

Sector report

European High Yield Telecom Initiation: The Sector is in a good place

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- **Summary:** There is a significantly sized private/high yield Telecom universe, of which we already have direct coverage of c.80% and indirect coverage of a further c10%. In this new product, we pull together market data and commentary for the high yield telecom universe (>€155bn of gross debt), leaning specifically on our sector knowledge and expertise to provide context and outlook for all. We also look closely at the European FTTH overbuilder sector, which we believe will see more debt raises in the near future.
- **Supportive regulation driving better outlook:** The sector outlook is as good as it has been for some time. Underlying total Europe y/y SR growth was positive in Q3, the first time the sector has posted positive successive quarters of growth in at least three years. We believe this growth can continue as regulatory drag turns into regulatory support, predominantly from rising wholesale prices as the industry migrates to FTTH.
- **Growth in cashflow to come:** Cashflow can then grow as we go through peak-FTTH rollout. The European Recovery Fund will provide more direct support too. Our tariff tracking data also suggests we are seeing more pricing discipline between the operators, which should bode well for medium-term growth. From a debt perspective, we think capex will peak in 2021 giving good deleveraging potential. M&A is likely to continue, and will help to reshape the credit landscape, as private valuations continue to lead public markets. We expect more in-market consolidation, more deals to crystallise SOP value and more Infrastructure deals.
- **Extensive library of thematic research:** From a sector perspective, we have written most recently on: Private Equity M&A ([HERE](#)), FCF ROIC cycles ([HERE](#)), European Recovery Fund ([HERE](#)), Cable capex (FTTH overlay) ([HERE](#)), 5G capex ([HERE](#)), ESG ([HERE](#)), FTTH overbuilders ([HERE](#), [HERE](#)) and Towers ([HERE](#)) - these complement our monthly tariff tracker ([HERE](#)) and our quarterly data product ([HERE](#)).
- **Coverage:** We have detailed models for most of the names in the space. Of the high-yield names, we see the most upside in the equity of **Liberty Global** and **Telenet**, while we continue to believe the market is too optimistic on **Cellnex**. Of those names without equity quotes, we know Iliad, Masmovil, Altice France and Altice International extremely well from when they were listed.

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Initiation: European High Yield Telecom

- There is c€158bn of gross Telecom high yield debt (below Moody's Baa3, S&P BBB-). We cover some of these names already from an equity perspective, and follow most to help with the equity coverage of their peers. This product though pulls together market data and commentary specifically for the high yield issuers. A content summary for this new quarterly product is as follows:

- **Section 1:** Sector view - Operators
- **Section 2:** Sector view - TowerCos
- **Section 3:** Market analysis
- **Section 4:** Company snapshots (including bond pricing and capital structure)

Q3 21 €m	Gross debt*	Cash	Net debt*	Gross debt as % of total sector	Given by company ND/EBITDA	WACD	WAM	NSR Equity rating
Telecom Italia	24,556	6,943	17,613	16%	3.0	3.7%	5.5	Neutral
Altice France	23,399	423	22,976	15%	5.3	4.3%	5.7	
Virgin Media O2	20,418	639	19,778	13%	3.7	3.8%	8.1	LG = Buy;Tef = Buy
Cellnex	18,174	1,501	16,673	12%	6.3	1.6%	7.2	Reduce
Vodafone-Ziggo	10,817	175	10,642	7%	6.3	3.7%	7.5	LG = Buy;Vod = Buy
Iliad	8,987	1,607	7,380	6%	2.8	1.6%	4.4	
Altice International	7,941	866	7,075	5%	4.3	3.6%	6.1	
Masmovil	6,799	155	6,644	4%	5.1	4.1%	5.2	
Sunrise-UPC	6,605	35	6,570	4%	4.0	3.7%	8.4	LG = Buy
Telenet	5,603	194	5,409	4%	3.9	3.1%	6.8	Buy
TDC (DKT)	4,236	123	4,113	3%	5.3	5.1%	2.8	
United Group	4,870	311	4,559	3%	4.7	3.9%	5.2	
PPF Telecom	4,227	266	3,961	3%	2.9	2.3%	3.9	
Inwit	4,100	1,000	3,100	3%	5.6	1.8%	5.9	Neutral
eir	2,550	528	2,022	2%	3.4	2.9%	5.0	
Salt	1,828	346	1,483	1%	3.4	3.3%	4.9	
Digi	1,180	43	1,136	1%	2.6	2.9%	5.4	
TalkTalk	922	43	879	1%	3.1	3.9%	3.6	
Ice Group	545	46	500	0%	16.5	8.3%	5.7	
Aggregate	157,757	15,244	142,513	100%	4.2	3.4%	6.3	

* Excludes lease debt

Initiation: European High Yield Telecom

- In addition, further more detailed Q3 commentary is available for the below (other non result detailed reports exist as well of course, e.g. proprietary survey into pay-TV sport in Italy [HERE](#), Telenet upgrade [HERE](#) etc)

- Altice France - [HERE](#);
- Altice International - [HERE](#);
- Cellnex - [HERE](#);
- Iliad - [HERE](#);
- Telecom Italia - [HERE](#);
- Inwit - [HERE](#);
- Liberty Global - [HERE](#);
- Telenet [HERE](#);
- Virgin Media 02 - [HERE](#);
- VodafoneZiggo - [HERE](#).

- For those interested in the high yield issuance (hybrids) from IG issuers:

- Vodafone - [HERE](#), [HERE](#)
- KPN - [HERE](#)
- Telefonica - [HERE](#)

- Full models can be accessed for the following:

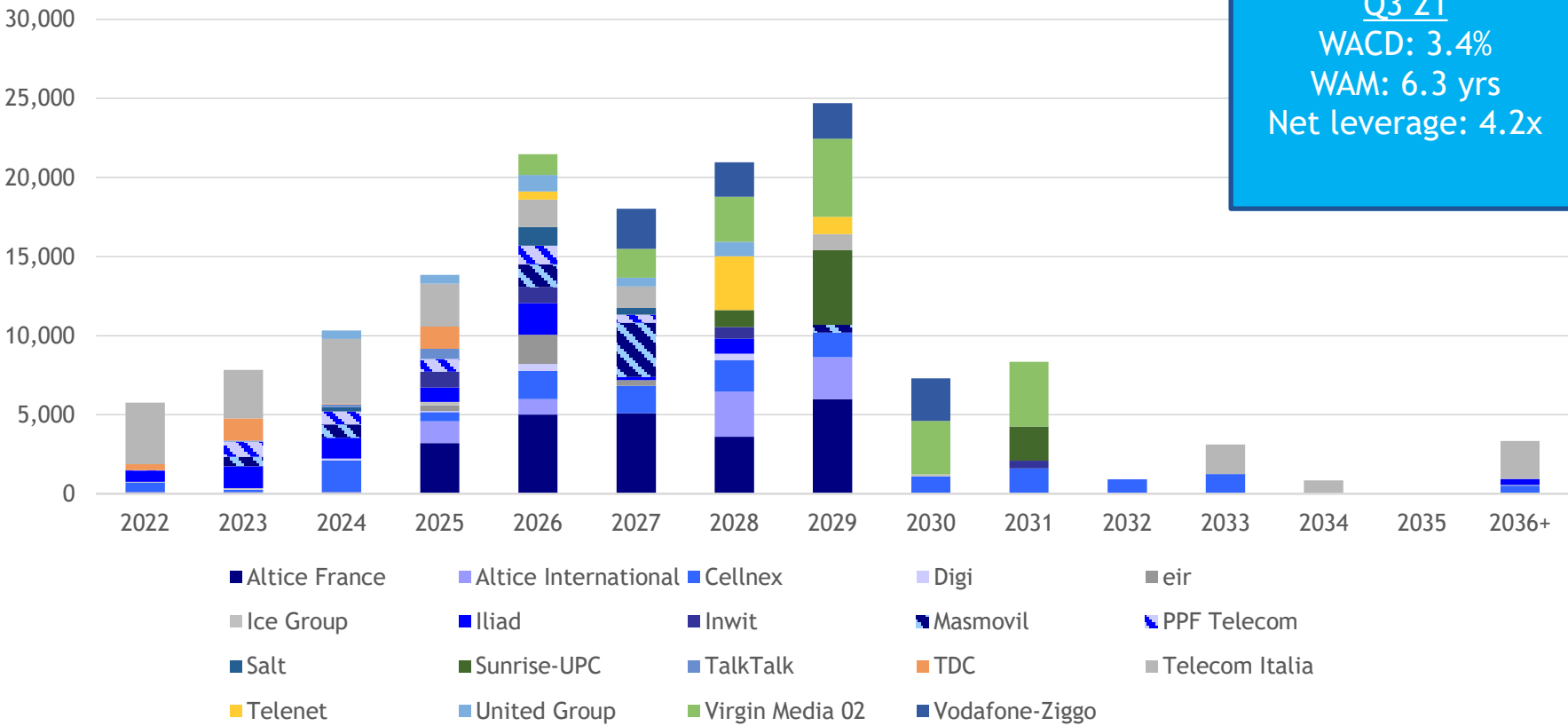
- Cellnex - [HERE](#)
- Inwit - [HERE](#)
- KPN - [HERE](#)
- Liberty Global - [HERE](#)
- Telefonica - [HERE](#)
- Telenet - [HERE](#)
- Virgin Media 02 - [HERE](#)
- Vodafone - [HERE](#)
- VodafoneZiggo - [HERE](#)

Q3 21

Issuer rating	S&P		Moody's	
	Rating	Outlook	Rating	Outlook
Altice France	B	Negative	B2	Negative
Altice International	BB+	Negative	B2	Negative
Cellnex	BB+	Stable		
Digi	BB-	Stable	B1	Stable
eir	B+	Positive	B1	Stable
Ice Group				
Iliad (Holding)	BB	Stable	Ba3	Stable
Inwit	BB+	Stable		
Masmovil	B	Stable	B1	Stable
PPF Telecom	BB+	Stable	Baa2	Stable
Salt	B+	Stable	B2	Stable
Sunrise-UPC	BB-	Stable	Ba3	Stable
TalkTalk	B+	Stable		
TDC	B	Stable	B1	Stable
Telecom Italia	BB	Stable	Ba2	Negative
Telenet	BB-	Stable	Ba3	Stable
United Group	B	Stable	B2	Stable
Virgin Media 02	BB-	Stable	B2	Stable
Vodafone-Ziggo			B1	Stable

European High Yield Telecom Issuance

Sector debt repayment schedule



Sector overview - Operators

Sector outlook: FCF growth set to improve

- We think that the sector outlook is slowly but surely improving based on improving regulation - as outlined in our our recent report, [HERE](#). Our view is that:

- 1
- 2
- 3
- 4

Better revenue outlook... will lead to...

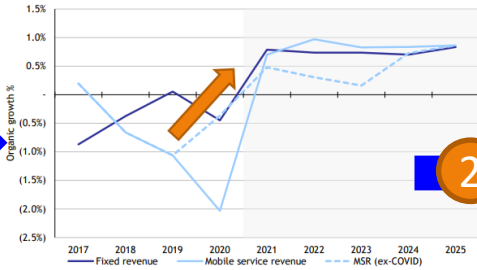
... improved EBITDA growth... and because

...Capex has peaked... this means...

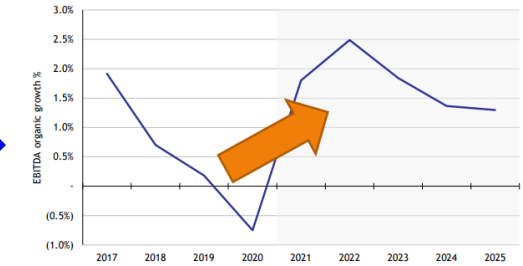
FCF will grow, ROICs will stabilise then rise... which is sustainable because regulatory oversight is diminishing.

- This report from September fleshes out the drivers behind these charts - [HERE](#).

EU Telecoms fixed and mobile revenue growth - improving trends ex-COVID as well
Source: NSR estimates

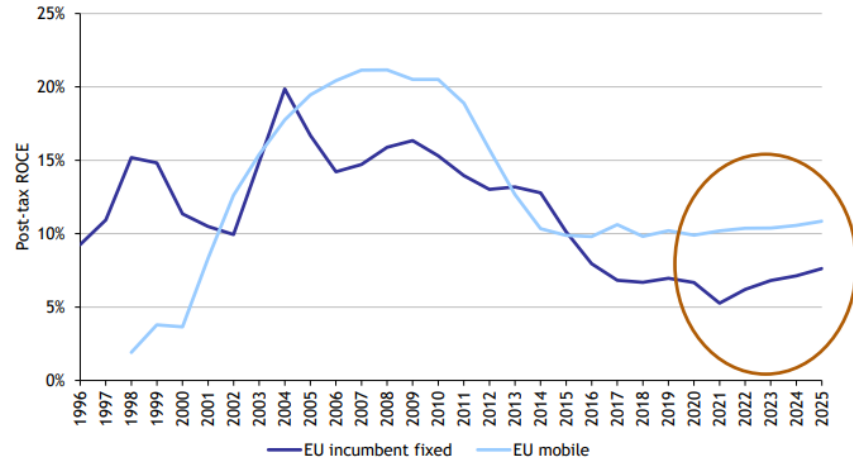


EU Telecoms EBITDA growth
Source: NSR estimates



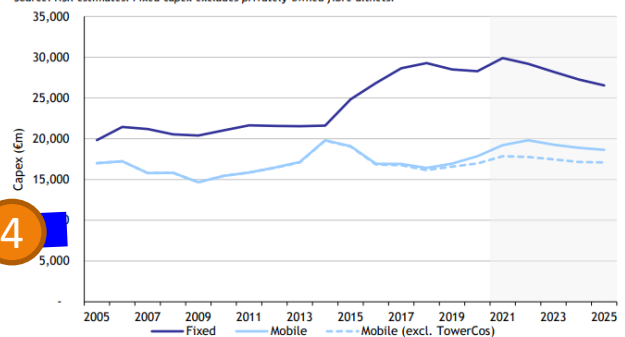
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EU Telecoms fixed and mobile post-tax ROCE
Source: NSR estimates



Returns bottoming out and gradually improving

EU Telecoms fixed and mobile capex
Source: NSR estimates. Fixed capex excludes privately-owned fibre altnets.



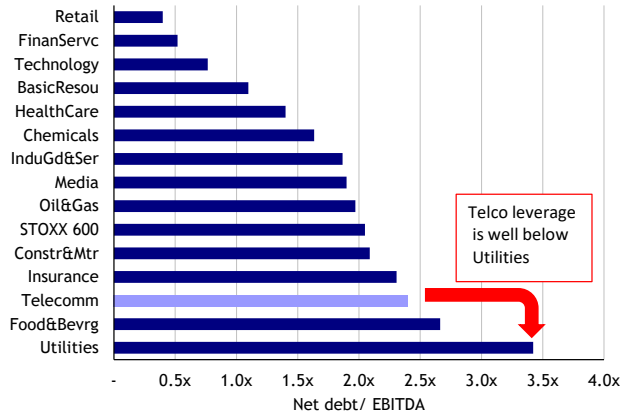
Sector outlook: Equity should re-rate, and if not, more M&A

What next?: The question is, what happens if we are right?

- **Equity implications:** We see 27% upside on average so we think the sector will perform well from an equity perspective; there is precedent: Elisa trades at a 48% premium to the sector, and we think much of the sector can re-rate toward (but necessarily to) the Elisa multiple, given that conditions are becoming more Finnish (in growth terms - not in actual market structure, as the exact Finnish conditions are unlikely to be exactly replicated, but might be partly).
- **Debt implications:** We think that the telco sector is increasingly looking like the utilities sector, thanks to: (1) Lowered and stable ROCE close to WACCC; (2) Less regulatory intervention; and (3) Reduced threat from challengers (focus on quality). If we are right, and the risk profile for the sector is lower, then investors should have more confidence over the longer-term cash generation of the European telecoms sector - i.e. leverage can be higher (especially true of the infrastructure piece of the asset mix).
 - This means that companies can and should take action to support their share price in our view, return cash to shareholders, use the balance sheet to pay dividends if necessary, invest in long-term projects, be confident (which might not necessarily be good for bond holders).

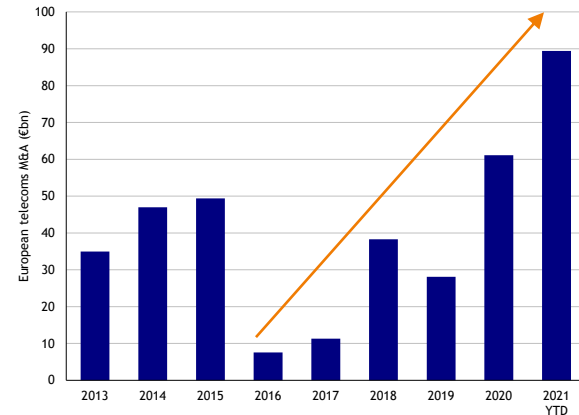
Net debt/EBITDA for STOXX sectors

Source: Factset, NSR estimates for Telecoms



M&A volumes have been steadily rising since the low of 2016

Source: NSR estimates



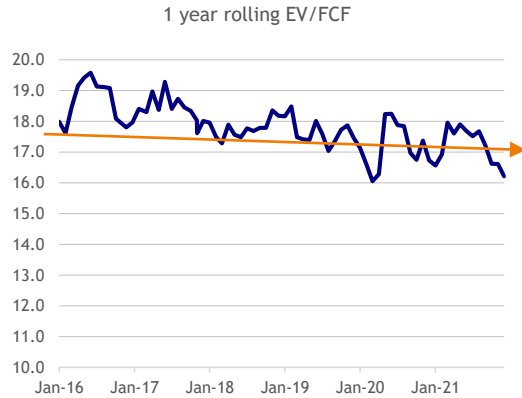
- **M&A implications:** In the mean-time, as the sector waits for equity sentiment to turn (and management is unwilling to buyback stock en masse - adding leverage) we think MA& will persist, as the private market sees the repair and the recovery that we see and is prepared to pay up for the businesses that the public market is under-valuing. **We are in the middle of another M&A boom.**

Sector outlook: M&A - More deals to come

Despite our belief that the sector has a favourable outlook, it still trades at a discount to the market in absolute terms, and on a growth adjusted basis - this is despite the improving outlook and the fact that M&A volumes are elevated.

