

Update: Trends In Global Project Finance

Arnold Gevero
Associate Director
S&P Capital IQ

23rd October 2014

Topics

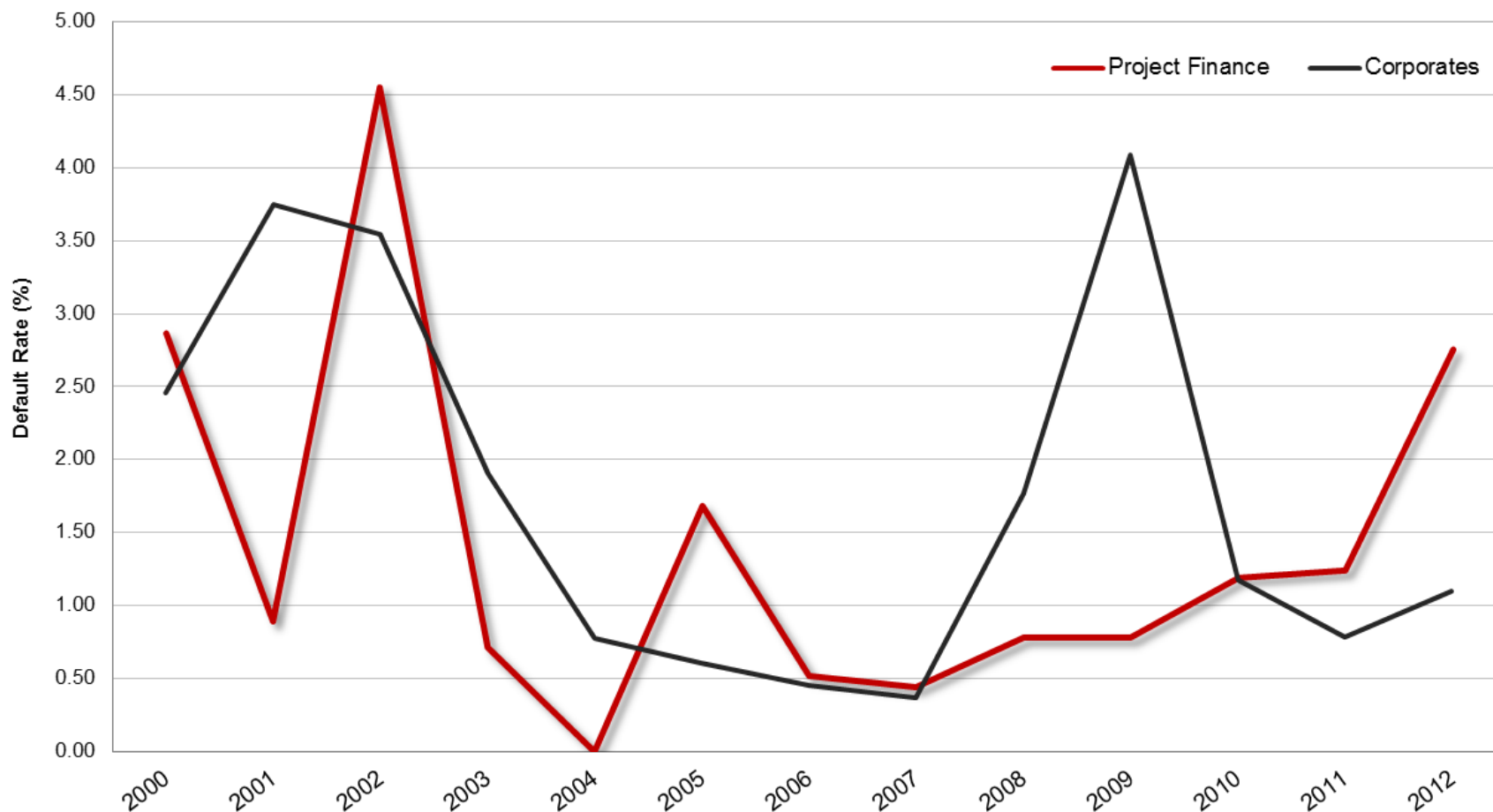
- **Trends in Rated Global Project Finance**
- **Trends in Un-Rated Global Project Finance**

Trends In Rated Global Project Finance

Trends In Rated Global Project Finance

Standard & Poor's Rating Services has rated 514 project finance debt issues since 1991. The annual average default rate is 1.5%

Project Finance-v-Corporate Default Rates (2000-2012)



Source: S&P Rating Services "Default Study: Project Finance Default And Recovery: Shale Gas Fuels Rise In US Defaults (August 9, 2013)".

Trends In Rated Global Project Finance

The average initial rating on defaulting issues was 'BB-', while the average initial rating for project finance was 'BBB-'. Recent defaults were mostly in the Power Industry.

