S&P Global
Ratings

Industry Top Trends 2020

Telecommunications

In the quest for faster networks amid slow growth, financial policy is key

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What's changed?

5G has launched. 5G services launched, notably in South Korea, the U. S., China, and Switzerland. Indications from South Korea paint an encouraging picture of consumer take-up, but we believe monetization in most countries is less clear cut.

A trade war has broken out and economic risks are rising. Telecom companies have exposure to the weakening economy through lower business-to-business revenues, and reduced consumer spending on content, and connected devices.

Telcos are taking a break from M&A. Some pending transactions have yet to complete, but we expect more muted M&A in North America and Europe, as companies are digesting previous deals and the pipeline of targets is drying up.

What to look out for in the sector in 2020

More 5G launches and spectrum auctions. We look for evidence to gauge consumer demand for 5G, and examples of compelling and commercially ready use cases. However, costly spectrum auctions could add to ratings pressure.

Leverage reduction. We expect leverage reduction to be a priority for the sector, with free cash flow being the main driver. However, pressure from shareholders for generous payouts and capital expenditure (capex) remain a risk.

Competition may increase risk to credit metrics. Some countries in Asia and Europe have seen new mobile entrants, sometimes encouraged by government policy, and U. S. mobile players are taking on cable with fixed-wireless access.

What are the key medium-term credit drivers?

The challenge of cashing in on data growth. Monetizing explosive data growth--through tiered pricing in mobile, the up-selling of higher broadband speeds, and new industrial use cases--remains the sector's pivotal challenge.

The need to deliver on past M&A. Companies' ability to integrate acquisitions and deliver promised synergies will be key to sustaining credit metrics and ratings.

The continued expansion of over-the-top (OTT) options. Fragmented direct-to-consumer content propositions could allow cable to reestablish itself as an aggregator, but profitability from this is weak relative to historical levels.

Ratings trends and outlook

Global Telecommunications

Chart 1

Ratings distribution

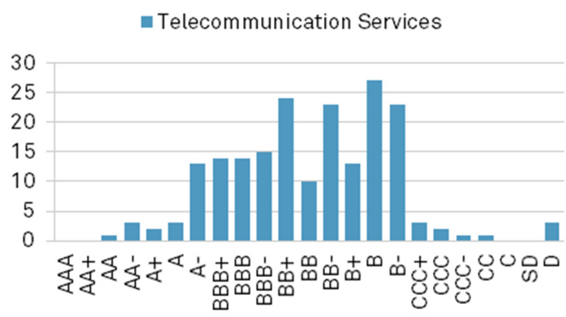


Chart 2

Ratings distribution by region

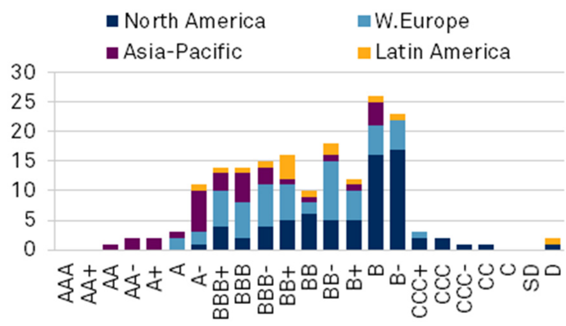


Chart 3

Ratings outlooks

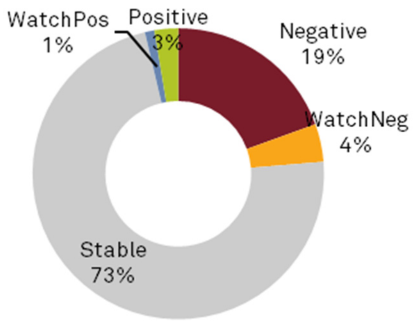


Chart 4

Ratings outlooks by region

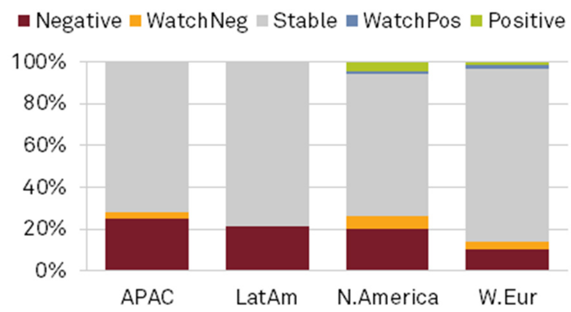


Chart 5

Ratings outlook net bias

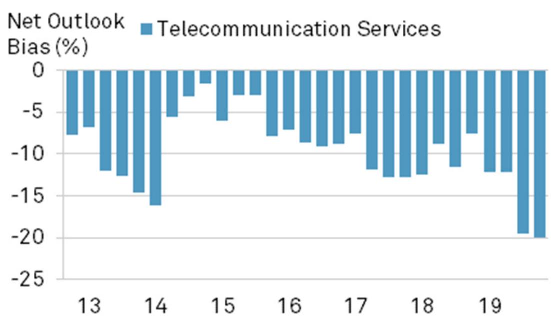
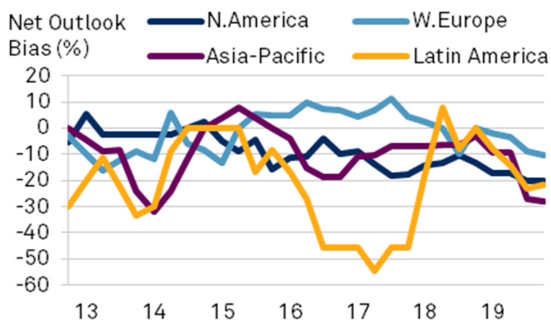


Chart 6

Ratings net outlook bias by region



Source: S&P Global Ratings. Ratings data measured at quarter end. Data for Q4 2019 is end October, 2019

We expect stable ratings for most issuers in the sector globally, but the outlook bias has turned more negative over the past 12 months across all regions. This is apparent in Asia-Pacific (APAC), where some issuers are confronted with increased competitive pressure, and in Latin America, where some issuers are facing sovereign-related rating constraints and macroeconomic headwinds. In North America, ratings pressure remains centered on wireline, where a secular decline persists, and on data center segments, where the shift to the cloud has slowed colocation growth and hurt margins for smaller, highly leveraged operators.

North America

Rating trends in the U.S. were largely negative in 2019, with 19 downgrades and only three upgrades. We expect the negative rating trend to continue, as more than 20% of rated issuers either have a negative outlook or are on CreditWatch negative. We expect rating trends in cable to be relatively stable as broadband growth offset the loss of lower-margin video customers. Ratings pressure could come from secular industry declines in wireline; integration missteps in acquisitions among data center and fiber providers; and slowing growth. Ratings trends in Canada, however, remain stable given the rational competition among the national telecom players. Improving trends for regional wireless players and constructive broadband trends continue to support ratings stability among the smaller operators.

Europe

We expect stable ratings for the vast majority of issuers in Europe. With less than 15% of ratings on negative outlook or CreditWatch negative, Europe has a more balanced mix of outlooks than the other regions, and the highest percentage of stable outlooks, at over 80%. Although competition remains intense in many markets, most regulatory headwinds for telecom pricing have now abated, and companies' credit metrics should see some improvements from continued cost-saving efforts. In some cases, further support may come from leverage-reduction measures such as disposals, for example, of tower assets. We also have stable outlooks on most cable companies. We expect cable companies to display faster revenue and EBITDA growth than telcos, albeit accompanied by higher capex intensity. However, capex intensity should moderate as larger network upgrades approach completion. We think these factors will provide cable companies with greater organic deleveraging capacity than telcos.

Latin America

The region's net negative outlook bias is at about 20%, while stable outlooks are close to 80%. Political uncertainty and expectations for weaker economic growth across the region in 2020 could negatively weigh on credit metrics over the next 12 months, and exacerbate downside risks on ratings. In 2019, the outlook revision to negative on the sovereign ratings of Mexico and Argentina also triggered similar rating actions on some operators from those two countries. Yet, stable outlooks on the vast majority of issuers reflects resilient operating performance, supported by still-healthy demand in the wireless subscriber base, fixed-line broadband access, and mobile data usage.

Asia-Pacific

We are seeing gradually increasing downward pressure on APAC telcos' creditworthiness, with a negative outlook bias of over 20%. This is mainly attributable to stiff competition and ongoing large capital spending needs for advanced network deployment in many APAC markets. Despite growing data consumption, competition remains intense, with deeper cuts in wireless tariff pricing in India, Australia, Singapore, Japan, and Taiwan.

Global Telecoms

Key assumptions

1. No end in sight for data consumption growth, but telcos' ability to cash in remains uncertain

We think mobile and fixed data growth will continue apace, but operators' ability to convert this into incremental revenue is still uncertain. This could change in the medium term as high data consumption may put a premium on network quality.

2. Fixed-mobile convergence will increase, but at an uneven pace

We believe that convergence will ultimately conquer most European and some Asian telecom markets, but the future of convergence in the U. S. and Latin America is less clear cut, partly because of fewer integrated operators in these markets.

3. High capex is here to stay

Global capex will remain high, driven by 5G-related spending on spectrum, site expansion, and fiber backhaul. This is in addition to ongoing high investments in fixed broadband networks to replace copper with fiber in regions such as Europe and Latin America.

The industry is heading for modest growth and leverage improvements in 2020

We expect the global telecom and cable industry to show low-single-digit revenue growth and modest improvements in profitability in 2020. For telcos, growth mainly relies on still-rising mobile and broadband penetration in some regions, and the up-selling of mobile data and broadband in certain countries. Cable operators should continue to grow faster than telcos, mainly thanks to broadband, but growth continues to slow down as a result of pressure on TV revenues. We expect all players to maintain focus on costs, supporting a very gradual expansion of EBITDA margins. The combination of cost-cutting and leverage reduction through free cash flow should help to support a modest reduction of S&P Global Ratings-adjusted debt to EBITDA next year.

No end in sight for data consumption growth

We expect demand for data will continue to grow strongly, both in mobile and fixed networks, forcing operators to maintain high network investments despite mixed prospects for monetization. While unlimited data is prevalent in fixed plans, speed tiering and regular price increases have allowed for some monetization of data growth. In mobile, the success of more-for-more strategies involving migration to larger data allowances have varied by market. We believe intense competition has increased the commoditization of data, as evident from more unlimited plans, as has the ability to offload to Wi-Fi.

In consumer markets, video will remain the pivotal growth driver, with surging consumption of streaming or on-demand services, the proliferation of online and mobile gaming, improved resolution of existing video-based content, and, further down the line, augmented and virtual reality applications. We think these trends will initially benefit fixed-line consumption where we see the bulk of consumption and device proliferation occurring. This could be good news for cable operators in areas where they compete with copper-based infrastructure due to the superior headline speeds of cable networks. However, fiber investments by telcos will continue to reduce this advantage in the medium-to-long term.