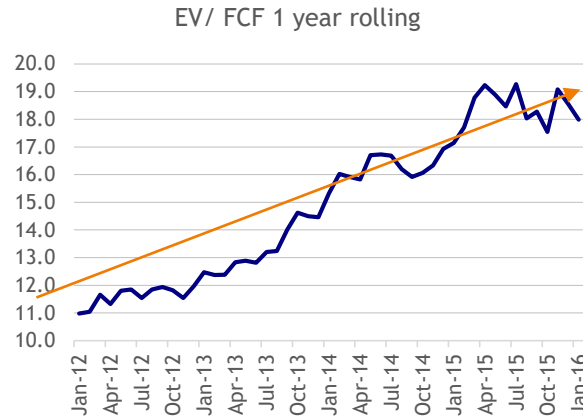
The sector multiple has hardly moved since 2016 (actually down)...

Source: NSR estimates



...but did move 2013-2015, during the last M&A boom...

Source: NSR estimates



...and still remains depressed relatively -

Source: NSR estimates



This is why we think the private sector will continue to do deals. In our January note, we highlighted three areas where we thought M&A would persist - we think that activity is still likely in these areas; we show a summary of these three areas below, and encourage investors to read the January report for more detail ([HERE](#)).

1. Buying businesses - 2 principal types:

- Buying out undervalued minorities - deals already done include Altice, OBEL, Talk, Iliad; **1&1 most likely next**;
- In-market consolidation opportunities - such as UPC-Sunrise, VMED-O2; **Masmovil - Vodafone potentially next**;

2. Infrastructure-driven deals - such as KKR/ FiberCop, Orange Concessions; **OpenFiber, TEF Fibre or Openreach next**;

3. Deals in the Towers space - AMT-Telxius, Cellnex-Hutchison, **Vantage; Orange/DT potentially next**.

Sector outlook: M&A - Private Equity hasn't stopped shopping

- **Private Equity has a long and good track record:** Private Equity has been an active participant in the sector over a multi-year period, and has a good track of creating value by outperforming the telecoms index with the acquisitions that it has made.
 - The percentage of deals done in the sector by PE has been increasing over time, and is currently at 35% for 2021, above the last 5 year average of 31%.
 - Of the deals done and exited, we estimate an unlevered annual return of 21%, 19pp more than the Telecoms index over similar periods. We think that this track record, combined with a desire for long-term stable high yielding assets (fibre/tower assets) means activity from PE will remain high
 - Private Equity could be involved in any of the three deal types outlined on the previous slide, and has been involved in all three types of deal before.
 - **We think Private Equity is likely to remain front and centre for M&A in the sector - read recent report on this topic [HERE](#).**

Deal	Seller	Acquisition date	Acquisition EV (100%)	Exit date	Exit EV (100%)	Total Asset change	Per year Asset change	Sector EV delta	Perf rel (pp)
KDG	Providence	Mar-03	4,400	Jul-11	5,800	32%	4%	0%	4%
TIM Hellas	Apax, TPG	Jun-05	1,960	Feb-07	3,400	73%	44%	8%	36%
Ono	Providence, CCMP et al	Nov-05	4,500	Mar-14	7,200	60%	7%	-2%	9%
eir	Babcock & Brown	May-06	2,400	Dec-17	3,500	46%	4%	0%	4%
TDC	NTC	Jun-06	8,429	Feb-18	10,111	20%	2%	0%	2%
Sunrise	CVC	Sep-10	2,750	Mar-16	4,066	48%	9%	3%	5%
Orange Switz.	Apax Partners	Dec-11	1,667	Dec-14	2,333	40%	13%	6%	8%
Deutsche Glasfaser	KKR	Jul-15	700	Feb-20	2,800	300%	65%	-3%	68%
Cabovisao	Apax France	Sep-15	141	Sep-18	140	0%	0%	-3%	3%
MasMovil	Providence	Jul-16	1,490	Apr-19	5,000	236%	86%	-1%	87%
Telxius	KKR	Feb-17	5,178	Jan-21	7,700	49%	12%	1%	12%
SFR Towers	KKR	Jun-18	3,600	Feb-21	5,200	44%	17%	5%	11%
Cabovisao	KKR	Sep-18	140	Sep-19	155	11%	11%	9%	2%
Average						74%	21%	2%	19%

Overbuilders: Could be a future opportunity for debt investors

We have done a lot of work looking at the alternative fibre builders in the UK and Germany and have also written extensively about the FTTH markets in Belgium, The Netherlands and France. See our most recent deep-dive notes on this:

- [German FTTH deep-dive: Pivot in competition towards B2B market from overbuilders;](#)
- [UK overbuilder deep-dive: More money flowing, but still look challenged;](#)
- [KPN FTTH roll justified - Call with CFO, Chris Figue;](#)
- [Belgium FTTH and JV plans compared;](#)
- [French FTTH JVs - SFR, Orange and Iliad compared;](#)

Each market is different, but the UK and Germany in particular have been attracting a lot of capital recently, but this could now be their downfall, as they not only have to compete against each other more aggressively, as well as BT/ DT and cable networks that are upgrading their own networks to FTTH more rapidly than previously expected.

We believe the longer-term ROIC on the altnets will be low single-digit, but these businesses still have significant execution risk given low retail presence.

We note with interest the recent major €5.75bn debt funding by Deutsche Glasfaser as this marks the first major debt funding for an FTTH overbuilder, as most previous financing has been via equity. **We believe this could be a growing - but higher-risk - sector for debt investors to start to focus on more.**

FTTH overbuilders are likely to struggle to make attractive ROICs

Source: NSR estimates.

£		Urban MDU <i>Community, G. Network, Hyperoptic</i>	Urban SDU <i>CityFibre, FibreNation</i>	Rural <i>GigaClear</i>	Mix <i>VirginMedia</i>
<i>Example overbuilders:</i>					
Capex per premises passed	a	350	750	2,000	550
Cost to connect	b	100	250	600	350
Penetration %	c	22%	22%	50%	25%
Capex per sub	d=a/c + b	1,691	3,659	4,600	2,550
Less: public funding				(1,000)	
Capital invested per sub		1,691	3,659	3,600	2,550
Consumer ARPU	e	25	25	35	45
EBITDA %	f	40%	40%	60%	50%
Consumer EBITDA per sub	g=12×e×f	120	120	252	270
Business EBITDA uplift		10%	20%	10%	10%
Business EBITDA per sub		12	24	25	27
ROIC pre-tax	h=g/d	8%	4%	8%	12%
Tax rate	i	19%	19%	19%	19%
ROIC post-tax	j=h×(1-i)	6%	3%	6%	9%

ESG: The wider sector is already benefitting from ESG funds flow

- European Telcos have already started to tap the ESG fund market, by issuing Green/Sustainable bonds - read our recent report [HERE](#).
- A Green bond is designed specifically to support a specific climate-related or environmental projects. A Sustainability bond is designed specifically to support green and/or social issues.
- Since Telefonica issued the first Telecoms Green Bond in 2019*, >€13bn of Green/sustainable debt has been issued, with offers often 4-5x oversubscribed. The most recent Bond by Proximus was a Green Bond, “that allows Proximus to sustainably invest in its future proof and energy friendly Fiber and 5G networks” - **i.e. business as normal is considered Green.**
 - There is empirical evidence (see Appendix of [NOTE](#)) that Green bonds have lower coupons than non-Green bonds for the market as whole (possibly due to demand>supply rather than underlying issues), but either way the coupon is lower. For Telecoms, this is also true:
 - **KPN issued one of the most recent ESG linked debt instrument, and its view is that “the coupon was lower than if we had issued a non-sustainability linked bond”.**

Issuer	Date	Term Type	Size, €m	Yield Note	Demand
Proximus	Nov-21	15.0 Green Bond	750	0.75%	>5x oversubscribed
KPN	Nov-21	12.0 Sustainability-linked bond	700	0.84% Yield will increase if ESG targets missed	
Telefonica	Nov-21	6.5 Sustainability hybrid bond	750	2.88%	
Elisa	Sep-21	2.0 Sustainability revolver	130	Not disclosed	
KPN	Aug-21	5.0 Sustainability revolver	1,000	Not disclosed	
Inwit	Apr-21	10.0 Sustainability-linked bond	500	1.75%	4.5x oversubscribed
Telefonica	Feb-21	8.3 Sustainability hybrid bond	1,000	2.38% Lowest hybrid coupon for Group	
TI	Jan-21	8.0 Sustainability bond	1,000	1.63% 50% lower than group ACD	4x oversubscribed
Vod-Ziggo	Dec-20	9.0 Green Bond	700	2.88%	
NOS	Dec-20	6.0 Sustainability bond	100	1.20%	
Orange	Sep-20	9.0 Sustainability bond	500	0.13%	5x oversubscribed
Telenor	Jun-20	3.0 Sustainability revolver	2,000	Not disclosed	
Swisscom	May-20	8.5 Green Bond	500	0.38%	10x oversubscribed
Telia	Feb-20	6.3 Green hybrid	500	1.38%	
Telefonica	Jan-20	7.3 Green hybrid	500	2.50% Lowest hybrid coupon for Group	4x oversubscribed
Telefonica Deutschland	Dec-19	7.0 Sustainability-linked loan	750	Linked to ESG score	
Vodafone	May-19	7.0 Green Bond	750	0.90%	
Telefonica	Jan-19	5.0 Green Bond	1,000	1.07%	5x oversubscribed
Total			13,130	1.47%	
Average hybrid yield				2.28%	
Average bond yield				1.26%	

* Sustainable loans existed pre 2019, e.g. TEF De EIB €450m loan in 2016. We have though excluded EIB loans from the table due to opaque terms, and so its difficult to know which of the loans are Sustainable and which are not.

ESG: High Yield names are laggards

Compared to their listed counterparts, High Yield names are clear laggards, for example:

- 52% are not rated by CDP; and
- CDP scores are lower on average vs listed peers (CDP scores are important, as Climate impact funds will drive the next wave of ESG funds in our view);
- Only Cellnex and Inwit have an MSCI/S&P/Sustainalytics rating.

This may be because there is less bottom-up demand for an ESG policy (from society through equity fund managers but not to debt fund managers), but it is perhaps a little short-sighted (from a financial perspective, moral issues aside). For example, in our recent research (HERE), we found that:

- There are good qualitative and quantitative reasons to look at ESG - ranging from resilience, to FCF generation, to cost of borrow, to share price performance, for example:
 - **Cost of capital:** ESG linked bonds (Green/sustainable) have a lower yield on average “the so-called greenium” by 0-5bps than non ESG bonds (has been narrowing a little of late - [LINK](#)). ESG stocks often are lower volatility; a lower beta can help to lower the WACC.
 - **FCF generation:** A review of over 200 sources on ESG performance by Oxford University and Arabesque showed that in the overwhelming majority (88%) of companies that focused on sustainability, operational performance was improved, translating to higher cash flows.
 - **Risk avoidance:** For those worried about risk, MSCI is perhaps the benchmark ranking, with a large focus on governance, which is clearly a material issue for FCF performance and newsflow.

	2020	2021
	CDP Climate Score	CDP Climate Score
Altice France	Not rated	Not rated
Altice Int	Not rated	Not rated
Cellnex	A	A
Digi	B	B
eir	Not rated	Not rated
Ice Group	Not rated	Not rated
Iliad	Not rated	B
Inwit	Not rated	B
Masmovil	Not rated	Not rated
PPF Telecom	Not rated	Not rated
Salt	Not rated	Not rated
Sunrise-UPC	Not rated	C
TalkTalk	B	B-
TDC	Not rated	B
Telecom Italia	A-	B-
Telenet	A-	C
United Group	Not rated	D
Virgin Media 02	Not rated	Not rated
Vodafone-Ziggo	Not rated	Not rated
Average	C	C to B-
Wider sector average	B to A-	B to A-

Sector overview - Towers

Towers: Leverage - Cellnex significantly above peer group

- The reported leverage for the European tower companies is heavily influenced by the shift to lease accounting that took place 3 years ago.
- We prefer the former basis for reported leverage, ie net debt excluding leases/ EBITDAaL to get a better view of underlying leverage, given the value of leases included in net debt is not representative of the perpetual nature of the liability. The reported lease liability normally only includes c.4-5 years of lease liability
- On this basis, Cellnex's leverage is materially above the peers, and despite paying a very low dividend, the rate of deleveraging is substantially slower than the peers due to its high BTS commitments.
- Although we believe the European tower business model is reasonably predictable, we see still far higher risks for Cellnex given their higher leverage

European tower leverage

Source: NSR estimates. IAS17 basis

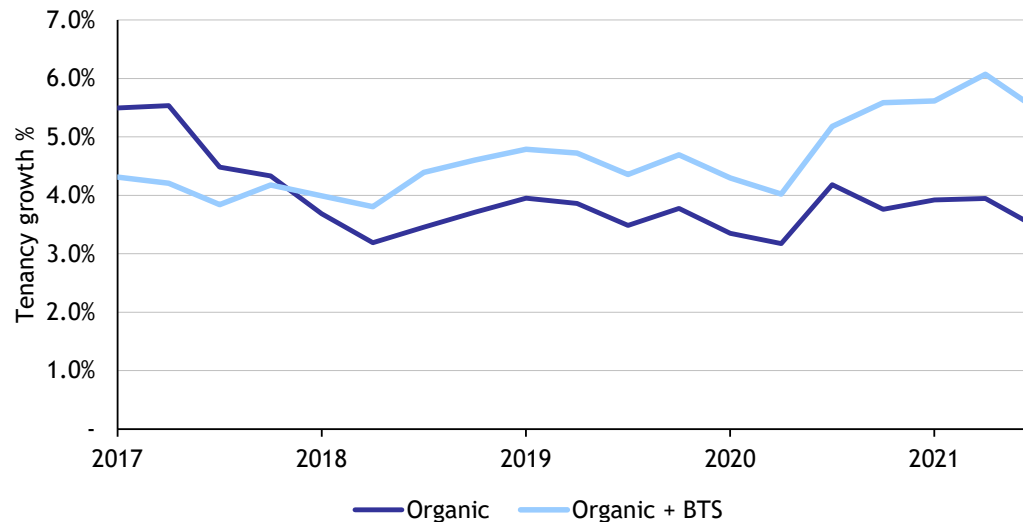
Net debt/ EBITDAaL	2021	2022	2023	2024	2025	2026
Cellnex	8.5x	7.3x	6.6x	6.0x	5.3x	4.4x
Inwit	6.0x	5.4x	4.7x	4.1x	3.7x	3.3x
Vantage	3.7x	3.6x	3.5x	3.1x	2.7x	2.2x

Towers: Q3 21 - Organic tenancy growth of 3.4% YoY

- The following slides are taken from our quarterly European Towers report - read the full report [HERE](#).
- Given the spate of M&A in the EU Towers space over recent years, it can be difficult to get a sense of the underlying growth that these companies are achieving. The one metric where we believe it is possible to see underlying trends is organic tenancy growth; the number of organic tenant adds over the last 12 months (excl. M&A, BTS), divided by average tenants over the last 12 months.
- Aggregating across the three publicly listed EU Towers, we calculate that organic tenancy growth for the EU Towers sector declined to +3.4% in 3Q21 (vs. +3.9% in 2Q).
- Growth in tenancies including BTS is higher at 5.5% - and this gap has widened over the past year given the timing of the uptake of Cellnex's BTS program. We continue to believe that the significant majority of the BTS additions are driven by coverage obligation requirements for spectrum auctions, so isn't inherently an indicator of underlying capacity demand from MNOs.

Aggregate EU Tower organic tenancy growth

Source: NSR estimates. Organic tenant net adds LTM, divided by average tenants LTM.



Towers: DT/ ORA/ VOD all looking for tower partners

- Recently, the management of Deutsche Telekom, Orange and Vodafone have spoken about the opportunity to find ‘industrial partners’ for their respective tower portfolios.
- Whilst we believe that all three MNOs would want to retain (co-)control of their towers, both DT and VOD expressed a preference for deconsolidating their towers.
- This would give their tower businesses greater capex flexibility without impacting the leverage of the controlling shareholders. It would also allow the separate value within the tower assets to become even more transparent
- All three MNOs seem to have a preference for partnering with another MNO, rather than an independent towerco or a financial party. DT and VOD both spoke about wanting an ‘industrial’ partner. ORA spoke about wanting to participate in consolidation as an alternative to the towercos.
- Given that all three tower portfolios are now ‘in play’ we look at the potential synergies that could arise from combining these respective assets.

“We highly prefer the option of having a strong partner who is working with us going forward. And I even prefer the deconsolidation of that asset [...]”

“I’d love to have an industrial partner and I’m willing to deconsolidate”

Timotheus Höttges, Deutsche Telekom CEO, 3Q21 and conferences

“I think there’s an opportunity to do an industrial merger [...]. And then the third thing for me is the deconsolidation, [...] I think that we would not want any balance sheet constraint for Vantage Towers. And it can optimize its capital structure once deconsolidated and we would want co-control with a like-minded industrial player.”

