S&P Global
Ratings

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Summary:

TenneT Holding B.V.

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Table Of Contents

Summary:
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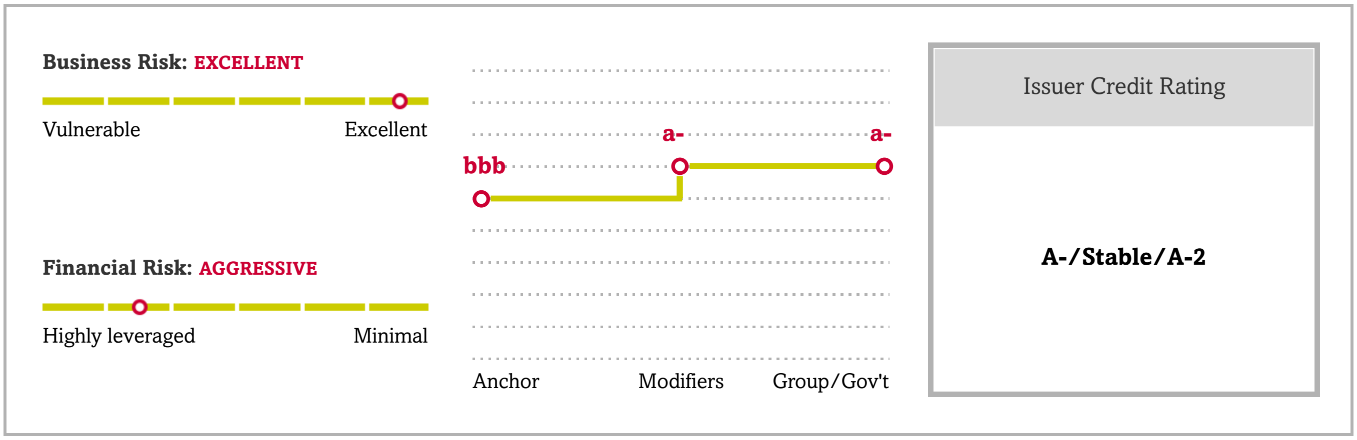

Credit Highlights

Overview

Key Strengths	Key Risks
Almost all income from relatively predictable and regulated earnings, thanks to supportive regulatory frameworks in the Netherlands and Germany.	Pressure on profitability, owing to regulatory period resets and ongoing funding needs that weigh on credit metrics.
Significant growth prospects, owing to the large investment program that will increase the regulatory asset base (RAB).	Very large capital expenditure (capex) tied to the network development plan (NDP) with limited flexibility, requiring significant financing and equity contributions.
Moderately high likelihood of support from the Dutch government in times of distress.	Material negative free cash flow after capex and dividends over the coming two years.

Two supportive regulatory frameworks support TenneT's business profile.

TenneT is the sole electricity transmission system operator (TSO) in the Netherlands and one of four TSOs in Germany (alongside Amprion, 50Hertz/Eurogrid, and TransnetBW). Like the other TSOs, TenneT benefits from stable, five-year regulatory periods with well-defined and transparent conditions. The regulatory framework provides virtually full coverage of costs and protection against volume and commodity risk. However, S&P Global Ratings expects a reduction in remuneration in 2019 when the regulatory period in Germany is reset, which will weigh on profitability because about 75% of TenneT's income stems from Germany. Furthermore, the expected setting of German sectorial efficiency factors (xgen) could lead to lower profitability than expected. The company improved its German individual efficiency factor (xind) to 99.9% for the coming regulatory period from 97%. In the Netherlands, the current regulatory period ends in 2021.

Significant capex requirements will increase risks over the next decade.

To help facilitate Europe's energy transition, TenneT is making significant investments in its role as TSO under the NDP. We expect its capex will total around €28 billion over the next 10 years, mainly related to offshore wind farm connections and Germany's underground North-South onshore grid. Consequently, we expect TenneT will expand faster than its peers, and face higher operational and financing risks over that period. TenneT has limited financial flexibility in terms of timing and the size of cash investment outflows. The company benefits from frequent issuance of hybrid and green bonds, and its ongoing financing needs are partly compensated by equity contributions from the Dutch government.

