issue Category

## Asia-Pacific Region Debt Market

In 2015, S&P Global Ratings rated approximately 69% of the \$521 billion of addressable debt issued in the Asia-Pacific market, compared to 63% in 2014. Rated debt issue volume for corporates in Asia was \$336 billion, which is a 16% decrease from 2014. S&P Global Ratings' 2015 market penetration was 80% for corporates, compared to 78% in 2014. For structured finance, rated debt issuance by dollar volume was down 15% compared to 2014, and S&P Global Ratings rated approximately 44% of that volume, compared to 47% in 2014.

The rated debt market is a component of the total debt market and includes only the debt securities issued with a rating. The rated Asia-Pacific debt market is comprised of six new-issue categories (shown below): (1) Corporates (Industrials and Financial Services), (2) Sovereigns/International Public Finance (IPF), (3) Mortgage-Backed Securities (Residential and Commercial), (4) Asset-Backed Securities, (5) Collateralized Debt Obligations, and (6) Covered Bonds.

### Rated Asia-Pacific Debt Market: 2015 Dollar Volume by New-Issue Category<sup>(a, b, c, d, e)</sup>



**Notes:** Annual figures; dollar volume in billions; data by domicile of issuer/assets

Details may not sum to total due to rounding

Historical percentages calculated based on unrounded figures

Data as of April 30, 2016, and subject to revision to reflect final deal information

#### Notes for debt issuance:

(a) Excludes confidential and repo transactions

(b) Includes Rule 144a (private placements), MTN takedowns, convertibles and preferred stocks. Excludes sovereign issuers, private placements (except Rule 144a issues), retail notes, commercial paper and all agency issues

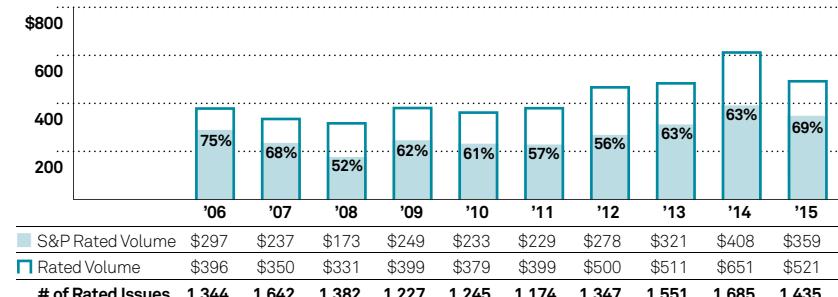
(c) Excludes asset-backed commercial paper and letters of credit

(d) Includes home equity loans

(e) Includes sovereigns

### Rated Asia-Pacific Debt Market<sup>(a, b, c, d, e)</sup>

S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, Harrison Scott Publications, S&P Global Ratings

### Asia-Pacific Corporates (Industrials and Financial Services)<sup>(b)</sup>

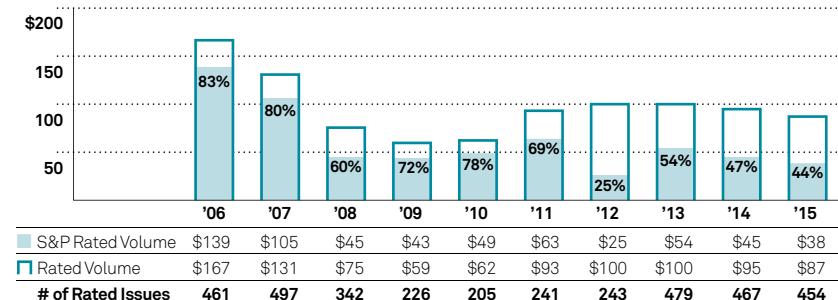
S&P Global Ratings penetration rate as a % of rated dollar volume



Sources: Thomson Reuters, S&P Global Ratings

### Asia-Pacific Structured Finance<sup>(a, c, d)</sup>

S&P Global Ratings penetration rate as a % of rated dollar volume

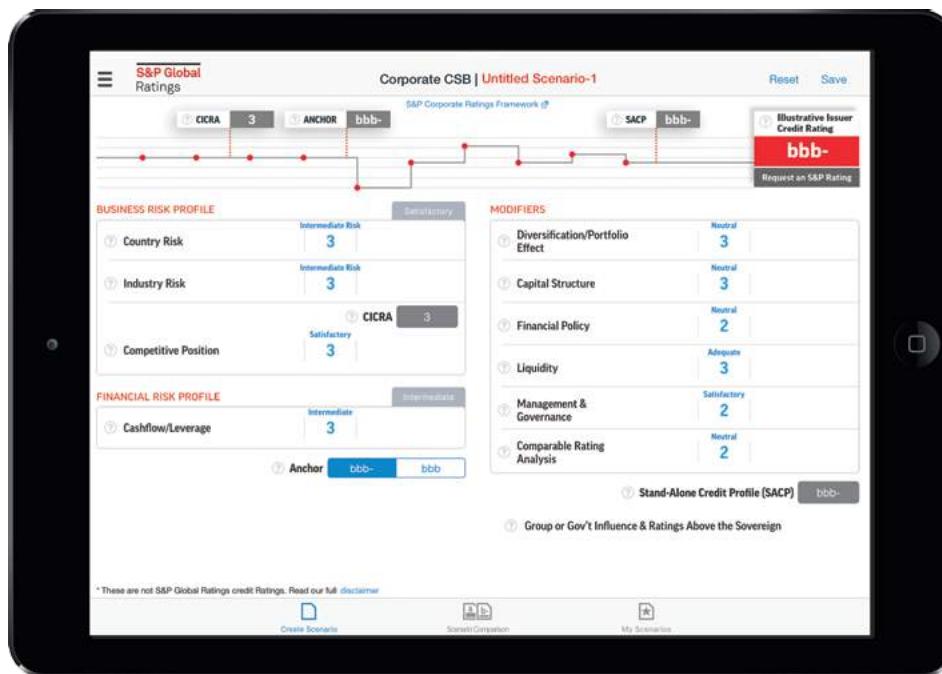


Sources: Harrison Scott Publications, S&P Global Ratings

# Interactive Tools from S&P Global Ratings Add Transparency to Its Ratings Process

## Credit Scenario Builders

S&P Global Ratings' Credit Scenario Builders provide the marketplace with interactive tools that add more transparency to its ratings process, methodology, and criteria. S&P Global Ratings' suite of criterion education tools includes Credit Scenario Builders for corporates, banks, insurers, U.S. local governments, and international public finance. Nearly 16,500 credit scenarios have been created using these applications since the beginning of 2015.



Corporate Credit Scenario Builder

### Users of Credit Scenario Builders Can:

Interact with S&P Global Ratings' framework

Design, create, save, and compare illustrative issuer credit-rating scenarios based on their own parameters and adjustments as well as S&P Global Ratings' rating methodology and assumptions

Understand the analyst-adjusted data that factor into S&P Global Ratings' credit analysis

### Build Credit Scenarios For:

Corporates

Banks

Insurers

U.S. Local Governments

International Public Finance

iPad app  
available



Create scenarios based on user inputs and S&P Global Ratings' credit ratings framework

Credit Scenario Builder ratings are for illustration purposes only