Nick Read, Vodafone CEO, 2Q22

“We are actively [...] thinking of how and when we will be participating to the consolidation of the tower market in our countries and at a European level. [...] There is no way that we would leave this part of a market to let’s say, the pure TowerCos.”

Ramon Fernandez, Orange deputy CEO, 3Q21

Towers: Could a VOD/ DT merger pass the regulators?

- Germany is the most obvious tower market that could deliver operational synergies, through a combination of DT and Vantage's tower assets.
- The overall tenancy ratio of the German tower market is low, largely a function of overlapping rooftop portfolios with tenancy ratios of c.1x. With 2 MNOs working together, there could be scope to generate synergies by aggregating equipment on rooftop sites with single-RAN and decommissioning existing rooftop sites.
- This would clearly need the co-operation of existing landlords and ensuring that EMF restrictions are not breached and will take time to process. However, Vantage feels that rooftop sharing would work in the "majority" of its sites.
- However, DT + Vantage would own 65% of tower sites in Germany, so for this deal to be approved, we would assume that the combined entity might have to sell c.10-15k towers to a third-party to gain approval, either AMT, or potentially a new entrant into the market like Cellnex, Phoenix International or a financial third-party.

German tower market

Source: NSR estimates

	TowerCo					Total	VTWR+DFMG	% of total
	DFMG	VTWR	AMT	O2D	Other			
Sites	29,000	19,400	14,700	8,000	3,000	74,100	48,400	65%
DT	29,000	2,000	1,500	-	-	32,500		
Vodafone	6,800	19,400	1,800	-	-	28,000		
O2D	3,900	1,500	11,600	8,000	3,000	28,000		
Other	850	768	700	-	-	2,318		
Total tenants	40,550	23,668	15,600	8,000	3,000	90,818	64,218	
Tenancy ratio	1.4x	1.2x	1.1x	1.0x	1.0x	1.2x	1.3x	

Towers: INW/ VOD model for operational synergies

- We think the Inwit/ Vodafone Italy Towers combination is the obvious model for operational synergies between major MNO-controlled towercos. In March 2020, Vodafone and Inwit combined their Italian tower portfolios, creating an enlarged Inwit with 22k mobile sites. The transaction generated substantial synergies by facilitating mobile network sharing between Telecom Italia and Vodafone. These synergies took three forms:
 - Passive sharing:** Passive site sharing saves the cost of an alternative anchor tower tenancy, typically c.€20k/ year. We estimate 10-year unit cost savings of €150k per site (assuming five year ramp-up, five year run-rate).
 - Active sharing:** Active RAN sharing saves the capex of the avoided RAN equipment, which we estimate to be €60k per site and to last the full 10 years.
 - Site decommissioning:** Site decommissioning saves the cost of the ground lease that can be exited, typically c.€10k/ year. We estimate 10-year unit cost savings of €75k per site (assuming five year ramp-up, five year run-rate).
- We estimate that cumulative FCF from the transaction synergies over 10 years is c.€2.0bn. We estimate that 20% of this accrued to the enlarged Inwit (c.€0.4bn), in the form of €110m of additional committed run-rate EBITDA AL. The remaining synergies were split evenly between the two MNOs (c.€0.8bn each), with both reporting '>€800m' cumulative FCF benefit over 10 years.

Inwit/ Vodafone Italy towers 10-year merger synergies and split

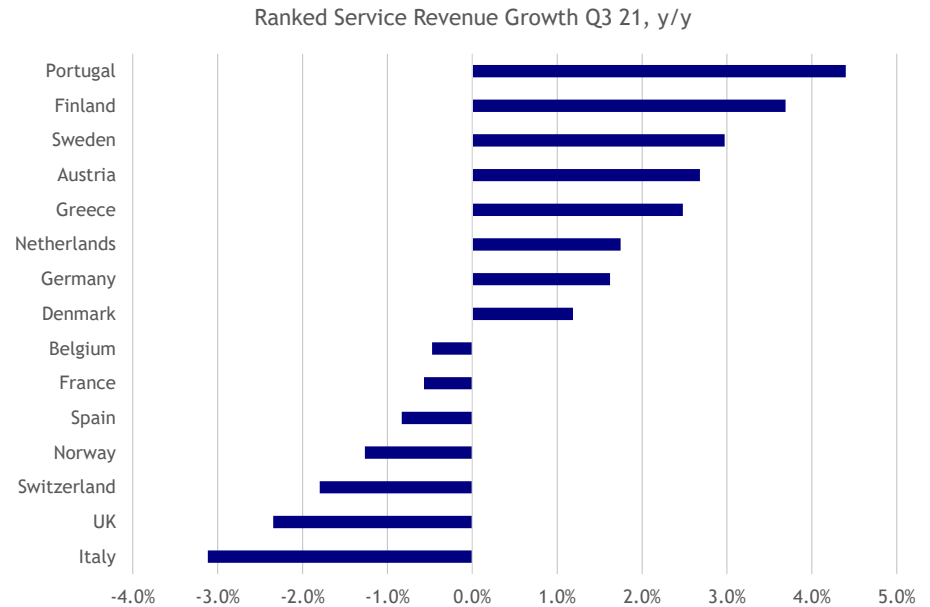
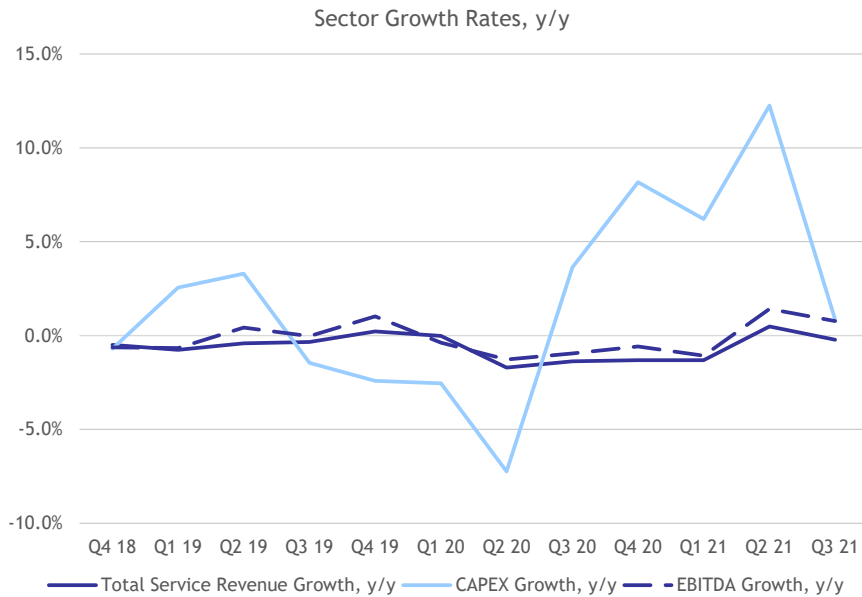
Source: NSR estimates

Inwit/ Vodafone Towers	Network sharing		10- year FCF synergies			
	2020	2026	Unit cost saving (€k)	Cost saving (€bn)	Post-tax (€bn)	%
Macro sites (k)	22.3	24.5				
Passive sharing	10.0	21.3	150	1.7	1.2	
Active sharing	-	18.0	60	1.1	0.8	
Site decommissioning	-	1.1	75	0.1	0.1	
Total				2.9	2.0	100%
Accrued to Vodafone					0.8	40%
Accrued to Telecom Italia					0.8	40%
Accrued to Inwit/ Vodafone Towers					0.4	20%

Market analysis

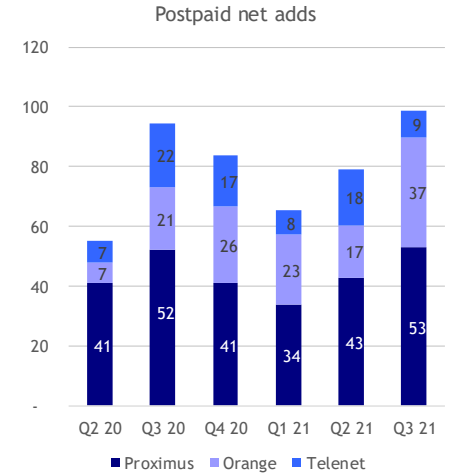
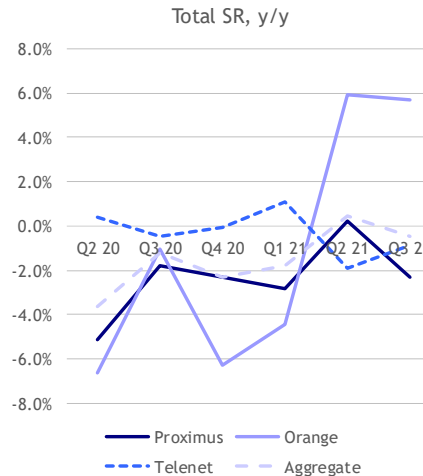
Europe: Sustained underlying growth

- The following are market snapshots for the relevant Western Europe markets of the High Yield issuers.
- A full breakdown of data for all the European markets can be found [HERE](#) in our European Quarterly Review.
- The intention is to add Eastern Europe to this product in the future.
- We show summary charts for Western Europe below.



Belgium: OBEL making inroads in fixed

- Total market **SR inc wholesale** was -0.5% y/y from +0.4% y/y in Q2 21, thanks to Proximus, where SR slipped because of B2B, which has reverted to trend (i.e. Q2 was unusually good). OBEL is taking share thanks to the inroads it is making in fixed.
- Total market **EBITDA** was -1.8% y/y from -0.2% y/y in Q2 20, thanks to a slip at both Proximus and Telenet (Proximus as it repositions the business to FTTH and Telenet due to phasing of marketing spend).
- **KPIs:** OBEL continues to gain share in fixed with a good share of net adds. In mobile, shares are more even, but Telenet typically underperforms vs its overall share.



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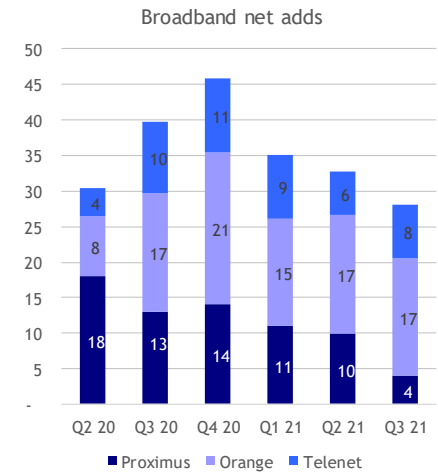
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Proximus	-0.3%	-1.5%	-2.0%	-2.2%	-2.4%	-1.9%	-5.2%	-1.8%	-2.3%	-2.8%	0.3%	-2.3%
Orange	6.9%	3.5%	1.1%	1.6%	2.9%	2.6%	-6.7%	-1.0%	-6.3%	-4.4%	5.9%	5.7%
Telenet	-0.9%	0.1%	-1.0%	-1.2%	-0.3%	1.1%	0.4%	-0.4%	-0.1%	1.1%	-1.9%	-0.9%
Aggregate	0.7%	-0.2%	-1.2%	-1.3%	-0.8%	-0.2%	-3.6%	-1.2%	-2.3%	-1.8%	0.4%	-0.5%

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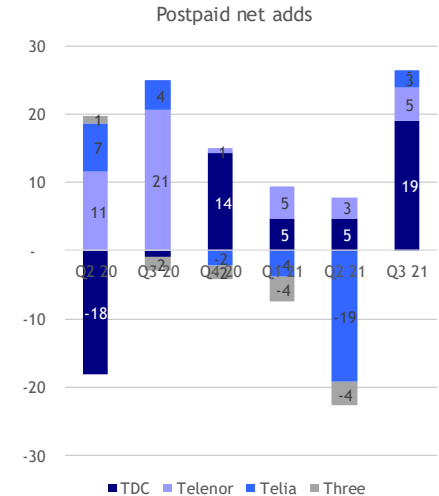
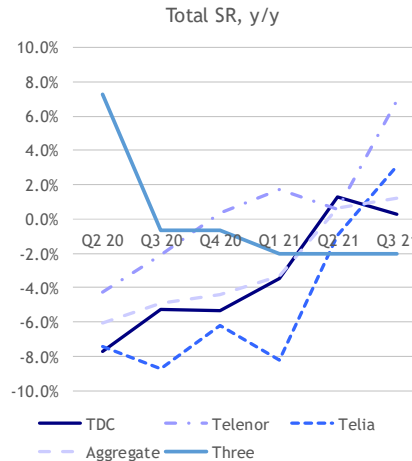
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Proximus	1.5%	2.1%	0.9%	0.5%	-0.1%	-0.2%	-1.8%	0.2%	-4.0%	-2.3%	-3.0%	-4.1%
Orange	17.1%	-5.4%	16.5%	2.6%	3.1%	5.3%	8.2%	5.9%	7.8%	12.8%	5.8%	7.8%
Telenet	11.3%	-0.1%	-1.8%	-1.1%	-3.8%	3.9%	-0.3%	-1.9%	0.7%	3.8%	2.0%	-1.4%
Aggregate	6.6%	0.7%	1.0%	0.0%	-1.4%	1.8%	-0.3%	-0.1%	-1.0%	1.2%	-0.2%	-1.8%



Denmark: Mobile ARPU supporting trends

- Total market **SR inc wholesale** was +1.2% y/y from +0.6% y/y in Q2 21; trends remain volatile thanks to the low base of Q3 20 and the low SR share for non TDC operators, but price increases are supporting mobile ARPU and upsell is supporting fixed trends.
- Total market **EBITDA** was +0.4% y/y from +1.1% y/y in Q2 21, but again trends here can be volatile tank to the low margins of Telia, Telenor and Three.
- **KPIs:** TDC's heavy donation of subs in fixed continues, but TDC has had a better quarter in mobile, where it performs consistently better.



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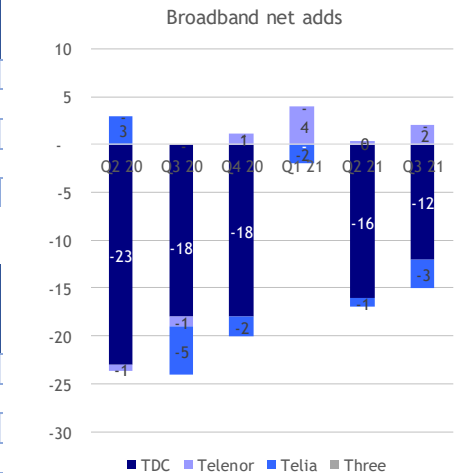
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
TDC	-1.9%	-0.6%	-2.1%	-2.8%	-1.6%	-4.1%	-7.7%	-5.3%	-5.3%	-3.5%	1.3%	0.3%
Telenor	-0.5%	-2.9%	-4.7%	-6.7%	-7.0%	-3.0%	-4.3%	-2.1%	0.4%	1.7%	0.6%	6.9%
Telia	-2.7%	-5.6%	-3.7%	-6.0%	-6.3%	-1.7%	-7.4%	-8.7%	-6.2%	-8.2%	-1.0%	3.1%
Three	-1.1%	-0.9%	-0.9%	2.4%	2.4%	7.3%	7.3%	-0.6%	-0.6%	-2.0%	-2.0%	-2.0%
Aggregate	-1.8%	-1.5%	-2.5%	-3.3%	-2.5%	-2.8%	-6.0%	-4.9%	-4.4%	-3.3%	0.6%	1.2%

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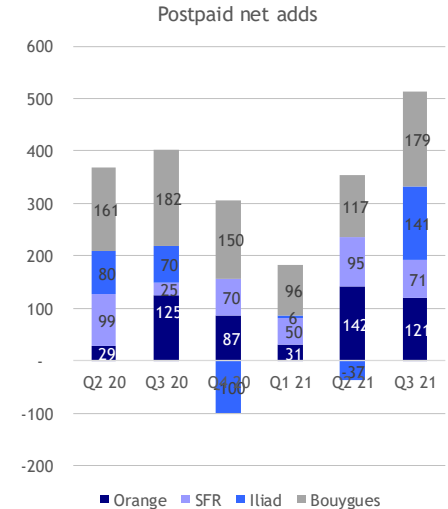
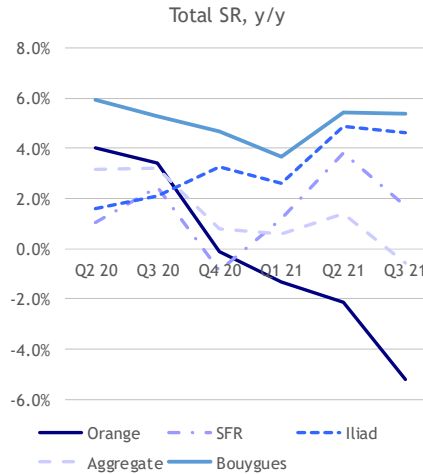
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
TDC	-1.1%	-3.0%	-2.6%	-3.6%	-5.8%	-2.0%	-3.7%	-0.8%	0.4%	-1.8%	0.8%	0.9%
Telenor	68.0%	13.0%	-2.2%	-4.8%	-10.4%	-1.7%	-8.9%	-0.4%	8.8%	13.7%	13.6%	6.4%
Telia	8.4%	49.0%	46.3%	39.3%	20.5%	3.1%	-0.2%	-2.3%	-5.8%	-1.9%	-9.3%	-11.3%
Three	-10.4%	6.3%	6.3%	25.7%	25.7%	3.6%	3.6%	-8.1%	-8.1%	-1.2%	-1.2%	0.0%
Aggregate	2.5%	1.7%	0.8%	1.2%	-1.6%	-1.1%	-3.4%	-1.6%	-0.3%	-0.2%	1.1%	0.4%



France: Wholesale drag, retail trends better

- Total market SR inc wholesale was -0.6% y/y from +1.4% y/y in Q2 21, but Orange numbers are materially impacted by wholesale one-offs.
 - Looking at retail revenue only, we estimate that Total French market retail B2C SR was better at +3.2% y/y from +3.1% y/y in Q2 21. We adjust for the EIS deal in the Bouygues numbers, and exclude the EIS wholesale drag at SFR as we look at retail (B2C) only for all four.
- Total market EBITDA was better at -0.1% y/y from -0.9% y/y in Q2 20, but Orange and Iliad are estimated.
- KPIs: SFR continues to underperform in terms of share of adds vs overall market share, with Bouygues the outperformer in fixed and Iliad in mobile.