Sector	Issuer	Description	Country	Original rating	Rating prior to default	Vintage	Original date	Default date	Time to Default (years)
● INDUSTRIAL	California Statewide Communities Development Authority		U.S.	BB	CCC+	2007	5/30/2007	9/22/2011	4.3
● NATURAL RESOURCES/MINING	Murrin Murrin Holdings Pty. Ltd.	Nickel mine	Australia	BB-	CC	1997	8/22/1997	7/7/2002	4.9
	Glencore Nickel Pty Ltd.	Nickel mine	Australia	BB+	CC	1997	11/18/1997	12/3/2002	5.0
	Bulong Operations Pty Ltd.		Australia	B+	CC	1998	12/10/1998	6/18/2000	1.5
● OIL AND GAS	Northeast Biofuels L.P.	Dry-mill ethanol facility	U.S.	B+	C	2006	6/8/2006	1/14/2009	2.6
● POWER	Panda Global Energy Co.		Cayman Islands	B-	CC	1997	4/10/1997	12/21/2000	3.7
	AES Drax Holdings Ltd.		Cayman Islands	BBB-	CC	2001	2/2/2001	12/16/2002	1.9
	TermoEmcali Funding Corp	Gas-fired power	Colombia	BBB-	CC	1997	3/31/1997	9/15/2004	7.5
	European Power Ltd. Co.		U.K.	BB-	B-	2000	6/9/2000	12/5/2001	1.5
	InPower Ltd.		U.K.	BBB-	CC	2001	2/2/2001	12/16/2002	1.9
	Mobile Energy Services Co. LLC	Steam/Electric Energy	U.S.	BBB-	CCC	1995	7/25/1995	1/15/1999	3.5
	Pennsylvania Economic Development Financing Authority		U.S.	BBB-	CC	1998	2/20/1998	12/6/2011	13.8
	LSP Energy L.P., LSP Batesville Funding Corp.		U.S.	BBB-	CC	1999	5/12/1999	1/19/2012	12.7
	Homer City Funding LLC	Coal-fired plant	U.S.	BBB-	CC	1999	5/12/1999	10/10/2012	13.4
	GenOn Mid-Atlantic LLC		U.S.	BBB-	CC	2000	10/31/2000	7/15/2003	2.7
	Tiverton Power Assoc L.P., Rumford Power Assoc L.P.		U.S.	BB+	CCC-	2000	12/12/2000	12/21/2005	5.0
	Broad River Energy LLC		U.S.	BB+	CCC-	2001	10/2/2001	12/21/2005	4.2
	RockGen Energy LLC		U.S.	BB+	CCC-	2001	10/2/2001	12/21/2005	4.2
	Choctaw Generation L.P.		U.S.	BBB-	CC	2002	12/3/2002	12/14/2012	10.0
	AES Eastern Energy L.P.	Coal plant	U.S.	BB+	CC	2003	9/24/2003	1/3/2012	8.3
	Boston Generating LLC		U.S.	B-	C	2006	12/21/2006	8/18/2010	3.7
	Astoria Generating Co. Acquisitions LLC	Gas plant	U.S.	B	CCC-	2006	8/14/2006	12/7/2011	5.3
	Bicent Power LLC	Coal & Gas plant	U.S.	BB-	CC	2007	7/10/2007	4/20/2012	4.8
	Bicent Power LLC		U.S.	B-	CC	2007	7/10/2007	4/20/2012	4.8
	Bosque Power Co. LLC		U.S.	B	B	2009	3/31/2009	3/26/2010	1.0
● TRANSPORT	Autopistas Del Sol S.A.		Argentina	BB-	CC	1997	7/18/1997	2/1/2002	4.5
	Lane Cove Tunnel Finance Co. Pty Ltd.		Australia	BBB-	CC	2003	12/22/2003	12/8/2008	5.0
	Greater Beijing First Expressways Ltd.		China	BB	CC	1997	6/3/1997	6/16/2000	3.0
	Traffic Stream (BVI) Infrastructure Ltd.		Hong Kong	BB-	CC	1998	3/30/1998	5/4/1999	1.1
	Fixed-Link Finance 2 B.V.		Netherlands	BBB-	C	2002	7/11/2002	3/16/2007	4.7
	Eurotunnel S.A.		U.K.	A	C	1998	12/14/1998	8/16/2006	7.7
	Metronet Rail BCV Finance PLC		U.K.	BBB+	CC	2003	11/5/2003	2/29/2008	4.3

Market price exposure
Price and interest rate dependence

Operational Issues
Driven by chronic operational issues that cause underperformance

Technology or design issues
Equipment failure & flawed design impairing operating efficiency

Source: S&P Rating Services "Default Study: Project Finance Default And Recovery: Shale Gas Fuels Rise In US Defaults (August 9, 2013)".

Trends In Rated Global Project Finance

The average recovery rate in the rated universe was approximately 75%. The majority of the lenders received recovery close to 100% and very few received close to 0%.

