S&P Global
Ratings

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Deutsche Telekom AG

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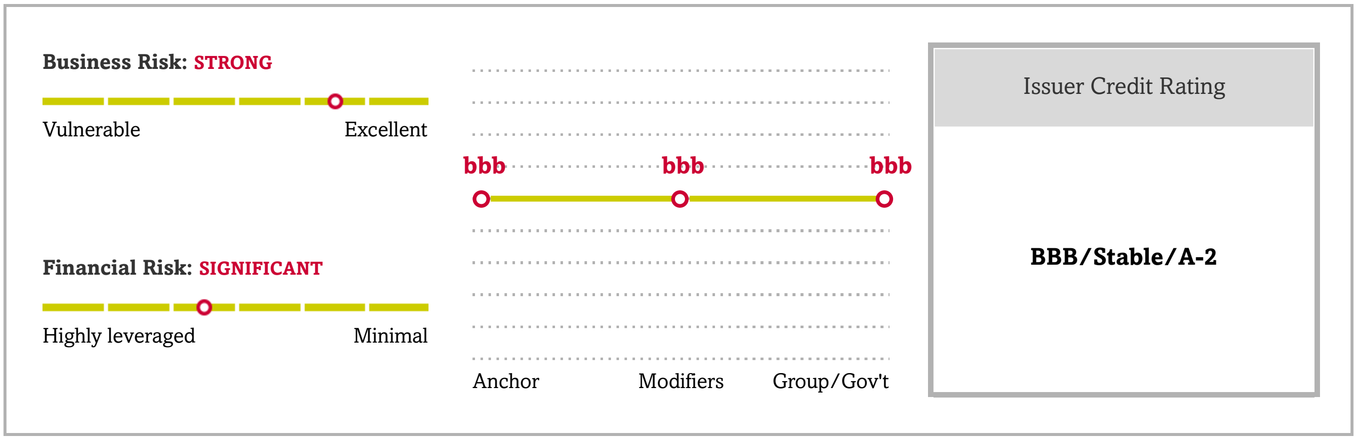
Deutsche Telekom AG



Credit Highlights

Overview

Key strengths	Key risks
Leading position in fixed and mobile in the German telecom market.	Competition is likely to intensify in the German fixed market, which could erode DT's domestic market position in the longer term.
Rational competition in the mobile domestic market, with three established and an emerging fourth mobile network operator, and rational pricing and predictable conditions in fixed broadband.	Capital expenditure likely to remain high at 16%-18% of sales as fixed and mobile networks are upgraded and spending on fiber-to-the-home (FTTH) increases.
High-quality mobile network in Germany and improving broadband network.	Heavy merger-related integration costs and potential spectrum outlays in 2021 in the U.S. weighing on free operating cash flow (FOCF) to debt and leverage ratios through 2020-2022.
Diversification and growth opportunities boosted by leading positions in several European fixed and mobile markets.	DT likely to exceed the upper limit of its 2.25x-2.75x net debt to EBITDA comfort zone through 2022, with an S&P Global Ratings-adjusted leverage materially higher than 3.5x over the period.
Controlling stake owned in the No. 2 U.S. mobile player TMUS-Sprint, with strong spectrum position and substantial merger synergies.	Saturated and competitive U.S. wireless market.

The on-going TMUS- Sprint merger, and potential spectrum outlays in 2021 in the U.S., will significantly weigh on FOCF and leverage over 2020-2021. Integrating Sprint Corp. into T-Mobile U.S. (TMUS) is estimated to cost about $15 billion over five years, and the U.S. subsidiary has higher debt leverage than the Deutsche Telekom AG (DT) group. As a result, this will weigh on S&P Global Ratings' adjusted consolidated debt to EBITDA, which we foresee will shoot up to about 3.7x-3.8x in 2020, from about 3x in the previous two years. In addition, because of potential outlays from the on-going C-Band frequency auction in the U.S., leverage could increase further in 2021. The ratio will then likely recede towards 3.5x by 2023. The higher leverage will also temporarily cap our ratio of adjusted of free operating cash flow (FOCF) to debt (excluding spectrum) at around 5%-7% over 2020-2022.

DT's four-year call option on an 8% stake in TMUS, which allows DT to keep the control in TMUS over the long-term, will likely be within rating parameters. Should it be exercised today, DT would have to pay about €11 billion in our estimate. It would allow DT to keep a controlling stake in TMUS when the current proxy agreement with Softbank comes to an end. At this stage, we believe that the magnitude of the deleverage we anticipate in the future will likely create enough headroom within the rating for such an outlay, assuming it is debt funded sometime in 2023-2024. In addition, we also note that DT could choose to fund the option differently, through a mix of debt and equity.

The business risk profile is temporarily diluted, but should strengthen after the integration is complete. In addition to execution and integration risks, we consider that the enlarged U.S. operations would still be less-established in the market than DT's domestic business. The combined U.S. business is the No. 2 U.S. mobile player (by subscribers), but because it would contribute more than half of group EBITDA, our view of DT's business would initially weaken.