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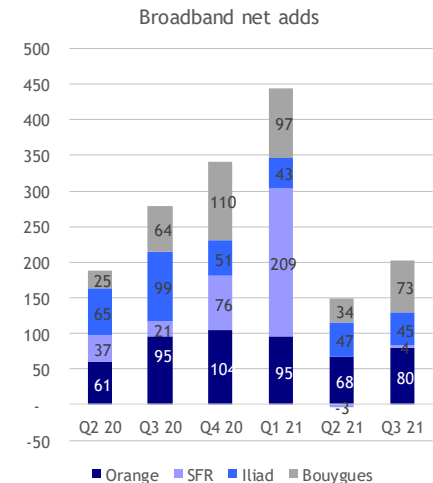
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Orange	0.4%	-1.5%	0.2%	-0.4%	1.1%	0.9%	4.0%	3.4%	-0.1%	-1.3%	-2.1%	-5.2%
SFR	-2.8%	-2.3%	-2.1%	1.3%	2.8%	0.2%	1.1%	2.4%	-0.9%	1.2%	3.8%	1.7%
Iliad	-3.0%	-1.4%	0.9%	2.4%	4.2%	4.2%	1.6%	2.1%	3.3%	2.6%	4.9%	4.6%
Bouygues	3.7%	6.1%	8.5%	6.6%	10.8%	10.1%	5.9%	5.3%	4.7%	3.7%	5.4%	5.4%
Aggregate	-0.6%	-0.8%	0.7%	1.3%	3.2%	2.4%	3.2%	3.2%	0.8%	0.6%	1.4%	-0.6%

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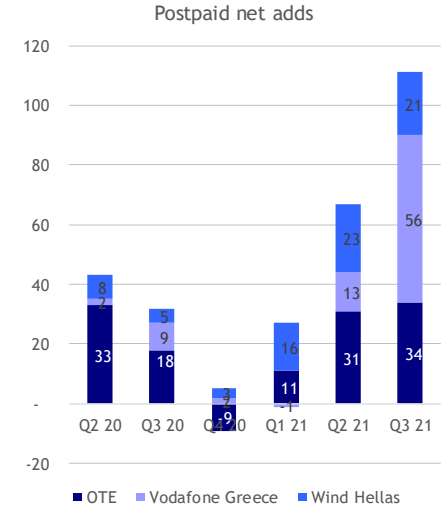
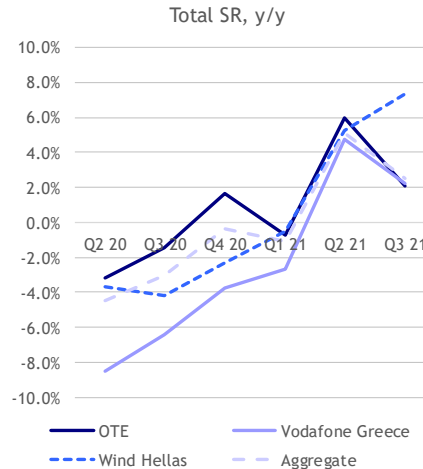
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Orange	1.8%	-0.4%	-0.4%	0.4%	0.4%	0.6%	0.6%	0.2%	0.2%	-3.6%	-3.6%	-1.9%
SFR	-16.8%	3.0%	6.0%	5.0%	15.2%	-0.4%	1.7%	3.2%	3.5%	-3.9%	-1.6%	-3.4%
Iliad	1.2%	1.2%	1.2%	8.8%	8.8%	6.1%	6.1%	6.8%	6.8%	6.1%	6.1%	7.2%
Bouygues	16.6%	21.5%	16.9%	3.9%	7.1%	-0.3%	16.7%	3.8%	5.0%	10.4%	3.9%	7.5%
Aggregate	-2.5%	2.4%	3.2%	3.0%	5.9%	1.0%	3.3%	2.2%	2.4%	-1.1%	-0.9%	-0.1%



Greece: Good underlying MSR trends

- Total market **SR inc wholesale** was +2.5% y/y from +5.1% y/y in Q2 21, a slowdown driven by OTE fixed (other) - MSR trends though remain very impressive (+8.2% y/y from +7.4% y/y in Q2 for OTE), thanks to the return of roaming, and good underlying fundamentals - discipline in pricing and good data growth.
- Total market **EBITDA** was +3.0% y/y from +7.5% y/y in Q2 20, but Forthnet EBITDA is volatile and this has swung to -25% y/y from +122%. OTE remains stable, WIND H is improving and Vodafone probably has but only calendar reports Q2 and Q3 together.
- **KPIs:** OTE continues to utterly dominate fixed net adds, but Vodafone took an impressive share in mobile in the quarter.



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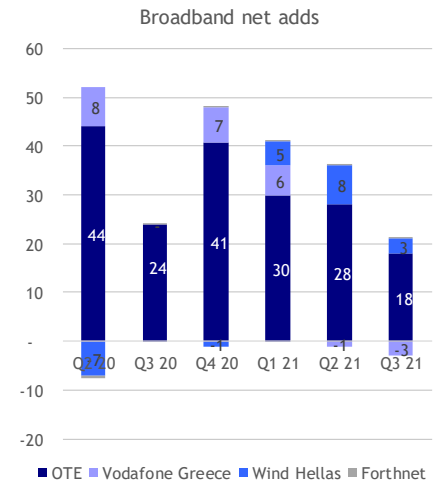
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
OTE	1.8%	1.6%	1.8%	2.7%	4.0%	2.4%	-3.2%	-1.4%	1.7%	-0.7%	6.0%	2.1%
Vodafone Greece	10.4%	10.9%	7.2%	1.0%	-1.2%	-2.6%	-8.5%	-6.4%	-3.7%	-2.7%	4.7%	2.3%
Wind Hellas	2.6%	-4.5%	1.8%	5.0%	3.3%	4.1%	-3.7%	-4.2%	-2.3%	-0.5%	5.3%	7.4%
Forthnet	-7.5%	-7.5%	-7.5%	-5.9%	-5.9%	-6.2%	-6.2%	-6.2%	-6.2%	-0.8%	-3.0%	-2.4%
Aggregate	2.9%	2.0%	2.2%	2.1%	2.2%	1.0%	-4.5%	-3.1%	-0.3%	-1.1%	5.1%	2.5%

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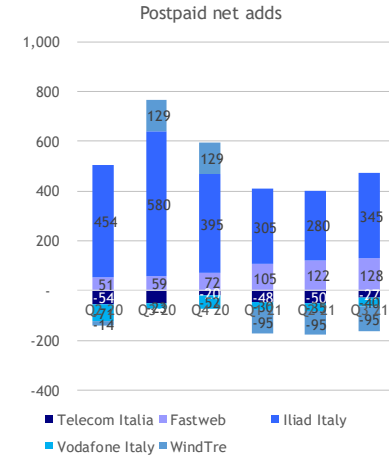
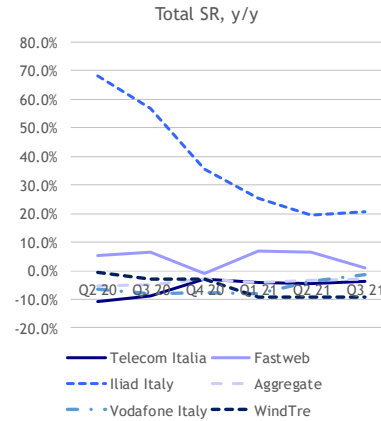
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
OTE	1.4%	0.4%	4.1%	5.2%	0.6%	2.0%	-1.7%	-3.3%	-0.7%	3.4%	6.5%	5.0%
Vodafone Greece	13.1%	13.1%	1.7%	1.7%	0.8%	0.8%	-11.0%	-11.0%	-2.4%	-2.4%	-4.4%	-4.4%
Wind Hellas	10.2%	22.4%	12.5%	10.8%	1.6%	1.9%	1.7%	-0.9%	-7.9%	-12.9%	9.7%	13.9%
Forthnet	21.2%	-0.7%	-0.7%	-20.8%	-20.8%	1.1%	1.1%	91.7%	91.7%	101.1%	122.2%	-24.9%
Aggregate	4.4%	4.1%	4.2%	4.4%	0.1%	1.8%	-3.1%	-2.4%	0.6%	3.5%	7.5%	3.0%



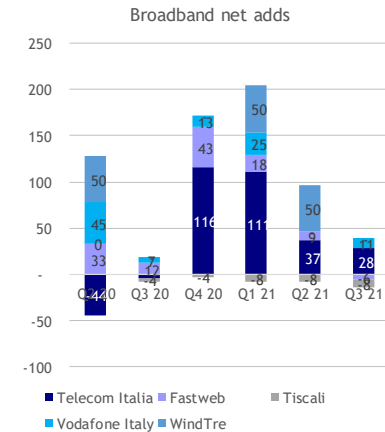
Italy: Iliad led trends still

- Total market **SR inc wholesale** was -3.1% y/y from -3.5% y/y in Q2 21, as Iliad continues to take share and lead price down in mobile at the expense of TI, Vod and WIND. Fastweb saw a big slowdown, but books B2B CPE in SR, and so trends can be lumpy. Fixed revenue at TI continues to disappoint driven by weaker ARPU trends.
- Total market **EBITDA** was unchanged at -1.7% y/y, with weak TI trends offset by good Vodafone growth, thanks to easier comps and winning the PosteMobile MVNO.
- **KPIs:** Iliad continues to dominate the postpaid mobile net add market, with all operators waiting for its long-delayed launch in fixed.



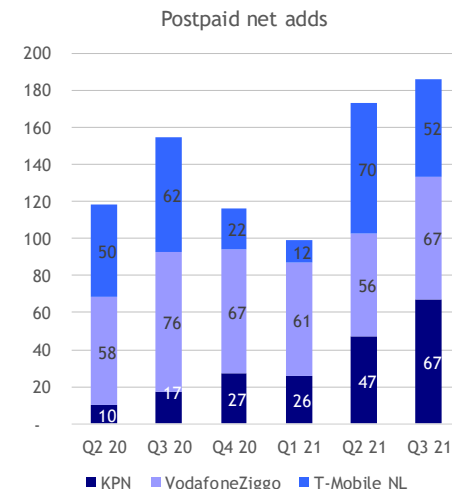
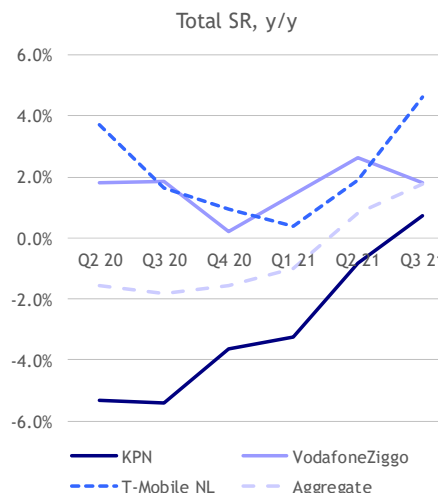
Like for Like												
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y												
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telecom Italia	-6.5%	-3.0%	-1.0%	-6.1%	-3.9%	-9.4%	-10.6%	-8.8%	-2.9%	-3.9%	-4.6%	-3.8%
Fastweb	10.8%	4.7%	2.7%	6.0%	8.0%	5.5%	5.5%	6.4%	-0.8%	7.0%	6.6%	1.1%
Iliad Italy						85.2%	68.1%	56.9%	35.5%	25.3%	19.6%	20.5%
Tiscali	-19.4%	-14.9%	-14.9%	-12.2%	-12.2%	3.3%	3.3%	-1.2%	-1.2%	0.6%	0.6%	0.6%
Vodafone Italy	-4.6%	-6.1%	-3.8%	-3.2%	-5.0%	-3.7%	-6.5%	-7.9%	-7.8%	-7.9%	-3.6%	-1.4%
WindTre	-14.2%	-8.6%	-8.6%	0.5%	0.5%	-0.6%	-0.6%	-3.1%	-3.1%	-9.2%	-9.2%	-9.2%
Aggregate	-5.3%	-2.9%	-1.4%	-2.2%	-1.0%	-3.9%	-5.2%	-4.9%	-2.8%	-3.9%	-3.5%	-3.1%

Like for Like												
EBITDA (Fixed & Mobile) Growth, y/y												
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telecom Italia	-13.2%	-3.4%	-3.3%	-6.3%	-4.5%	-11.6%	-7.5%	-9.7%	-1.7%	-7.1%	-9.5%	-9.2%
Fastweb	2.7%	4.1%	5.2%	5.1%	10.6%	13.4%	11.7%	11.6%	2.2%	5.3%	5.1%	7.4%
Iliad Italy						-22.2%	-22.2%	-66.2%	-66.2%	-107.1%	-107.1%	-144.8%
Tiscali	-30.1%	45.4%	45.4%	4.4%	4.4%	-51.0%	-51.0%	103.7%	103.7%	63.0%	63.0%	63.0%
Vodafone Italy	-5.8%	-5.8%	-3.5%	-3.5%	-6.6%	-6.6%	-11.1%	-11.1%	-14.3%	-14.3%	14.7%	14.7%
WindTre	-11.8%	6.1%	6.1%	3.2%	3.2%	-6.5%	-6.5%	-3.1%	-3.1%	-6.9%	-6.9%	-6.9%
Aggregate	-10.9%	-3.2%	-2.5%	-5.5%	-4.6%	-7.9%	-6.4%	-5.2%	-1.9%	-5.7%	-1.7%	-1.7%



The Netherlands: SR recovery continues

- Total market **SR inc wholesale** was +1.7% y/y from +0.8% y/y in Q2 21. The Netherlands has been an impressive SR growth recovery trajectory, and Q3 was no different. Vod-Z saw a small slowdown, but both KPN and TMNL saw good improvements. SR growth is both APRU and sub led.
- Total market **EBITDA** was better at +4.0% y/y from -0.2% y/y in Q2 20, with trends better at all three operators.
- **KPIs:** TMNL continues to do well in broadband, with KPN and Vod-Z both suffering (no bad thing actually, as we think TMNL needs to build scale). In mobile, share of adds is more evenly spread.



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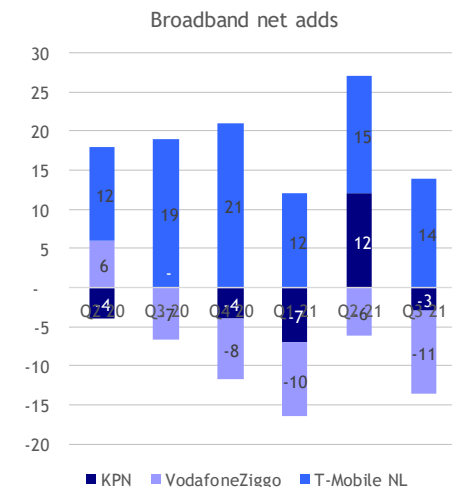
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
KPN	0.4%	-3.8%	-4.3%	-1.9%	-4.7%	-2.4%	-5.3%	-5.4%	-3.6%	-3.2%	-0.8%	0.7%
VodafoneZiggo	-0.4%	-1.7%	0.8%	0.1%	2.0%	3.3%	1.8%	1.9%	0.2%	1.4%	2.6%	1.8%
T-Mobile NL	-5.1%	0.6%	1.9%	-0.6%	-0.9%	5.5%	3.7%	1.6%	0.9%	0.4%	1.9%	4.6%
Aggregate	0.2%	-2.5%	-1.7%	-1.1%	-1.9%	0.7%	-1.6%	-1.8%	-1.6%	-1.0%	0.8%	1.7%

Like for Like

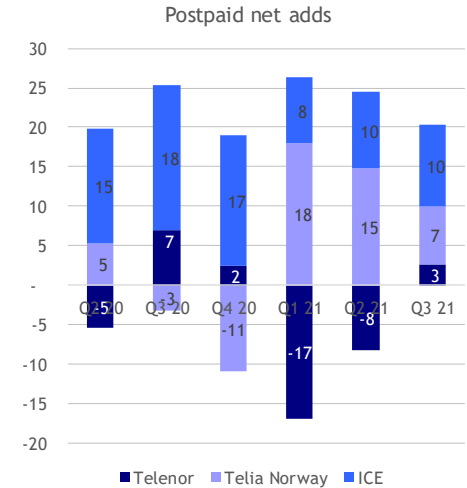
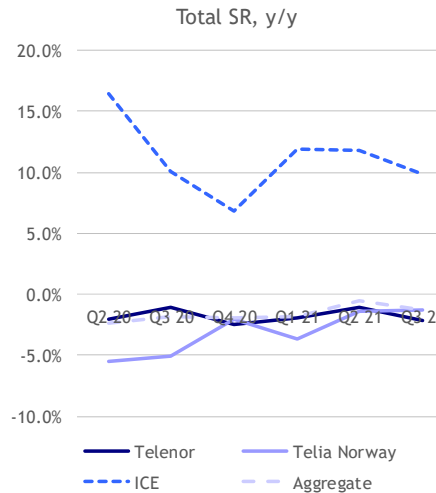
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
KPN	7.7%	-0.8%	2.9%	2.2%	-2.1%	1.3%	-1.9%	-0.8%	-0.7%	-1.3%	0.2%	0.9%
VodafoneZiggo	6.5%	3.4%	2.9%	1.7%	9.6%	4.9%	11.3%	6.4%	0.6%	2.8%	-2.1%	2.4%
T-Mobile NL	8.5%	30.7%	3.4%	12.4%	5.7%	10.6%	22.2%	6.8%	2.3%	6.5%	4.2%	22.0%
Aggregate	7.4%	3.4%	3.0%	3.0%	3.0%	3.6%	5.3%	2.7%	0.1%	1.2%	-0.2%	4.0%



Norway: Good EBITDA performance

- Total market **SR inc wholesale** was -1.3% y/y from -0.6% y/y in Q2 21. Ice continues to take share (from a low base), and Telenor numbers are artificially low due to the forced migration of xDSL subs to FWA in rural areas, which is resulting in high levels of churn. Mobile ARPU and MSR remains good for all (VAS and data upsell).
- Total market **EBITDA** was +1.2% y/y from +1.6% y/y in Q2 20, helped by Ice swinging from EBITDA negative in Q3 20 to EBITDA positive (thanks to a better roaming deal - which is dragging down Telia EBITDA).
- **KPIs:** Telia is doing well in the broadband market (and Telenor losing xDSL subs), with honours more even in mobile, but with Ice outperforming vs its overall market share.