Sector	Issuer	Description	Country	Original rating	Rating prior to default	Vintage	Original date	Default date	Time to Default (years)	Default Driver	Recovery (%)	Resolution
● INDUSTRIAL	California Statewide Communities Development Authority		U.S.	BB	CCC+	2007	5/30/2007	9/22/2011	4.3			
● NATURAL RESOURCES/MINING	Murrin Murrin Holdings Pty. Ltd.	Nickel mine	Australia	BB-	CC	1997	8/22/1997	7/7/2002	4.9	Weak Operating performance & low nickel/cobalt prices	26%	Debt restructuring
	Glencore Nickel Pty Ltd.	Nickel mine	Australia	BB+	CC	1997	11/18/1997	12/3/2002	5.0	Weak Operating performance & low nickel/cobalt prices	26%	Debt restructuring
	Bulung Operations Pty Ltd.		Australia	B+	CC	1998	12/10/1998	6/18/2000	1.5			
● OIL AND GAS	Northeast Biofuels L.P.	Dry-mill ethanol facility	U.S.	B+	C	2006	6/8/2006	1/14/2009	2.6	Severe start-up problems delaying operations	7%	Liquidation/sale
● POWER	TermoEmcali Funding Corp	Gas-fired power	Colombia	BBB-	CC	1997	3/31/1997	9/15/2004	7.5	Liquidity shortage from off-take contracts	73%	Distressed exchange
	European Power Ltd. Co.		U.K.	BB-	B-	2000	6/9/2000	12/5/2001	1.5			
	InPower Ltd.		U.K.	BBB-	CC	2001	2/2/2001	12/16/2002	1.9			
	Mobile Energy Services Co. LLC	Steam/Electric Energy	U.S.	BBB-	CCC	1995	7/25/1995	1/15/1999	3.5	Dependence on single buyer of output/fuel supplier	12%	Conversion to equity
	Pennsylvania Economic Development Financing Authority		U.S.	BBB-	CC	1998	2/20/1998	12/6/2011	13.8			
	LSP Energy L.P., LSP Batesville Funding Corp.		U.S.	BBB-	CC	1999	5/12/1999	1/19/2012	12.7	Operational issues		
	Homer City Funding LLC	Coal-fired plant	U.S.	BBB-	CC	1999	5/12/1999	10/10/2012	13.4	Market price exposure & Event risk		
	GenOn Mid-Atlantic LLC		U.S.	BBB-	CC	2000	10/31/2000	7/15/2003	2.7			
	Tiverton Power Assoc L.P., Rumford Power Assoc L.P.		U.S.	BB+	CCC-	2000	12/12/2000	12/21/2005	5.0		113%	Hybrid
	Broad River Energy LLC		U.S.	BB+	CCC-	2001	10/2/2001	12/21/2005	4.2		100%	Debt restructuring
	RockGen Energy LLC		U.S.	BB+	CCC-	2001	10/2/2001	12/21/2005	4.2		101%	Liquidation/sale
	Choctaw Generation L.P.		U.S.	BBB-	CC	2002	12/3/2002	12/14/2012	10.0	Design & Operational issues		
	AES Eastern Energy L.P.	Coal plant	U.S.	BB+	CC	2003	9/24/2003	1/3/2012	8.3	Market price exposure		
	Boston Generating LLC		U.S.	B-	C	2006	12/21/2006	8/18/2010	3.7			
	Astoria Generating Co. Acquisitions LLC	Gas plant	U.S.	B	CCC-	2006	8/14/2006	12/7/2011	5.3	Liquidity shortage		
	Bicent Power LLC	Coal & Gas plant	U.S.	BB-	CC	2007	7/10/2007	4/20/2012	4.8	Market price exposure & low interest rate		
	Bosque Power Co. LLC		U.S.	B	B	2009	3/31/2009	3/26/2010	1.0			
● TRANSPORT	Autopistas Del Sol S.A.	Toll Road	Argentina	BB-	CC	1997	7/18/1997	2/1/2002	4.5	Weak legal provisions & Refinance risk	93%	Distressed exchange
	Autopistas Del Sol S.A.	Toll Road	Argentina	CCC-	CC	2004	10/14/2004	12/17/2009	5.2		93%	Distressed exchange
	Lane Cove Tunnel Finance Co. Pty Ltd.		Australia	BBB-	CC	2003	12/22/2003	12/8/2008	5.0	Reliance on bond insurer for bond/swap payments	68%	Liquidation/sale
	Fixed-Link Finance 2 B.V.		Netherlands	BBB-	C	2002	7/11/2002	3/16/2007	4.7	Link to Eurotunnel S.A. & Bond Insurer	80%	Liquidation/sale
	Eurotunnel S.A.		U.K.	A	C	1998	12/14/1998	8/16/2006	7.7	Weak volume	100%	Debt restructuring
	Metronet Rail BCV Finance PLC		U.K.	BBB+	CC	2003	11/5/2003	2/29/2008	4.3	Weak volume + Construction delays	98%	Debt restructuring

Recoveries varied greatly by sector. The **Transport** and **Power** sectors had the highest recoveries at approximately **88%** and **63%** respectively.

Oil and Gas had the lowest recovery rate of less than **10%**.

The small number of default and recovery samples is the main concern as there were only 13 resolved projects in the rated universe.

It means that a small number of outliers can affect the results materially.

Source: S&P Rating Services "Default Study: Project Finance Default And Recovery: Shale Gas Fuels Rise In US Defaults (August 9, 2013)".