That said, as the integration progresses, the combination is likely to bring substantial benefits in terms of market share, spectrum holdings, and improved competitive conditions in the U.S. wireless market. It will also offer synergies that could expand DT's unadjusted EBITDA margins by about five percentage points over the following four or five years.

The acquisition of cable operator Unitymedia by Vodafone is not a game-changer for DT in the short term, but could reinforce competitive and capital expenditure (capex) pressure over time. Vodafone has approximately doubled its cable network coverage to about two thirds of German households from the Unitymedia acquisition, which may erode DT's market share. It is unlikely, however, to redraw the competitive landscape, particularly given Vodafone's history of rational behavior in the German market after the acquisition of Kabel Deutschland. In addition, DT's efforts to promote the take-up of fixed-mobile convergence bundles are likely to provide some churn protection.

In the medium term, Vodafone's acquisition could increase competitive headwinds for DT. Vodafone plans to upgrade 25 million homes (almost its entire footprint) to gigabit speeds by 2022. This would give it a headline speed advantage over the 25 million homes covered by DT, which currently receive 250 megabits per second (Mbps). Although we do not expect customers to see this as a key reason to switch providers at present, it could become more important over time. As a result, DT may need to scale up its FTTH investments beyond its current roll-out plan of 2 million homes a year from 2021.

Competition may increase in the German mobile market, but it is unlikely to disrupt market conditions in the next two years. 1&1 Drillisch, which is 75% owned by telecom service and internet applications provider United Internet, acquired 70 megahertz (MHz) of spectrum in the German mid-band auction in June 2019. It plans to commence the build out of its own mobile network with these frequencies. However, we think this will have little effect on competitive conditions and DT's mobile business. Drillisch is already established in the market as a mobile virtual network operator (MVNO) and its revenue market share stands at about 9%. That said, after several years, once Drillisch has achieved a viable level of coverage, we could see competition becoming more aggressive. It could then cut prices to increase its network utilization.

Outlook: Stable

The stable outlook on DT reflects the assumption that the integration of T-Mobile and Sprint will progress without major setbacks, but at the same time that cost synergies will be offset by near-term integration expense. The outlook also reflects our belief that DT will defend its domestic market positions in mobile and fixed broadband, and manage its domestic cost base effectively, supporting moderately increasing EBITDA in Germany. We anticipate the group's pro forma adjusted leverage will peak at about 3.6x-3.7x in 2020 and progressively recede thereafter, and that its pro forma funds from operations (FFO) to debt and FOCF to debt before spectrum, will gradually strengthen, from the low 20% range and 6%-7% range, respectively.

Downside scenario

We could lower the rating if difficulties with the integration resulted in considerably weaker operating performance in the U.S. market than we expect, causing S&P Global Ratings-adjusted debt to EBITDA to durably exceed 4x; FFO to debt to weaken to less than 20%; or FOCF to debt, before spectrum and leases, to drop and remain sustainably below 5%.

Upside scenario

We could raise the rating if these occur:

- The integration succeeds, with synergies at the combined U.S. operations, accompanied by continued solid performance in Germany; and
- Significantly strengthened credit metrics, such that S&P Global Ratings-adjusted debt to EBITDA, FFO to debt, and FOCF to debt before lease and spectrum payments, improved to comfortably less than 3.5x and to 25% and 10%, respectively.

Our Base-Case Scenario

Assumptions

In our base-case scenario, we assume:

- A recession in the wake of the COVID-19 pandemic, with eurozone real GDP declining by 7.2% in 2020 (by 5.6% in Germany) and U.S real GDP declining by 3.9% in 2020. We do not envisage significant adverse effects of the recession, however, given the recurring, subscription-based business models and the fundamental, recession-resistant nature of the telecommunication services. In addition, GDP growth is forecast to rebound to 4.8% in 2021 (3.7% in Germany) and 4.2% in the U.S.
- A dollar depreciation against the euro in 2021-2022, with an exchange rate of $1.14 per euro in 2020, $1.19 in 2021, and flat thereafter, compared with an average of $1.12 in 2019.
- Revenue growth for the DT group of about 30% in 2020 pro forma a 12 month consolidation of Sprint, and negative 1.6% on average in 2021-2022, as growth on the legacy T-Mobile network will be offset by higher customer churn from Sprint's business through the integration, and after our assumed dollar depreciation in 2021.

