

RatingsDirect®

Alliander N.V.

Primary Credit Analyst:

Gerardo Leal, Frankfurt + 52 55 5081 4450; gerardo.leal@spglobal.com

Secondary Contact:

Claire Mauduit-Le Clercq, Paris + 33 14 420 7201; claire.mauduit@spglobal.com

Table Of Contents

Credit Highlights

Outlook

Our Base-Case Scenario

Company Description

Business Risk

Financial Risk

Liquidity

Other Credit Considerations

Issue Ratings - Subordination Risk Analysis

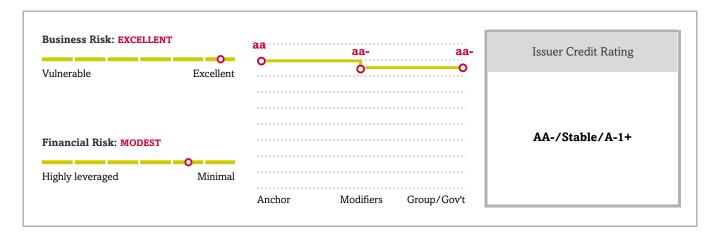
Reconciliation

Ratings Score Snapshot

Related Criteria

Related Research

Alliander N.V.



Credit Highlights

Overview	
Key Strengths	Key Risks
Largest monopoly owner and operator of regulated electricity and gas distribution regional networks in the Netherlands.	A lower regulatory weighted-average cost of capital (WACC) over the 2017-2021 regulatory period constrains the company's allowed revenues and return.
Supportive regulatory framework and low-risk business support predictable and stable cash flow generation.	Slightly deteriorating credit metrics due to incremental funding needs, but with enough headroom for the current rating.
Energy transition in the Netherlands provides stimulus for core business.	Industry-wide scarcity of technical workforce may create bottlenecks, potentially curving its investment plan.

Alliander has a sound operating performance in a supportive Dutch regulatory framework. In addition to the benefits from a low-risk, regulated operating environment for gas and electricity network businesses, Alliander's high-quality assets, and its strong operating performance enhance its business position. S&P Global Ratings believes these factors will continue enabling the company to generate stable and predictable revenues over the foreseeable future.

The energy transition in the Netherlands will keep Alliander busy over the intermediate future. Alliander continues to prioritize the provision of equally affordable, sustainable, and renewable energy. Over the next few years, the energy transition in the Netherlands is expected to markedly lift total local generation capacity. Several energy projects in the Netherlands will expand the energy supply, in particular from wind farms and solar parks. In our view, these developments will continue stimulating Alliander's business. Alliander also focuses on heat transition, aiming to facilitate the gas phase-out by timely and efficiently replacing the use of its natural gas networks with sustainable new alternatives.

Alliander has some headroom despite a slight weakening of its credit metrics. We expect Alliander's funding needs to increase over our forecast period due to greater investments and sustained shareholder remunerations, which will result in negative discretionary cash flow. Although this will take a modest toll on the company's credit metrics beyond 2018, Alliander will still have headroom at the current rating level.

Outlook: Stable

The stable outlook reflects our expectation that, despite incremental debt and a scheduled decline in regulatory WACC, Alliander will post a funds from operations (FFO)-to-debt ratio comfortably above 25% over the next 24 months, thanks to higher sufferance tax compensation and cost-cutting initiatives. We also believe that investments related to the energy transition in the Netherlands will support improvements of Alliander's regulated asset base.

Downside scenario

The ratings would come under pressure if our forecast FFO to debt fell below 23% with no immediate plan for recovery. Although we don't expect this to happen, factors leading to such a deterioration over the next two years include a decision by the company to recapitalize its balance sheet closer to its minimum internal requirement of FFO to debt of 20%, or a material decline in EBITDA margins.

Upside scenario

We consider an upgrade to be unlikely at this time, given ongoing predictable, but declining, tariffs set by the regulator, alongside the company's capital expenditure (capex) plan and dividend policy. However, we would consider an upgrade if, all other things equal, Alliander were to achieve and sustain FFO to debt above 30%.