In the medium term, businesses of all sizes will contribute increasingly to mobile data growth as they move toward digitization, such as through smart factories in manufacturing, intelligent fleet management in logistics, or smart metering and grid management by utilities. Network equipment vendor Ericsson estimates that mobile data traffic will grow at a compound annual rate of 30% over 2018-2024. While mobile operators have struggled to convert data consumption into revenue growth, many are counting on increases in 5G-reliant devices, and that speeds ten times faster than 4G will drive a step-change in consumption that will finally deliver on the more-for-more promise. But will it? We believe that 5G and Internet-of-Things (IoT) trends may improve mobile prospects over the medium term, increasing the position and pricing power of operators with leading network quality.

Fixed-mobile convergence will increase, but at an uneven pace

Fixed-mobile convergence will be increasingly important in Europe, Canada, and parts of Asia-Pacific, but will continue to play a limited role in the U. S. and Latin America for the time being. In our view, convergence occurs mainly in markets with intense competition and the presence of one or more integrated operators with meaningful mobile and fixed-network assets. Although convergence often involves some form of discounting, it can reduce customer attrition rates in competitive markets by 50% or more compared to selling the same services separately. This better shields the customer base against poaching by aggressive competitors, and lowers subscriber retention costs, which often outweigh negative revenue implications. In Europe, this rationale, plus the potential for capex synergies between fixed and mobile networks that become more significant in the preparation for 5G, has motivated a number of fixed-mobile mergers in recent years, and most markets have at least two on-net converged players.

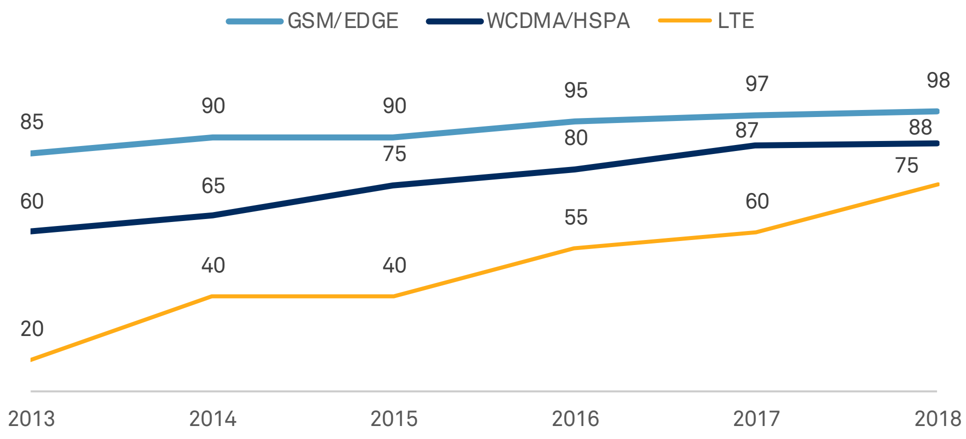
We believe the situation will remain different in the U. S. and Latin America for some time. Here, fewer players have extensive high-speed fixed broadband as well as mobile network coverage, and competition is mainly focused on marketing fixed and wireless services separately. U. S. cable operators are expanding into mobile through access agreements with wireless carriers, while wireless players like Verizon and T-Mobile are attempting to make inroads into in-home broadband using fixed-wireless technology. This could pave the way to convergence in the long term, but we think this will evolve only slowly. In Latin America, full convergence in key markets like Mexico and Brazil is held back by regulation, and we don't expect this to change in 2020.

High capex is here to stay

Capex in the industry is already high at more than $250 billion globally, as per our projections for 2019, and we forecast that it will stay at similar levels in 2020 and beyond. Pivotal drivers are the ramp-up of 5G investments across several regions, combined with ongoing significant spending on fixed network upgrades in others. 5G requires additional spectrum, and a significant number of new antenna sites, as well as fiber upgrades for base-station backhaul. In 2019, a number of countries sold newly allocated mid-band and high-band spectrum, and we expect more frequencies in these bands to be auctioned over 2020-2021. However, spending on 5G-related network equipment and cell sites will partly be offset by lower investment needs for 4G, the roll-out of which is mostly complete, with about 75% coverage of the global population at this point (see the chart below). Over time, 5G will also generate savings, as it will help telcos to avoid capacity upgrades that would be necessary under 4G to cope with surging data traffic. In fixed line, we think investments will remain high in Europe and Latin America, where telcos continue to upgrade from copper to fiber-based networks. For cable operators, however, we think capex intensity should gradually level off, as major investments in higher broadband speeds come to an end.

Chart 7

Network coverage evolution (% population)



Source: Ericsson Mobility Report

Overall capex masks some regional variation. In North America, we expect capex growth to slow down in 2020 because operators have scaled up their 5G and mobile capex in 2019 more quickly than we anticipated. We project that capex in Europe will remain high next year, as the region steps up its 5G roll-out later than the U.S. and APAC, while fixed network upgrades will require continued high capex. In APAC, we expect capex to grow modestly in 2020 amid the deployment of 5G in Korea, Australia, Japan, and China. In Latin America, we think capex intensity will stay at around 15% of revenues, with spending mostly on upgrades and expansions in both fixed and mobile networks, including the build-out of the 4G/4.5G band and fiber.

Key risks and opportunities

1. 5G can unlock new opportunities for growth--in the longer term

New uses cases related to IoT and industrial applications enabled by 5G can significantly expand telcos' addressable market, offering an escape from anemic growth in more traditional telecom services.

2. A focus on leverage reduction could benefit credit quality

Companies in the sector are making efforts to reduce leverage, with free cash flow being the main driver. However, pressure from shareholders for generous payouts and capex spikes could pose a risk for some.

3. Deteriorating economic conditions could put credit metrics at risk

A pronounced downturn could weigh on revenues, earnings, and cash flow from operators' business-to-business segment and lead to lower consumer spending on content, fewer connected devices, and migration to cheaper mobile and broadband plans.

5G can unlock new opportunities for growth in the longer term

We believe 5G has the potential to significantly expand the market for telecom operators, although we are convinced that new revenue opportunities will take time to develop. 5G will enable a broad set of new use cases outside faster mobile broadband and fixed-wireless access that derive from IoT applications and the digitization of entire economic sectors. This may spur the evolution of a diverse range of digital ecosystems, such as smart grid management in utilities, new models of factory automation in manufacturing, intelligent management of port operations in logistics, or smart agriculture. Consultancy firm Strategy Analytics predicts that the number of connected devices will more than double to 50 billion by 2030, compared with 22 billion in 2018. Many applications will run at least partly over public fixed and mobile networks, whereas large manufacturing plants or mining or logistics facilities may rely entirely on private enterprise networks.

We think telcos have the chance to tap into this pool of value, but need to develop the right capabilities and solutions if they want to be more than mere providers of low-revenue SIM cards for robots. In addition to the ability to implement data transmission with guaranteed quality parameters over public networks, it will require a broader offering of connectivity, IoT platform solutions, and (private) network management services. One of the challenges is that operating and pricing models in this space are still nascent, and the distribution of roles and value between telcos, equipment vendors, independent software and solution providers, and industrial end users remains fluid. As a result, material future revenue opportunities continue to lag the need for upfront investments in networks and products, which may strain credit metrics in the interim.

A focus on leverage reduction could benefit credit quality

We think management teams are putting increased priority on reducing leverage, and for many issuers there is some room to do so through free cash flow. Moreover, we expect M&A activity to slow as companies digest recent acquisitions. For example, in the U.S., several large operators are deleveraging, including Verizon, AT&T, and Comcast. We also expect that some telcos will take a more prudent approach to capital allocation as macroeconomic uncertainty grows. In Europe, disposals of tower assets may provide an additional means of lowering debt, and some U. S. issuers may use noncore asset disposals for debt reduction. As a result, we foresee that headroom under the current rating thresholds will improve in 2020 for a number of issuers. In Canada, national players will continue to balance ongoing capex and shareholder returns, keeping leverage metrics elevated.

Leverage reduction could be undermined by spectrum auctions that turn out to be more costly than expected, a faster ramp-up of 5G or fiber capex, or, in some regions, mounting pressure for higher shareholder returns. In Europe, Canada, and Latin America, the effect of 5G roll-out on credit quality should be contained by our expectation of slower roll-out, which smooths the capex profile, but risks remain, particularly in the U. S. and APAC. In Europe, where several operators are saddled with high debt, financial policy discipline has mostly been maintained so far, but this could be reversed if equity investors successfully demand higher distributions to compensate for lackluster share price performance. Likewise, in the U. S., pressure from an activist shareholder pushed AT&T to formalize a three-year capital allocation plan. While the plan includes a modest reduction in leverage, it also comprises a large share repurchase program, which will allocate 50%-70% of free cash flow to stock buybacks.

Deteriorating economic conditions may put credit metrics at risk

Our economists have scaled back their growth expectations across the board for the next year in an environment of high global trade tensions. We believe a pronounced global economic slump could exert pressure on telecom and cable company ratings, especially in conjunction with other factors such as a worsening competitive environment. Although the industry is only moderately cyclical, issuers are exposed to weaker macroeconomic conditions through their business-to-business (B2B) segment. In a downturn, we would expect to see issuers affected by lower demand for work-related mobile data usage and handsets due to lower activity levels and reduced employment, bankruptcies of small and midsize enterprises, and cost-cutting by larger enterprise clients weighing on spending for fixed and mobile connectivity, as well as IT solutions. On the consumer side, recessionary developments could constrain, or even undo, successful prepaid to postpaid conversion, curb revenue upside from the up-selling of premium mobile and broadband subscriptions, and accelerate cord-cutting trends for video.

Given high total telecom debt of $1.5 trillion globally, we cannot dismiss refinancing risks. However, many issuers in the sector have successfully refinanced over the past 12 months, reducing the amount of debt falling due within the next year and terming out their debt maturity profile, and we see limited risks of significantly rising interest rates in most regions. Nonetheless, a severe economic crisis accompanied by dislocations in the capital markets could impair access to credit, particularly for around 50 issuers in the sector rated 'B' or lower.

North America

Key assumptions

1. Robust demand for data is proving difficult to monetize

Wireless carriers will likely struggle to grow ARPU in light of unlimited data plans and emerging competition from the cable industry, and wireline operators will continue to be harmed by the limitations of copper infrastructure. While cable operators should benefit over the next year, longer-term questions linger around the ability to raise prices if competition from 5G fixed wireless comes to fruition.

2. A better revenue mix and cost-cutting could improve margins

Wireless carriers should see an improved mix of higher-margin service revenue as customers keep their devices longer. We expect growth in high-margin broadband to continue to offset headwinds from rising programming costs for cable operators. However, wireline companies will likely continue to experience profitability compression from top-line declines.

3. Capex growth could pause in 2020

We expect wireless operators' ratio of capex to revenue to increase slightly to 14.8% in 2020 from 14.5% in 2019, with a more significant pickup possible in 2021. Cable operators will likely experience lower capex requirements as DOCSIS 3.1 buildouts are largely complete and video subscribers decline.