Trends In Un-Rated Global Project Finance

Trends In Un-Rated Global Project Finance

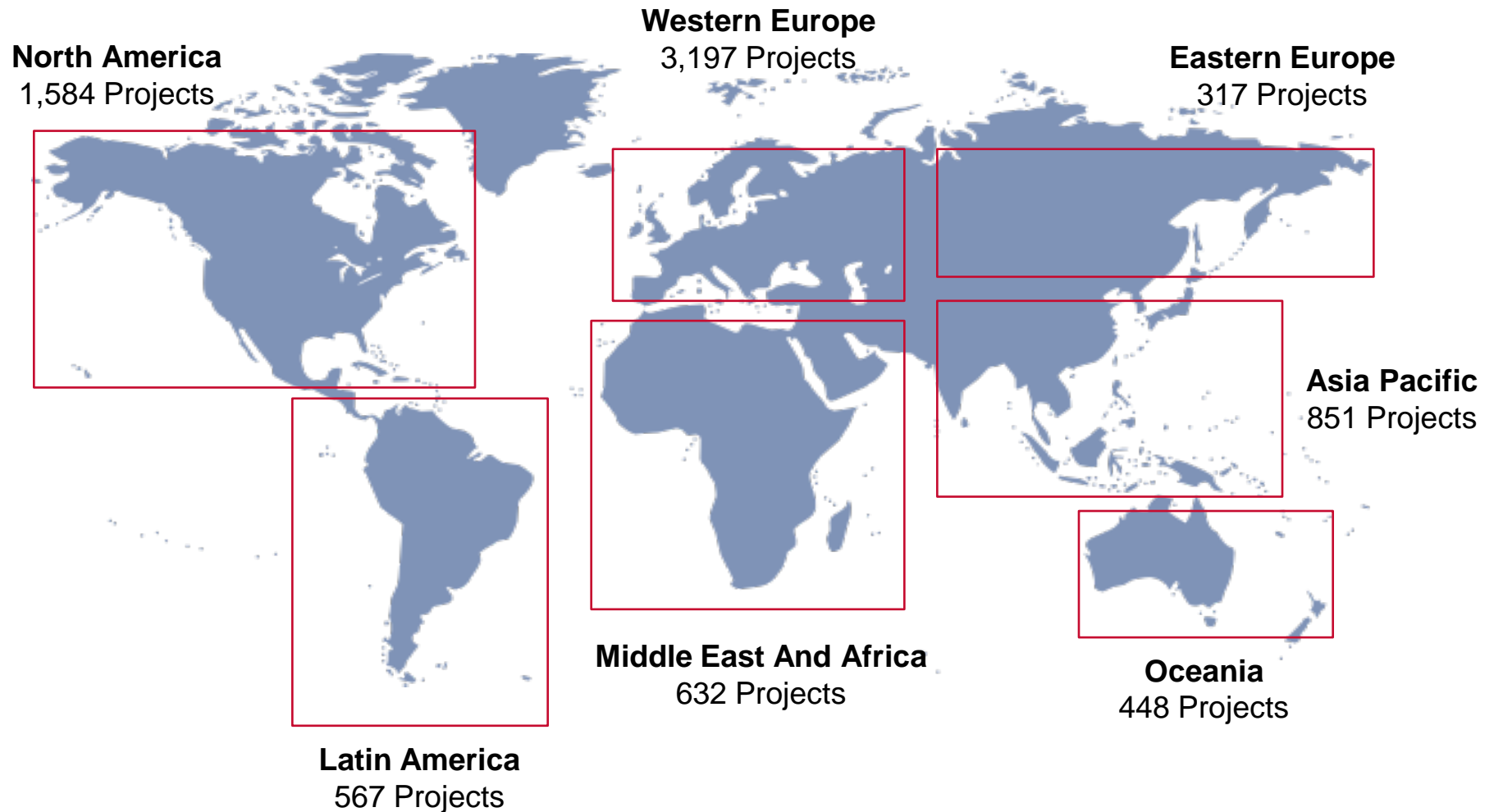
While projects can be financed in a number of ways including bond, equity, and bank loan offerings, the majority of financing comes from bank loans. To solve the issue of the relatively small sample size in the rated universe, one can leverage the S&P Capital IQ Project Finance Consortium database.

- **Originally initiated by four global banks in 2001**
- **The database represents a historical compilation of performance information from the portfolios of 35 lending institutions**
- **Participating banks contribute data annually on a confidential basis to S&P Capital IQ Credit Solutions who then standardize, aggregate, and analyse each dataset**
 - The data requirements are approved by a client advisory group
- **In 2013, the database represented a considerable percentage of global project finance syndicated loans providing a representative and robust database to calculate reliable benchmarks**
 - 7,596 projects in total versus 462 projects in the rated universe
 - 576 defaulted projects versus 34 projects in the rated universe
 - 435 projects resolved from default versus 13 projected in the rated universe

Source: S&P Capital IQ Project Finance Consortium database, October 17, 2014.