Ongoing and expected support from the Dutch government underpins our ratings on TenneT.

We believe the Dutch government would provide timely and sufficient extraordinary support to TenneT in the event of financial distress, given its 100% ownership of TenneT and the company's standing as part of critical European and Dutch power system infrastructure. TenneT receives ongoing support from the government through a lower dividend payout (35% of profit) than for peers and equity contributions to finance projects totaling about €1.2 billion over 2017-2020 (about €500 million received in 2017 and 2018). The government's equity commitment is aimed at supporting TenneT's extensive investments in the Netherlands. In 2011 and 2012, TenneT received cumulative equity injections at the corporate level of about €600 million.

Outlook: Stable

Our outlook on Netherlands-based power grid operator TenneT is stable because we expect operating conditions for power transmission in Netherlands and Germany won't change in the coming years. In particular, in our base-case scenario, we assume that TenneT's direct owner, the Dutch Ministry of Finance, would consent to lower dividends to mitigate an unexpected increase in the company's already high leverage. Overall, we continue to see a moderately high likelihood of TenneT receiving extraordinary support from the Dutch government in the event of financial distress.

We assume that TenneT's large planned investments and lower returns in Germany from 2019 will weaken its credit metrics in the coming years. However, we expect they will remain commensurate with the ratings, notably with funds from operations (FFO) to debt sustainably above 6%. FFO to debt was 13% at year-end 2017 and we expect it to decline to about 11% by year-end 2018.

Downside scenario

We could lower the ratings if TenneT's stand-alone credit profile (SACP) deteriorates to 'bbb-' or lower. This could result from adverse changes to either regulatory framework that materially affected the stability of TenneT's cash flows or profitability.

We would also downgrade TenneT if the S&P Global Ratings-adjusted ratio of FFO to debt declines and stays below 6%. This could occur if, for example, TenneT's capex increases further, without offsetting measures, or it there are unexpected delays or cost overruns on existing projects that are not covered by regulated tariffs.

If the Dutch government seems less likely to support TenneT, we could lower the rating on the company. However, a one-notch downgrade of the Netherlands would not trigger a downgrade of TenneT once TenneT's stand-alone credit quality doesn't weaken.

Upside scenario

We see the likelihood of an upgrade as remote in light of TenneT's extensive investment program, which will lead to a material increase in debt by 2020 and weaken 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 no lower than 10%, assuming its business risk doesn't increase.

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

- Somewhat reduced regulatory visibility, owing to uncertainty on the setting of Germany's xgen factors, the productivity targets for TSOs through the next five-year regulatory period starting 2019.
- Gradual weakening of financial metrics due to reduced regulatory returns on investments in Germany from 2019.
- A steady rise in revenue as investments in the Netherlands and Germany increase the RAB. We assume about €7 billion of capex over 2018-2020, about two-thirds of this in Germany, and about 50% of total capex in off-shore connections.
- Minimum €700 million of equity contributions from the Dutch government in 2019-2020.
- A dividend payout ratio of 35%.
- Significant negative cash flow after capex and dividends over the coming two years of -€1.0 billion to -€1.5 billion.

Key Metrics

	2017A	2018E	2019E
EBITDA (bil. €)*	1.58	~1.4	N.A.
FFO/Debt (%)*	13.0	10.0-13.0	9.5-12.5
FOCF/Debt (%)*	(3.3)	~(10.0)	~(10.0)

A--Actual. E--Estimate. FFO--Funds from operations. FOCF--Free operating cash flow. N.A.--Not available. *S&P Global Ratings adjusted figures.

Base Case Projections

Lower cost of debt will weigh on remuneration and profitability.

We expect the regulatory remuneration in Germany to decline for the power transmission regulatory period starting in 2019. The German regulator Bundesnetzagentur (BNetzA) will reduce the return on equity (ROE) allowance by about 200 basis points, mainly due to lower reference interest rate and the reduction of the risk premium. BNetzA has not yet issued its sectorial efficiency target (xgen) for the next regulatory period which leaves some uncertainty about the productivity an efficient (xind = 100%) TSO is expected to achieve over the five-year regulatory period. German TenneT is assessed to have 99.9% xind efficiency score.