Despite industry challenges, U.S. companies' credit metrics should improve

Overall, we expect modest revenue growth in U.S. wireless, mid-single-digit percentage declines in wireline, and solid mid-single-digit revenue growth in cable. For U.S. telcos, postpaid customer growth as subscribers migrate from prepaid plans and relatively stable ARPU trends should support modest topline growth, whereas secular industry pressures continue to affect wireline. Cost-cutting initiatives, including network virtualization, and lower upgrade rates should also benefit margins. In cable, we expect that broadband revenue and contributions from commercial services will outpace video subscriber declines. Greater contributions from broadband and lower revenue from video should also enable modest margin expansion for the cable providers, though wireless startup costs will likely prevent significant improvement. We expect that U.S. telco and cable issuers will continue to prioritize leverage reduction, although the pressure of returning cash to shareholders, network investments, or the purchase of spectrum licenses could constrain leverage improvement in the longer term.

Robust demand for data is proving difficult to monetize

While the demand for data and mobile video continues to grow at a rapid pace, the ability to monetize this growth has become more challenging, primarily due to competition.

In **wireless**, we expect service revenue growth for carriers will moderate at around 1%-2%, based on slower customer growth and weaker ARPU trends because of mature industry conditions. That said, there is a lot of uncertainty heading into next year. While competition from cable in the wireless industry via mobile virtual network operator (MVNO) agreements has been somewhat muted, it could intensify with Altice USA's entrance into the market with low price offerings. Additionally, approval of the T-Mobile/Sprint merger and DISH's potential entry into the wireless market could affect overall industry performance.

Among the **U.S. wireline** providers, we expect revenues to decline to the mid-single-digit percentage range due to broadband market share losses to cable, and voice access line losses to wireless substitution. Revenue from business services continues to contract due to competition from cable, especially among small-to-midsize business customers, and the increasing adoption of cloud-based networking technologies--such as software-defined wide area networks (SD-WAN)--which carry lower price points. As a result, we expect business revenue to decline around 3%-5% for the industry overall.

We expect **U.S. cable** operators to grow revenue by 4%-6% in 2020, driven by predictable broadband growth. Cable continues to enjoy an advantage for in-home broadband over incumbent phone companies that haven't deployed a fiber-to-the-home service. Most U.S. cable providers have upgraded their networks to DOCSIS 3.1 and can offer speeds of up to 1 gigabits per second to their customers. In contrast, phone companies that use digital subscriber lines for broadband service can typically offer up to 100 megabits per second (Mbps) with fiber to the node. Over the next two-to-three years, we believe that customers migrating to faster internet tiers should drive continued ARPU growth. That said, the prospect of wireless entering the cable broadband market via 5G fixed wireless could change the competitive landscape. While we believe that cable will still be able to offer a more competitive product, the threat of 5G fixed wireless could make it difficult to monetize increasing data demand in the longer term. Verizon has already deployed 5G fixed wireless in certain markets and is able to offer 300 Mbps to customers at a lower price than cable.

The **Canadian** telecom market remains very competitive. As Shaw's Freedom Mobile grows, it has accelerated changes in the wireless market such that national incumbents have started offering unlimited data plans and equipment installment plans in 2019. We do not anticipate any material ARPU growth for the next four-to-six quarters. On the wireline side, telcos' fiber infrastructure expansion combined with internet protocol television (IPTV) offerings have started bearing fruit, with subscriber additions ahead of the cable companies' counterparts in 2019. However, broadband growth continues to offset video and telephony subscriber losses for all players. Overall, we expect revenue growth to be supported by growing subscribers (both wireless and wireline) and increasing wireline ARPU. As a result, we expect consolidated topline revenue to grow 1%-3%, but EBITDA to be higher at 3%-5%, as companies focus on cost control and operating efficiency. With a significant portion of fiber capex behind the carriers, we expect an improvement in consolidated capex intensity for the next few years, excluding spectrum auctions.

A better revenue mix and cost-cutting could improve margins

Despite intense competition and mature industry conditions, we expect some margin improvement as companies look to reduce costs and shift to more profitable products and services. In wireless, we expect some margin improvement due to low device upgrade rates, although this is dependent on take-up rates for new 5G handsets as they come to the market. Carriers have benefited from consumers keeping their handsets longer as the incremental benefits of newer devices have diminished. Furthermore, we expect companies to focus on cost-reduction initiatives. Already, Verizon is embarking on a $10 billion expense reduction plan, and with pressure from an activist shareholder, AT&T is looking to reduce expenses by about $6 billion over the next three years. If T-Mobile and Sprint are able to get regulatory approval for their proposed merger, potential cost synergies are substantial at about $6 billion.

Notwithstanding the erosion of their linear video customer base, U.S. cable operators should see a modest margin improvement as growth from high-margin broadband services more than offsets the loss of lower-margin linear video and wireless startup costs for the larger cable operators, including Comcast, Charter, and Altice USA. We project high-margin broadband growth of 8%-10% from a combination of subscriber growth of 3%-5% and ARPU increases of 5%-7%, resulting in a modest improvement in industry-average EBITDA margins to about 40% in 2020 from around 39% in 2019.

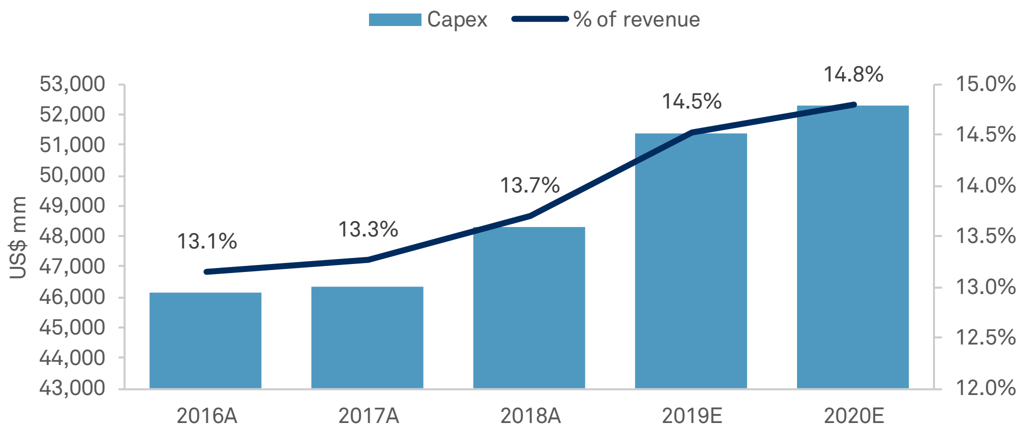
In contrast, U.S. wireline companies are saddled with a high fixed costs and face secular industry declines. Over the past several years, these companies have pursued M&A to drive cost savings and preserve margins. However, as synergies wind down from recent acquisitions, we believe these companies could experience weaker profitability due to topline pressures, lower subsidy revenues, and limited M&A opportunities.

Capex growth could pause in 2020

We expect modestly higher capex in wireless over the next year as carriers densify their networks and deploy fiber for backhaul, but the lack of new mid-band spectrum could push meaningful capex growth into 2021 or 2022. However, if the T-Mobile-Sprint deal is approved, this could accelerate capital spending by the combined company and push DISH to deploy its spectrum aggressively next year. Overall, we project a slight increase in capex to revenue of about 14.8% in 2020 from 14.5% in 2019.

Chart 8

U.S. Telecoms Capital Expenditures



Source: S&P Global Ratings

Cable operators are benefitting from lower spending on customer -premises equipment as customers migrate away from traditional video and self-installations increase. We expect scalable infrastructure to decline as operators pause the upgrades of networks following the completion of DOCSIS 3.1. This will be partly offset by mobile-related capex as cable operators build a retail presence. However, we believe that cable operators could purchase mid-band spectrum in the upcoming auctions to pursue a traffic-offload strategy involving selective buildouts in denser markets to complement their MVNO agreements. If so, this could result in elevated capex after 2020.

Key risks and opportunities

1. The benefits from 5G investments are uncertain

We question consumers' propensity to spend more money for incremental increases in speeds on mobile devices over the near term. Nevertheless, in the longer term, we believe there are significant IoT and enterprise opportunities that are difficult to quantify at this time and will require meaningful capital outlays to realize.

2. A recession could take a toll on telcos' credit quality

S&P Global Ratings' economists have increased their forecast of the risk of a U. S. recession to 30%-35%, which could pose a risk for telecom operators that have exposure to small businesses. Higher borrowing costs and refinancing risk could pose a threat for issuers in the 'B' category, which now represent about 60% of our rated universe.

3. A T-Mobile-Sprint merger could have meaningful industry ramifications

The outcome of this merger could have varying impacts on issuers across telecom subsectors. We believe the competitive intensity should improve in wireless as the industry shifts to three nationwide providers from four. The merger is modestly negative for tower operators in the near term, although accelerated 5G builds could offset decommissioned sites. We view the transaction as largely negative for cable, as it would strengthen T-Mobile's 5G fixed wireless capabilities.

The benefits from 5G investments are uncertain

In the U.S., we have a cautious view on 5G, based on our expectation for accelerated deployments. We believe that the acquisition of spectrum licenses and higher capex to support 5G network deployments, which includes small cell and fiber builds, could constrain leverage improvement at a time when the carriers are trying to reduce debt and improve credit metrics. We also expect that the demand for mid-band spectrum such as the C-band will be strong, since in our view, these licenses will likely serve as the foundation for 5G deployments.

At the same time, we believe that revenue opportunities associated with 5G will be slow to materialize in the near term since we question consumers' propensity to spend more for faster data speeds on their devices, and most of the IoT and enterprise opportunities are likely several years away. While 5G fixed wireless offers some potential to monetize investments at an early stage, the technology is still unproven and is unlikely to offer a comparable product to cable. That said, fixed wireless broadband could capture some share if it is able to compete on price, which may appeal to more value-conscious consumers.

From the cable perspective, we believe that the risks are still several years away and remain highly uncertain. However, if wireless operators are able to deliver on targeted speeds and the number of homes passed, it could harm cable's ability to grow earnings and cash flow in five years. For example, if Verizon is able to achieve at least a 20% penetration rate across 30 million homes and T-Mobile is able to achieve its goal of 9.5 million in-home broadband customers by 2024, we estimate this could take about three-to-four million customers from each of Comcast and Charter. Perhaps more importantly, this could also limit ARPU growth and cause EBITDA to flatten or even decline five years from now. Still, we do not incorporate this level of stress into our forecasts yet because it is not clear if Verizon will be able to achieve advertised coverage and reliability using mmWave spectrum, while T-Mobile's 5G plans hinge on acquiring Sprint's mid-band spectrum. In addition, cable has a substantial cost per bit advantage as in-home nonvideo data consumption averages over 400 gigabytes (GB) per month today, which is a higher order of magnitude than average wireless usage.

A recession could take a toll on telcos' credit quality

We project that U. S. GDP growth will weaken to 1.7% in 2020 from 2.3% in 2019 and estimate the risk of recession at 30%-35%. While the U.S. telecom and cable sectors held up well during the 2008 financial crisis and recession, we believe the effects of lower barriers to entry and changing technologies could be exacerbated in an economic downturn. A greater risk is that tightening credit market conditions increase borrowing costs and refinancing risk. As issuers have moved down the rating scale over the past couple of years, we now rate about 60% 'B' or lower. These issuers could find it difficult to access capital as debt comes due.