Trends In Un-Rated Global Project Finance

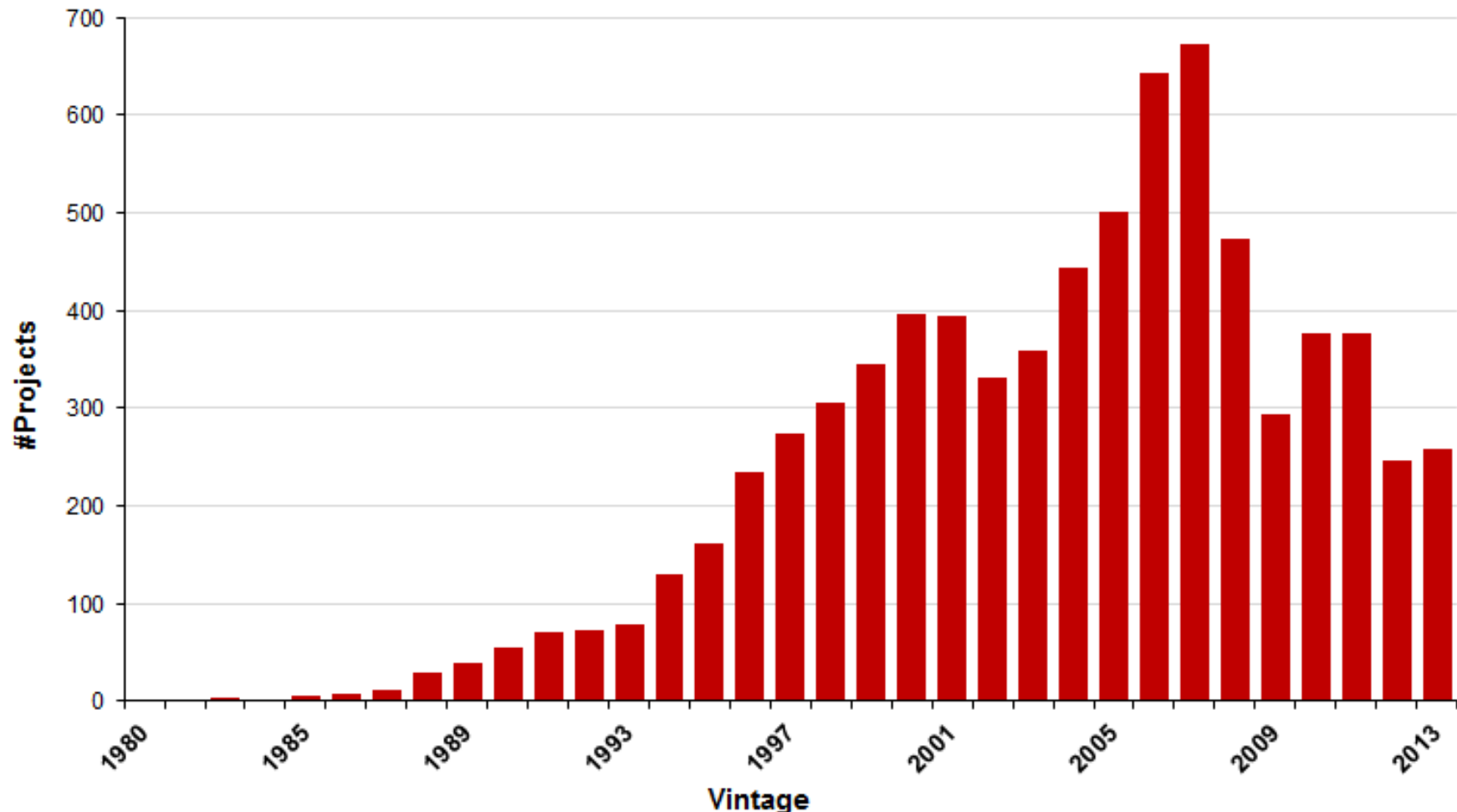
The Project Finance Consortium database is a truly global data repository. It has considerable coverage across each region.



For illustrative purposes only.

Trends In Un-Rated Global Project Finance

Project Finance origination was impacted by the financial crisis of 2008 but has picked up again. In 2013 there were 259 new projects originated and submitted to the study. The number of new originations stayed flat compared with 2012.

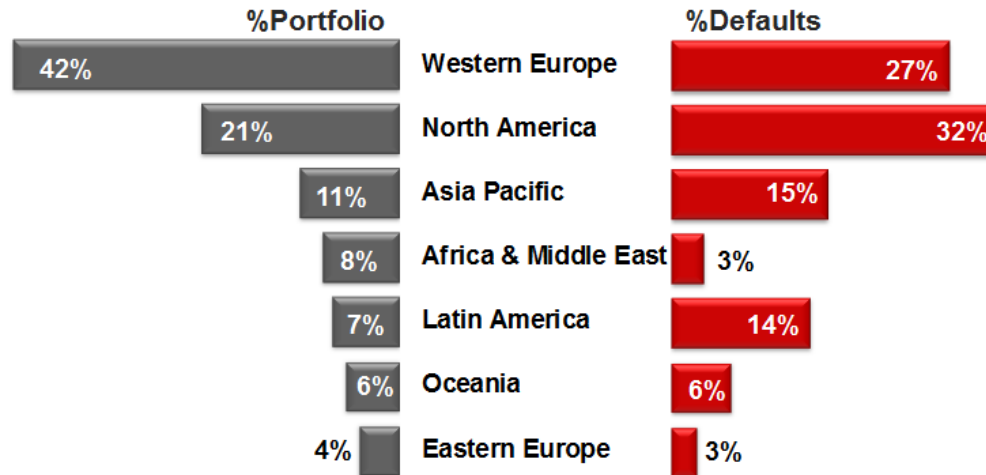


Source: S&P Capital IQ.