Our Base-Case Scenario

Assumptions	Key Metrics					
 Dutch GDP growth of 2.7% in 2018 and 2.3% in 2019 set to fuel connection points' growth, although 	2017a 2018e 2019e 2020e					
Alliander's business is not entirely sensitive to	Debt to EBITDA (x)* 3.2 2.7-3.1 2.8-3.2 2.8-3.2					
economic performance due to its inherent regulated	FFO to debt (%)* 25.6 25.0-30.0 25.0-30.0 25.0-30.0					
nature.	FFO interest cover (x)* 10.9 11-14 11-14 11-14					
 Regulatory WACC of 3.8% in 2018, decreasing to 	DCF (mil. €) (207.9) (90-120) (80-110) (10-40)					
3.5% in 2019 and to 3.0% by the end of regulatory	Debt to debt + equity (%)* 36.2 33-38.0 33.0-38.0 33.0-38.0					
period at 2021, due to the reduced cost of debt. This will squeeze the company's revenues over the regulatory period.	*Adjusted by S&P Global Ratings.					
 An 11% revenue increase in 2018 due to higher sufferance tax compensation, followed by a 4% contraction in 2019 because of lower gas revenues. 	FFOFunds from operations. DCFDiscretionary cash flow.					
 Profitability lifted by lower purchase cost as a result of the group's cost-savings program and lower amount of outsourced work. We also expect that the Allego sale of will have a favorable impact. 	aActual. eEstimate.					
• Capex increasing to about €600 million-€620 million in 2018 and in 2019.						
 Financing needs of about €120 million in total over 2018 and 2019, which we believe will result in incremental debt for the company. 						
 Sufferance tax to increase in parallel with the company's grid in municipalities that levy such taxes. However, we expect that sufferance taxes will be fully compensated for in tariffs, although with some time mismatches. 						
 Dividend payout ratio of 45% of previous year's net income, according to Alliander's financial policy. 						
 The refinancing of the company's €500 million hybrid at a 1.625% rate from a 3.25% to reduce Alliander's coupon disbursement by half. 						

Base-Case Projections

The Allego sale will support cash flow generation and profitability. We believe that the disposal of Allego will reduce the group's non-core capex and therefore support free operating cash flow. We also think that the ensuing redistribution of these resources to projects more aligned with the company's core activities will benefit the group's business. Furthermore, the transaction will likely support overall profitability.

Hybrid replacement will reduce financial expenses. On Jan. 29, 2018, Alliander announced its intention to tender its existing €500 million perpetual bonds issued in 2013 with a new perpetual subordinated bond. This transaction will reduce cash outflows from financing activities, both in the form of dividends and interest payments, given that we consider this instrument as bearing 50% equity content and 50% debt.

Sufferance tax to increase due to network deployment. We expect sufferance taxes to rise for Alliander until 2021 due to an increase in total kilometers of cables and pipelines located in municipalities that levy such taxes. Sufferance costs will completely disappear in 2022 by decree. The group will be compensated for sufferance costs, albeit with some mismatches between the tax and the timing of the corresponding compensation.

Company Description

Alliander is a Dutch group mainly devoted to energy distribution in the regions of Gelderland, Noord-Holland, Amsterdam, Zuid-Holland, Friesland, and Flevoland across the Netherlands.

Through its main subsidiary, Liander, the group provides electricity and gas to around 3.3 million consumers and businesses through its more than 5.7 million connection points. Qirion, another subsidiary of the group, focuses on the development of sustainable technologies and intelligent energy infrastructures. Lastly, Kenter is a metering company that delivers innovative solutions for metering energy and energy management. As of financial year-end2017 (Dec. 31, 2017), about 90% of the group's EBITDA derives from Liander, while Qirion and Kenter together represent the remaining approximate 10%.

Alliander is 100% owned by 77 Dutch provinces and municipalities. The province of Gelderland owns 44.7%, Friesland 12.7%, Noord-Holland 9.2%, and the city of Amsterdam 9.2%. The remainder is owned by other smaller Dutch municipalities.

