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TenneT Holding B.V.

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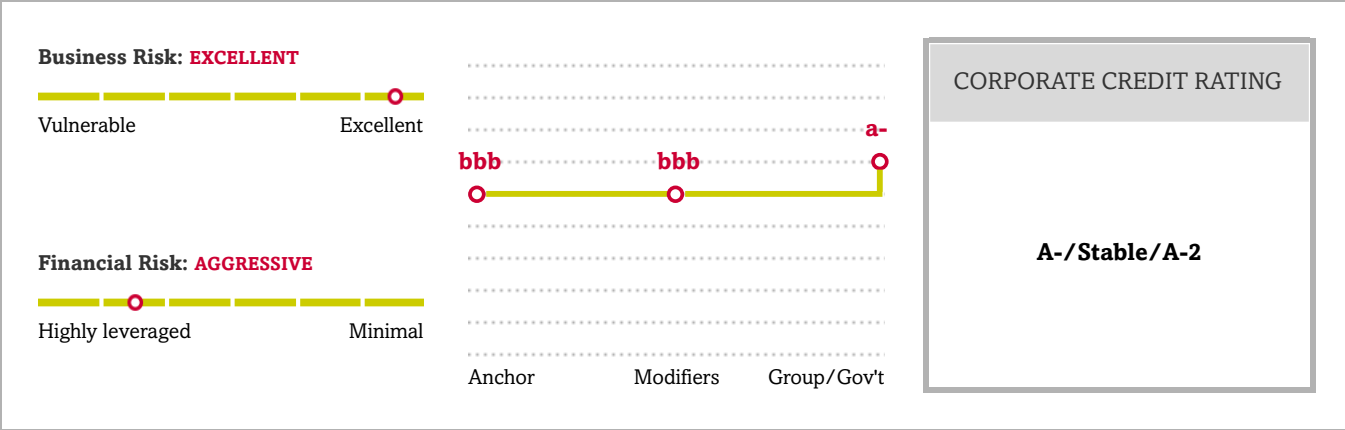
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TenneT Holding B.V.



Rationale

Business Risk: Excellent	Financial Risk: Aggressive
<ul style="list-style-type: none"> • Strategic importance as the owner and operator of transmission networks in The Netherlands and Germany. • Almost all revenues derived from low-risk transmission activities in relatively supportive, regulatory regimes. • Relatively efficient grid operator with high grid availability. • Execution risk on a very large capital expenditure (capex) program, which should result in the company almost doubling in size. • Lower expected returns in Germany from 2019. 	<ul style="list-style-type: none"> • Relatively predictable operating cash flows over the medium term. • Significantly negative free operating cash flow (FOCF) and aggressive leverage, due to a massive capex plan that will lead to ratio deterioration in the longer term. • Scale of funding needs requires ongoing capital market access.

Outlook: Stable

The outlook on Netherlands-based power grid operator TenneT Holding B.V. (TenneT) is stable, based on our expectation that operating conditions for transmission activities in The Netherlands and Germany will remain unchanged in the coming years. In particular, our base-case scenario assumes that TenneT's unique shareholder, the Dutch Ministry of Finance, would consent to lower dividends to mitigate any unexpected increase in the company's already high leverage and credit metrics.

The stable outlook also assumes large planned investments and lower returns in Germany from 2019, which will weaken credit metrics in the coming years. However, we expect credit metrics will remain commensurate with the ratings, notably with funds from operations (FFO) to debt sustainably above 6%. FFO to debt was 9.4% at year-end 2016 and we expect it will be above 10% at year-end 2017.

The stable outlook also reflects our expectation that TenneT will continue to benefit from a moderately high likelihood of extraordinary support from the Dutch government in the event of financial distress.

Downside scenario

We could lower the ratings on TenneT if we revised down its stand-alone credit profile (SACP) to 'bbb-' or lower. This could result from an adverse overhaul of the regulatory framework in either Germany or The Netherlands. Another triggering factor could be a marked deterioration in TenneT's credit metrics beyond what we already factor in our base case. We would consider downgrading TenneT if its S&P Global Ratings-adjusted ratio of FFO to debt falls to less than 6% on a prolonged basis. This could occur if, for example, TenneT further increased the size of its capex plan without offsetting measures, or if it faced unexpected delays or cost overruns on existing projects that were not reflected in regulated tariffs in a timely manner.