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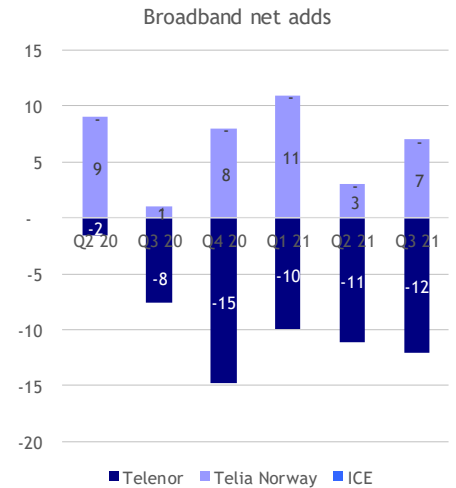
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telenor	-2.9%	-1.3%	-1.0%	-0.4%	1.7%	-0.8%	-2.0%	-1.1%	-2.5%	-1.9%	-1.1%	-2.2%
Telia Norway	-6.6%	-5.0%	-2.9%	-2.1%	-2.5%	-0.6%	-5.4%	-5.1%	-2.0%	-3.7%	-1.4%	-1.3%
ICE	13.7%	17.1%	14.0%	21.7%	31.3%	21.5%	16.5%	10.1%	6.9%	11.9%	11.7%	9.8%
Aggregate	-1.8%	-1.9%	-1.1%	-0.1%	1.5%	0.2%	-2.3%	-1.8%	-1.9%	-1.8%	-0.6%	-1.3%

Like for Like

EBITDA (Fixed & Mobile) Growth, y/y

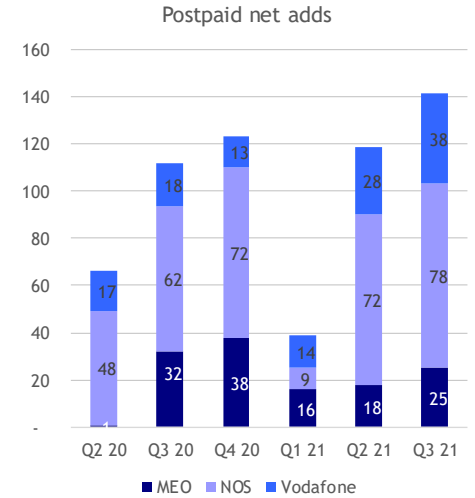
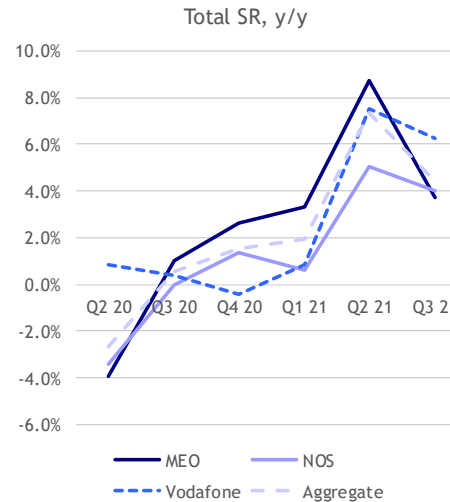
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telenor	-2.7%	-0.6%	-1.8%	3.9%	6.1%	1.0%	0.7%	2.8%	-3.2%	0.2%	1.6%	0.2%
Telia Norway	3.5%	-3.0%	4.3%	4.0%	3.4%	4.8%	10.1%	-1.2%	14.0%	11.8%	-4.3%	-1.9%
ICE	-13.7%	-23.4%	23.8%	-22.4%	-27.5%							
Aggregate	1.4%	-0.9%	-0.1%	4.1%	5.6%	3.7%	4.8%	1.9%	3.4%	5.5%	1.6%	1.2%



Portugal: Good SR and EBITDA performance

Ahead of a possible two new entrants (read about new entrant maths [HERE](#)), the Portuguese market continues to perform nicely with good SR (best in Europe in fact) and EBITDA growth:

- Total market **SR inc wholesale** was +4.4% y/y from +7.3% y/y in Q2 21, as sport rolls off the numbers for ATC and NOS, but Vods post good growth again.
- Total market **EBITDA** was better at +1.5% y/y from +0.6% y/y in Q2 20, despite Vodafone posting negative growth, which is because Vods reports for Q2 and Q3 together.
- **NOS** continues to dominate the **postpaid net add** market, and **Vodafone** the **broadband net add** market.



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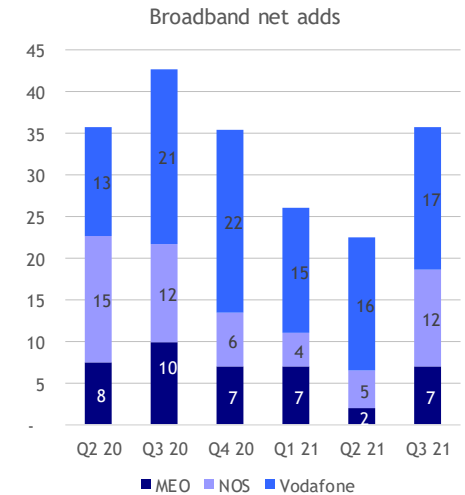
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
MEO	-2.5%	-2.6%	2.1%	0.6%	1.2%	2.0%	-3.9%	1.0%	2.6%	3.3%	8.7%	3.7%
NOS	3.7%	1.0%	0.0%	1.3%	1.7%	-0.1%	-3.4%	0.0%	1.4%	0.6%	5.1%	4.0%
Vodafone	2.9%	1.8%	3.0%	5.4%	6.0%	7.9%	0.8%	0.4%	-0.4%	0.8%	7.5%	6.3%
Aggregate	0.7%	-0.5%	1.7%	1.9%	2.5%	2.7%	-2.7%	0.6%	1.5%	1.9%	7.3%	4.4%

Like for Like

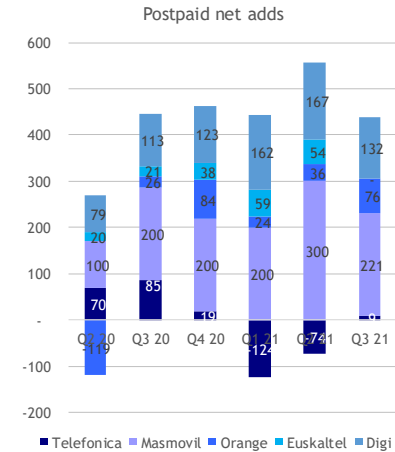
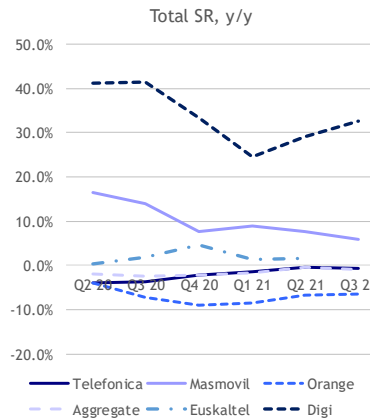
EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
MEO	-13.8%	-1.3%	0.4%	-1.7%	-1.1%	1.8%	-5.7%	0.5%	4.3%	-2.9%	5.9%	2.4%
NOS	2.7%	2.3%	2.9%	2.3%	3.0%	-3.4%	-3.5%	-1.0%	1.8%	1.5%	-5.0%	2.4%
Vodafone	5.0%	5.0%	0.8%	0.8%	4.0%	4.0%	2.8%	2.8%	4.1%	4.1%	-1.4%	-1.4%
Aggregate	-5.7%	1.1%	1.3%	0.1%	1.2%	0.5%	-3.1%	0.5%	3.5%	0.0%	0.6%	1.5%

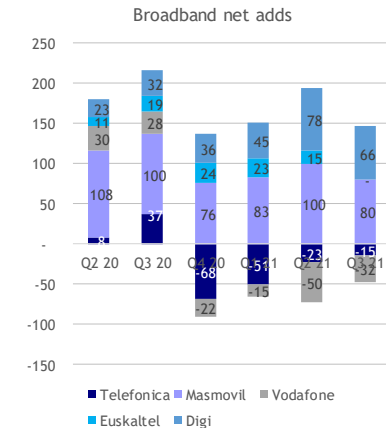


Spain: Low-end operators continue to dominate

- Total market **SR inc wholesale** was -0.8% y/y from -0.4% y/y in Q2 21, but within that the low end providers continue to do well, with Digi and Masmovil materially outperforming Orange, Tef and Vodafone.
- Total market **EBITDA** was better at -5.5% y/y from -4.4% y/y in Q2 20, despite strong growth from Masmovil, thanks to weak EBITDA at Orange and Tef (partly energy related).
- **KPIs:** Digi and Masmovil dominate the share of adds in both fixed and mobile.



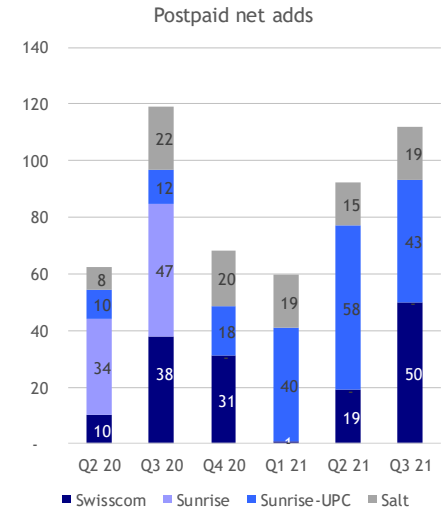
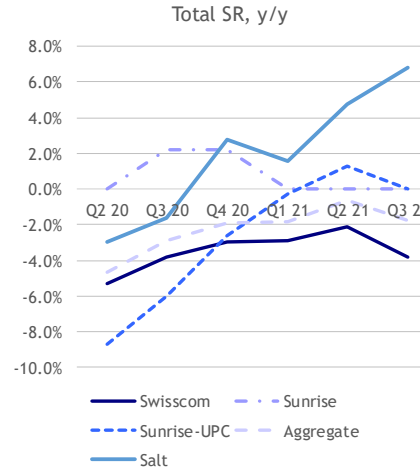
Like for Like												
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y												
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telefonica	0.7%	0.9%	0.2%	1.0%	0.4%	-1.2%	-3.9%	-3.6%	-2.1%	-1.5%	-0.3%	-0.5%
Masmovil	25.2%	26.7%	21.8%	21.3%	24.7%	19.3%	16.5%	14.0%	7.8%	9.0%	7.8%	6.0%
Orange	2.9%	3.2%	-1.7%	-0.8%	-0.9%	-2.8%	-4.0%	-7.1%	-9.0%	-8.6%	-6.6%	-6.5%
Vodafone	-7.4%	-8.9%	-9.3%	-8.0%	-6.5%	-2.7%	-2.7%	-1.8%	-1.1%	-1.3%	0.6%	-1.9%
Euskaltel	-4.3%	-2.8%	-0.9%	-0.2%	0.6%	0.1%	0.3%	1.8%	4.6%	1.4%	1.5%	
Digi	54.6%	50.2%	53.3%	52.9%	52.2%	53.8%	41.2%	41.4%	33.4%	24.4%	29.2%	32.7%
Aggregate	0.7%	0.7%	-0.6%	0.3%	0.6%	-0.2%	-2.0%	-2.3%	-2.1%	-1.7%	-0.4%	-0.8%



Like for Like												
EBITDA (Fixed & Mobile) Growth, y/y												
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Telefonica	-4.9%	-1.2%	-3.4%	0.2%	1.2%	-6.4%	-6.6%	-3.4%	0.2%	0.0%	-4.4%	-8.9%
Masmovil	28.6%	40.0%	40.0%	41.8%	45.6%	27.6%	25.6%	15.8%	49.7%	26.7%	26.7%	17.0%
Orange	1.4%	2.0%	2.0%	-1.0%	-1.0%	-7.5%	-7.5%	-17.9%	-17.9%	-16.2%	-16.2%	-9.7%
Vodafone	-23.5%	-23.5%	-11.3%	-11.3%	-1.7%	19.4%	6.0%	6.0%	1.3%	1.3%	-0.4%	-0.4%
Euskaltel	-4.6%	-3.7%	-0.1%	3.2%	10.3%	8.3%	3.7%	-2.1%	-10.5%	-16.9%	-15.5%	
Digi	54.6%	50.2%	53.3%	52.9%	52.2%	53.8%	62.8%	51.0%	9.9%	-10.2%	-25.2%	-5.6%
Aggregate	-5.4%	-2.7%	-1.5%	0.5%	2.7%	-1.2%	-3.0%	-3.8%	-0.4%	-1.6%	-4.4%	-5.5%

Switzerland: Tough outlook remains

- Pricing remains tough in Switzerland, and total market **SR inc wholesale** was -1.8% y/y from -0.6% y/y in Q2 21. Swisscom and Sunrise-UPC both saw growth slow, but Salt had a good quarter, with SR +6.8% y/y from +4.7% y/y in Q2 21.
- Despite Sunrise-UPC beginning to deliver cost savings, total market **EBITDA** was worse at -1.4% y/y from -0.5% y/y in Q2 20 thanks to Swisscom where EBITDA growth slipped to -3.7% y/y from -1.1% y/y in Q2 21 (partly accounting related).
- **KPIs:** In mobile, share of adds this quarter was fairly similar to overall share, but in general Sunrise-UPC is out-performing vs its overall share. Salt still does not disclose fixed adds, and so we use our estimates.



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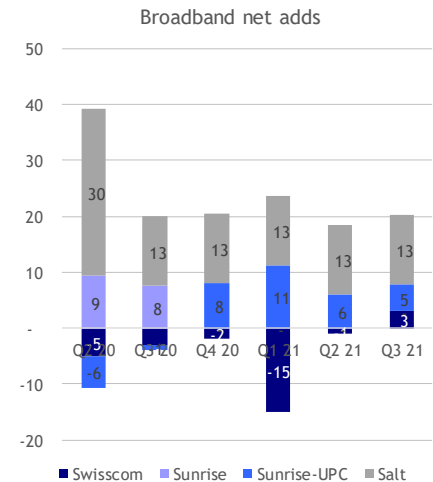
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Swisscom	-4.0%	-2.3%	-4.1%	-4.3%	-3.4%	-4.5%	-5.3%	-3.8%	-3.0%	-2.9%	-2.1%	-3.8%
Sunrise	1.9%	2.8%	1.9%	1.4%	4.4%	3.5%	0.0%	2.2%	2.2%			
Sunrise-UPC	-4.8%	-3.6%	-3.0%	-3.0%	-3.6%	-2.5%	-8.7%	-6.0%	-2.6%	-0.3%	1.3%	0.0%
Salt	-0.8%	0.3%	0.9%	3.7%	3.4%	3.5%	-3.0%	-1.6%	2.8%	1.6%	4.7%	6.8%
Aggregate	-3.0%	-1.5%	-2.6%	-2.6%	-1.6%	-2.4%	-4.7%	-2.9%	-1.9%	-1.8%	-0.6%	-1.8%

Like for Like

EBITDA (Fixed & Mobile) Growth, y/y

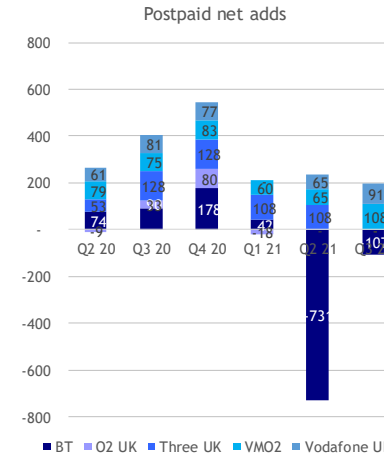
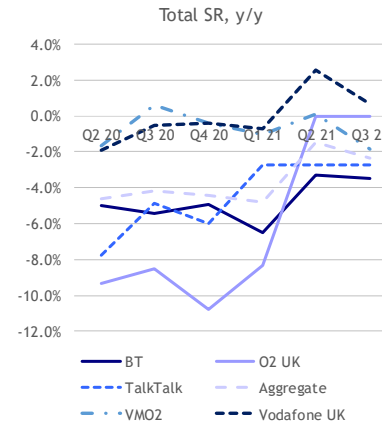
	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
Swisscom	5.1%	-1.8%	-3.3%	-3.9%	-0.5%	-0.5%	-1.9%	0.9%	7.7%	-0.8%	-1.1%	-3.7%
Sunrise	3.4%	5.0%	3.4%	2.0%	5.3%	6.3%	-1.2%	1.7%	1.7%			
Sunrise-UPC	-7.8%	-8.0%	-8.2%	-11.1%	-13.1%	-15.2%	-9.9%	-9.9%	-7.9%	-7.2%	-3.1%	3.3%
Salt	-16.5%	-3.1%	-3.2%	1.1%	8.6%	5.7%	-4.1%	3.4%	-0.6%	-2.6%	11.5%	5.0%
Aggregate	0.4%	-2.0%	-3.2%	-3.8%	-0.8%	-1.0%	-2.9%	-0.1%	2.8%	-2.3%	-0.5%	-1.4%



UK: Trends likely to improve further with inflationary transition

The UK market is trying to move to inflationary pricing, but competition for new customers, especially in mobile, continues to remain intense. Service revenues for BT and VMO2 are also held back due to a change in accounting for the Dixons-Carphone contract. This effect should lap from early next year

- Underlying trends should improve, with BT targeting accelerating EBITDA growth next year and VMO2 benefitting from further synergy delivery.
- Broadband pricing should also benefit from CPI+3-4% price increases and a gradual migration to higher wholesale prices with FTTP.