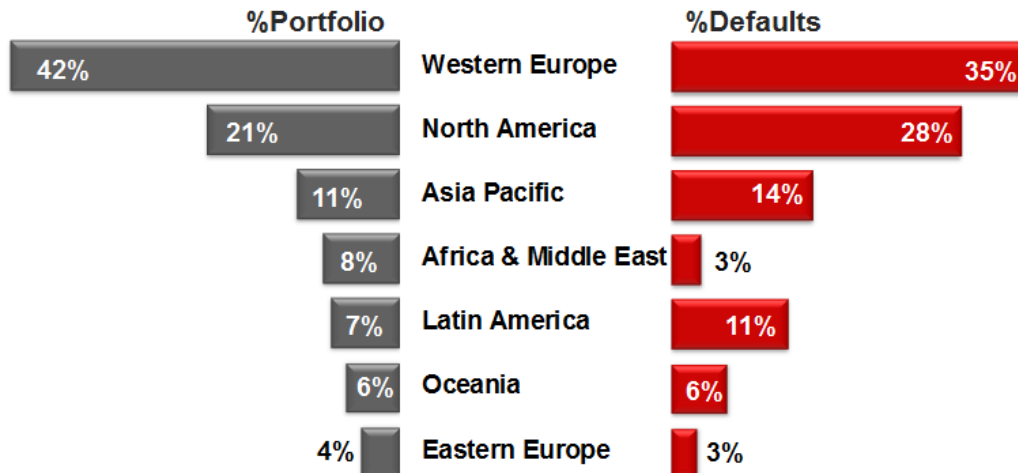
Trends In Un-Rated Global Project Finance

Since 2010, there has been steady Project Finance growth across all global regions – particularly Asia Pacific and Latin America.

2010



2013

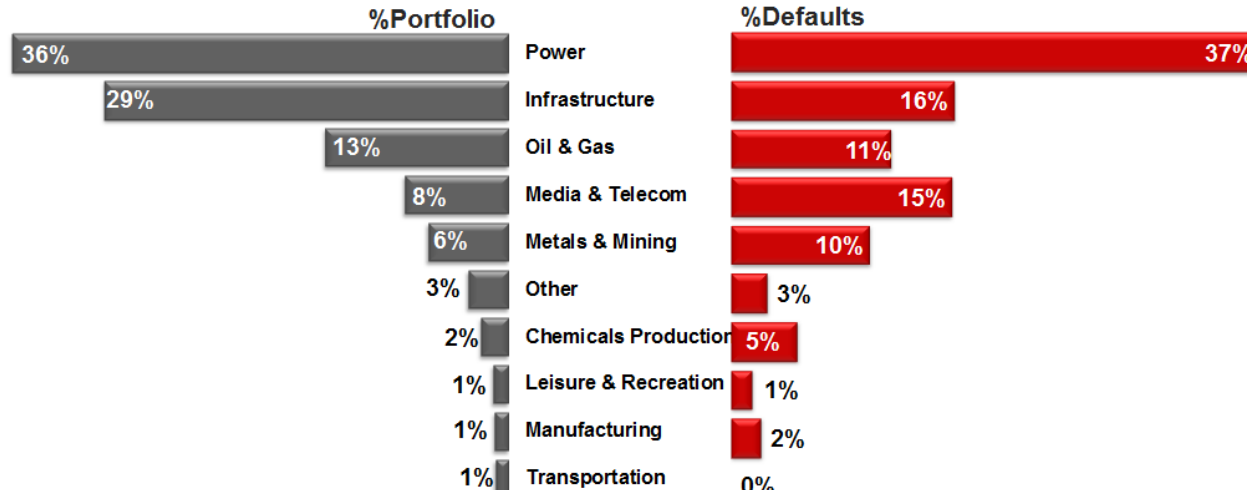


Source: S&P Capital IQ.