The large capex program, while fueling growth, will also put TenneT's credit metrics under pressure.

TenneT has embarked on an aggressive capex plan that it aims to execute over the next 10 years to cope with renewable energy dynamics in Germany and the Netherlands. Although this will enable the company to expand faster than its peers, we believe it will result in negative free operating cash flow in each year of our forecast, thus increasing the company's financing needs. This translates into a gradual deterioration of the company's credit metrics, which we nonetheless believe will remain consistent with the current rating.

A lower regulatory allowance in German offshore operations could bring additional pressure.
We foresee further pressure on TenneT from a change in the remuneration calculation in Germany. As of 2018, German offshore operating expenditure will be remunerated at actual cost compared with a lump-sum allowance of 3.4% previously. This will leading to a lower regulatory allowance.

Company Description

TenneT is a leading European electricity TSO serving 41 million end users in the Netherlands and Germany through about 22,900 kilometers (km) of high voltage transmission lines. As such, the company's activities are under the oversight of the regulatory authorities in each jurisdiction, the Autoriteit Consument & Markt in the Netherlands and Bundesnetzagentur (BNetzA) in Germany. The company generates annual turnover of about €4 billion and EBITDA of €1.5 billion (about 75% in Germany); its asset book value totals €20 billion. TenneT is involved in limited non-regulated activities (about 5%) through its 50% stake in BritNed, a merchant cable operator (Anglo-Dutch interconnector), 17% stake in EPEX, a North West European electricity exchange, and 100% stake in Relined and NOVEC, two telecommunication infrastructure companies.

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 company generates the bulk of its revenues 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 of renewable energy necessitates significant investments in the onshore and offshore grids, creating a range of new challenges and risks. Over the next 10 years, TenneT expects to invest €28 billion in onshore and offshore grid infrastructure in both countries. These risks are partly offset by TenneT's good operating performance and track record so far.

In our view, the regulatory frameworks in the Netherlands and Germany provide TSOs with a strong regulatory advantage. Electricity operators benefit from the regulators' solid track record of stability and five-year regulatory periods with well-defined and transparent conditions, which makes for relatively predictable financial performance. The regulatory framework provides virtually full coverage of costs and protection against volume and commodity risk (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 March 2, 2016, for more information).

Peer comparison

We compare TenneT with 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 key difference between TenneT and most of its European peers is its large 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 weaker.

Nevertheless, TenneT benefits from a few strengths that its European TSO peers do not share, in particular a lower dividend payout (35%) and ongoing support from its related government. For example, TenneT benefits from a €1.2 billion equity contribution from the Dutch government over 2017-2020.

Table 1

TenneT Holding B.V.--Peer Comparison

Industry Sector: Electric

	TenneT Holding B.V.	N.V. Nederlandse Gasunie	Elia System Operator S.A./N.V.	Terna SpA	National Grid PLC
Rating as of Nov. 21, 2018	A-/Stable/A-2	AA-/Stable/A-1+	BBB+/Stable/A-2	BBB+/Negative/A-2	A-/Stable/A-2
(Mil. €)		**--Fiscal year ended Dec. 31, 2017--**			**Fiscal year ended March 31, 2017**
Revenues	3,976	1,319	2,086	2,245	17,579
EBITDA	1,580	894	857	1,603	5,679
Funds from operations (FFO)	1,183	761	530	1,169	4,101
Net income from cont. oper.	477	260	229	688	2,116
Cash flow from operations	1,452	664	567	1,687	5,274
Capital expenditures	1,754	266	850	892	4,114
Free operating cash flow	(302)	398	(283)	795	1,159
Discretionary cash flow	(672)	287	(419)	376	(610)
Cash and short-term investments	55	72	783	1,989	9,972
Debt	9,119	3,873	5,125	7,904	25,626
Equity	5,068	5,866	4,006	3,829	25,061
Adjusted ratios					
EBITDA margin (%)	39.7	67.8	41.1	71.4	32.3
Return on capital (%)	6.7	5.4	7.8	9.2	6.9
EBITDA interest coverage (x)	7.7	8.2	5.7	15.6	4.2
FFO cash int. cov. (X)	7.8	7.3	7.7	5.3	5.9
Debt/EBITDA (x)	5.8	4.3	6.0	4.9	4.5
FFO/debt (%)	13.0	19.6	10.4	14.8	16.0
Cash flow from operations/debt (%)	15.9	17.1	11.1	21.3	20.6
Free operating cash flow/debt (%)	(3.3)	10.3	(5.5)	10.1	4.5
Discretionary cash flow/debt (%)	(7.4)	7.4	(8.2)	4.8	(2.4)