We would also consider a downgrade if the likelihood of extraordinary support from the Dutch government materially weakens. A one-notch downgrade of The Netherlands would not trigger a downgrade of TenneT, assuming an unchanged SACP.

Upside scenario

We see the likelihood of an upgrade as remote in light of TenneT's extensive investment program, leading to a material increase in debt by 2020 that will lower debt coverage ratios over the medium term. That said, we would consider revising the SACP upward if TenneT demonstrates that it can sustain adjusted FFO to debt of more than 10%, while maintaining negative FOCF to debt of no lower than 10%. This assumes an unchanged business risk profile.

We would also consider upgrading TenneT, assuming an unchanged SACP, if we believed that the likelihood of extraordinary support from the Dutch government had materially strengthened, although we consider this unlikely in the near term because of the high proportion of TenneT's capex in Germany.

Our Base-Case Scenario

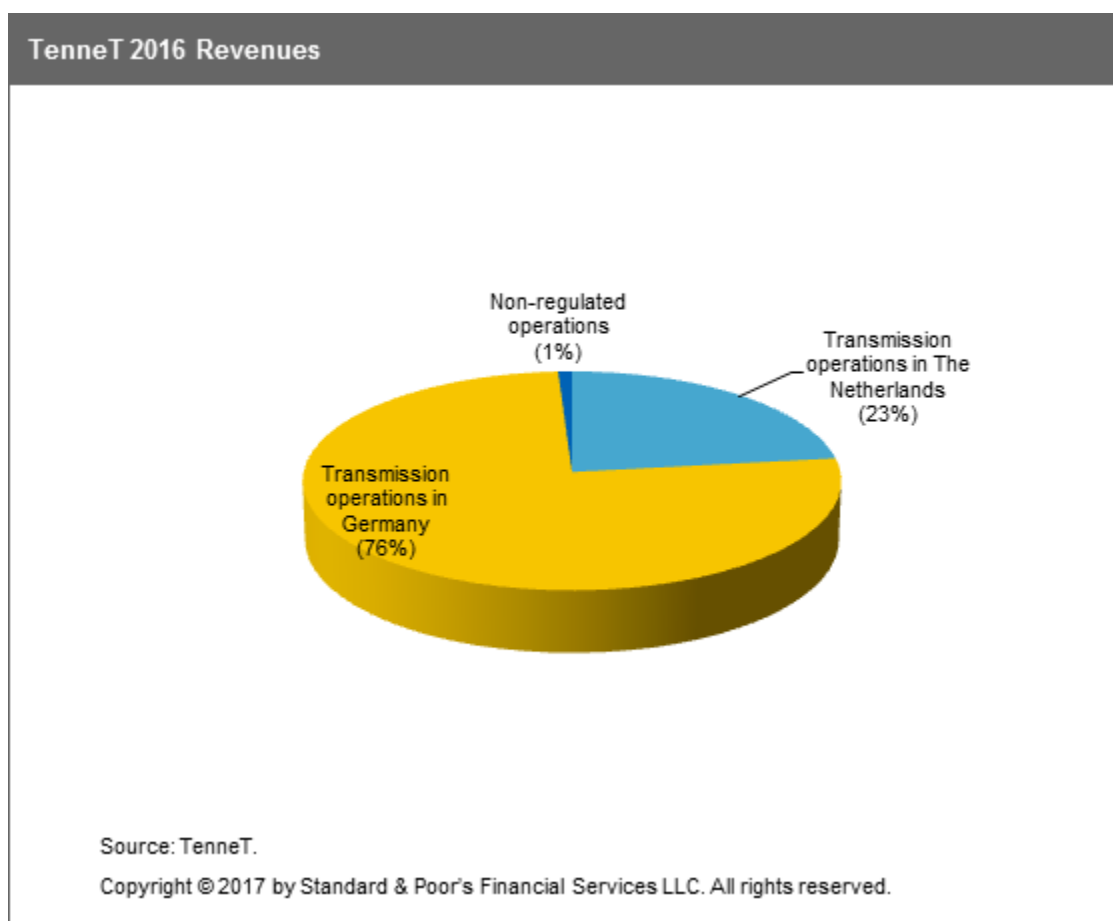
Assumptions	Key Metrics			
<ul style="list-style-type: none"> Steady revenue increase as investments in both The Netherlands and Germany increase the size of TenneT's regulatory asset base (RAB). We assume about €11 billion of capex over 2017-2020, about two-thirds of it in Germany. Sustainable and heavily negative FOCF generation, ranging between -€1.0 billion and -€1.7 billion, driven by offshore and onshore grid investments in Germany and The Netherlands. Dividend payout of 35%, which is lower than that of most regulated entities. €1.2 billion equity contribution from the Dutch government in 2017-2020. Potential ratio constraints and uncertainties from 2022, following reduced regulatory returns on investments in Germany from 2019 and the start of a new regulatory period in The Netherlands. However, we think that financial constraints from the very high capex should alleviate around that time as well, potentially offsetting the lower ratios. 	2016a	2017f	2018f	
	EBITDA (€ bil.)	1.1	c.1.4	N.A.
	Adjusted debt (€ bil.)	8.3	8.0-9.0	N.A.
	EBITDA margin	37.8	~40.0	~40.0
	FFO/debt (%)	9.4	10.0-13.0	10.0-13.0
	FOCF/debt	(16.4)	(~15.0)	(~15.0)
<p>a--Actual. f--Forecast. FFO--Funds from operations. FOCF--Free operating cash flow. N.A.--Not available.</p>				