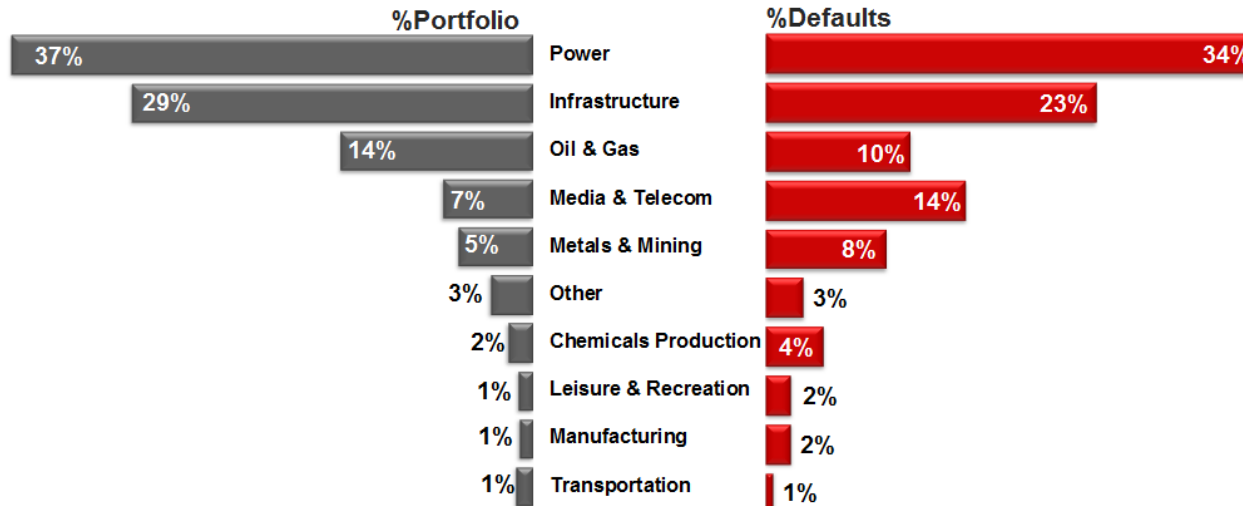
Trends In Un-Rated Global Project Finance

Across industries, strong growth in the Power, Infrastructure, and Oil & Gas segments. Infrastructure's performance has deteriorated slightly but still maintains a low 10-year cumulative default rate compared to other industries.

2010



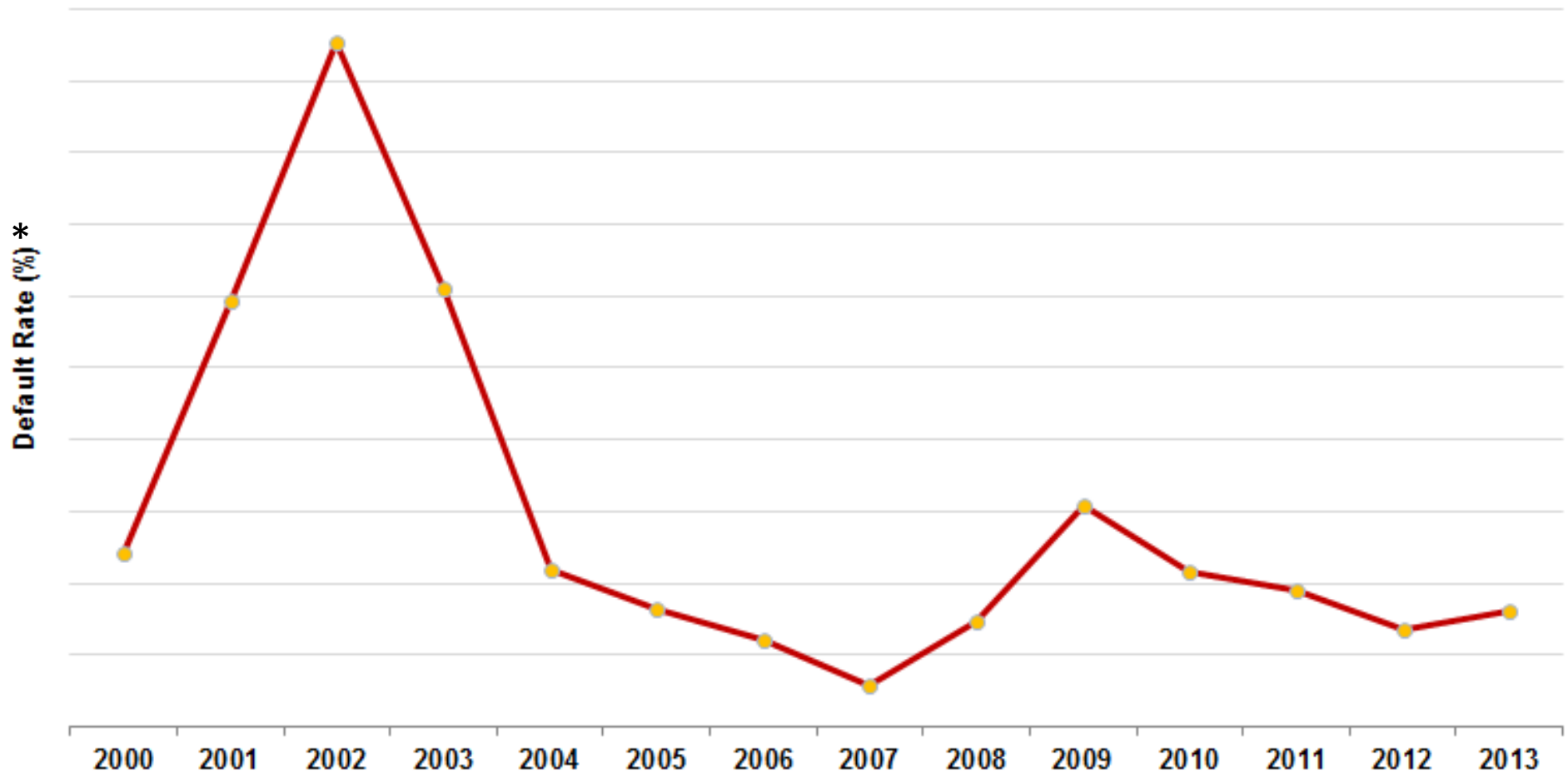
2013



Source: S&P Capital IQ.