- Revenues in Europe to be slightly negative of -1% in 2020 due to the COVID-19 headwinds, and about flat in 2021-2022 as slight growth in Germany and Europe is offset by our assumption of lower information technology services revenues.
- Pro forma S&P Global Ratings-adjusted EBITDA margins for DT of 31% in 2020 and 32%-34% in 2021-2022, compared with 33% in 2019, based on IFRS 16 and including our handset leasing adjustment, and underpinned by margin improvement but constrained by the integration-related costs in the U.S.
- Pro forma capital expenditures (capex), excluding spectrum acquisitions, of about 18% of sales on average over 2020-2022, including integration outlays in the U.S., up from 16% in 2019.
- $7 billion annual working capital requirements at the combined U.S. operations on average over 2020-2021, mostly in connection with handset leasing.
- Cash dividends of about €3.1 billion annually.
- No share buybacks.
- About €1.2 billion and €3.1 billion of cash proceeds in 2020 and 2023 from the disposal of Sprint's prepaid business, Boost, and antitrust remedy's spectrum disposals, respectively.

Key metrics

Deutsche Telekom AG--Key Metrics*

	2019a	2020f	2021f§	2022f§
EBITDA margin (%)	33.4	31.0	32.5	33.6
Capex/sales (%)*	16.3	17.5	18.3	18.2
Debt/EBITDA (x)	3.0	3.7-3.8	3.6-3.7	3.5-3.6
FFO/debt (%)	26.9	22-23	22-23	23-24
FOCF/debt (%)*	11.1	5-6	6-7	6-7

All data adjusted by S&P Global Ratings, including captive finance adjustments, except capex to sales (unadjusted). *Excluding spectrum. FFO--Funds from operations. FOCF--Free operating cash flow, defined as cash flow from operations after investments in property, plant, and equipment, and intangible assets. §Not including the impact of any C-Band outlays in 2021. a--Actual. f--Forecast.

The Sprint merger and potential spectrum acquisition will increase leverage in 2020-2021, and several years would be required before it falls back to within DT's financial policy framework. At this stage, we expect DT's leverage to increase to 3.7x-3.8x in 2020, to increase further in 2021 on potential spectrum outlays in the U.S., and recede thereafter likely towards 3.5x by 2023. We foresee reported leverage to remain outside DT's 2.25x-2.75x target range through 2022. Thereafter, however, further deleverage would likely translate into significant rating headroom within the 3.5x S&P Global Ratings-adjusted leverage trigger from 2023 onwards.

Company Description

Germany-headquartered DT is one of the world's largest telecommunications operators. It mainly offers fixed and mobile telecommunication services, and its corporate structure comprises the following operational divisions: Germany (21% of company-adjusted EBITDA in the third quarter 2020); the U.S. (64%); Europe (11%); Group development (3%), which includes DT's operations in the Netherlands and its tower business in Germany; System Solutions (1%). DT's largest shareholder is Germany, which holds a 14.5% direct stake and a further 17.4% indirect stake through the German government-owned bank KfW.

Peer Comparison

Table 1

Deutsche Telekom AG--Peer Comparison

Industry sector: Diversified telecom

	Deutsche Telekom AG	Telefonica S.A.	Orange S.A.	Vodafone Group PLC	Verizon Communications Inc.	AT&T Inc.
Ratings as of Nov. 23, 2020	BBB/Stable/A-2	BBB-/Stable/A-3	BBB+/Stable/A-2	BBB/Stable/A-2	BBB+/Positive/A-2	BBB/Stable/A-2
	--Fiscal year ended--					
	Dec. 31, 2019	Dec. 31, 2019	Dec. 31, 2019	March 31, 2020	Dec. 31, 2019	Dec. 31, 2019
(Mil. €)						
Revenue	80,531.0	51,264.0	42,238.0	44,974.0	116,818.7	160,915.9
EBITDA	27,079.6	15,571.0	13,706.0	18,470.0	46,529.6	56,656.2
Funds from operations (FFO)	22,054.6	13,186.0	11,136.5	15,195.5	37,779.5	46,519.9
Interest expense	3,230.0	1,906.0	1,397.5	2,252.5	5,711.3	8,628.5
Cash interest paid	4,267.0	1,754.0	1,490.5	2,344.5	5,557.2	8,870.0
Cash flow from operations	22,832.0	13,330.0	10,827.5	15,822.5	34,726.8	42,871.2
Capital expenditure	14,014.0	8,410.0	8,215.0	7,605.0	15,401.2	17,318.9
Free operating cash flow (FOCF)	8,818.0	4,920.0	2,612.5	8,217.5	19,325.6	25,552.3
Discretionary cash flow (DCF)	5,008.0	1,674.0	300.0	4,752.5	10,400.1	10,131.4
Cash and short-term investments	5,393.0	9,165.0	6,112.0	20,373.0	2,311.6	10,809.3
Debt	85,323.0	54,113.7	37,530.1	62,102.5	116,706.2	187,384.9
Equity	46,231.0	20,479.9	31,544.1	61,777.0	54,414.4	172,750.8
Adjusted ratios						
EBITDA margin (%)	33.6	30.4	32.4	41.1	39.8	35.2
Return on capital (%)	7.3	6.9	7.8	1.3	16.1	7.2
EBITDA interest coverage (x)	8.4	8.2	9.8	8.2	8.1	6.6
FFO cash interest coverage (x)	6.2	8.5	8.5	7.5	7.8	6.2
Debt/EBITDA (x)	3.2	3.5	2.7	3.4	2.5	3.3
FFO/debt (%)	25.8	24.4	29.7	24.5	32.4	24.8
Cash flow from operations/debt (%)	26.8	24.6	28.9	25.5	29.8	22.9
FOCF/debt (%)	10.3	9.1	7.0	13.2	16.6	13.6
DCF/debt (%)	5.9	3.1	0.8	7.7	8.9	5.4