Wireless carriers have benefited from prepaid subscribers migrating to postpaid plans as credit quality has improved over the past couple of years, as well as increased penetration of second handsets among business customers. If the economy fell into another recession, we believe these subscribers could move back to more affordable prepaid plans that provide carriers with lower ARPU and margins. Furthermore, business customers would likely reduce headcount in a recession, which could pressure subscriber metrics and service revenue.

We also expect that more people would cut the cord in video, which could hurt topline performance for both cable and satellite video providers. The impact would be more pronounced for satellite TV operators since they lack a broadband hedge.

Telecom issuers with a lot of exposure to small-to-midsize business and enterprise customers could be hurt in a downturn since there is a greater correlation between telecom spending and economic growth for business customers than for residential. These customers may be more likely to adopt less expensive networking technologies such as SD-WAN, which could exacerbate topline pressures.

A T-Mobile/ Sprint merger could have meaningful industry ramifications

We believe a merger between T-Mobile and Sprint could have significant ramifications across multiple sectors. We believe the transaction would be positive for T-Mobile if it is able to successfully integrate Sprint, although this is by no means an easy task given the size and complexity of the combination. In addition to a very strong spectrum portfolio, T-Mobile's postpaid market share would improve to about 28% from 16% today, giving it substantially greater scale to compete with AT&T and Verizon. Furthermore, targeted synergies of about $6 billion could enable an EBITDA margin improvement to the low-to-mid-30% range in the longer term.

While we believe the transaction is neutral for DISH in the near term since it has capacity to purchase Sprint's prepaid customers and spectrum in three years, the longer-term capital spending requirements are significant and achieving scale economies could be difficult in a mature industry. Furthermore, we believe DISH's lack of experience in wireless could make it challenging to compete against more established players and adding more spectrum does little to increase long-term revenue visibility. In our view, DISH will need find a partner with deep pockets in order to build out a 5G network that could cost $10 billion.

For the large U.S. cable operators, we believe that Altice will benefit from the extension of its MVNO agreement to T-Mobile's network. However, Comcast and Charter could be hurt by incremental competition from T-Mobile's 5G fixed wireless product, which could be more formidable than Verizon's given its strong spectrum position on a pro forma basis. Additionally, conditions are in place to prevent cable from making a back-door purchase of DISH's wireless assets.

For Verizon and AT&T, we believe the transaction could be positive over the next three-to-four years as T-Mobile undertakes a massive integration. The longer term credit implications are more uncertain. On the one hand, competitive intensity should improve as the industry shifts to three nationwide providers from four. At the same time, T-Mobile will have a robust and balanced portfolio of spectrum licenses, including low-band and mid-band spectrum, which it could monetize by keeping prices low. While we believe the odds are against DISH, if it is able to find a partner to help fund the buildout of its network and profitably grow its subscriber base, it could become a viable fourth competitor, which could be disruptive.

Europe

Key assumptions

1. There is no respite from fierce competition

We expect competition among telecom carriers and with cable operators to remain intense in 2020, with aggressive challengers in a number of mobile and broadband markets such as Italy, Spain, and France. This caps upside on credit metrics.

2. For capex, it remains "spend or die" for European operators

Although we don't think that 5G will prompt a big surge in capex given only gradual deployment, we believe capex will stay high at 17%-19% of sales for telecom carriers, given ongoing fixed network upgrades and further spectrum auctions. Coming out of a period of major network upgrades, cable players should see a modest capex decline.

3. Carriers will continue to eye asset spin-offs

Unlike in North America, most European towers are still owned by operators, but skyrocketing multiples may be too attractive for many operators to say no. High multiples provide some room for leverage reduction even after adjusting for the resulting lease liabilities.

Slow growth continues, but European credit metrics are broadly stable

We forecast flattish revenues for European telecom operators and modest topline growth of 1%-2% for European cable in 2020. For telcos, growth mainly rests on the success of up-selling mobile data and better broadband packages, offset by tough pricing conditions and the ever-shrinking legacy of fixed voice revenues. We expect cable growth to come from the remaining potential for share gains in broadband and expansion in the small-to-midsize business segment, but TV cord-cutting represents a headwind. For telcos as well as cable operators, continued cost-cutting, including from the digitization of operations, should enable a modest EBITDA margin uplift. Combined with some retained free cash flow, this should see credit metrics improve slightly, except for operators that have closed or may close material M&A transactions, like Deutsche Telekom, Vodafone, and Telenor.

There is no respite from fierce competition

Competition in most European telecom markets remains intense, and we don't foresee this changing fundamentally in 2020 as penetration for most services is near or at saturation, and there are at least three-to-four players with comparable offerings across nearly all segments. We continue to regard competitive dynamics in broadband as somewhat more benign than in mobile, but we observe clear distinctions between different countries.

Four-player mobile markets in Italy, France, and Spain are characterized by the presence of aggressive challengers that disrupt pricing with value offers, often with unlimited data. This caps the revenue potential for the entire market and removes upside from data monetization. In contrast, we observe more rational behavior in Germany, for example, which moved from four to three players several years ago, and some of the smaller three-player mobile markets. In these markets, operators are often able to achieve modest mobile service revenue growth thanks to tiered pricing based on data allowances or mobile speeds. However, as part of the 2019 spectrum auction in Germany, one of the existing MVNOs acquired spectrum and is planning to build out a fourth network, which could prove deleterious for ARPUs in the medium term.

In broadband, competition between telecom and cable operators remains strong, reinforced by slowing penetration growth in many larger countries. Cable players are trying to take advantage of higher headline speeds in Germany and the U.K., where incumbent telcos mainly rely on fiber to the cabinet and advanced copper networks so far. However, as telecom operators continue to upgrade their networks to fiber to the home (FTTH), we expect the speed advantage of cable to diminish. In some markets like Spain, challengers are building over existing FTTH and high-speed cable networks with own-fiber infrastructure, which is likely to fuel competition between different fixed-line infrastructures.

Recently, cable operators have opened their networks for broadband service providers in several markets. In Germany and the Netherlands, this was imposed as part of merger clearance proceedings, whereas in Belgium it was mandated by the regulatory authority. This could benefit mobile carriers like Telefonica Deutschland or Orange Belgium by giving them an alternative to accessing the incumbent's fixed network, but ultimately increase broadband competition. In spite of these developments, we believe that incumbents, cable, and other challengers alike are able to charge some mark-up for higher speeds in most markets. This, combined with increasing multiple-play penetration and the up-selling of IPTV, should support modest service revenue growth.

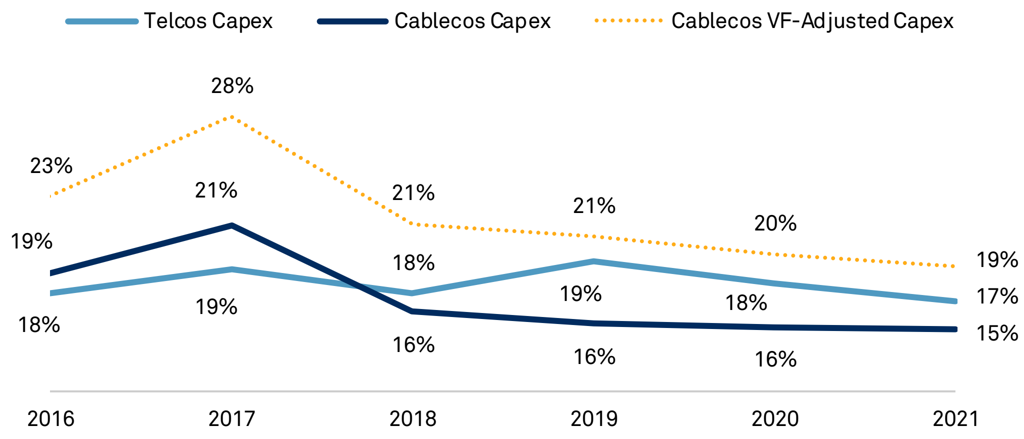
For cable, we think growth dynamics will continue to shift. Although we project that cable will continue to take broadband market share from telcos, the size of the incremental gains is flattening. At the same time, competition from incumbents' IPTV and OTT propositions drives higher video churn. We think this will force operators to shift their quest for growth toward the small-to-midsize business segment, focusing on connectivity as well as IT services, or toward footprint expansions, which carry capex implications.

For capex, it remains "spend or die" for European operators

We see little room for European telecom operators to materially reduce their capex in the near term, and expect capex intensity to stay at 17%-19% of sales over 2019-2021, similar to what we observed in 2016–2018. This is primarily driven by a combination of continued spending on fiber roll-out in fixed networks, and incipient 5G investments. For cable, we project a step-down in capital intensity as the upgrades of cable networks to DOCSIS 3.1 technology and node-splitting programs--which caused higher spending levels in 2016-2018--are nearing completion. However, expansion projects to pass more homes and unlock growth opportunities will keep capex intensity slightly above that of telcos (adjusted for vendor financing), like Virgin Media in the U. K.

Chart 9

European Average Capital Expenditure (% of sales)



Source: S&P Global Ratings

We think the capex impact of 5G will be more muted than for the U. S. and APAC, mainly because we expect Europe to be a fast follower rather than an early adopter of 5G. This is due to the difficult experience of operators with the monetization of 4G services, high competitive intensity that limits the potential for premium pricing, and the fact that spectrum is yet to be made available in some countries. While six countries have made significant 5G launches to date, with the exception of Switzerland all have been limited to a handful of cities thus far. The slower ramp-up will allow companies to fund 5G investments by re-allocating budget away from 4G, thereby smoothing the capex profile. In Switzerland, for example, Swisscom has been able to launch broad 5G coverage without increasing its capex guidance. In addition, ongoing investments in fiber deployment should reduce the need for 5G-related backbone upgrades. Spectrum costs, however, create some uncertainty. Generally, we believe less clear-cut monetization opportunities should promote rational bidding in remaining auctions. In our view, more expensive mid-band (3.6GHz) auctions in Italy and Germany at €0.36 cents per megahertz pop (/MHZ/POP; cost per megahertz divided by the number of persons in spectrum license coverage area) and €0.17 cents /MHZ/POP are outliers that were mainly caused by the auction design. Even these prices were still 70%-85% lower than 3G auctions in these countries.