Company Description

TenneT is The Netherlands' only electricity transmission system operator (TSO), serving 41 million end-users in The Netherlands and Germany through approximately 22,000 kilometers of high-voltage transmission lines. TenneT is one of the largest TSOs in Europe and the only one in the world with a fully contiguous, cross-border transmission grid. It is 100% owned by the Dutch state. About one-half of TenneT's existing power lines are located in The Netherlands (in terms of length) and the other half in Germany, but the company derives close to 80% of its revenues from Germany.

TenneT is involved in limited nonregulated activities (less than 5%) through its 50% stake in BritNed, a merchant cable operator; a 17% stake in EPEX, a North West European electricity exchange; a 100% stake in Relined, a cable infrastructure company; and a 100% stake in Novec, a provider of antenna installation points for telecom operators in The Netherlands.

Chart 1



Recent developments

- TenneT's results for the half year ending June 30, 2017, were in line with our base case. Strong revenue growth was largely due to an increased RAB and increased reimbursement of rising system expenses. This increased half-year EBITDA to €796 million from €715 million previously.
- Capital investments remain high, at €750 million for the half year, but adjusted debt was constant at about €8.4 billion, thanks to a €150 million capital contribution from the Dutch State and temporary working capital adjustments (see the section below titled "The distortion of underlying results due to IFRS and working capital movements," for more detail). Our adjusted debt figure comprises €7.7 billion of financial debt and about €500 million of pension and asset retirement obligation adjustments. FFO to debt was 12.3% on a 12-month rolling basis.
- We expect the remuneration of investments in Germany to decline for the power transmission regulatory period starting in 2019. This does not affect expansion investments for offshore connections, as we expect them to be remunerated within the German investment measure mechanism.
- The German regulator Bundesnetzagentur (BNetzA) will reduce the pre-corporate tax equity return to 6.91% for the next regulatory period from 9.05% for the current period. The proposed reduction is mainly driven by the lower reference interest rate, and by the reduction of the risk premium.
- BnetzA has not yet issued its efficiency target for the regulatory period starting in 2019. We expect this efficiency target, as well as the reduced return on equity (RoE), to weigh on the profitability of network operators.
- In April 2017, TenneT was the first European company to issue a green hybrid bond, amounting to €1 billion. The

hybrid was sized to at least replace the existing €500 million hybrid debt that TenneT issued in 2010. We consider the bond to have intermediate equity content. For more information, see "Netherlands-Based Electricity TSO TenneT's Proposed Junior Subordinated Security Rated 'BB+'," published on May 17, 2017.

Business Risk: Excellent

TenneT's business risk profile is supported by its position as The Netherlands' only electricity TSO and Germany's largest electricity TSO.