We consider DT's business is incrementally stronger than that of Telefonica and Orange because our view of the market structure and competitive conditions in Germany is more favorable than those in Spain and France. In particular, there is less infrastructure competition in fixed broadband and mobile competition is not as fierce. DT also lacks the exposure to country, economic, and currency risks that Telefonica has incurred through its operations in Latin America. However, Telefonica and Orange have progressed further than DT in rolling out FTTH in their domestic markets, which reduces their longer-term capex risks.

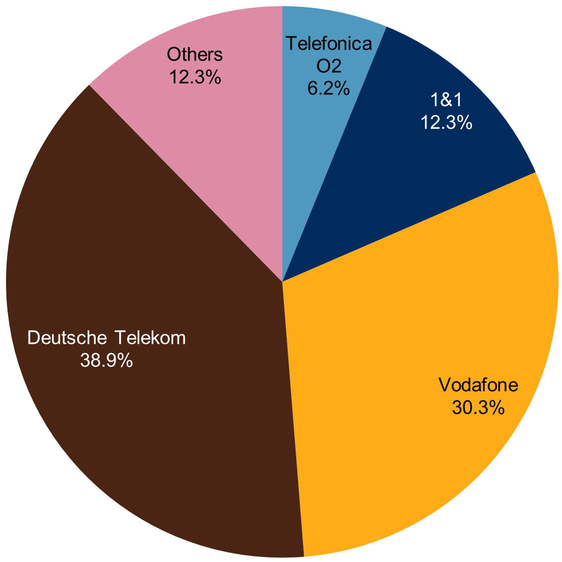
We view DT's business as marginally stronger than Verizon's, primarily due to its broader geographic diversification and higher share of fixed-line or converged assets. This is partly offset by Verizon's stronger position in the U.S. wireless market.

Business Risk: Strong

DT remains a clear market leader in the German fixed broadband market. Despite intense competition from cable operators and competitors that have wholesale access to its network, DT continues to enjoy a strong incumbent market position in fixed broadband and a market share of about 39% as of the second quarter of 2019. This is ahead of Vodafone, which has a share of about 30% (including Unitymedia); and Drillisch, which has about 12% (see chart 1). DT's market broadband market share has declined by 2 percentage points over the past five years (see chart 2) and we expect the company will continue to cede incremental share, chiefly to cable operators. That said, we do not foresee any major shifts in the next two years. Similarly, DT leads the mobile market, where it has a service revenue share of about 37% (32% total mobile revenue share including MVNOs and service providers). There are three network operators in Germany.

Chart 1

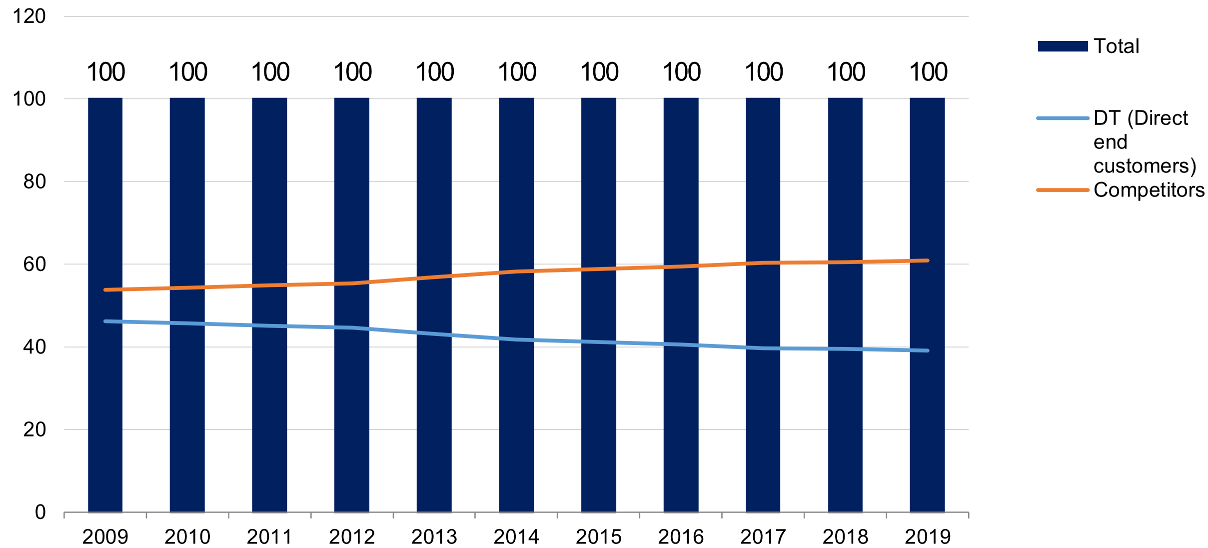
Fixed Broadband Market Share %
As on June 30, 2020