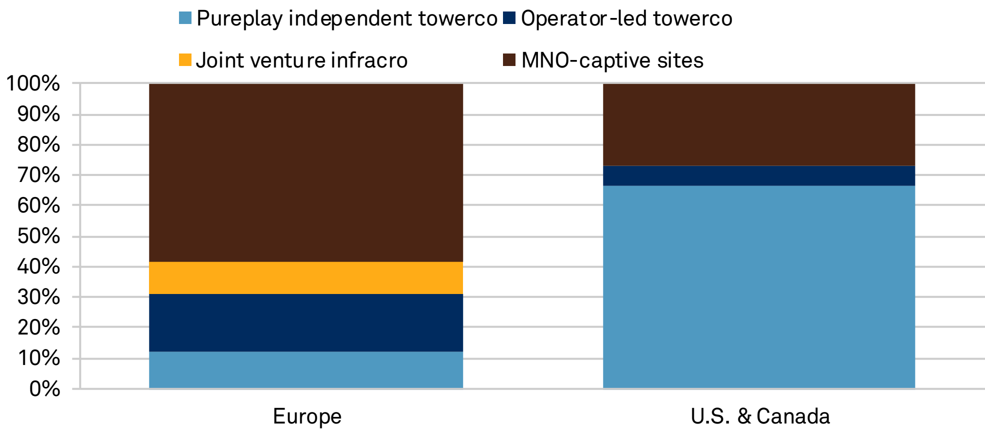
Ongoing investments in last-mile fiber remain an important driver of high capex in Europe, though with some variation between countries. Of 28 EU member states, 20 had achieved more than 80% next generation access coverage with intermediate speeds (>30 Mbps) in 2018, and the focus continues to shift to fiber deepening and costly FTTH deployment in many countries. In France and Italy, FTTH roll-out remains in full swing, whereas Germany and the U.K. are lagging, with less than 10% fiber-to-the-premises (FTTP) coverage. However, we think these markets will increase FTTH spending in the next three years. Spain is an outlier to a certain extent, with FTTP reaching about 77% at this stage, which should support a gradual reduction in fixed-line spending in the medium term. Outside the top five markets, FTTH roll-out is ramping up in countries such as Greece, and continues at a significant pace in a number of midsize markets like the Netherlands.

Carriers will continue to eye asset spin-offs

We believe European telcos will increasingly be tempted by the high multiples that telecom infrastructure is attracting, notably mobile towers, and to a lesser extent, fixed-line networks. These assets often fetch valuations that are 2x-3x higher than those for vertically-integrated operators, driven by expectations about efficiency gains that could result from independent ownership and shared infrastructure. As per our estimates, less than 20% of European mobile towers are owned by independent tower companies, compared with well over 60% in the U. S.

Chart 10

Over €90 billion of towers still housed in European Telcos



Source: TowerXchange.

We estimate that European telcos' captive towers could be valued as high as €90 billion based on recent valuations. Although tower disposals would result in additional lease liabilities for operators that we include in our adjusted debt, high valuations could yield a net deleveraging effect in a number of cases. At this stage, we do not expect such transactions to result in upgrades, given the still-moderate impact on overall group credit metrics, but they can increase financial flexibility and headroom under our rating thresholds. However, the rating implications will also depend on whether asset disposals weaken operators' ability to differentiate their services from those of competitors. For towers, this can be the case for sites that are in key locations where competitors lack coverage and have difficulty replicating the same service quality due to space limitations, for example, in dense urban areas, or legal restrictions such as emission limits or permit issues. We typically view the differentiation benefits of fixed-broadband networks as greater than for passive tower real estate, mainly because of the strong link between the network and the ability to offer better speeds and service quality to end customers, especially where regulated access to the network is limited.

Key risks and opportunities

1. Convergence can mitigate the fall-out of fierce competition

Fixed-mobile convergence could allow operators to contain churn and protect profitability in the face of strong competition. Integrated fixed-mobile operators may also have a cost advantage in the roll-out of 5G.

2. Financial discipline under fire from shareholder pressure

Following several years of discipline on distributions, operators could face mounting pressure to make up for underperforming share prices with higher payouts. This could deplete headroom for issuers close to our downside thresholds.

3. Brexit, trade tensions, and an economic slowdown could create a perfect storm

Although telecom and cable is not a cyclical sector, uncertainty around Brexit, trade disputes, and weakening economic sentiment increase the risk of a European recession. This could weigh on business-to-business revenues and consumer spending on content and premium mobile and broadband subscriptions.

Convergence can mitigate the fall-out of fierce competition

We view the bundling of fixed, mobile, and TV services as a tool for operators to counter the impact of aggressive competitors. With converged subscribers more than 50% less likely to churn, it is harder for challengers that focus on mobile or broadband to gain customers with low pricing. Despite the negative revenue effect from bundle discounts, convergence is usually EBITDA-accretive due to lower subscriber acquisition and retention costs. Convergence is well-advanced in markets like Spain, Portugal, France, and the Netherlands, whereas convergence penetration in Germany and the U.K. is much lower. It will take time, but we believe convergence will gradually gain momentum in these markets, too.

For Europe, we think the combined ownership of fixed and mobile assets is advantageous for operators, despite the fact that regulatory access obligations often hand alternative providers an opportunity to offer the full range of services without owning the assets. This mainly relates to the greater commercial flexibility and more favorable economics that come with asset ownership. Another consideration may be the increased value of integrated networks on the road to 5G, which will require much denser mobile networks and fiber backhaul than with 4G, increasing the synergies of holding both networks within the same company. We think all of these factors have spurred converged M&A deals in recent years, such as BASE-Telenet in Belgium, Vodafone-Ziggo in the Netherlands, Vodafone-Unitymedia in Germany, or the attempt to merge Sunrise and UPC in Switzerland.

Financial discipline under fire from shareholder pressure

European telecom operators have exercised discipline in recent years when it comes to shareholder returns. With few exceptions, dividends have either remained stable, or increased at much lower rates than historically. Vodafone has even cut its dividend this year by 40% and DT by about 15%. Our base case assumption at this point is that this discipline will be maintained. We forecast that dividends as a percentage of free operating cash flow will come down from just under 100% to less than 70% by 2021.

However, we are cognizant that the sector has underperformed the wider equity market significantly, with European telecom stocks trading around multi-year lows. This implies a risk of shareholders stepping up pressure on management teams to loosen the reins on payouts. In cases where metrics are close to our downside thresholds, giving in to shareholder demands could deplete any remaining headroom or even precipitate a downgrade.

Brexit, trade tensions, and an economic slowdown could create a perfect storm

We project European GDP growth to drop to 1.4% in 2019 and 1.6% in 2020, compared with 2.3% in 2018. Risks to growth are on the downside as uncertainties over Brexit and global trade remain unresolved, and the fact that telecom and cable is less cyclical does not mean that the industry will be completely shielded from protracted economic weakness or a downturn. Being economies that are very open to foreign trade, many European countries could be affected by a further escalation of global trade tensions. This remains a key downside risk to growth especially if the industry recession translates into weaker demand in services. Political uncertainty at home in the shape of Brexit is another risk to watch out for. These developments could directly affect telco revenues in the B2B segment, or consumer's willingness to spend on premium mobile and broadband subscriptions, or higher-value content. That said, in an environment of subdued inflation, we expect monetary policy to keep interest rates low for an extended period of time, which reduces refinancing risk for issuers.

European issuers may also be affected by the evolving debate about possible bans on Chinese equipment vendor Huawei, whose equipment is used in many European networks today. Most European countries have so far opted for a principles-based approach to network equipment security that does not formally exclude any vendors, but requires equipment to meet certain standards. We think the fluid nature of the discussion, as well as the steps necessary to comply with security standards, may create uncertainty for operators, delay investment decisions, and increase roll-out costs, particularly if companies decide to swap existing equipment.

Latin America

Key assumptions

1. Data usage will continue to grow

We think incremental wireless data usage, fixed-to-mobile substitution, and continued demand for broadband access should fuel low- to mid-single-digit revenue growth.

2. Capex spending on 5G technology is limited

5G will not be a major capex driver in the near term. We expect capex to stay at around 15% of revenues, driven by network upgrades and expansions in fixed and mobile networks.

3. Financial management will emphasize low leverage and liquidity

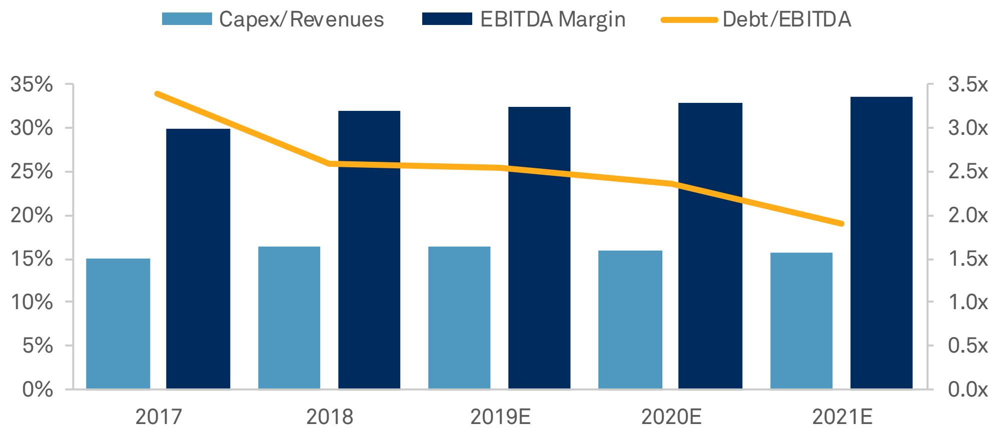
We believe financial discipline will support leverage reduction in 2020-2021. In addition, issuers will focus on foreign-exchange risk management and liquidity.

Latin American telcos are in good shape to weather a difficult 2020

We consider that macroeconomic conditions in Latin America will be a key driver of the sector's growth, and headwinds to economic activity in key markets will have direct implications on demand. In our view, however, telcos are generally well equipped to withstand a scenario of sluggish growth, particularly because low leverage and sound liquidity provide comfortable financial flexibility. We project low- to mid-single-digit revenue growth, spurred by higher mobile data usage, wireless subscriber growth, and demand for broadband. We expect EBITDA margins above 30%, which is credit-positive, and we expect this to continue over the next couple of years. In particular, margins will be supported by higher-margin mobile postpaid and broadband service revenues. However, a contraction of EBITDA margins below 30%, within the context of relevant downside economic risks, could trigger increasing pressure on leverage metrics.

Chart 11

LatAm Key Financial Indicators



Source: S&P Global Ratings

Data usage will continue to grow

We expect data consumption will continue to grow, particularly as the region catches up with other parts of the world in terms of service penetration among both consumers and businesses. Mobile penetration remains relatively low in Latin America, at about 70%. We expect an increase in 4G and 4.5G wireless coverage across most operators, which is likely to drive higher data usage and revenue in the next few years. In 2019, the region reached the milestone of 450 million internet users, which represents a penetration rate of about 70%. For 2020, we expect internet subscriber growth in the low single-digit area. Corporate IT and data communication penetration is still relatively low and we expect it to increase in coming years, underpinned by cloud and security services. Penetration growth, however, could be constrained by weak economic growth in the near term.

Capex spending on 5G technology is limited

We project capex to stay at around 15% of revenues, as Latin American countries are slower to roll out 5G services than mature markets. Brazil's local regulator has announced that frequencies for 5G could be auctioned in the second half of 2020, in the 2.3 gigahertz (GHz), 700 MHz, and 3.5 GHz bands. Commercial operation could begin in 2021, although the new regulatory framework is yet to be approved by Congress. Telefonica has already conducted 5G trials, but we expect sizable near-term investments in fiber optics coverage, considering that broadband remains the most relevant business in the fixed segment.