The bulk of TenneT's revenues are generated under the German and Dutch regulatory regimes, which we view as supportive. TenneT is exposed to higher execution risks than other TSOs, due to its very large capex plan, especially in Germany, where the rapid growth in renewable energy necessitates significant investments in the onshore and offshore grids, creating a range of new challenges and risks. Over the next ten years, TenneT expects to invest €25 billion in onshore and offshore grid infrastructure across The Netherlands and Germany. These risks are partly offset by TenneT's good operating performance and track record so far.

Two supportive regulatory frameworks, but significant capex requirements

TenneT operates both in The Netherlands and in Germany, under two regulatory frameworks that we view as strong (see "Why We See Germany's Electricity And Gas Regulatory Framework As Supportive," published on Nov. 21, 2016, and "Why Do We View The Dutch Electricity And Gas Networks Regulatory Framework As Supportive?," published on March 2, 2016, for more information).

In The Netherlands, the current regulatory period has been extended to five from three years, which in our view provides operators with more stability. The pre-tax real weighted average cost of capital (WACC) for existing onshore assets will decline to 3.0% in 2021 from 4.3% in 2016, but to 3.0% in 2021 from 3.6% in 2016 for new assets. The WACC for offshore investments is the same as the WACC for new onshore investments, with an operating expenditure (opex) budget of 1% of the investment value in the offshore grid. TenneT is currently appealing the regulator's decision to remove the ex-post settlement of energy and capacity purchase costs for onshore investment, as this would increase TenneT's exposure to price and volume risk. TenneT has also appealed the opex allowance.

The new German regulatory period will run for five years from 2019 to 2023, with a pre-corporate tax RoE set at 6.91% (5.64% post tax), versus 9.05% currently (7.39% post tax). The framework is an incentive-based regime, with cost-plus features for expansion capex under investment measures that the regulator has approved using a sectoral productivity factor that it is still deciding.

Peer comparison

We compare TenneT to other TSOs in Europe. Unlike most of its peers, TenneT operates in two countries, Germany and The Netherlands, which brings some diversification to regulatory reset risk, but also some additional complexity. The main thing that differentiates TenneT from its European peers is its high capex program, which results in highly negative FOCF-to-debt and discretionary cash flow-to-debt ratios. Consequently, we view TenneT's financial risk profile at the lower end of the aggressive category, whereas its peers have significant or intermediate financial risk profiles.

Belgium TSO Elia System Operator S.A./N.V. also has a dual geographic zone, with ownership in 50Hertz. Its financial profile is close to TenneT's long-term financial profile, including FFO to debt of 9%, and it also has a large capex plan. The main reason that Elia's SACP is one notch higher than TenneT's is that the scale of its capex is lower.

However, TenneT benefits from a few strengths that its European TSO peers do not share. The company has a lower dividend payout (35%) and is supported on an ongoing basis by the Dutch government. In particular, TenneT's financial profile will be supported by up to €1.2 billion equity contribution from the Dutch government in 2017-2020.

Due to its high capex, we expect that TenneT will grow at a much faster rate than its peers. As a result, the company faces higher operational and financing risks over the next 10 years.

Table 1

TenneT Holding B.V.--Peer Comparison						
(Mil. €)	TenneT Holding B.V.	Elia System Operator S.A./N.V.	RTE Réseau de Transport d'Electricité	Terna SpA	N.V. Nederlandse Gasunie	
--Fiscal year ended Dec. 31, 2016--						
Revenues	2,843.0	2,013.3	4,446.3	2,103.2	1,621.7	
EBITDA	1,075.0	725.1	1,741.2	1,554.0	1,140.7	
Funds from operations (FFO)	782.0	509.7	1,201.3	1,108.2	868.6	
Net income from cont. oper.	167.0	179.9	403.0	633.1	183.5	
Cash flow from operations	420.0	780.9	1,226.0	1,553.7	887.6	
Capital expenditures	1,786.0	1,205.1	1,400.1	781.8	291.3	
Free operating cash flow	(1,366.0)	(424.2)	(174.1)	771.9	596.3	
Discretionary cash flow	(1,644.5)	(558.1)	(303.4)	365.7	264.6	
Cash and short-term investments	157.0	1,399.3	403.3	1,135.7	269.7	
Debt	8,318.2	4,353.5	9,725.8	8,105.6	4,222.9	
Equity	4,631.0	3,809.2	5,105.5	3,555.2	5,672.5	
Adjusted ratios						
EBITDA margin (%)	37.8	36.0	39.2	73.9	70.3	
Return on capital (%)	4.0	7.6	6.3	9.1	8.1	
EBITDA interest coverage (x)	5.4	4.9	5.6	14.0	7.6	
FFO cash interest coverage (x)	6.7	5.7	5.2	4.8	7.1	
Debt/EBITDA (x)	7.7	6.0	5.6	5.2	3.7	
FFO/debt (%)	9.4	11.7	12.4	13.7	20.6	
Cash flow from operations/debt (%)	5.0	17.9	12.6	19.2	21.0	
Free operating cash flow/debt (%)	(16.4)	(9.7)	(1.8)	9.5	14.1	
Discretionary cash flow/debt (%)	(19.8)	(12.8)	(3.1)	4.5	6.3	