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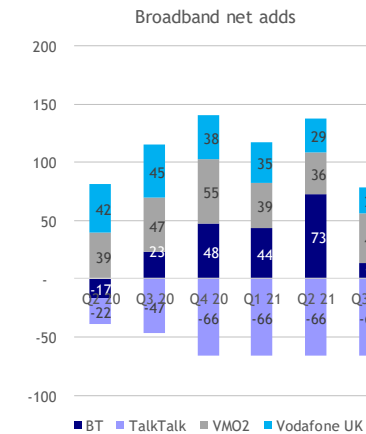
Total Service Revenue (Total Revenue inc Wholesale ex Equipment & Other) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
BT	-1.9%	-2.6%	-1.2%	-2.2%	-2.5%	-0.9%	-5.0%	-5.4%	-4.9%	-6.5%	-3.3%	-3.5%
O2 UK	2.9%	0.1%	-1.4%	-3.0%	-1.3%	-0.9%	-9.3%	-8.5%	-10.7%	-8.3%		
TalkTalk	0.0%	-1.2%	-0.5%	-4.9%	-2.2%	-5.3%	-7.8%	-4.9%	-6.0%	-2.8%	-2.8%	-2.8%
Three UK	-8.3%	-6.2%	-6.2%	-0.5%	-0.5%	-0.9%	-0.9%	-2.7%	-2.7%	-2.2%	-2.2%	-2.2%
VMO2	2.8%	0.5%	0.6%	0.0%	1.2%	0.1%	-1.7%	0.6%	-0.4%	-1.1%	0.1%	-1.8%
Vodafone UK	1.0%	0.2%	0.1%	0.1%	0.6%	1.3%	-1.9%	-0.5%	-0.4%	-0.7%	2.5%	0.7%
Aggregate	-0.5%	-1.6%	-1.1%	-1.8%	-1.3%	-0.7%	-4.6%	-4.2%	-4.5%	-4.8%	-1.5%	-2.3%

Like for Like

EBITDA (Fixed & Mobile) Growth, y/y

	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21
BT	-3.6%	-11.2%	-2.3%	-6.3%	-3.5%	-1.0%	-8.0%	-2.3%	-5.0%	-9.6%	5.5%	1.0%
O2 UK	16.3%	3.4%	4.1%	5.7%	-1.6%	-1.0%	-2.4%	-4.5%	1.5%	7.9%		
TalkTalk	-1.4%	-1.4%	13.9%	13.9%	6.6%	6.6%	-12.9%	-12.9%	-10.6%	-10.6%	-10.6%	-10.6%
Three UK	6.7%	-8.2%	-8.2%	-2.3%	-2.3%	-24.9%	-24.9%	-20.3%	-20.3%	0.4%	0.4%	0.4%
VMO2	1.2%	-0.7%	-2.5%	-4.0%	-1.4%	-3.5%	-1.5%	-3.6%	-11.4%	-1.7%	6.2%	-0.6%
Vodafone UK	11.3%	11.3%	4.2%	4.2%	10.5%	10.5%	-2.3%	-2.3%	-11.2%	-11.2%	1.8%	1.8%
Aggregate	1.5%	-5.5%	-1.0%	-2.9%	-1.3%	-1.2%	-6.7%	-4.0%	-6.7%	-6.0%	4.8%	0.3%



Company Snapshots

European High Yield Telecom Pricing

Description	Current Amt		Coupon		Issue Date	Maturity Date	Issue Curr	Seniority	Debt Class	Price	YTW	OAS (LIBOR)
	Out (EUR)	Rate	Coupon Type	Rate								
Alitice France SA												
Senior Sec. Term Loan - Tranche B11 - 1.42B USD	1,121	-	Variable		04/2017	12/2025	USD	SNR Sec	TL	98	-	-
Alitice France SA	500	2.13%	Fixed		02/2020	02/2025	EUR	SNR Sec	BND	97	3.1	330
Alitice France SA	550	2.50%	Fixed		09/2019	01/2025	EUR	SNR Sec	BND	98	3.1	333
Senior Sec. Term Loan - Tranche B12	970	-	Variable		-	12/2026	EUR	SNR Sec	TL	98	-	-
Senior Sec. Term Loan - SFR Group SA - 2.15B USD	1,706	-	Variable		10/2017	12/2026	USD	SNR Sec	TL	99	-	-
Senior Sec. Term Loan - Tranche B13 - 2.5B USD	2,004	-	Variable		07/2018	12/2026	USD	SNR Sec	TL	99	-	-
Alitice France SA	1,000	5.88%	Fixed		07/2018	02/2027	EUR	SNR Sec	BND	104	3.5	406
Alitice France SA - 1.75M USD	1,432	8.13%	Fixed		07/2018	02/2027	USD	SNR Sec	BND	107	2.5	238
Alitice France SA - 1.1B USD	900	5.50%	Fixed		09/2019	01/2028	USD	SNR Sec	BND	99	5.7	410
Alitice France SA	1,000	3.38%	Fixed		09/2019	01/2028	EUR	SNR Sec	BND	97	4.0	400
Alitice France SA - 475M USD	389	5.13%	Fixed		09/2020	01/2029	USD	SNR Unsec	BND	97	5.7	417
Alitice France SA	500	4.13%	Fixed		09/2020	01/2029	EUR	SNR Unsec	BND	99	4.3	423
Alitice France SA 4.250% 15-OCT-2029	800	4.25%	Fixed		10/2021	10/2029	EUR	SNR Sec	BND	99	4.4	428
Alitice France SA 5.500% 15-OCT-2029	1,775	5.50%	Fixed		10/2021	10/2029	USD	SNR Sec	BND	99	5.7	408
Alitice France SA 4.000% 15-JUL-2029	400	4.00%	Fixed		04/2021	07/2029	EUR	SNR Sec	BND	98	4.3	422
Alitice France SA 5.125% 15-JUL-2029	2,218	5.13%	Fixed		04/2021	07/2029	USD	SNR Sec	BND	97	5.7	407
Alitice International S.a.r.l.												
Alitice Financing SA	600	2.25%	Fixed		01/2020	01/2025	EUR	SNR Sec	BND	97	3.3	359
Senior Sec. Term Loan - 900M USD	731	-	Variable		10/2017	12/2026	USD	SNR Sec	TL	98	-	-
Alitice Financing SA - 1.2M USD	1,012	5.00%	Fixed		01/2020	01/2028	USD	SNR Sec	BND	95	5.9	448
Alitice Financing SA	1,100	3.00%	Fixed		01/2020	01/2028	EUR	SNR Sec	BND	94	4.2	425
Alitice Finco SA - Series B	675	4.75%	Fixed		10/2017	01/2028	EUR	SNR Unsec	BND	93	6.1	619
Alitice Financing SA 4.250% 15-AUG-2029	805	4.25%	Fixed		08/2021	08/2029	EUR	SNR Sec	BND	97	4.8	470
Alitice Financing SA 5.750% 15-AUG-2029	1,819	5.75%	Fixed		08/2021	08/2029	USD	SNR Sec	BND	97	6.2	464
Cellnex Telecom S.A.												
Cellnex Telecom SA - MTN - Series 1 - Tranche 1	600	3.13%	Fixed		07/2015	07/2022	EUR	SNR Unsec	BND	102	(0.1)	47
Cellnex Telecom SA - MTN - Series 2 - Tranche 1	750	2.38%	Fixed		08/2016	01/2024	EUR	SNR Unsec	BND	104	0.2	59
Cellnex Telecom SA - 100M CHF	91	1.12%	Fixed		06/2020	07/2025	CHF	SNR Unsec	BND	102	0.6	103
Cellnex Telecom SA - MTN - Series 4 - Tranche 1	335	2.88%	Fixed		01/2017	04/2025	EUR	SNR Unsec	BND	107	0.6	83
Cellnex Finance Co SA - 150M CHF	137	0.94%	Fixed		03/2021	03/2026	CHF	SNR Conv	BND	100	0.8	114
Cellnex Finance Co SA	500	0.75%	Fixed		02/2021	11/2026	EUR	SNR Conv	BND	99	1.0	111
Cellnex Telecom SA	800	1.50%	Fixed		01/2018	01/2026	EUR	SNR Conv	BND	176	(10.0)	946
Cellnex Telecom SA - MTN - Series 6 - Tranche 1 - FRN	60	1.68%	Variable		08/2017	08/2027	EUR	SNR Unsec	BND	99	2.2	239
Cellnex Telecom SA - MTN - 185M CHF	169	0.78%	Fixed		02/2020	02/2027	CHF	SNR Unsec	BND	99	1.0	126
Cellnex Telecom SA - MTN - Series 8 - Tranche 1	450	1.00%	Fixed		01/2020	04/2027	EUR	SNR Unsec	BND	98	1.3	141
Cellnex Finance Co. SA 1.000% 15-SEP-2027	1,000	1.00%	Fixed		09/2021	09/2027	EUR	SNR Unsec	BND	98	1.4	149
Cellnex Telecom SA	850	0.50%	Fixed		07/2019	07/2028	EUR	SNR Conv	BND	133	(2.7)	190
Cellnex Finance Co SA	1,000	1.50%	Fixed		06/2021	06/2028	EUR	SNR Conv	BND	99	1.6	169
Cellnex Telecom SA - Series 7 - Tranche 1	61	1.90%	Fixed		07/2019	07/2029	EUR	SNR Unsec	BND	103	1.5	149
Cellnex Telecom SA - MTN - Series 10 - Tranche 1	750	1.88%	Fixed		06/2020	06/2029	EUR	SNR Unsec	BND	101	1.8	179
Cellnex Finance Co SA	750	1.25%	Fixed		02/2021	01/2029	EUR	SNR Conv	BND	97	1.7	177
Cellnex Telecom SA	1,000	1.75%	Fixed		10/2020	10/2030	EUR	SNR Unsec	BND	98	2.0	196
Cellnex Telecom SA	1,500	0.75%	Fixed		11/2020	11/2031	EUR	SNR Conv	BND	99	1.6	242
Cellnex Finance Co SA	1,250	2.00%	Fixed		02/2021	02/2033	EUR	SNR Conv	BND	97	2.3	210
Cellnex Finance Co. SA 2.000% 15-SEP-2032	850	2.00%	Fixed		09/2021	09/2032	EUR	SNR Unsec	BND	98	2.2	204
Cellnex Finance Co. SA 3.875% 07-JUL-2041	532	3.88%	Fixed		07/2021	07/2041	USD	SNR Unsec	BND	98	4.1	241
Digi Communications NV												
RCS & RDS SA**	450	2.50%	Fixed		02/2020	02/2025	EUR	SNR Sec	BND	98	3.0	323
RCS & RDS SA**	400	3.25%	Fixed		02/2020	02/2028	EUR	SNR Sec	BND	98	3.6	357