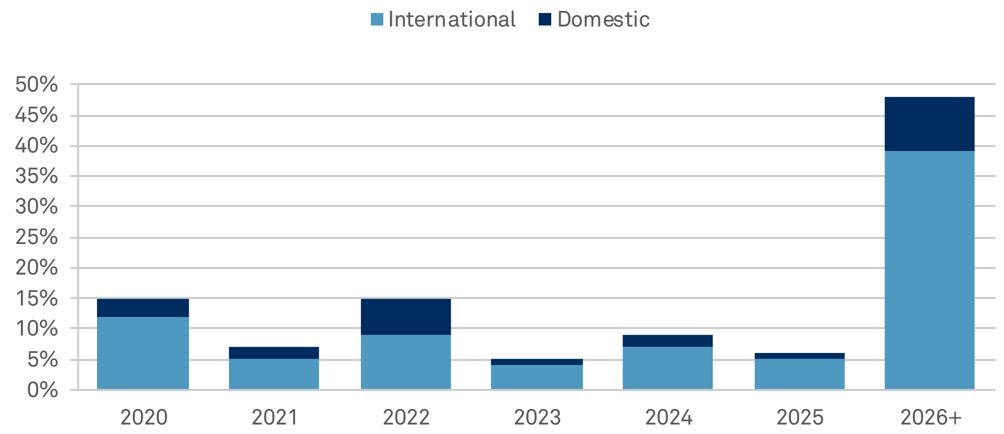
For the rest of the region, we generally don't anticipate significant 5G investments in the near term because operators are still in the process of enhancing 4G networks, and we expect a 5G adoption rate of only 10% by 2025. For example, for Mexican operator America Movil, we expect capex allocations to focus on the expansion of fiber, 4.5G technology, and network virtualization. In Chile, we expect capital investments to be mostly driven by the deployment of the 4G long-term evolution (LTE) network and increased fiber optic coverage.

Financial management will emphasize low leverage and liquidity

Financial discipline has increasingly become a common theme across the region, with an increased focus on reducing leverage. While dividend distributions and share repurchases have slightly increased in recent months, we consider that these type of payments to shareholders will depend solely on performance, and companies would be ready to adjust as necessary, on a case-by-case basis. In addition, companies have been quite proactive in terms of liability management, not only to reduce their cost of debt, but more importantly to extend their debt maturity profiles to mitigate refinancing risk. This was particularly evident in markets affected by political cycles marked by presidential elections, such as Brazil, Mexico, and Argentina. Some issuers have also protected leverage metrics and liquidity by reducing their exposure to foreign-exchange risk. We expect continuity of this general financial policy framework.

Chart 12

LatAm debt maturity profile (% of total debt)



Source: S&P Global Ratings

Although the bulk of our rated portfolio companies have very healthy liquidity, liquidity will remain a priority in 2020. We believe that refinancing risks have been largely mitigated, but we think liability management will continue as market conditions permit. Issuers will also continue their efforts to manage the exposure to exchange-rate fluctuations.

Key risks and opportunities

1. Sovereign risk can constrain the ratings on telcos

Low economic growth and political risks have undermined sovereign credit quality in some countries, which will continue to weigh on the credit ratings of important players in the region.

2. Regulatory initiatives could foster growth in some markets

Several countries in the region are preparing or implementing legislation that could be favorable for the sector and improve its growth potential.

3. Selected M&A will continue, but with limited risks to credit metrics

While M&A activity is likely to continue in 2020, we consider that the telcos' financial policies will still prioritize low leverage.

Sovereign risk can constrain the ratings on telcos

We expect weaker GDP growth of 0.9% in 2019 and 1.8% in 2020 for Latin America, which is very low growth by historical standards (the 10-year average is about 2%), and compared with other emerging markets that are averaging 4%. The political environment has also affected investor sentiment in several of the region's largest markets. In Argentina, the opposition's win in the October presidential election and a recent change in policy direction could hamper domestic demand, as financial conditions tighten. We now see the Argentine economy contracting 3% in 2019 and 1% in 2020. Brazil has made progress on key reforms, including pensions, but it has become clear that these changes won't be enough to fix the country's short-term fiscal challenges and slow economic activity. A lack of policy direction and controversial decisions in Mexico act as a drag on the already fragile investor confidence, and has already started to affect consumer spending. And more recently, social unrest in Chile could dent the country's short-term growth prospects.

Such slow economic growth and political risks have undermined sovereign credit quality in some countries, which is a factor that will continue to weigh on the credit ratings of important players in the region. For instance, the negative outlook on America Movil mirrors the negative outlook on Mexico, as we rate the company only one notch above the long-term foreign currency sovereign rating on Mexico. In the case of Telefonica Brasil, we can rate the company above the Brazilian sovereign long-term foreign currency rating of 'BB-', but the rating is limited by Brazil's transfer and convertibility (T&C) assessment of 'BB+', since the company's operations are concentrated in that market. In the same way, we cap the rating on Telecom Argentina at the level of our T&C assessment on Argentina, because only 5% of the company's revenues and EBITDA come from foreign operations. We believe this wouldn't be enough to cover the company's full foreign currency commitments if the sovereign were to further restrict access to foreign exchange and thereby erode Telecom Argentina's capacity to service its foreign debt.

Regulatory initiatives could foster growth in some markets

We expect some regulatory changes for 2020 that could improve the sector's growth potential. In Brazil, the change in the fixed-line segment from a concessions model into an authorizations scheme is still being implemented. Argentina recently carried out a regulatory push to promote infrastructure sharing. In Mexico, we don't expect significant regulatory moves in 2020 because the federal government's austerity policy has reduced the annual budget for the telecom regulator, which in our view limits the regulator's capacity to enhance the existing framework in the near term.

In Brazil, the government continues to discuss a bill (PLC 79) that would allow fixed-telephony concession holders to migrate to the authorization regime. We believe that the bill is positive as the authorization regime is less strict about coverage, regulatory requirements, and price controls. This regulation aims to re-focus capital investments on broadband services, instead of requiring investments in fixed voice telephony. This initiative has been pending since 2017, but it seems that Congress could soon approve the bill.

Slow regulatory updates are holding back the sector's full convergence in key markets like Mexico and Brazil, and we don't anticipate the approval of significant pro-convergence regulations in 2020. Argentina is one of the few large markets that has been recently pushing convergence, and Telecom Argentina holds a strong market position following its merger with Cablevision last year. In Chile, operators are also focusing on bundling packages of fast broadband and TV, and keeping up the upgrade from asymmetric digital subscriber line to ultra-fast broadband to protect market share.

Selected M&A will continue, but with limited risks to credit metrics

In 2019, consolidation increased across the region, led by America Movil's acquisition of Nextel's subsidiaries in Brazil. On top of this, America Movil pursued growth opportunities in Central America to further strengthen its footprint in that region. Axtel in Mexico has divested certain noncore assets, and recently signed a $175 million agreement under which Equinix Inc. would acquire three data centers that serve two strategic cities in Mexico.

Brazilian Oi S.A.'s financial difficulties stemming from higher-than-expected disconnections and consequent revenue declines in fixed lines over the past few quarters has led the company to consider divesting several assets in the next two years totaling Brazilian real (R$) 6.5 billion-R$7.5 billion. Some operators in the region may also consider monetizing part of their portfolio to boost shareholder value, improve return on capital, and utilize their telecom infrastructure more efficiently. This could raise important M&A opportunities for incumbent players as early as 2020. While M&A activity is likely to continue in 2020, we consider that the telecom players' financial policies will still prioritize low leverage, limiting the potential for large debt-financed acquisitions.

Asia-Pacific

Key assumptions

1. Growth in data usage is strong, but monetization prospects are uncertain

We expect mobile date usage to continue to rise, but operators' ability to convert this into incremental revenue and earnings is still uncertain given intense competition in many markets.

2. Investment needs for advanced networks remain significant

We expect still-high capex in 2020 amid 5G roll-out and continued network upgrades, as well as spectrum spending. Large capital investments are likely for 5G networks in Korea, Australia, Japan, and China.

3. M&A is likely to continue

We anticipate ongoing M&A activities in APAC as operators seek economies of scale and cost synergies given saturated telecom markets and increasing needs for network investments.

We expect revenue to grow, but credit quality is coming under pressure

We forecast a low-single-digit revenue increase for APAC telcos in 2020, supported by continued growth in mobile data usage and steady but moderating regional GDP growth. However, we expect modest pressure to continue on profitability, due to stiff competition, with deeper cuts in wireless tariff pricing. Competition remains intense in many countries, with major operators using aggressive pricing strategies and the entrance of new operators. This, combined with the ongoing large capital spending needs for advanced network deployment such as 5G, could gradually increase downward pressure on credit quality for APAC telecom operators.

Growth in data usage is strong, but monetization prospects are uncertain

We expect mobile data usage in APAC to continue its strong growth. Major drivers include more affordable plans, growth of data-intensive use cases such as video, and enhanced handset capabilities, including the launch of 5G smartphones in many developed countries in particular. For instance, in South Korea, where a commercial 5G wireless service was launched in April this year, the average mobile data usage per user for 5G smartphones recorded 26.6 GB in September 2019, compared to 9.8 GB for LTE users during the same period (source: Ministry of Science and ICT of Korea). For developing countries, increasing high-speed network coverage and rising smartphone adoption is still driving rapid growth in mobile data consumption.

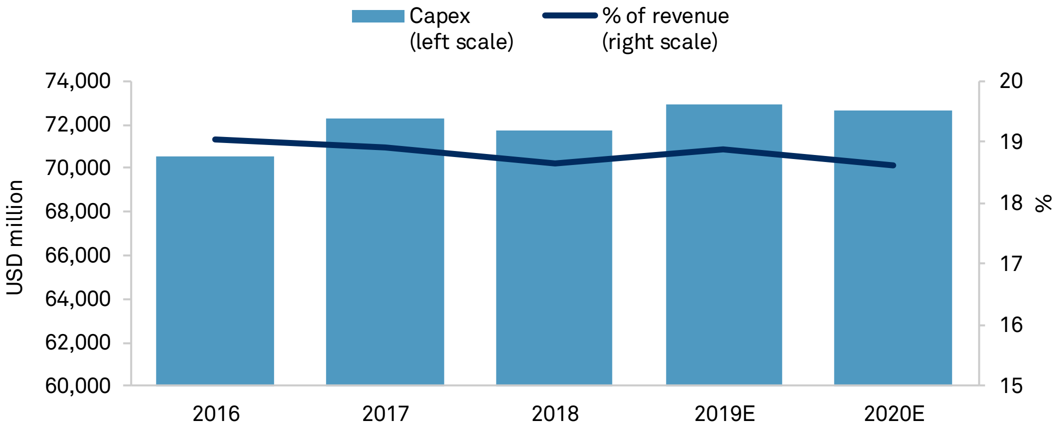
However, it is uncertain whether telcos will be able to convert the data usage growth into incremental revenue and EBITDA. This is because the ARPU growth rate remains pressured in most APAC countries by competitive pricing dynamics in the market. We forecast that modest pressure on ARPU and profitability will continue as mature markets, increased commoditization of services, and regulatory interventions are likely to prevent meaningful improvements in competitive conditions.