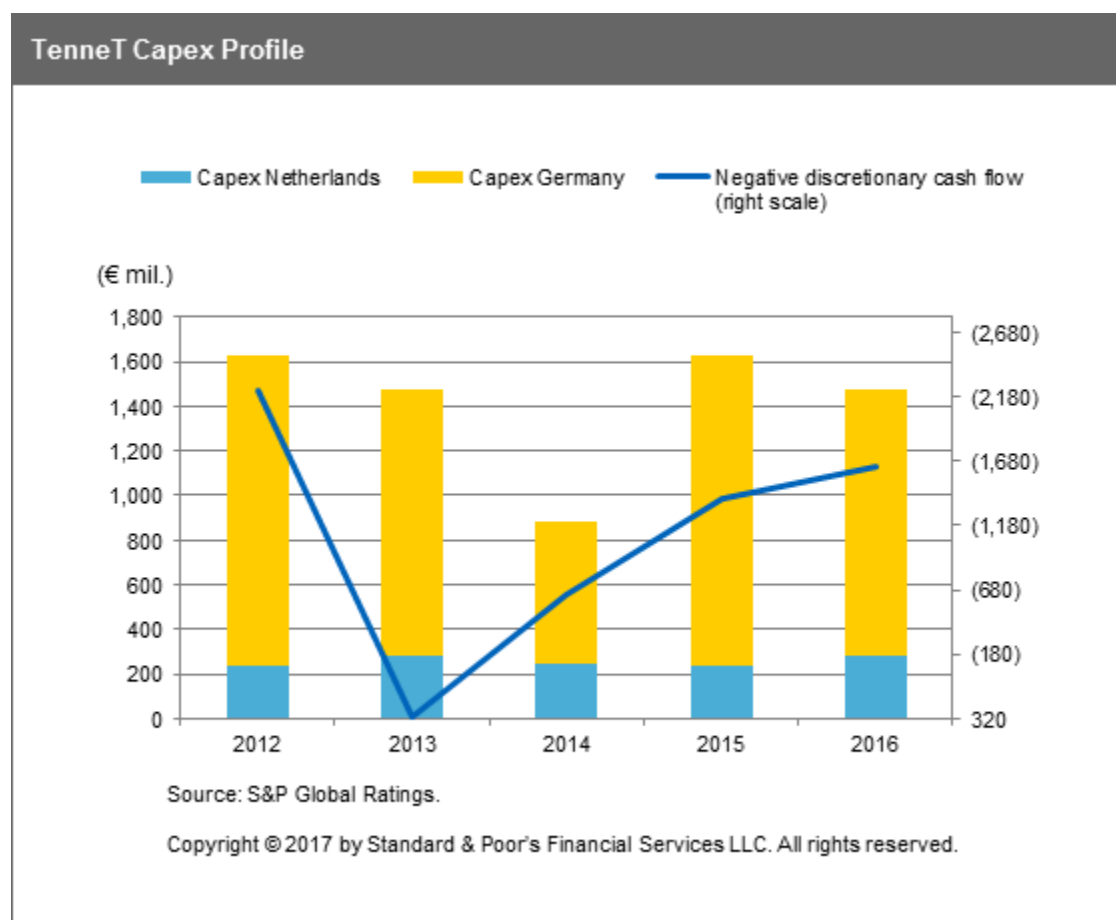
Financial Risk: Aggressive

TenneT's financial risk profile is supported by its very stable regulated cash flow generation derived from Germany and The Netherlands. TenneT's financial risk profile is constrained by rising financial leverage because of significantly negative FOCF, substantial short-term cash flow volatility with substantial working capital swings, and high ongoing funding requirements.