European High Yield Telecom Pricing

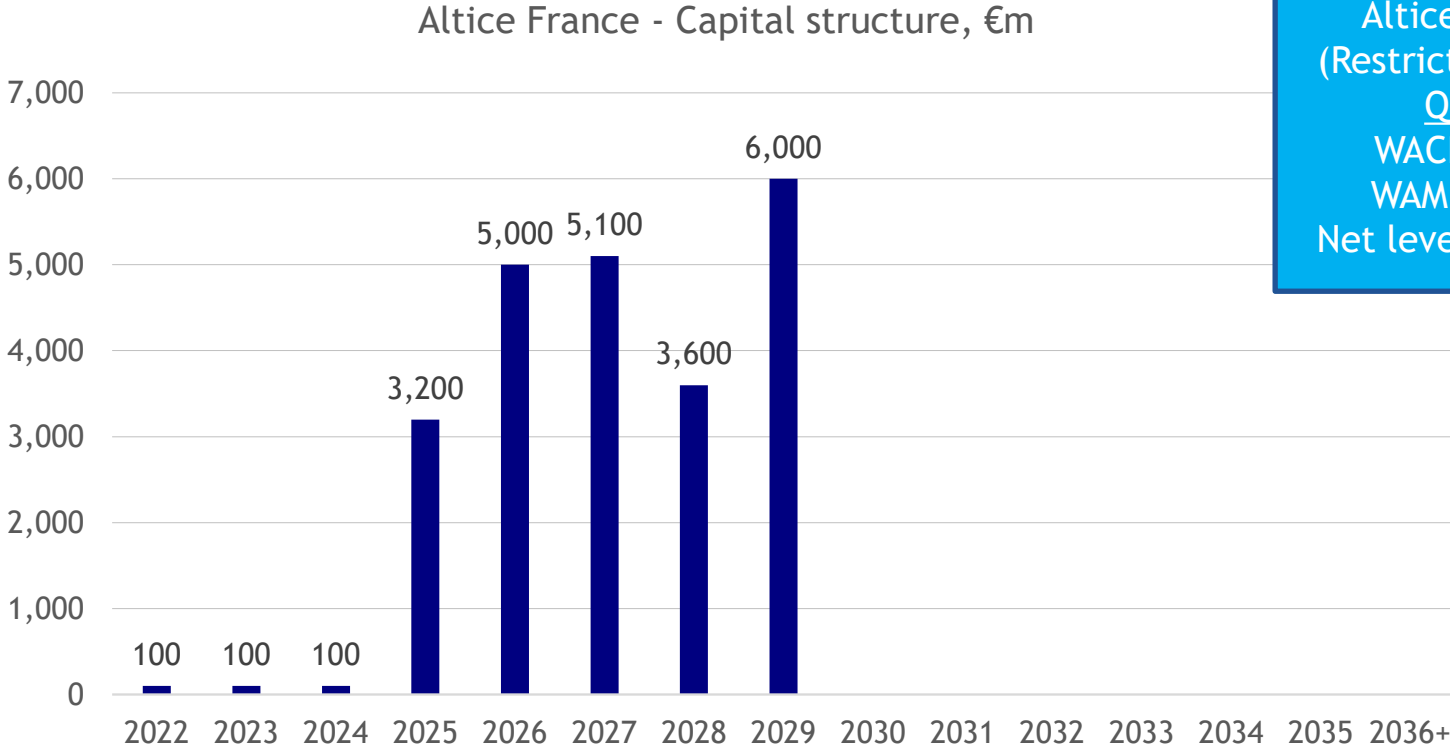
Description	Current Amt	Coupon	Issue Date	Maturity Date	Issue Curr	Seniority	Debt Class	Price	YTW	OAS (LIBOR)	
	Out (EUR)	Rate									Coupon Type
Ice Group ASA											
Ice Group Scandinavia Holdings AS - FRN	800	5.88%	Variable	04/2017	04/2022	NOK	SNR Unsec	BND	100	7.7	680
Ice Group Scandinavia Holdings AS - FRN	900	8.63%	Variable	10/2019	10/2023	NOK	SNR Unsec	BND	100	9.4	820
Ice Group Scandinavia Holdings AS - FRN	1,400	4.48%	Variable	03/2021	03/2025	NOK	SNR Sec	BND	98	6.2	479
Ice Group ASA	650	10.00%	Fixed	08/2020	08/2025	NOK	SUB Conv	BND	103	8.9	572
Iliad											
Iliad SA	650	2.13%	Fixed	12/2015	12/2022	EUR	SNR Unsec	BND	101	0.4	89
Iliad SA - MTN - Tranche 1	600	0.75%	Fixed	02/2021	02/2024	EUR	SNR Unsec	BND	99	1.1	144
Iliad SA	650	1.50%	Fixed	10/2017	10/2024	EUR	SNR Unsec	BND	100	1.6	180
Iliad SA - Tranche 2	650	1.88%	Fixed	04/2018	04/2025	EUR	SNR Unsec	BND	100	1.7	196
Iliad SA	650	2.38%	Fixed	06/2020	06/2026	EUR	SNR Unsec	BND	100	2.3	249
Iliad Holding SAS 5.125% 15-OCT-2026	1,100	5.13%	Fixed	10/2021	10/2026	EUR	SNR Sec	BND	104	4.1	425
Iliad Holding SAS 6.500% 15-OCT-2026	1,065	6.50%	Fixed	10/2021	10/2026	USD	SNR Sec	BND	104	5.5	415
Iliad SA - Tranche 2	700	1.88%	Fixed	02/2021	02/2028	EUR	SNR Unsec	BND	95	2.8	284
Iliad Holding SAS 5.625% 15-OCT-2028	750	5.63%	Fixed	10/2021	10/2028	EUR	SNR Sec	BND	104	4.6	466
Iliad Holding SAS 7.000% 15-OCT-2028	799	7.00%	Fixed	10/2021	10/2028	USD	SNR Sec	BND	103	6.2	471
Infrastrutture Wireless Italiane S.p.A.											
Infrastrutture Wireless Italiane Spa - MTN - Series 1 - Tranche 1	1,000	1.88%	Fixed	07/2020	07/2026	EUR	SNR Unsec	BND	104	0.9	107
Infrastrutture Wireless Italiane Spa - MTN - Series 2 - Tranche 1	750	1.63%	Fixed	10/2020	10/2028	EUR	SNR Unsec	BND	102	1.3	131
Infrastrutture Wireless Italiane Spa - MTN - Series 3 - Tranche 1	500	1.75%	Fixed	04/2021	04/2031	EUR	SNR Unsec	BND	101	1.6	155
MasMovil Ibercom, S.A.											
Kaixo Bondco Telecom SA 5.125% 30-SEP-2029	500	5.13%	Fixed	10/2021	09/2029	EUR	SNR Unsec	BND	101	4.9	486
PPF Telecom Group BV											
CETIN Finance BV - MTN - Series 1 - Tranche 1	-	1.42%	Fixed	12/2016	12/2021	EUR	SNR Unsec	BND	100	-	-
CETIN Finance BV - MTN - Series 3 - Tranche 1 - 4.8B CZK	185	1.25%	Fixed	12/2016	12/2023	CZK	SNR Unsec	BND	101	0.7	-
PPF Telecom Group BV - MTN - Series 3 - Tranche 2	600	3.50%	Fixed	05/2020	05/2024	EUR	SNR Unsec	BND	106	0.8	113
PPF Telecom Group BV - MTN - Series 2 - Tranche 1	600	2.13%	Fixed	11/2019	01/2025	EUR	SNR Sec	BND	102	1.3	154
PPF Telecom Group BV - MTN - Series 1 - Tranche 1	550	3.13%	Fixed	03/2019	03/2026	EUR	SNR Sec	BND	106	1.5	167
PPF Telecom Group BV - MTN	500	3.25%	Fixed	09/2020	09/2027	EUR	SNR Sec	BND	108	1.8	192
Matterhorn Telecom Holding SA											
Matterhorn Telecom SA - 250M EUR	265	2.63%	Fixed	09/2019	09/2024	EUR	SNR Unsec	BND	101	2.3	261
Senior Sec. Term Loan B - 83.5M EUR	88	-	Variable	-	09/2026	EUR	SNR Sec	TL	99	-	-
Senior Sec. Term Loan B1 - 400M EUR	423	-	Variable	-	09/2026	EUR	SNR Sec	TL	99	-	-
Matterhorn Telecom SA - 675M EUR	714	3.13%	Fixed	09/2019	09/2026	EUR	SNR Unsec	BND	98	3.5	357
Matterhorn Telecom SA - 400M EUR	423	4.00%	Fixed	11/2017	11/2027	EUR	SNR Sec	BND	101	3.7	365
UPC Holding BV											
UPC Holding BV - 550M USD	475	5.50%	Fixed	10/2017	01/2028	USD	SNR Sec	BND	103	4.4	298
Senior Unsec. Term Loan - UPC Facility AU	400	-	Variable	01/2020	04/2029	EUR	SNR Unsec	TL	98	-	-
Senior Unsec. Delayed Drawdown Term Loan - AY	863	-	Variable	04/2021	01/2029	EUR	SNR Unsec	TL	99	-	-
Senior Unsec. Delayed Drawdown Term Loan - AX - 1.925M USD	1,661	-	Variable	04/2021	01/2029	USD	SNR Unsec	TL	100	-	-
UPCB Finance VII Ltd	600	3.63%	Fixed	06/2017	06/2029	EUR	SNR Sec	BND	102	2.7	282
UPC Holding BV	594	3.88%	Fixed	06/2017	06/2029	EUR	SNR Unsec	BND	102	2.9	307
UPC Broadband Finco BV - 1.25B USD	1,079	4.88%	Fixed	04/2021	07/2031	USD	SNR Sec	BND	102	4.6	284
TalkTalk Telecom Group PLC											
Talktalk Telecom Group Plc	685	3.88%	Fixed	02/2020	02/2025	GBP	SNR Unsec	BND	96	5.4	427
TDC A/S											
TDS AS - MTN - Series 4 - Tranche 1 - 500M EUR	3,718	5.00%	Fixed	03/2012	03/2022	EUR	SNR Unsec	BND	101	1.2	171
TDC AS - MTN - Series 4 - Tranche 1 - 550M GBP	3,674	6.88%	Fixed	02/2011	02/2023	GBP	SNR Unsec	BND	106	1.5	73
Senior Sec. Term Loan B - Bank - 1.9B EUR	14,128	-	Variable	11/2018	06/2025	EUR	SNR Sec	TL	99	-	-

European High Yield Telecom Pricing

Description	Current Amt	Coupon	Issue Date	Maturity Date	Issue Curr	Seniority	Debt Class	Price	YTW	OAS (LIBOR)
	Out (EUR)	Rate								
Telecom Italia Spa - MTN - Series 24 - Tranche 1**	884	5.25% Fixed	02/2010	02/2022	EUR	SNR Unsec	BND	101	0.3	85
Telecom Italia Spa - MTN - Equity-Linked - Convertible**	2,000	1.13% Fixed	03/2015	03/2022	EUR	Other	BND	100	0.7	124
Telecom Italia Spa - MTN - Series 13 - Tranche 1 - 400M GBP**	465	5.88% Fixed	05/2006	05/2023	GBP	SNR Unsec	BND	105	2.4	155
Telecom Italia Spa - MTN - Series 35 - Tranche 1**	1,000	3.25% Fixed	01/2015	01/2023	EUR	SNR Unsec	BND	103	0.7	117
Telecom Italia Spa - MTN - Series 39 - Tranche 1**	1,000	2.50% Fixed	01/2017	07/2023	EUR	SNR Unsec	BND	102	1.0	142
Telecom Italia Spa - MTN - Series 36 - Tranche 1**	750	3.63% Fixed	01/2016	01/2024	EUR	SNR Unsec	BND	104	1.7	202
Telecom Italia Spa - MTN - Series 42 - Tranche 1**	1,250	4.00% Fixed	01/2019	04/2024	EUR	SNR Unsec	BND	105	1.5	187
Telecom Italia Spa - 1.5B USD**	1,294	5.30% Fixed	05/2014	05/2024	USD	SNR Unsec	BND	105	3.1	210
Telecom Italia Spa - MTN - Series 38 - Tranche 1**	1,000	3.00% Fixed	09/2016	09/2025	EUR	SNR Unsec	BND	103	2.2	244
Telecom Italia Spa - MTN - Series 43 - Tranche 1**	1,000	2.75% Fixed	04/2019	04/2025	EUR	SNR Unsec	BND	102	2.0	219
Telecom Italia Mobile Spa - MTN - Series 41 - Tranche 1**	750	2.88% Fixed	06/2018	01/2026	EUR	SNR Unsec	BND	102	2.3	249
Telecom Italia Spa - MTN - Series 37 - Tranche 1**	1,000	3.63% Fixed	05/2016	05/2026	EUR	SNR Unsec	BND	105	2.4	256
Telecom Italia Spa - MTN - Series 39 - Tranche 1**	1,250	2.38% Fixed	10/2017	10/2027	EUR	SNR Unsec	BND	99	2.6	265
Telecom Italia Spa - MTN - Series 44 - Tranche 1**	1,000	1.63% Fixed	01/2021	01/2029	EUR	SNR Unsec	BND	94	2.6	265
Telecom Italia Capital SA - 1B USD**	863	6.38% Fixed	09/2004	11/2033	USD	SNR Unsec	BND	104	5.9	440
Olivetti Finance NV - MTN - Series 14 - Tranche 1**	1,015	7.75% Fixed	01/2003	01/2033	EUR	SNR Unsec	BND	133	4.0	387
Telecom Italia Capital SA - 1B USD**	863	6.00% Fixed	09/2005	09/2034	USD	SNR Unsec	BND	102	5.8	427
Telecom Italia Capital SA - 1B USD**	863	7.20% Fixed	07/2006	07/2036	USD	SNR Unsec	BND	110	6.2	459
Telecom Italia Capital SA - 1B USD**	863	7.72% Fixed	06/2008	06/2038	USD	SNR Unsec	BND	114	6.3	474
Telecom Italia Spa - MTN - Series 8 - Tranche 1**	670	5.25% Fixed	03/2005	03/2055	EUR	SNR Unsec	BND	107	4.8	460
Telenet Group Holding NV**	540	3.50% Fixed	12/2017	03/2028	EUR	SNR Sec	BND	102	2.7	279
Telenet Group Holding NV - 1B USD**	863	5.50% Fixed	12/2017	03/2028	USD	SNR Sec	BND	103	4.4	297
United Group BV	525	4.88% Fixed	07/2017	07/2024	EUR	SNR Sec	BND	101	3.2	372
United Group BV	550	4.13% Variable	05/2019	05/2025	EUR	SNR Sec	BND	100	1.8	240
United Group BV - FRN	450	3.25% Variable	02/2020	02/2026	EUR	SNR Sec	BND	98	3.7	403
United Group BV	600	3.13% Fixed	02/2020	02/2026	EUR	SNR Sec	BND	96	4.1	422
United Group BV	400	4.00% Fixed	11/2020	11/2027	EUR	SNR Sec	BND	98	4.3	432
United Group BV	300	4.63% Fixed	07/2021	08/2028	EUR	SNR Sec	BND	100	4.7	467
United Group BV	625	3.63% Fixed	02/2020	02/2028	EUR	SNR Sec	BND	96	4.3	432
Senior Sec. Term Loan M	--	Variable	11/2017	11/2027	GBP	SNR Sec	TL	99	-	-
Virgin Media Secured Finance Plc	675	5.00% Fixed	02/2017	04/2027	GBP	SNR Sec	BND	103	3.2	230
Senior Sec. Term Loan N - 3.3B USD	--	Variable	10/2019	01/2028	USD	SNR Sec	TL	99	-	-
Dolya Holdco 18 DAC - 500M USD	366	5.00% Fixed	06/2020	07/2028	USD	SNR Unsec	BND	100	5.0	331
Virgin Media Vendor Financing Notes III DAC	11	4.88% Fixed	06/2020	07/2028	GBP	Coll	BND	100	4.8	342
Virgin Media Secured Finance Plc	340	5.25% Fixed	05/2019	05/2029	GBP	SNR Sec	BND	104	4.2	278
Virgin Media Secured Finance Plc - 1.425B USD	1,043	5.50% Fixed	05/2019	05/2029	USD	SNR Sec	BND	105	4.5	285
Virgin Media Secured Finance Plc	480	4.13% Fixed	06/2020	08/2030	GBP	SNR Sec	BND	99	4.3	295
Virgin Media Secured Finance Plc	635	4.25% Fixed	10/2019	01/2030	GBP	SNR Sec	BND	99	4.4	300
Virgin Media Secured Finance Plc - 915B USD	669	4.50% Fixed	06/2020	08/2030	USD	SNR Sec	BND	99	4.6	292
Virgin Media Finance Plc - 500M EUR	448	3.75% Fixed	06/2020	07/2030	EUR	SNR Unsec	BND	100	3.8	364
Virgin Media Finance Plc - 925M USD	677	5.00% Fixed	06/2020	07/2030	USD	SNR Unsec	BND	99	5.2	350
Ziggo Secured Finance BV	620	4.25% Fixed	09/2016	01/2027	EUR	SNR Sec	BND	102	2.8	341
Ziggo Secured Finance BV - 2B USD	1,381	5.50% Fixed	09/2016	01/2027	USD	SNR Sec	BND	103	3.7	301
Ziggo Bond Finance BV - 625M USD	539	6.00% Fixed	09/2016	01/2027	USD	SNR Unsec	BND	103	4.4	348
Ziggo BV	503	2.88% Fixed	10/2019	01/2030	EUR	SNR Sec	BND	100	2.9	276
Ziggo BV - 1.2M USD	855	4.88% Fixed	10/2019	01/2030	USD	SNR Sec	BND	102	4.5	282
Ziggo Bond Co BV - 500M USD	431	5.13% Fixed	02/2020	02/2030	USD	SNR Unsec	BND	101	5.0	329
Ziggo Bond Co BV	900	3.38% Fixed	02/2020	02/2030	EUR	SNR Unsec	BND	98	3.7	364

Altice France

Altice France Q3 21: Slightly weaker SR trends even adjusting for EIS and ATS, and slightly lower EBITDA growth. Guidance unchanged. KPIs remain weak and a slight concern given the longevity of the underperformance in share of adds relative to overall market share.

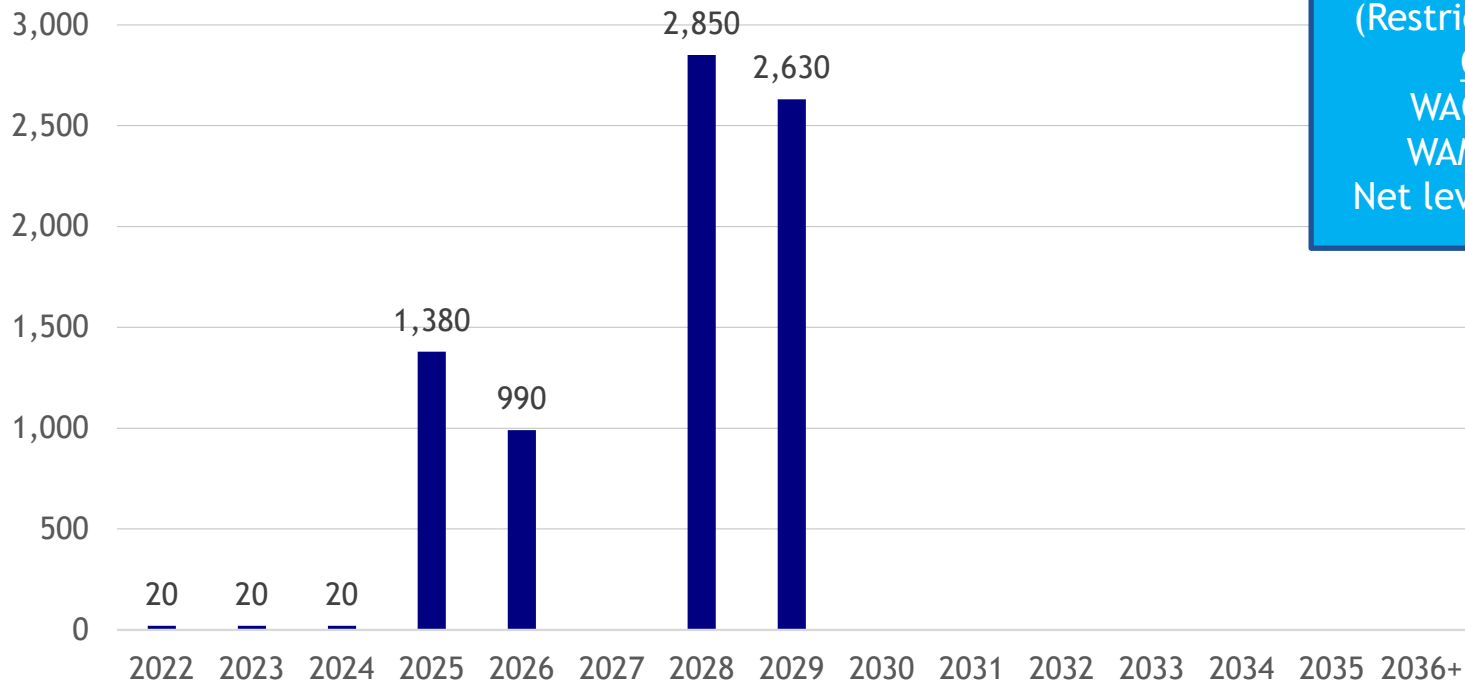


Altice France
(Restricted Group)
Q3 21
WACD: 4.3%
WAM: 5.7yrs
Net leverage: 5.3x

Altice International

Altice International Q3 21: Investment into Altice UK as opposed to paying a dividend dominated headlines; UK will not be moved into International debt silo company confirmed. Leverage will likely exceed 4.5x target for a few quarters company suggested. Co-investment capex still being booked outside of OpFCF.