Financial Risk: Aggressive

TenneT's financial risk profile is supported by relatively predictable regulated cash flows. However, substantial investments result in high debt, which we expect will increase over the next 10 years. Although we believe that this high capex creates some operating risks and limits financial flexibility, we understand that it will be remunerated because it is part of TenneT's regulated activity. There is some volatility of cash flow metrics embedded in the regulatory framework, owing to delayed recovery of unexpected costs (such as for congestion-management measures); however, we view this as a working capital issue rather than a credit risk.

We expect TenneT's credit metrics will weaken in the coming years, but allow sufficient headroom at the current SACP level. In particular, we expect adjusted FFO to debt to decline to below 10% after 2020 from about 13% at year-end 2017, and debt to increase by more than €1 billion annually. The forecast decline is mainly due to the continuation and recent expansion of the investment program as per the German and Dutch NDP, combined with lower regulatory remuneration, specifically in Germany.

Financial summary

Table 2

TenneT Holding B.V.--Financial Summary					
Industry Sector: Electric					
	--Fiscal year ended Dec. 31--				
(Mil. €)	**2017**	**2016**	**2015**	**2014**	**2013**
Revenues	3,976.0	2,843.0	2,844.0	2,597.0	2,429.0
EBITDA	1,579.5	1,075.0	1,045.0	1,321.0	895.0
Funds from operations (FFO)	1,183.0	782.0	723.7	1,025.3	610.4
Net income from continuing operations	477.0	167.0	28.0	541.0	426.0
Cash flow from operations	1,451.5	420.0	1,245.7	1,646.3	2,140.4
Capital expenditures	1,754.0	1,786.0	2,489.0	2,131.0	1,787.0
Free operating cash flow	(302.5)	(1,366.0)	(1,243.3)	(484.7)	353.4
Discretionary cash flow	(672.0)	(1,644.5)	(1,388.8)	(636.2)	310.9
Cash and short-term investments	55.0	157.0	3.0	83.0	120.0
Debt	9,118.7	8,318.2	5,549.4	4,077.2	3,601.4
Equity	5,068.0	4,631.0	3,918.0	3,918.0	3,090.0
Adjusted ratios					
EBITDA margin (%)	39.7	37.8	36.7	50.9	36.8
Return on capital (%)	6.7	4.0	3.2	12.6	6.6
EBITDA interest coverage (x)	7.7	5.4	5.7	7.9	5.9
FFO cash int. cov. (x)	7.8	6.7	5.9	7.9	5.3
Debt/EBITDA (x)	5.8	7.7	5.3	3.1	4.0
FFO/debt (%)	13.0	9.4	13.0	25.1	16.9
Cash flow from operations/debt (%)	15.9	5.0	22.4	40.4	59.4
Free operating cash flow/debt (%)	(3.3)	(16.4)	(22.4)	(11.9)	9.8
Discretionary cash flow/debt (%)	(7.4)	(19.8)	(25.0)	(15.6)	8.6

Liquidity: Adequate

We consider TenneT's liquidity to be adequate for the next 12 months. As of Sept. 30, 2018, we expect that the company's sources of liquidity will exceed uses by more than 1.2x over this period.

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

Principal Liquidity Sources:	Principal Liquidity Uses:
• Unrestricted cash of about €50 million. • Available undrawn committed bank facilities of €2.2 billion maturing in July 2021 and a €350 million European Investment Bank facility available for at least the coming 12 months.	• €325 million in debt maturing over the next 12 months. • Capex of €2.0 billion-€2.5 billion. • Dividend payments based on a 35% payout ratio.