Trends In Annual Default Rates – Un-Rated Global Project Finance

Compared to the rated universe study, there was no uptick in the default rates from 2010 to 2012 in the un-rated universe. Preliminary analysis suggests relatively flat default rates between 2012 to 2013.



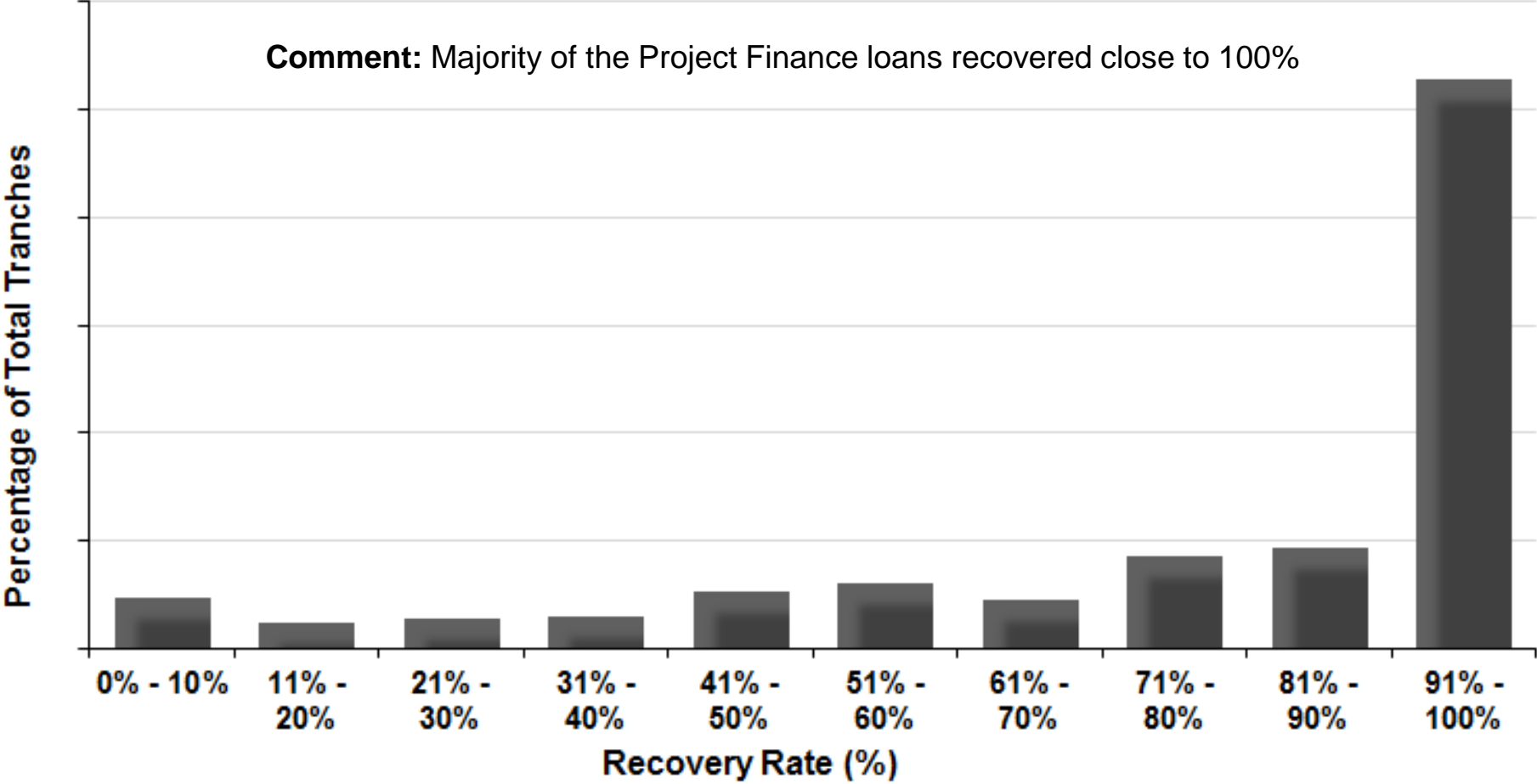
Note: Values for default rates are not shown to preserve the confidentiality agreement with member banks..

Source: S&P Capital IQ.

* Please note that we are unable to show the Y axis values due to the confidential nature of the Project Finance Data Consortium

Trends In Un-Rated Global Project Finance

This slide shows the recovery rate distribution. It shows a bullet distribution, where a majority of the total resolved loans had almost full recovery (between 91% and 100%). The remaining recoveries were spread quite evenly among other buckets.



Note: The percentage of total tranches is hidden because of confidentiality agreement with member banks.

Source: S&P Capital IQ.

Q&A



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