Source: Dialog Consult Newsletter 2020

Chart 2

Share Of Fixed Broadband %
Estimate for 2019



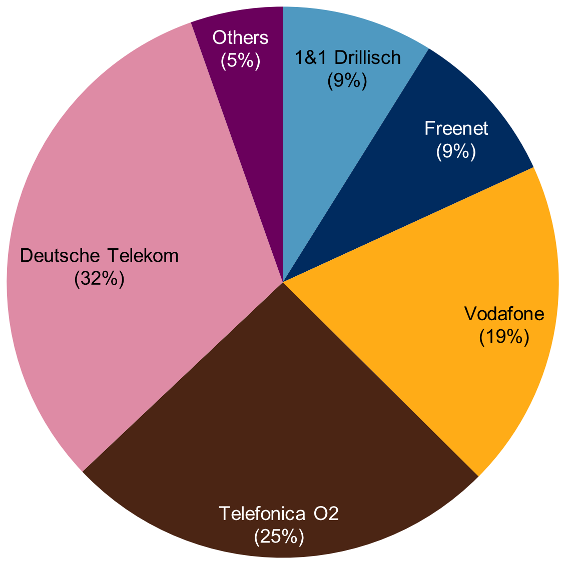
Source: Bundesnetzagentur Annual Report 2019

DT keeps investing to stay competitive, but this drives high capex. DT's value proposition benefits from the company's ongoing investments in fixed and mobile network upgrades. The company enjoys a reputation for leading mobile network performance in Germany. In fixed broadband, DT continues to invest to raise broadband speeds, aiming to ramp up its roll-out of FTTH to about 2 million homes per year from 2021. Domestic capex will therefore remain high, as a percentage of sales, in the range of 20%-21% in our forecasts over 2021-2023 (excluding spectrum).

Competition in Germany is intense, but less destructive than in some other European markets. The relatively benign mobile market conditions in Germany were aided by the four-to-three merger between O2 and E-Plus in 2014. In addition, most display increasingly rational pricing behavior; for example, they do not indulge in cheap unlimited data offers. These conditions have supported positive mobile service revenue growth recently (excluding the COVID-19 headwinds in the previous two quarters) despite the presence of sizable MVNOs like Drillisch, service providers such as Freenet, and the availability of a number of no-frills brands (see chart 3).

Chart 3

Mobile Retail Market Share %
Estimate for 2020 (including interconnection, wholesale and end devices)



Source: Dialog Consult Newsletter 2020

Although promotional activity affects Germany's fixed broadband market, pricing and competitive behavior is typically predictable. Rates for regulated access to DT's network also limit the downside to current pricing levels, capping the potential for steeply discounted offers by the competitors that use DT's infrastructure today, such as Drillisch or Telefonica O2.

Compared with other European markets, such as Spain or France, DT benefits from the limited number of competing fixed-line networks and the fact that demand for very high speeds is evolving only gradually. FTTH coverage is currently limited to about 10% of homes. This makes the cable networks of Vodafone and Tele Columbus the main alternative high-speed infrastructure--we estimate that they cover 65%-70% of households. At the same time, consumers' appetite for very high speeds is muted so far, so the take-up of more expensive offers on cable and FTTH network remains to be seen. These factors allow DT to maintain premium retail pricing while facing only very modest market share erosion, and we do not foresee any major changes in the next two years.

Substantial increase in scale in the U.S. after the merger with Sprint. After the merger with Sprint in April 2020, we think that T-Mobile's improved market share and scale, combined with its strong spectrum holdings, will enable it to better compete with its larger peers.(See: Research Update: T-Mobile US Inc. Downgraded To 'BB' On Weaker Credit Metrics Following Acquisition Of Sprint; Outlook Stable April 1, 2020.)

European markets add scale, but tend to be more volatile. We think DT's operations in the Netherlands, Austria, and nine Central and Eastern Europe markets provide additional diversification and expansion opportunities for DT, as mobile data consumption and broadband and pay TV penetration grow. In most of the larger markets, DT holds a Top 2 market position in mobile, and is either an incumbent or a meaningful converged player--Poland and the Netherlands are notable exceptions. That said, in many countries, DT is also exposed to tough competition and economic and regulatory conditions that we regard as less stable than those in its domestic market. This is likely to result in higher earnings volatility over time.

Financial Risk: Significant

Our view of DT's financial risk reflects the group's increased leverage, factoring in the heavy integration costs and higher debt leverage in the U.S. compared with the group's, and the pressure on its FOCF during the first few years. DT expects its company-adjusted leverage to increase above its net debt to EBITDA target band of 2.25x-2.75x and to return into that band within three years after the April 2020 closing.