Investment needs for advanced networks remain significant

We expect capex to modestly increase in the region in 2019 and remain high in 2020, amid the deployment of advanced networks such as 5G. In our view, large capital investments for 5G networks are likely to continue in developed countries such as Korea, Australia, Japan, and China. In particular, we expect Korean telecom operators' capex to increase 20%-30% in 2019 and remain elevated in 2020, as the country was the first to commercialize 5G wireless services globally in April 2019, and is still expanding service coverage across the nation. Compared to Korea, we believe Chinese and Japanese operators have relatively more room to flexibly manage investments without significantly increasing capex. Meanwhile, we expect ongoing sizable capex in developing countries such as India, Thailand, and Indonesia, due to continued investment in 4G LTE networks, and for acquiring 5G spectrum.

Chart 13

APAC telcos' capital expenditure



Source: S&P Global Ratings

M&A is likely to continue

We expect M&A activities to continue in APAC in 2020 as operators pursue cost synergies, economies of scale, and 5G readiness through convergence and industry consolidation. In recent years, consolidation activity has increased across APAC. Telecom carriers pursued mergers to realize scale benefits and synergies from combined resources to deal with increasing competition in the respective wireless markets.

In 2018, Vodafone India and Idea Cellular completed their merger to counter intense competition from new entrant Reliance Jio (Jio). However, the transaction didn't succeed in easing competition in the industry, which remains intense and pushed Vodafone-Idea Ltd. into third place behind Jio and Bharti Airtel. In Australia, TPG and VHA announced merger plans in 2018 to take on market leaders Telstra and Optus, with the focus on realizing scale benefits and preparing for 5G rollout. However, the merger has been opposed by the Australian Competition and Consumer Commission and is pending in the federal court for a final ruling. Another key merger between Axiata and Telenor's Asian operations has been called off due to deal complexities. However, we believe that Axiata is still exploring other options, including consolidating country-specific operations, which could pave the way for more consolidation in the region.

Mergers of telecom and cable or media companies also continue in certain advanced markets. In South Korea, two of the country's three mobile operators are pursuing the acquisition of cable TV operators (SK Telecom Co. Ltd. of Tbroad and LG Uplus Corp. of CJ Hellovision) to strengthen their competitiveness in the pay-TV business.

Key risks and opportunities

1. Competition is intensifying, with aggressive pricing and new entrants

Major operators in India, Singapore, Philippines, and Taiwan are adopting aggressive pricing strategies to maintain their market positions, resulting in profitability pressure. Given some governments' initiatives to encourage competition, the entrance of new operators could further intensify competition in Japan, Singapore, and Australia.

2. Although positive in the longer term, 5G could be credit-negative initially

5G has had a positive impact on wireless ARPU and subscriber numbers after its launch in South Korea, but it came with higher marketing cost and capex. This can be slightly credit-negative initially, but in the medium-to-long term, may be offset by further ARPU growth and the development of new 5G use cases.

3. The economic downturn could take a toll on smaller operators

Substantially weaker economic conditions could curtail consumer spending on content and connected devices, and access to capital markets could tighten. We think this poses risks, particularly for the ratings on some smaller operators in emerging markets.

Competition is intensifying, with aggressive pricing and new entrants

Major operators in India, Singapore, Philippines, and Taiwan are adopting increasingly aggressive pricing strategies to defend their market positions, which has resulted in profitability pressure in these markets. Furthermore, following government initiatives to promote competition in recent years, new operators have entered the markets in Japan, Singapore, and Australia.

In India, after the entry of Jio in September 2016, incumbent mobile service providers Bharti Airtel and Vodafone Idea are facing stiff competition and a tariff war. Jio is set to become the largest player by revenues after almost three years in operation, but the industry might have shrunk by 35% since Jio's launch. Competition in Singapore is also intensifying due to the impending commercial launch of the country's fourth licensed telecom operator, TPG Telecom. Tariffs in Singapore have already fallen substantially across the board in the past two years, following the influx of MVNOs. In Australia, competition in the highly competitive mobile market has further intensified since TPG Telecom won the license in 2017 to become Australia's fourth mobile operator.

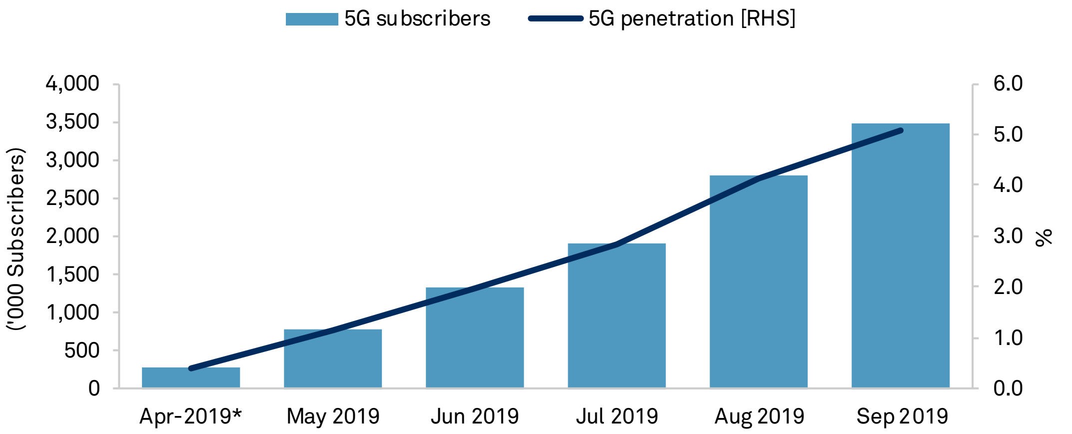
In **Japan**, Rakuten Mobile became the country's fourth mobile operator, receiving a mobile license in April 2019. The company plans to launch its mobile services in 2020, and aims to use new network technology to gain a significant cost advantage over rivals. Rakuten's entrance comes at a time when Japan's telecom market already faces increasing price competition after years of pressure from the government. The government-mandated operators cut tariffs sharply, which resulted in market leader NTT Docomo reducing some rates by as much as 40%. Also, in **Philippines**, the entry of Dito Community slated for 2020 will disrupt the long-held duopoly in the country, which could intensify price competition as we expect Dito to compete on prices, given the weaker coverage at its inception.

Though positive in the longer term, 5G could be credit-negative initially

5G is making rapid progress in developed markets in APAC. In **South Korea**, 5G uptake has been strong since the commercial rollout in April 2019, aided by operators' extensive marketing. The success comes despite a limited rollout focusing on dense urban areas. Over three million subscribers (representing close to 5% of total wireless subscribers) have opted for 5G services in the first five months after launch, and we expect Korea's 5G subscriptions to further increase to around five million by the end of this year.

Chart 14

Cumulative 5G Subscribers In Korea



*Korea switched on 5G services to general consumers from April 05, 2019. Source: Ministry of Science and ICT, S&P Global Ratings.

Despite aggressive tariff plans to promote initial 5G uptake, South Korean telecom carriers have recorded a modest rebound in ARPU in recent quarters, halting the downward trend over the past few years. We expect ARPU to further improve for Korean telcos over the next 12-24 months as data consumption grows at a faster pace, aided by 5G speeds and the pricing of larger 5G wireless plans at a premium to 4G plans. That said, despite increasing ARPU, Korean telcos like SK Telecom and KT Corp. have reported a drop in profitability since the 5G launch, driven by higher marketing expenses and subsidies on 5G devices. Together with higher capex from further 5G development, this will likely result in a modest increase in debt over the next one-to-two years.

Australia is the second country in APAC to launch commercial 5G services. The country's leading operator Telstra launched 5G mobile services in May 2019 and has started building out coverage in 10 cities, while the second-largest player, Singtel Optus, has launched 5G fixed-wireless broadband services in several cities. Both companies remain relatively aggressive in their 5G buildouts and plan to expand their network over the next 12 months.

Australian telcos are also very keen to grow their 5G-based fixed wireless broadband business, so that they can bypass non-profitable national broadband network (NBN) resale. At present, the telcos need to pay high fixed-line-network access charges to government-owned National Broadband Network (NBN) for its provision of broadband services, which continues to pressure earnings. We do not expect 5G fixed wireless broadband networks to completely replace NBN in the near-to-medium term, given the heavy capital spending requirements and some players' stretched financial positions. Still, over the longer run, we expect technological advances and high mobile network investment to slowly tilt the balance in favor of 5G wireless broadband services. Although we expect Australian telcos to remain relatively aggressive in their 5G buildouts, 5G capital spending is unlikely to be a large lumpy step-up, given our view of a gradual 5G evolution.

Japan also plans to launch 5G commercial services by the spring of next year, ahead of the 2020 Summer Olympics in Tokyo. Earlier this year in April, the Japanese government allocated spectrum to the four mobile operators in the country. Although the investment in 5G network and infrastructure will result in increased capex for the telcos over the next one-to-two years, we do not expect a significant jump in the incumbents' incremental capital outlays thanks to the advanced nature of their current network, with nationwide fiber optic and 4G LTE. Still, we foresee Japanese players' revenues and earnings coming under pressure over the next one-to-two years amid intensifying competition, with a new entrant and regulatory pressures lowering tariffs.

China's three state-run telecom operators, China Mobile, China Telecom, and China Unicom launched 5G mobile services in early November 2019 in 50 cities including Beijing, Shanghai, and Shenzhen. The initial response in China has also been strong, with close to 10 million subscribers registering before the launch. We believe China will continue to expand its 5G network aggressively as it plans to extend coverage to all 300 plus cities by the end of 2020, and remains committed to gaining global leadership in developing 5G technology. We do not expect the high investments to weigh on the financial metrics of the Chinese incumbents, which remain well-positioned to endure the high capital spending thanks to their strong financial resources, particularly for the largest player China Mobile.

The economic downturn could take a toll on smaller telecom operators

We project APAC GDP growth to slow to 5% in 2019-2020, down from 5.5% 2018, and our economists see macroeconomic risks increasing. Substantially weaker economic conditions could curtail consumer spending on content and connected devices. This could hurt some smaller emerging-market telecom operators that are already struggling with high competitive intensity in their respective markets. Additionally, certain smaller players may also be affected by the ongoing trade and technology conflict between the U.S. and China. In APAC, many operators use network equipment from Chinese vendors such as Huawei and ZTE, owing to their attractive pricing, good technology, and vendor pricing support. However, a ban on Huawei could increase operators' equipment costs and delay technology upgrades. Furthermore, tighter access to credit markets could increase the cost of debt and refinancing risks, particularly for smaller operators in emerging markets.