Rising financial leverage because of significantly negative FOCF

TenneT will need to fund €1.7 billion-€2.6 billion in capex per year over the next 10 years, which is one of the most challenging capex programs of all the European TSOs, especially given TenneT's current size. This capex program is fully regulated and therefore does not pose a major risk to the company's long-term business risk profile. However, our rating on TenneT is constrained by the scale of the capex program and we rate the company one notch lower than we would if its FOCF was closer to a neutral position.

Chart 2

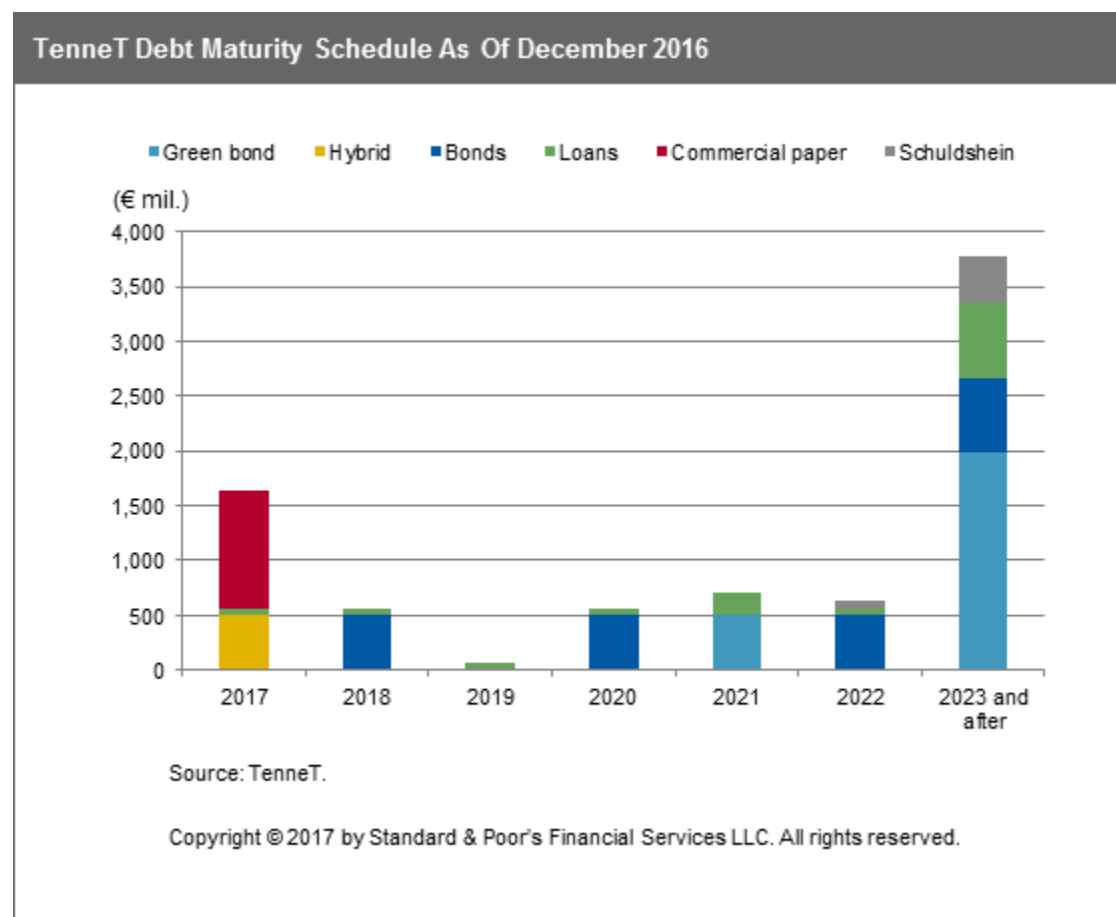


Debt structure and liability management

The scale of TenneT's funding requirements means that the company needs good and consistent access to debt markets. We consider that TenneT has a good standing in the credit markets. TenneT is one of Europe largest green

bond issuer and has a long-dated maturity schedule of bonds, loans, and commercial paper.