We fully consolidate the combined U.S. entity into the wider DT group in our analysis. Although DT's economic interest is limited to 43%, the company controls a majority of the voting rights through a proxy agreement with Softbank. In addition, since June 2020, offsetting an agreed release of Softbank from previous lock-up provisions, DT has received a four-year call option on an 8% stake in TMUS. Assuming the option is exercised, DT can retain control of the asset in the future, including the ability to determine key operating decisions and dictate financial policy.

We further understand that DT will continue to define its public financial policy targets for the consolidated group, including the U.S. operations. Moreover, given the sheer size of TMUS-Sprint's contribution to group EBITDA and FOCF, we believe DT would consider providing some support to TMUS in a financial distress scenario, depending on the circumstances and within the limits set by its own credit documentation and the shareholder and governance structure. Furthermore, we estimate that the divergence between leverage computed fully consolidated, compared with pro rata, is not material. Therefore, we do not believe that the full consolidation view, as opposed to the pro rata view, meaningfully distorts the economic reality of key credit metrics.

Financial summary

Table 2

Deutsche Telekom AG--Financial Summary

Industry sector: Diversified telecom					
	--Fiscal year ended Dec. 31--				
	2019	**2018**	**2017**	**2016**	**2015**
(Mil. €)					
Revenue	80,531.0	75,656.0	74,947.0	73,095.0	69,228.0
EBITDA	27,079.6	24,715.3	24,001.7	21,802.2	22,133.5
Funds from operations (FFO)	22,054.6	19,481.3	18,449.7	16,558.7	16,692.0
Interest expense	3,230.0	3,404.1	3,810.0	4,140.5	4,119.8
Cash interest paid	4,267.0	4,537.1	4,918.0	4,716.5	4,746.5
Cash flow from operations	22,832.0	19,933.9	19,455.5	17,061.5	15,719.5
Capital expenditure	14,014.0	12,202.0	19,318.0	13,476.0	14,396.0

Table 2

Deutsche Telekom AG--Financial Summary (cont.)

Industry sector: Diversified telecom					
	--Fiscal year ended Dec. 31--				
	2019	**2018**	**2017**	**2016**	**2015**
Free operating cash flow (FOCF)	8,818.0	7,731.9	137.5	3,585.5	1,323.5
Discretionary cash flow (DCF)	5,008.0	3,386.9	(1,932.5)	1,877.5	(88.5)
Debt	85,323.0	80,178.6	78,177.4	79,613.9	76,447.7
Equity	46,231.0	43,437.0	42,470.0	39,793.7	39,068.2
Adjusted ratios					
EBITDA margin (%)	33.6	32.7	32.0	29.8	32.0
Return on capital (%)	7.3	6.9	7.8	5.8	8.4
EBITDA interest coverage (x)	8.4	7.3	6.3	5.3	5.4
FFO cash interest coverage (x)	6.2	5.3	4.8	4.5	4.5
Debt/EBITDA (x)	3.2	3.2	3.3	3.7	3.5
FFO/debt (%)	25.8	24.3	23.6	20.8	21.8
Cash flow from operations/debt (%)	26.8	24.9	24.9	21.4	20.6
FOCF/debt (%)	10.3	9.6	0.2	4.5	1.7
DCF/debt (%)	5.9	4.2	(2.5)	2.4	(0.1)

Reconciliation

Table 3

Deutsche Telekom AG--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. €)

	--Fiscal year ended Dec. 31, 2019--							
Deutsche Telekom AG reported amounts								
	Debt	**Shareholders' equity**	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
Reported	66,349.0	31,707.0	27,113.0	9,457.0	2,712.0	27,079.6	23,074.0	14,357.0
S&P Global Ratings' adjustments								
Cash taxes paid	--	--	--	--	--	(758.0)	--	--
Cash interest paid	--	--	--	--	--	(3,924.0)	--	--
Trade receivables securitizations	3,125.0	--	--	--	--	--	101.0	--
Reported lease liabilities	19,835.0	--	--	--	--	--	--	--
Postretirement benefit obligations/deferred compensation	5,350.0	--	(5.0)	(5.0)	87.0	--	--	--
Accessible cash and liquid investments	(3,623.0)	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	343.0	(343.0)	(343.0)	(343.0)
Share-based compensation expense	--	--	495.0	--	--	--	--	--