Related Research

- Credit FAQ: Why Telecom Companies Across Europe Are Selling Their Towers , Oct-11-2019
- Credit Implications From AT&T's New Capital Allocation Plan, Financial Outlook, And HBO Max Launch, Nov 7, 2019
- How "Green" Are Telecom Green Bonds?, Sep 9, 2019
- Webcast Replay: Huawei Ban’s Credit Impact on Telecom and Technology Sectors, Jul 13, 2019
- Bans On Huawei Will Hit Tech Harder Than Telecom, But Not Enough To Move The Ratings. Jun 12, 2019

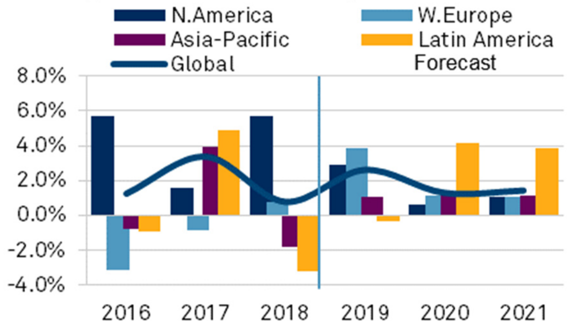
This report does not constitute a rating action.

Industry forecasts

Telecommunications – Fixed and Wireless

Chart 15

Revenue growth (local currency)



Cable and Satellite

Chart 16

Revenue growth (local currency)

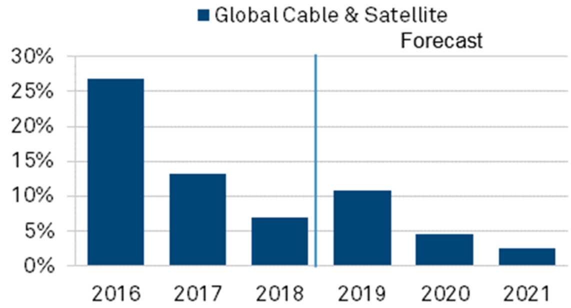


Chart 17

EBITDA margin (adjusted)

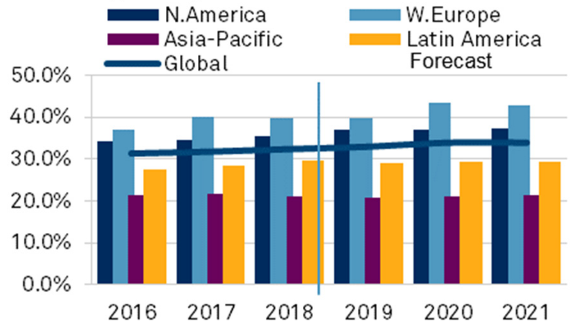


Chart 18

EBITDA margin (adjusted)on

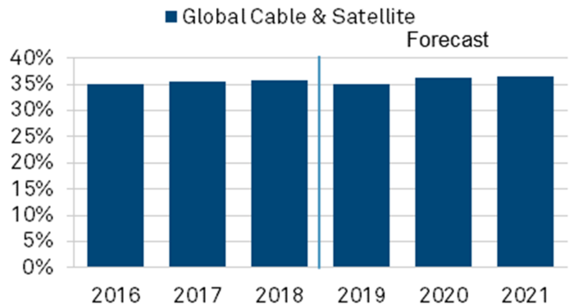


Chart 19

Debt / EBITDA (Weighted Average, adjusted)

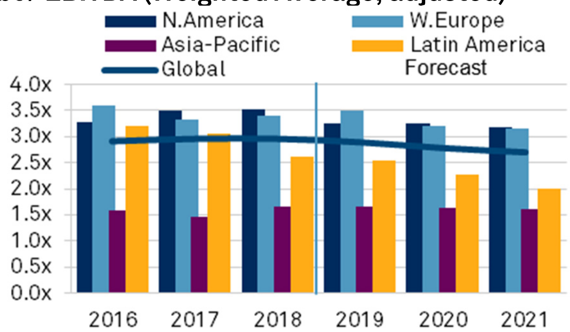


Chart 20

Debt / EBITDA (median, adjusted)

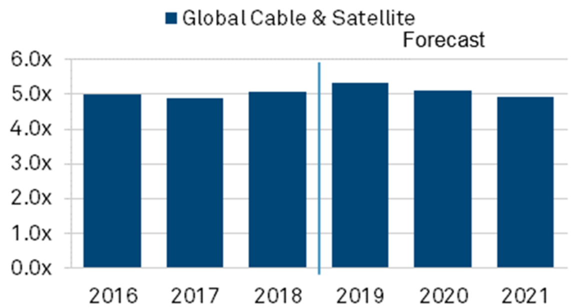


Chart 21

FFO / Debt (median, adjusted)

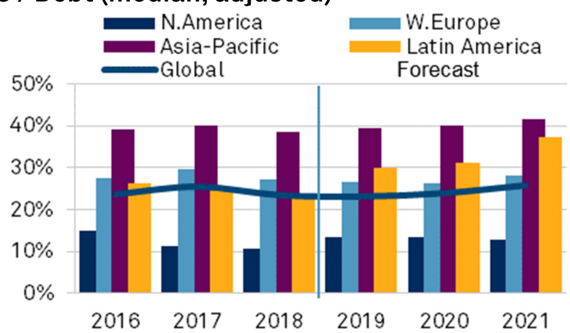
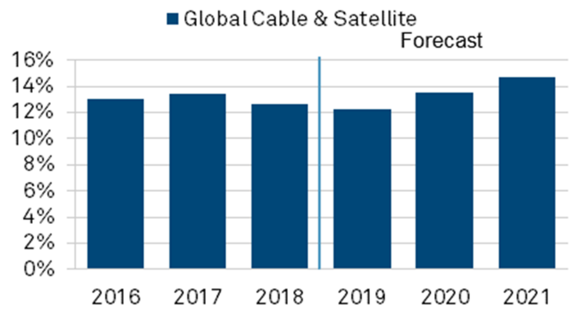


Chart 22

FFO / Debt (median, adjusted)



Source: S&P Global Ratings. Revenue growth shows local currency growth weighted by prior-year common-currency revenue-share. All other figures are converted into U.S. Dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. OEMs--Original equipment manufacturers. FFO--Funds from operations.

Cash, debt, and returns

Global Telecommunications

Chart 23

Cash flow and primary uses

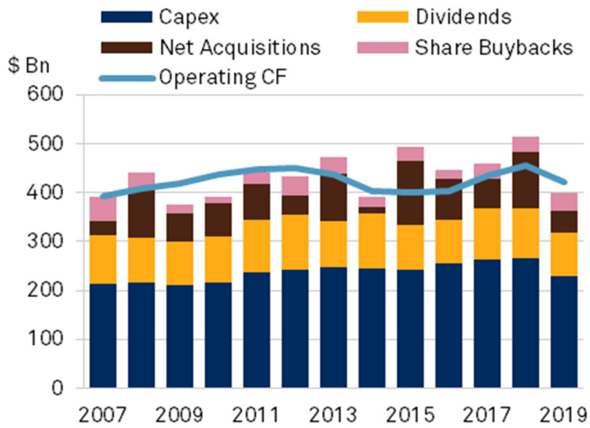


Chart 24

Return on capital employed

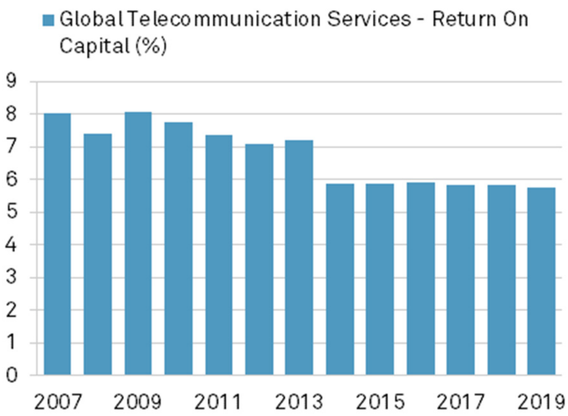


Chart 7

Fixed versus variable rate exposure

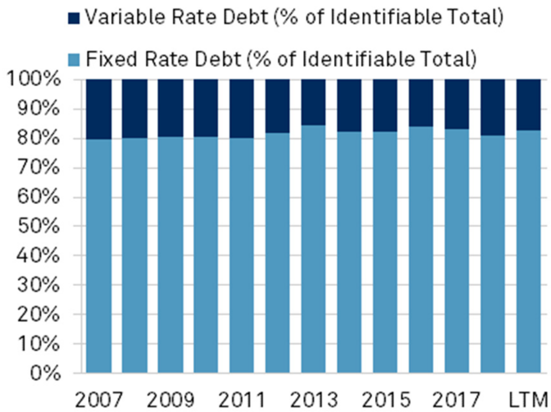


Chart 268

Long term debt term structure

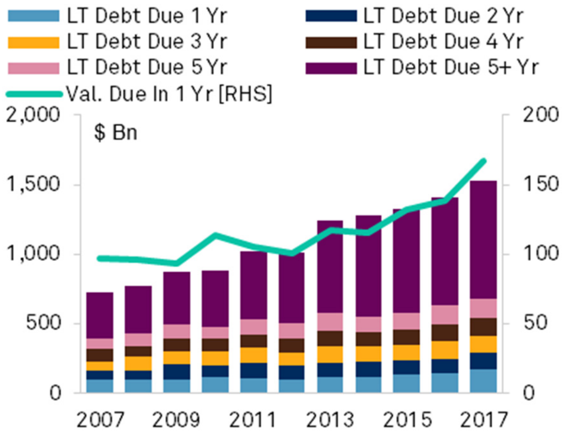


Chart 27

Cash and equivalents / Total assets

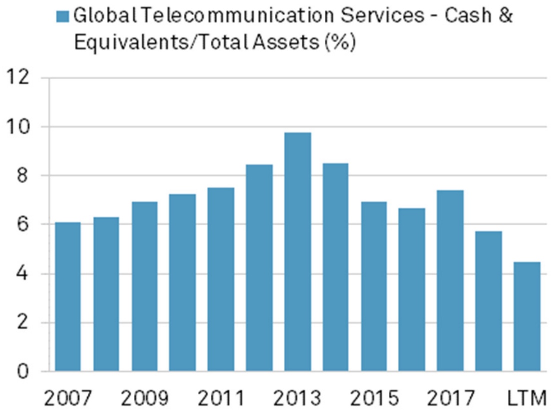
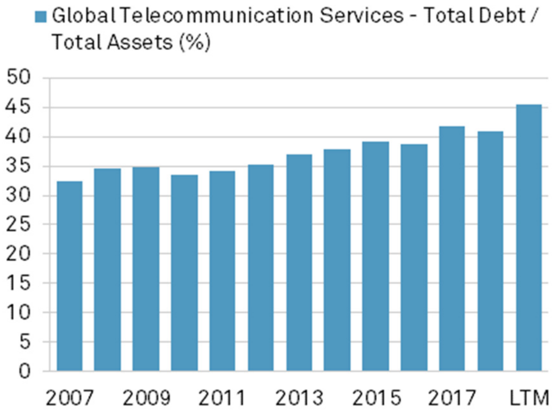


Chart 28

Total debt / Total assets



Source: S&P Global Market Intelligence, S&P Global Ratings calculations

spglobal.com/ratings