Chart 3



The distortion of underlying results due to IFRS and working capital movements

Germany's Renewable Energy Act ("Erneuerbare-Energien-Gesetz" or EEG) requires TSOs to buy and transmit renewable energy before other kinds of energy at the full price, including the renewable subsidy. The TSOs then sell the renewable energy onto exchanges at market price, which excludes the subsidy. The TSOs recover the subsidy from consumers on a monthly basis. Since October 2016, the company has treated the EEG cash flows as restricted cash so the impact on net debt should be neutral.

Financial Summary

Table 2

TenneT Holding B.V. Financial Summary					
	--Fiscal year ended Dec. 31--				
(Mil. €)	2016	2015	2014	2013	2012
Revenues	2,843.0	2,844.0	2,597.0	2,429.0	1,647.0
EBITDA	1,075.0	1,045.0	1,321.0	895.0	457.4
Funds from operations (FFO)	782.0	723.7	1,025.3	610.4	311.8
Net income from continuing operations	167.0	28.0	541.0	426.0	177.0

Table 2

TenneT Holding B.V. Financial Summary (cont.)					
--Fiscal year ended Dec. 31--					
(Mil. €)	2016	2015	2014	2013	2012
Cash flow from operations	420.0	1,245.7	1,646.3	2,140.4	(574.2)
Capital expenditures	1,786.0	2,489.0	2,131.0	1,787.0	1,610.0
Free operating cash flow	(1,366.0)	(1,243.3)	(484.7)	353.4	(2,184.2)
Dividends paid	278.5	145.5	151.5	42.5	43.5
Discretionary cash flow	(1,644.5)	(1,388.8)	(636.2)	310.9	(2,227.7)
Debt	8,318.2	5,549.4	4,077.2	3,601.4	3,928.8
Preferred stock	(270.0)	(270.0)	(270.0)	(270.0)	(249.0)
Equity	4,631.0	3,918.0	3,918.0	3,090.0	2,592.0
Debt and equity	12,949.2	9,467.4	7,995.2	6,691.4	6,520.8
Adjusted ratios					
EBITDA margin (%)	37.8	36.7	50.9	36.8	27.8
EBITDA interest coverage (x)	5.4	5.7	7.9	5.9	3.2
FFO cash interest coverage (x)	6.7	5.9	7.9	5.3	3.3
Debt/EBITDA (x)	7.7	5.3	3.1	4.0	8.6
FFO/debt (%)	9.4	13.0	25.1	16.9	7.9
Cash flow from operations/debt (%)	5.0	22.4	40.4	59.4	(14.6)
Free operating cash flow/debt (%)	(16.4)	(22.4)	(11.9)	9.8	(55.6)
Discretionary cash flow/debt (%)	(19.8)	(25.0)	(15.6)	8.6	(56.7)
Net cash flow / capex (%)	28.2	23.2	41.0	31.8	16.7
Return on capital (%)	4.0	3.2	12.6	6.6	4.1
Return on common equity (%)	4.4	0.3	16.7	14.7	7.0
Common dividend payout ratio (un-adj.) (%)	137.1	417.9	18.2	13.8	33.9

Liquidity: Adequate

TenneT has adequate sources of liquidity for the next 12 months, in our view. We expect that the company's sources of liquidity will exceed uses by 1.2x over this period.

We understand that there are no restrictive covenants in the documentation for the company's debt.

Principal Liquidity Sources	Principal Liquidity Uses
<ul style="list-style-type: none"> Unrestricted cash of about €172 million as of June 30, 2017; FFO of about €1.0 billion-€1.4 billion; and Available undrawn committed bank facilities of €2,200 million maturing in more than 12 months and a €350 million European Investment Bank facility. 	<ul style="list-style-type: none"> About €2.0 billion-€2.5 billion in capex; About €800 million in debt maturing over the 12 months from June 30, 2017; and Dividend payments based on a 35% payout ratio.

Government Influence

In accordance with our criteria for government-related entities, our view of a moderately high likelihood of support is based on our assessment of TenneT's:

- Important role for the government, given the company's strategic importance for the domestic energy sectors as the monopoly owner and operator of the Dutch electricity TSO network, and its service area in Germany. The recently agreed equity contributions illustrate the importance of TenneT for the government; and
- Strong link with The Netherlands, given our view that TenneT, which is currently fully owned by the Dutch State, is likely to remain majority state-owned.