Table 3

Deutsche Telekom AG--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. €) (cont.)								
Asset-retirement obligations	1,171.0	--	--	--	88.0	--	--	--
Nonoperating income (expense)	--	--	--	424.0	--	--	--	--
Noncontrolling interest/minority interest	--	14,524.0	--	--	--	--	--	--
Debt: Litigation	150.0	--	--	--	--	--	--	--
Debt: Derivatives	(2,910.0)	--	--	--	--	--	--	--
Debt: Other	(4,124.0)	--	--	--	--	--	--	--
EBITDA: Gain/(loss) on disposals of PP&E	--	--	112.0	112.0	--	--	--	--
EBITDA: Business divestments	--	--	(145.0)	(145.0)	--	--	--	--
EBITDA: Other	--	--	(490.4)	(490.4)	--	--	--	--
Depreciation and amortization: Impairment charges/(reversals)	--	--	--	(7.0)	--	--	--	--
Total adjustments	18,974.0	14,524.0	(33.4)	(111.4)	518.0	(5,025.0)	(242.0)	(343.0)
S&P Global Ratings' adjusted amounts								
	Debt	**Equity**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
Adjusted	85,323.0	46,231.0	27,079.6	9,345.6	3,230.0	22,054.6	22,832.0	14,014.0

DT includes in its reported debt certain obligations it categorizes as "other interest-bearing liabilities" and "other non-interest-bearing liabilities," amounting to about €4.4 billion and €1.5 billion, respectively, as of Dec. 31, 2019. Some of these liabilities we do not treat as debt, for example, cash collateral received in connection with derivative transactions. We also removed from reported debt €1.2 billion of spectrum liabilities related to the 3.6 gigahertz frequencies, because the latter were not yet in use. Overall, removing the non-debt-like items reduced our adjusted debt for the group by about €4.1 billion at year-end 2019.

DT hedges part of the exchange-rate risk associated with debt denominated in foreign currencies. We adjust the reported amount of foreign-currency-denominated debt to reflect the debt principal as converted at the locked-in exchange rate. These adjustments reduced reported debt by about €2.9 billion as of Dec. 31, 2019.

For purposes of calculating surplus cash, we reduce DT's reported cash and cash equivalents (about €5.4 billion at Dec. 31, 2019) by the aforementioned cash collateral received in connection with derivatives, which we also subtract from reported debt. We also subtract other cash in the group that we do not think is immediately and fully available to repay debt, for example, a portion of the cash that is held by DT's subsidiary OTE in Greece. We exclude from surplus cash "derivative financial assets" (€2.3 billion) and most items reported within "other financial assets" (€0.9 billion) in DT's own net debt calculation.

Off-balance-sheet securitization of trade receivables generated in the ordinary course of the telecoms business is an ongoing component of DT's financing strategy. We consider such transactions as being akin to debt financing and reconsolidate them by adding the amount of securitized receivables to debt and total assets (€3.1 billion as of Dec. 31, 2019).

TMUS offers customers so-called equipment installment plans (EIP) to finance the cost of their mobile handsets. These plans qualify as captive finance operations under our criteria (see "Standard & Poor's Analytical Approach To Wireless Equipment Installment Plans," published March 30, 2016). In line with our captive finance criteria (see "The Impact Of Captive Finance Operations On Nonfinancial Corporate Issuers," published Dec. 14, 2015), we exclude captive finance operations from DT's consolidated financials. In table 3 above, we do not publish our captive finance adjustments for DT, but we report their impact on selected credit metrics. As of Dec. 31, 2019, our captive finance adjustment resulted in improvements of about 0.15x to adjusted debt to EBITDA and approximately one percentage point to adjusted FFO to debt.

TMUS also offers customers so-called handset leasing plans. These differ from instalment plans in that TMUS retains ownership of the handset. As a result, the cost of handsets under leasing contracts is capitalized, whereas it is expensed for EIP. We view this accounting distinction as distortive and remove the estimated benefit to EBITDA from handset lease accounting by deducting the amount of handset lease depreciation from our adjusted EBITDA (€490 million in 2019).

Other adjustments to DT's 2019 financials mainly relate to our standard adjustments for unfunded defined-benefit postretirement obligations, asset retirement obligations, share-based compensation expense, gains/losses on disposals of property, plant, and equipment, and capitalized interest.

Liquidity: Adequate

We assess DT's liquidity as adequate based on our expectation that liquidity sources will exceed uses 1.2x in the 12 months started Oct. 1, 2020. In addition, we think DT enjoys a high standing in capital markets and well-established, solid relationships with its banks, as demonstrated by frequent issuance of notes and credit facilities to a variety of investors and in multiple currencies.

In addition, we note that intra-group loans extended to TMUS, with $2.25 billion due in 2022, and $2.5 billion due in 2026 or 2028, will strengthen liquidity at the parent level when they are repaid, thereby meaningfully reducing refinancing needs.

Principal liquidity sources	Principal liquidity uses
As of Oct. 1, 2020, excluding TMUS, we estimate that principal liquidity sources over the ensuing 12 months include: • Cash and liquid investments of about €3.5 billion at the parent.	For the same period, excluding TMUS, we estimate that principal liquidity uses include: • Debt maturities of about €3.8 billion. • Capex, excluding spectrum payments, of €9.6

• €12.6 billion available under undrawn committed credit facilities maturing within two-to-three years and which do not contain covenants nor material adverse clauses. • Sizable pro forma FFO of about €8 billion after leases.	billion. • Dividend payments of about €3.1 billion.