Issue Ratings--Recovery Analysis

Capital structure

TenneT is using hybrid capital to support its large investment program in Germany. We consider the rated €1.1 billion outstanding hybrids to have intermediate equity content.

TenneT is the biggest corporate issuer of green senior unsecured bonds in the Netherlands. In addition to its existing green bonds (€4.75 billion outstanding) issued to invest in green energy, TenneT successfully placed its first green Hybrid bond in April 2017.

Analytical conclusions

TenneT's debt structure is within our guidelines for aligning the rating on senior unsecured debt with the 'A-' issuer credit rating (ICR). This is because all of outstanding debt is at the parent company level and there is no secured debt.

We arrive at our 'BB+' issue rating on the hybrid instruments by notching down from our 'bbb' SACP on TenneT. The two-notch difference stems from deducting:

- One notch for subordination because our long-term ICR and SACP assessment are investment grade (higher than 'BB+'); and
- An additional notch for payment flexibility, to reflect that the deferral of interest is optional.

Government Influence

We base our view of a moderately high likelihood of government support for TenneT on our assessment of the company's:

- Important role for the Dutch government, given its strategic importance for the domestic energy sectors as the monopoly owner and operator of the Dutch electricity TSO network. The ongoing equity contributions illustrate TenneT's importance for the Dutch government; and
- Strong link with the Netherlands, since TenneT is currently fully owned by the Dutch government and we believe it will likely 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. 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.

Reconciliation

Table 3

Reconciliation Of TenneT Holding B.V. Reported Amounts With S&P Global Ratings Adjusted Amounts (Mil. €)

	--Fiscal year ended Dec. 31, 2017--								
TenneT Holding B.V. reported amounts									
	Debt	**Shareholders' equity**	**EBITDA**	**Operating income**	**Interest expense**	**EBITDA**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
Reported	7,742	4,731	1,529	900	157	1,529	1,595	388	1,762
S&P Global Ratings adjustments									
Interest expense (reported)	--	--	--	--	--	(157)	--	--	--
Interest income (reported)	--	--	--	--	--	9	--	--	--
Current tax expense (reported)	--	--	--	--	--	(210)	--	--	--
Operating leases	230	--	57	11	11	45	45	--	--
Debt-like hybrids	20	(20)	--	--	--	--	--	--	--
Intermediate hybrids reported as equity	500	(500)	--	--	9	(9)	(19)	(19)	--
Postretirement benefit obligations/deferred compensation	140	--	--	--	3	(1)	(7)	--	--
Surplus cash	(55)	--	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	8	(8)	(8)	--	(8)
Dividends received from equity investments	--	--	54	--	--	54	--	--	--
Asset retirement obligations	446	--	--	--	18	(10)	(7)	--	--
Non-operating income (expense)	--	--	--	9	--	--	--	--	--

Table 3

Reconciliation Of TenneT Holding B.V. Reported Amounts With S&P Global Ratings Adjusted Amounts (Mil. €) (cont.)									
Reclassification of interest and dividend cash flows	--	--	--	--	--	--	(149)	--	--
Non-controlling Interest/Minority interest	--	857	--	--	--	--	--	--	--
Debt - Accrued interest not included in reported debt	97	--	--	--	--	--	--	--	--
EBITDA - Income (expense) of unconsolidated companies	--	--	(69)	(69)	--	(69)	--	--	--
EBITDA - Other	--	--	9	9	--	9	--	--	--
EBIT - Income (expense) of unconsolidated companies	--	--	--	69	--	--	--	--	--
Total adjustments	1,377	337	51	29	49	(346)	(143)	(19)	(8)
S&P Global Ratings adjusted amounts									
	Debt	**Equity**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
Adjusted	9,119	5,068	1,580	929	206	1,183	1,452	370	1,754

Ratings Score Snapshot

Issuer 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)

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- 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
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- 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: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 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

Business And Financial Risk Matrix

	Financial Risk Profile					
Business 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-

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