Business Risk: Excellent

In our view, the Dutch regulatory framework has a high degree of regulatory stability because if provides well-developed tariff-setting procedures, and we see low risk of political interference. Regulated utilities in the Netherlands have historically been able to recover their costs and earn a return on their regulated asset base, along with low volatility of cash flows. In addition, the current five-year regulatory period, running from 2017 to 2021, has increased the level of visibility and predictability compared with the previous three-year regulatory periods.

Energy transition will support Alliander's business

The Dutch government intends to generate 16% of its total energy from sustainable sources by 2023. In addition, the proportion of renewable energy is forecast to expand to nearly 24% by 2030. There are a number of wind farms and solar parks in the Dutch pipeline over the next years to support these targets. Since these projects will need connecting to the end customers, in our opinion, Alliander will have a key role in helping the government achieve these goals.

In addition, although the ultimate decision to replace gas infrastructure with new heating solutions resides within the municipalities competencies, Alliander plays an active role for heat transition in the Netherlands. As natural gas is gradually phased out from the country, the company seeks alternative and sustainable ways to provide heating at the lowest possible cost and prioritizing the customer convenience. Currently, Alliander is optimizing capex deployment in its gas grid, meaning that older infrastructure will shut down ahead of the newer infrastructure, while new investments are minimized.

We understand that the group is also evaluating the possibility of developing district heating capabilities, which it would be capable of doing according to the Energy Transition Act, which came into effect in July 2018.

Industry-wide technical workforce scarcity may complicate capex plans.

As a result of the acceleration of the energy transition, the need for technically skilled workforce is increasing quicker than previously anticipated in the Netherlands. Alliander, among all the Dutch distribution system operators (DSOs), is facing a shortage of technical personnel that could potentially compromise workload feasibility. Although the company is proactively addressing the problem by, for instance, providing more and faster trainings and active cooperation with the sector, the shortage could widen by 2030. In our opinion, this could eventually prevent the company from achieving its capex targets and reducing the pace of the energy transition.

An additional risk of this phenomenon is that workforce deficit could reduce the company's responsiveness to outages because of time unavailability of technical support.

Peer comparison

Alliander N.V.--Peer Comparison

Table 1

Alliander N.V.	Enexis Holding N.V.	TenneT Holding B.V.	N.V. Nederlandse Gasunie	Stedin Holding N.V.		
AA-/Stable/A-1+	A+/Stable/A-1	A-/Stable/A-2	AA-/Stable/A-1+	A-/Stable/A-2		
	Average of past three fiscal years					
1,622.3	1,369.8	3,221.0	1,548.2	1,194.0		
616.3	702.1	1,233.2	1,076.2	495.5		
500.5	558.1	896.3	849.7	371.9		
168.7	212.4	224.0	332.0	89.0		
462.1	559.0	1,039.1	802.0	579.9		
546.7	488.9	2,009.7	302.5	499.0		
(84.5)	70.1	(970.6)	499.5	80.9		
(197.2)	(45.8)	(1,235.1)	231.5	(12.1)		
84.3	228.3	71.7	156.6	72.7		
1,959.7	2,222.9	7,662.1	4,181.2	3,046.3		
3,583.0	3,706.6	4,539.0	5,772.6	2,332.5		
38.0	51.3	38.3	69.5	41.5		
	AA-/Stable/A-1+ 1,622.3 616.3 500.5 168.7 462.1 546.7 (84.5) (197.2) 84.3 1,959.7 3,583.0	Alliander N.V. N.V. AA-/Stable/A-1+ A+/Stable/A-1 Average of past 1,622.3 1,369.8 616.3 702.1 500.5 558.1 168.7 212.4 462.1 559.0 546.7 488.9 (84.5) 70.1 (197.2) (45.8) 84.3 228.3 1,959.7 2,222.9 3,583.0 3,706.6	Alliander N.V. N.V. B.V. AA-/Stable/A-1+ A+/Stable/A-1 A-/Stable/A-2 Average of past three fiscal years 1,622.3 1,369.8 3,221.0 616.3 702.1 1,233.2 500.5 558.1 896.3 168.7 212.4 224.0 462.1 559.0 1,039.1 546.7 488.9 2,009.7 (84.5) 70.1 (970.6) (197.2) (45.8) (1,235.1) 84.3 228.3 71.7 1,959.7 2,222.9 7,662.1 3,583.0 3,706.6 4,539.0	Alliander N.V. N.V. B.V. Gasunie AA-/Stable/A-1+ A+/Stable/A-1 AA-/Stable/A-2 AA-/Stable/A-1+ Average of past three fiscal years		