Debt maturities

As of Sept. 30, 2020, debt maturities including bonds and term loans will be (excluding the U.S.):

- 2020: nil
- 2021: €3.7 billion
- 2022: €4.2 billion
- 2023: €3.3 billion
- 2024: €3.2 billion
- 2025: €2.1 billion
- 2026: €2.4 billion
- 2027: €3.9 billion
- 2028: €3.7 billion
- 2029: €1.7 billion
- 2030: €3.6 billon
- After 2030: €8.0 billion

Covenant Analysis

DT is not subject to any maintenance covenants in its bonds or credit facilities.

Environmental, Social, And Governance

DT's exposure to environmental and social risk factors is comparable with the broader telecom sector. The group's energy consumption is the main environmental consideration for DT. Although energy costs still represent a relatively small share of DT's overall cost base, energy efficiency and reduced greenhouse gas emissions are key performance indicators and form an integral part of its strategy. DT targets 100% energy consumption from renewable sources by 2021; and it intends to cut its carbon dioxide emissions by 90% by 2030, compared with 2017. We think DT's ongoing migration to all-IP networks and its plans to scale up deployment of energy-efficient FTTH networks, which it has been slower to roll out than some of its peers, will help to contain upward pressure on energy costs. As a result, we do not expect these factors to present a material risk to our forecast.

Sensitivity to data privacy and security issues is especially high in DT's home market in Germany. DT must therefore comply with the highest standards on data protection, security, and the prevention of cyberattacks, which carries an incremental cost. Germany also has strong trade unions, which can lead to cost inflation, as about half of the group's employees are covered by collective bargaining agreements.

Government Influence

We do not factor in any support from the German government into our rating on DT because in our view there is a low likelihood that Germany, which directly and indirectly controls about 32% of DT's common shares, would provide timely and sufficient extraordinary government support to DT in the event of financial distress.

Issue Ratings - Subordination Risk Analysis

Capital structure

We foresee somewhat more than 60% of pro forma consolidated reported debt to be at the U.S. level, and the rest mainly at the parent or fully owned subsidiary DT Finance. The latter is used as a finance vehicle and its issues are guaranteed by the parent. Based on the 43% existing economic stake of DT in U.S. subsidiary TMUS, we foresee pro forma structural subordination ratio of within 45%-50%.

Analytical conclusions

Although parent-level creditors will be structurally subordinated in respect to the U.S. assets, which will carry a high amount of debt, we continue to rate the unsecured debt at DT at the same level as the issuer credit rating. This is considering that the pro rata structural subordination ratio remains lower than 50%. In addition, we note the liquid and considerable equity value of DT's stake in TMUS, providing a strong cushion to the creditors at parent level. Conversely, in the situation of a default at TMUS, the equity value would likely remain substantial, given the value of TMUS' strong spectrum holdings and its network assets. Moreover, a substantial proportion of cash flows come from outside the U.S., while DT debt is not cross-defaulted with its U.S. subsidiary's debt and the latter does not benefit from any guarantee from the parent.

Ratings Score Snapshot

Issuer Credit Rating

BBB/Stable/A-2

Business risk: Strong

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

Financial risk: Significant

- **Cash flow/leverage:** Significant

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:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : bbb

- **Related government rating:** AAA
- **Likelihood of government support:** Low (no impact)

Related Criteria

- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology: The Impact Of Captive Finance Operations On Nonfinancial Corporate Issuers, Dec. 14, 2015
- 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 | Industrials: Key Credit Factors For The Telecommunications And Cable Industry, June 22,

2014

- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

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-

Ratings Detail (As Of December 10, 2020)*

Deutsche Telekom AG	
Issuer Credit Rating	BBB/Stable/A-2
Commercial Paper	
Foreign Currency	A-2
Senior Unsecured	BBB
Issuer Credit Ratings History	
01-Apr-2020	BBB/Stable/A-2
29-Apr-2018	BBB+/Watch Neg/A-2
29-Nov-2011	BBB+/Stable/A-2
Related Entities	
Deutsche Telekom International Finance B.V.	
Issuer Credit Rating	BBB/Stable/A-2
Hellenic Telecommunications Organization S.A.	
Issuer Credit Rating	BBB-/Stable/A-3
Sprint Capital Corp.	
Issuer Credit Rating	BB/Stable/NR
Sprint Communications Inc.	
Issuer Credit Rating	BB/Stable/NR
Senior Unsecured	BB
Sprint Corp.	
Issuer Credit Rating	BB/Stable/--
Senior Unsecured	BB

Ratings Detail (As Of December 10, 2020)*(cont.)	
T-Mobile USA Inc.	
Senior Secured	BBB-
Senior Unsecured	BB
T-Mobile US Inc.	
Issuer Credit Rating	BB/Stable/--

*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.