Our assessment of the likelihood of extraordinary support is lower for TenneT than for other European TSOs, because of the increasing dominance of TenneT's German operations, which we consider to be of higher risk than those in The Netherlands due to TenneT's large offshore wind-connection activities. We believe that the Dutch government could find it politically difficult to provide full and timely support to TenneT if it encounters financial difficulty due to problems in its German operations.

Ratings Score Snapshot

Corporate Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Strong

Financial risk: Aggressive

- **Cash flow/Leverage:** Aggressive

Anchor: bbb

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Fair (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : bbb

- Related government rating: AAA
- Likelihood of government support: Moderately high (+2 notches from SACP)

Reconciliation

Table 3

Reconciliation Of TenneT Holding B.V. Reported Amounts With S&P Global Ratings' Adjusted Amounts								
(Mil. €)								
--Fiscal year ended Dec. 31, 2016--								
TenneT Holding B.V. reported amounts								
	Debt	Shareholders' equity	EBITDA	Operating income	Interest expense	EBITDA	Dividends paid	Capital expenditures
Reported	7,504.0	3,930.0	1,035.0	439.0	143.0	1,035.0	295.0	1,796.0
S&P Global Ratings' adjustments								
Interest expense (reported)	--	--	--	--	--	(143.0)	--	--
Interest income (reported)	--	--	--	--	--	7.0	--	--
Current tax expense (reported)	--	--	--	--	--	(129.0)	--	--
Operating leases	91.2	--	20.0	6.7	6.7	13.3	--	--
Debt-like hybrids	20.0	(20.0)	--	--	--	--	--	--
Intermediate hybrids reported as equity	250.0	(250.0)	--	--	16.5	(16.5)	(16.5)	--
Postretirement benefit obligations/ deferred compensation	134.3	--	--	--	3.0	(0.3)	--	--
Surplus cash	(157.0)	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	10.0	(10.0)	--	(10.0)
Dividends received from equity investments	--	--	88.0	--	--	88.0	--	--
Asset retirement obligations	384.8	--	--	--	19.0	5.5	--	--
Non-controlling interest/minority interest	--	971.0	--	--	--	--	--	--
Debt--accrued interest not included in reported debt	91.0	--	--	--	--	--	--	--
EBITDA--income (expense) of unconsolidated companies	--	--	(78.0)	(78.0)	--	(78.0)	--	--
EBITDA--other	--	--	10.0	10.0	--	10.0	--	--
Total adjustments	814.2	701.0	40.0	23.7	55.2	(253.0)	(16.5)	(10.0)
S&P Global Ratings' adjusted amounts								
	Debt	Equity	EBITDA	EBIT	Interest expense	Funds from operations	Dividends paid	Capital expenditures
Adjusted	8318.2	4631.0	1075.0	462.7	198.2	782.0	278.5	1786.0

Related Criteria

- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology For Linking Short-Term And Long-Term Ratings For Corporate, Insurance, And Sovereign Issuers, May 7, 2013
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- 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
- 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
- General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008
- General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

Related Research

- Germany 'AAA/A-1+' Ratings Affirmed, Outlook Stable, April 28, 2017
- Why We See Germany's Electricity And Gas Regulatory Framework As Supportive , Nov. 21, 2016
- State of The Netherlands 'AAA/A-1+' Ratings Affirmed; Outlook Stable, Nov. 18, 2016
- Why Do We View The Dutch Electricity And Gas Networks Regulatory Framework As Supportive?, March 2, 2016
- Country Risk Assessments Update: February 2014, Feb. 11, 2014
- Standard & Poor's Assigns Industry Risk Assessments To 38 Nonfinancial Corporate Industries, Nov. 20, 2013

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	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 November 14, 2017)

TenneT Holding B.V.

Corporate Credit Rating	A-/Stable/A-2
Commercial Paper	
<i>Local Currency</i>	A-2
Junior Subordinated	BB+
Senior Unsecured	A-
Short-Term Debt	A-2
Subordinated	BBB

Corporate Credit Ratings History

15-Apr-2010	A-/Stable/A-2
21-Jan-2010	A-/Watch Neg/A-2

*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.

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