Table 1

Alliander N.VPeer Comparison (cont.)								
Return on capital (%)	5.3	6.1	4.9	7.4	3.2			
EBITDA interest coverage (x)	9.1	8.4	6.3	7.7	5.2			
FFO cash int. cov. (X)	8.4	8.9	6.9	7.3	5.5			
Debt/EBITDA (x)	3.2	3.2	6.2	3.9	6.1			
FFO/debt (%)	25.5	25.1	11.7	20.3	12.2			
Cash flow from operations/debt (%)	23.6	25.1	13.6	19.2	19.0			
Free operating cash flow/debt (%)	(4.3)	3.2	(12.7)	11.9	2.7			
Discretionary cash flow/debt (%)	(10.1)	(2.1)	(16.1)	5.5	(0.4)			

^{*}We only include data for the fiscal year ended Dec. 31, 2017, for Stedin as its financial figures from 2016 and before are not representative.

Financial Risk: Modest

We see Alliander's capital structure as bearing low leverage and consider its financial position as the least risky of our Dutch DSO rated spectrum. This is because our forecast of the group's FFO to debt of 26%-28% over the next two years is stronger than the 21%-23% we forecast for Enexis Holding N.V. and our 12.0%-13.5% projections for Stedin Holding N.V. In addition, Alliander's debt to EBITDA of 2.9x-3.0x compares favorably with Enexis' 3.3x-3.5x and Stedin's 5.5x-6.0x. Furthermore, Alliander has a strong balance sheet with an average debt-to-debt-plus-equity ratio of 36% for the past three years, which is the lowest among all the Dutch DSOs and TSOs (transmission system operators). We believe that these differences, among other factors, result in an overall better credit quality.

Our base case scenario contemplates higher-than-average capex levels over the next years. We expect 50%-60% of this capex will be devoted to grid infrastructure replacement and expansion. We also expect that around 20%-25% will be allocated to smart metering rollout, which forecast to be fully deployed by 2021. Although we acknowledge that Alliander capex increase will lead to negative free cash flow levels in 2018 and slightly positive in 2019, we believe that the fact the Dutch regulatory framework is supportive in guaranteeing a return for the total recovery of these investments partially mitigates these concerns.

Scheduled decline in regulatory WACC will constrain revenues

In the Netherlands, the regulatory WACC provides the DSOs a return on their regulated asset base. Over the current regulatory period, the WACC (real pre-tax) is set to decline to 3.00% by end-2021 from 4.04% in 2017 due to reduced regulatory cost of debt.

The regulatory WACC multiplies the regulated asset base, then adds depreciation and operating expenses (opex) to set average efficient costs. These costs constitute the basis for future allowed revenues. Therefore, all other things equal, we expect a lower WACC to squeeze Alliander's revenues for future periods.

Alliander has consistently outperformed the regulated cost of debt over the past regulatory periods, providing a benefit in terms of profits and additional cash flows. However, this may become more challenging over the current regulatory period, given gradual, albeit constant, decline in regulated cost of debt.

We believe, nonetheless, that the company will be able to cope with these pressures due to higher sufferance tax compensation and metering tariffs, as well as operating efficiencies and cost-management initiatives that result in lower purchase and outsourced work costs. We also believe that investments related to the energy transition phase in the Netherlands will contribute to expanding Alliander's business over the next few years.

Financial summary Table 2

Alliander N.V Financial Sum	ımary				
Industry Sector: Electric					
	Fiscal year ended Dec. 31				
	2017	2016	2015	2014	2013
(Mil. €)					
Revenues	1,697	1,584	1,586	1,696	1,744
EBITDA	654.5	559.0	635.5	742.0	773.5
Funds from operations (FFO)	536.1	466.3	499.0	560.2	614.7
Net income from continuing operations	203	106	197	323	288
Cash flow from operations	474.1	387.3	525.0	630.2	694.7
Capital expenditures	570	581	489	489	488
Free operating cash flow	(95.9)	(193.7)	36.0	141.2	206.7
Discretionary cash flow	(207.9)	(286.7)	(97.0)	8.2	87.7
Cash and short-term investments	101	63	89	167	155
Debt	2,092.4	1,866.9	1,919.8	1,776.8	1,859.3
Equity	3,694	3,616	3,439	3,331	3,127
Adjusted ratios					
EBITDA margin (%)	38.6	35.3	40.1	43.8	44.4
Return on capital (%)	5.7	3.8	6.5	8.6	9.5
EBITDA interest coverage (x)	10.5	8.7	8.2	7.2	7.4
FFO cash int. cov. (x)	10.9	7.3	7.8	7.5	8.5
Debt/EBITDA (x)	3.2	3.3	3.0	2.4	2.4
FFO/debt (%)	25.6	25.0	26.0	31.5	33.1
Cash flow from operations/debt (%)	22.7	20.7	27.3	35.5	37.4
Free operating cash flow/debt (%)	(4.6)	(10.4)	1.9	7.9	11.1
Discretionary cash flow/debt (%)	(9.9)	(15.4)	(5.1)	0.5	4.7

Liquidity: Strong

We assess Alliander's liquidity as strong. We estimate that Alliander's liquidity sources will exceed its funding needs by more than 1.5x over the next 12 months and will remain above 1.0x over the subsequent 12 months on the back of its solid cash FFO generation and committed credit facilities in place, maturing beyond 2022.

We also believe that Alliander enjoys a high standing in the credit markets, reflected in the company's funding costs consistently outperforming regulated cost of debt and recent refinancing of its perpetual subordinated notes at a more

favorable rate.

Alliander's well-established and solid relationship with banks, and typically prudent risk management further underpin our assessment of the group's liquidity.

Principal Liquidity Sources	Principal Liquidity Uses
 Cash and short-term investments of €164 million as of Sept. 30, 2018. A committed credit facility of €600 million maturing in 2023 and €125 million available under Alliander European Investment Bank facility, maturing in 2031. Cash FFO of about €600 million. 	 Debt maturities of €133 million over the next 12 months. Capex of €620 million. Dividends of about €128 million.

Other Credit Considerations

Our negative comparable ratings analysis on Alliander reflects our view that Alliander's FFO to debt will trend between 26% and 28% over the current regulatory period. This is in the lower range of our modest financial risk assessment. It also reflects our view that the company's discretionary cash flow will remain negative over the next few years, reflecting higher capex and sustained dividends.

Issue Ratings - Subordination Risk Analysis

Capital structure

As of June 30, 2018, Alliander's reported debt totaled €2.06 billion, of which €1.4 billion consisted of euro medium-term notes, €175 million corresponds to a short-term eurocommercial paper, and the rest corresponds to finance lease liabilities and other smaller bank loans.

In addition, at that date, there was an outstanding balance of €87 million on Alliander's 3.25% perpetual subordinated notes issued in 2013 and tendered in January 2018, which we understand were liquidated on Nov. 27, 2018. Furthermore, we add 50% of Alliander's 1.625% €500 million perpetual subordinated notes in our calculations of the company's debt, because we evaluate this instrument as having intermediate equity content.

Analytical conclusions

We rate Alliander's senior unsecured debt at the level of its 'AA-' issuer credit rating.

Alliander is the holding company of a key operating company and other smaller subsidiaries. All new debt is issued at the Alliander level and debt at Liander level, which is small compared with the group's total, will be repaid at the end of 2027.

Besides this factor, we rate Alliander's debt in line with the issuer credit rating, because we consider the company's leverage to be low enough to limit the possibility of any noteholders being significantly disadvantaged relative to other lenders.

The perpetual notes are rated 'A', two notches below the 'AA-' issuer credit rating on Alliander, reflecting:

- A one-notch deduction because of contractual subordination; and
- An additional one-notch deduction for payment flexibility to reflect that the deferral of interest is optional.

Reconciliation

Table 3

Reconciliation Of Alli	idilaci iv	. v. rieporteu ri					Timounts (iv	····· •)		
	Fiscal year ended Dec. 31, 2017									
Alliander N.V. reported a	mounts									
	Debt	Shareholders' equity	EBITDA	Operating income	Interest expense	EBITDA	Cash flow from operations	Dividends paid		
Reported	1,934	3,942	701	305	48	701	454	120		
S&P Global Ratings' adju	stments									
Interest expense (reported)						(48.0)		-		
Interest income (reported)						1.0		-		
Current tax expense (reported)						(54.0)				
Operating leases	109.9		24.5	6.1	6.1	18.4	18.4	-		
Intermediate hybrids reported as equity	248	(248)			8	(8)	(8)	(8)		
Postretirement benefit obligations/deferred compensation	49.5					(3.3)	9.8	-		
Surplus cash	(101.0)							_		
Non-operating income (expense)				10.0						
Debt - Other	(148.0)									
EBITDA - Other			(71.0)	(71.0)		(71.0)				
D&A - Other				71.0						
Total adjustments	158.4	(248.0)	(46.5)	16.1	14.1	(164.9)	20.1	(8.0)		
S&P Global Ratings' adju	sted amou	ınts								
	Debt	Equity	EBITDA	EBIT	Interest expense	Funds from operations	Cash flow from operations	Dividend: paid		
Adjusted	2,092.4	3,694.0	654.5	321.1	62.1	536.1	474.1	112.0		

Ratings Score Snapshot

Issuer Credit Rating

AA-/Stable/A-1+

Business risk: Excellent

• Country risk: Very low • Industry risk: Very low

• Competitive position: Excellent

Financial risk: Modest

• Cash flow/Leverage: Modest

Anchor: aa

Modifiers

• Diversification/Portfolio effect: Neutral (no impact)

• Capital structure: Neutral (no impact)

• **Financial policy:** Neutral (no impact)

• **Liquidity:** Strong (no impact)

• Management and governance: Satisfactory (no impact)

• Comparable rating analysis: Negative (-1 notch)

Stand-alone credit profile: aa-

Related Criteria

- · General Criteria: Methodology And Assumptions: Assigning Equity Content To Hybrid Capital Instruments Issued By Corporate Entities And Other Issuers Not Subject To Prudential Regulation, Jan. 16, 2018
- Criteria Corporates General: Reflecting Subordination Risk In Corporate Issue Ratings, Sept. 21, 2017
- Criteria Corporates General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria Corporates Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria Corporates General: Corporate Methodology, Nov. 19, 2013
- Criteria Corporates General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology And Assumptions: Assigning Equity Content To Corporate Entity And North

American Insurance Holding Company Hybrid Capital Instruments, April 1, 2013

- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- · General Criteria: Criteria Clarification On Hybrid Capital Step-Ups, Call Options, And Replacement Provisions, Oct. 22, 2012
- General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010
- Criteria Financial Institutions General: Methodology: Hybrid Capital Issue Features: Update On Dividend Stoppers, Look-Backs, And Pushers, Feb. 10, 2010
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria Insurance General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Related Research

Why Do We View The Dutch Electricity And Gas Networks Regulatory Framework As Supportive?, March 2, 2016

Business And Financial Risk Matrix										
	Financial Risk Profile									
Business Risk Profile	Minimal	Minimal Modest Intermediate Significant Aggressive Highly leveraged								
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+				
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb				
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+				
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b				
Weak	bb+	bb+	bb	bb-	b+	b/b-				
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-				

Ratings Detail (As Of December 21, 2018)

Alliander N.V.

Issuer Credit Rating AA-/Stable/A-1+

Junior Subordinated Α Senior Unsecured AA-

Issuer Credit Ratings History

AA-/Stable/A-1+ 15-Aug-2013 30-Aug-2011 A+/Positive/A-1 27-Mar-2009 A/Stable/A-1

^{*}Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

Additional Contact:

 $Industrial\ Ratings\ Europe;\ Corporate_Admin_London@spglobal.com$

Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Ratingrelated publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.