Altice International - Capital structure, €m

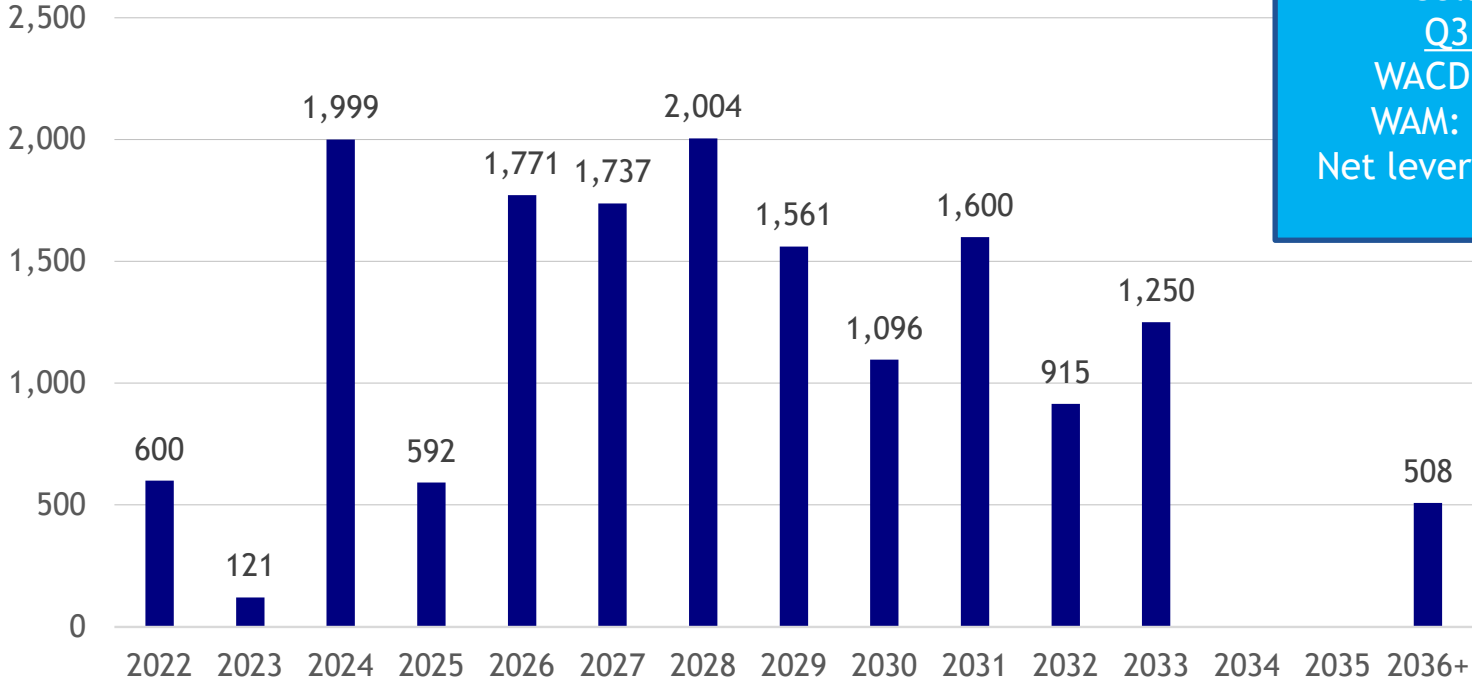


Altice International
(Restricted Group)
Q3 21
WACD: 3.6%
WAM: 6.1yrs
Net leverage: 4.3x

Cellnex

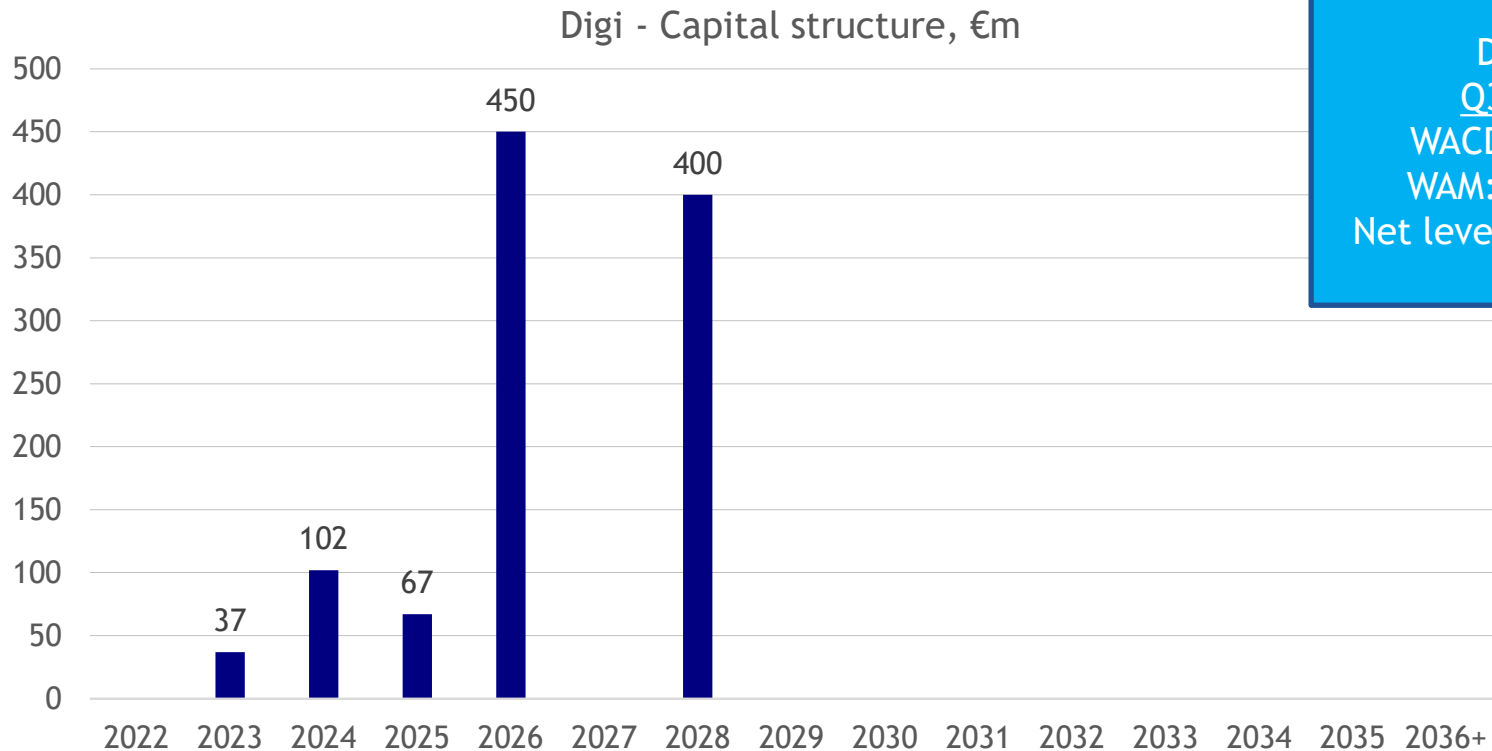
Cellnex Q3 21: Given current operating trends and after incorporating the impact of recent acquisitions, we now expect 2021 revenue and Adj. EBITDA to come in ahead of the adjusted guidance ranges. RLFCF is harder to forecast quarter-by-quarter, and we keep RLFCF estimates within the adjusted guidance range.

Cellnex - Capital structure, €m



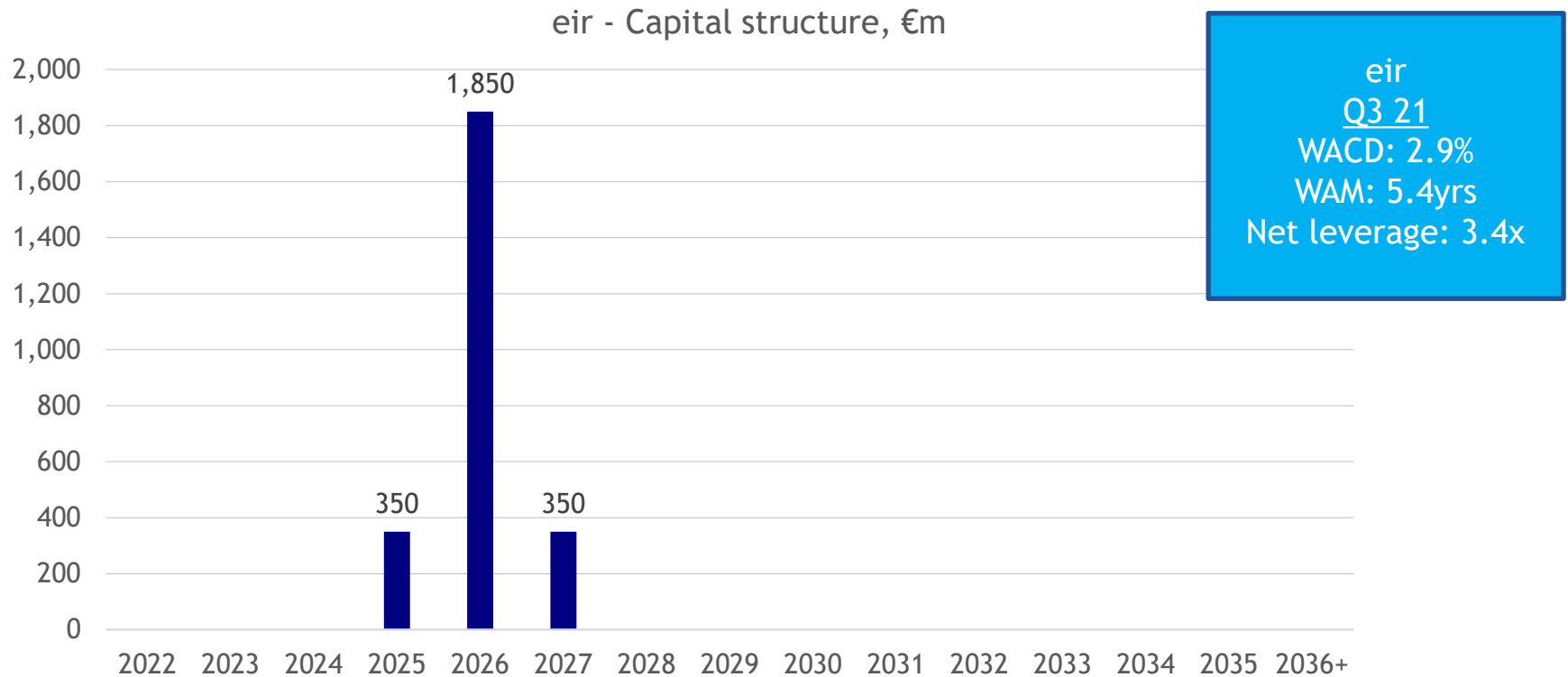
Cellnex
Q3 21
WACD: 1.6%
WAM: 7.2yrs
Net leverage: 6.3x

Digi Q3 21: Continues to take the lions share of adds in both fixed and mobile in Spain, and SR growth accelerated this quarter - drop through to EBITDA could be better. Romania growth remains good, Hungary solid too.

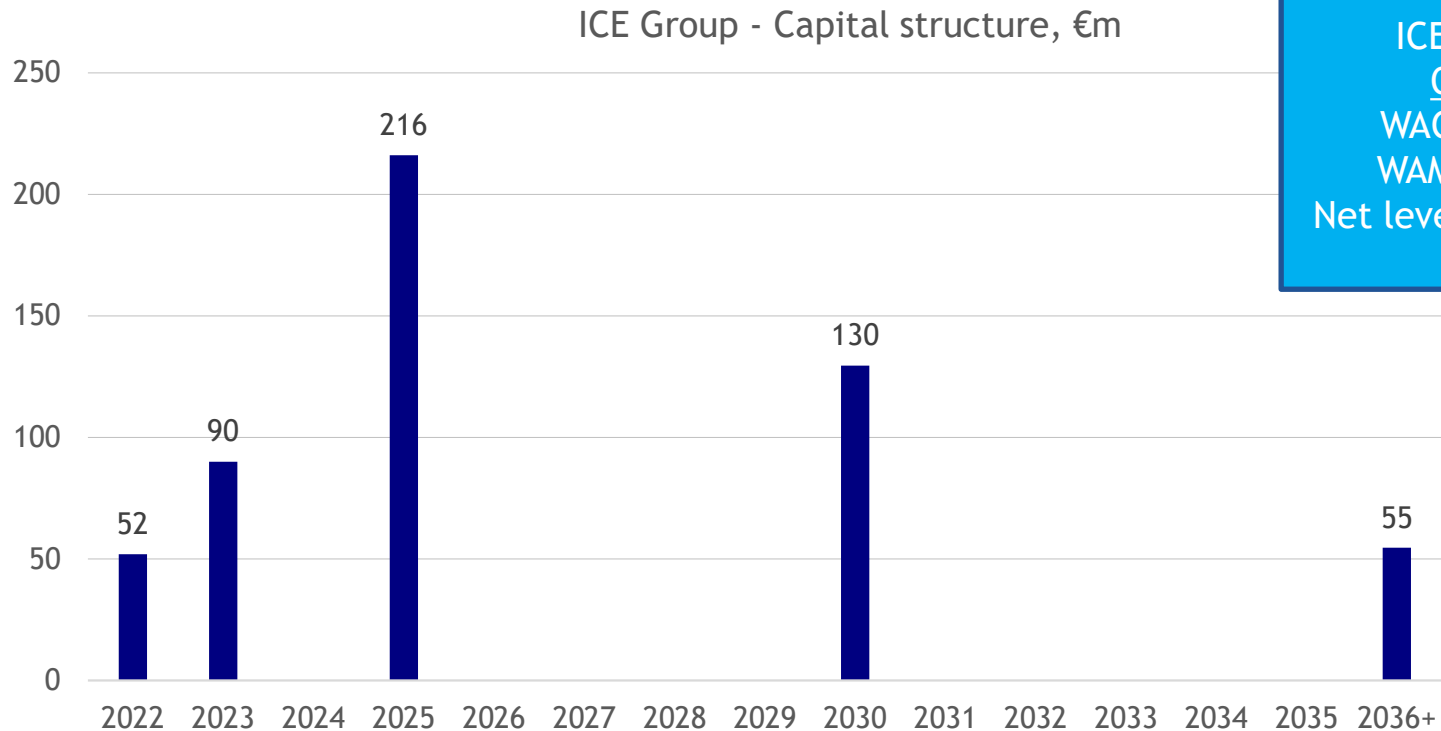


Digi
Q3 21
WACD: 2.9%
WAM: 5.4yrs
Net leverage: 2.6x

Eir Q3 21: KPI support continues to come at the expense continues to come at the expense of ARPU, with SR trends still negative overall. Cost out though provides a support to EBITDA.

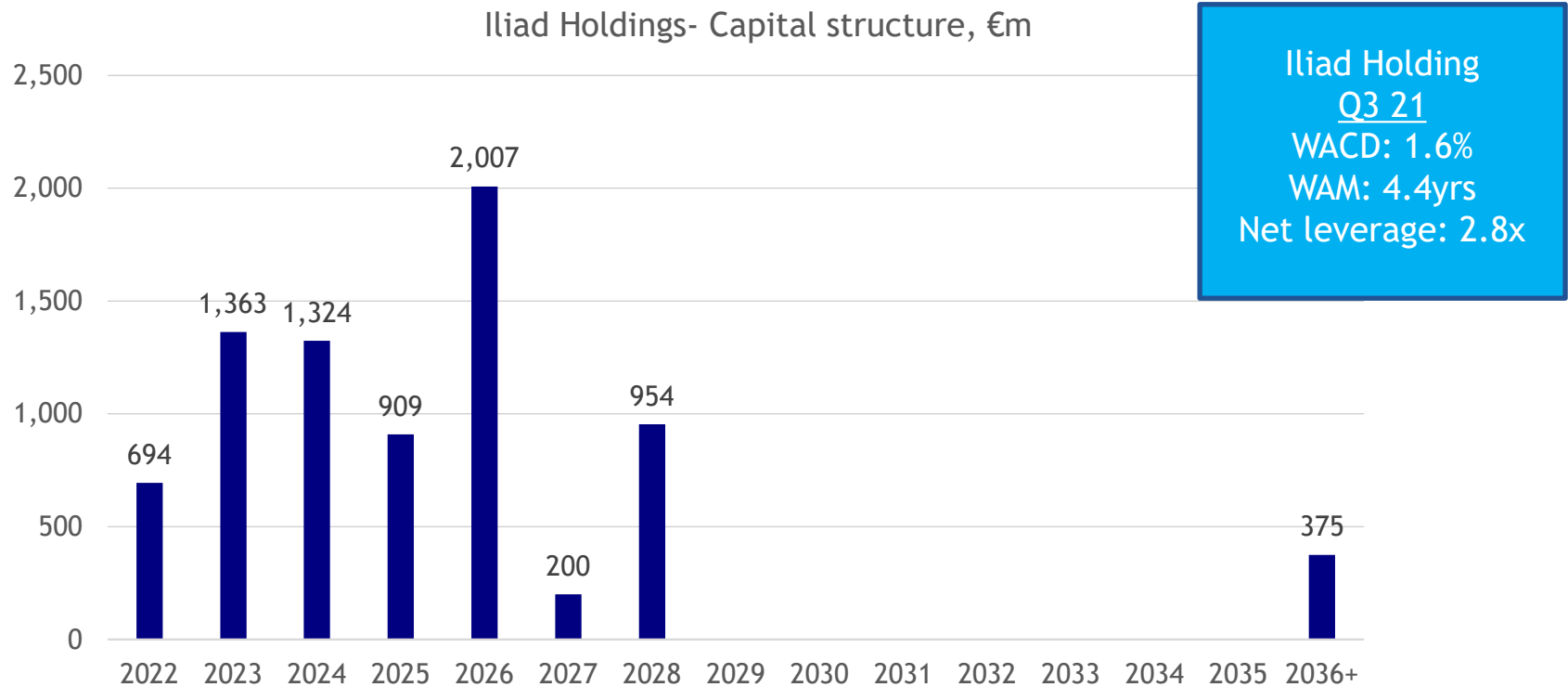


Ice Group Q3 21: Results continue to be solid (and new aggressive digital brand launched), but overshadowed by restructuring announcement, including an equity raise (but no commitment from NMT (69% holder) to participate) and a new ambition to reduce leverage to 3-4x over the medium-term.

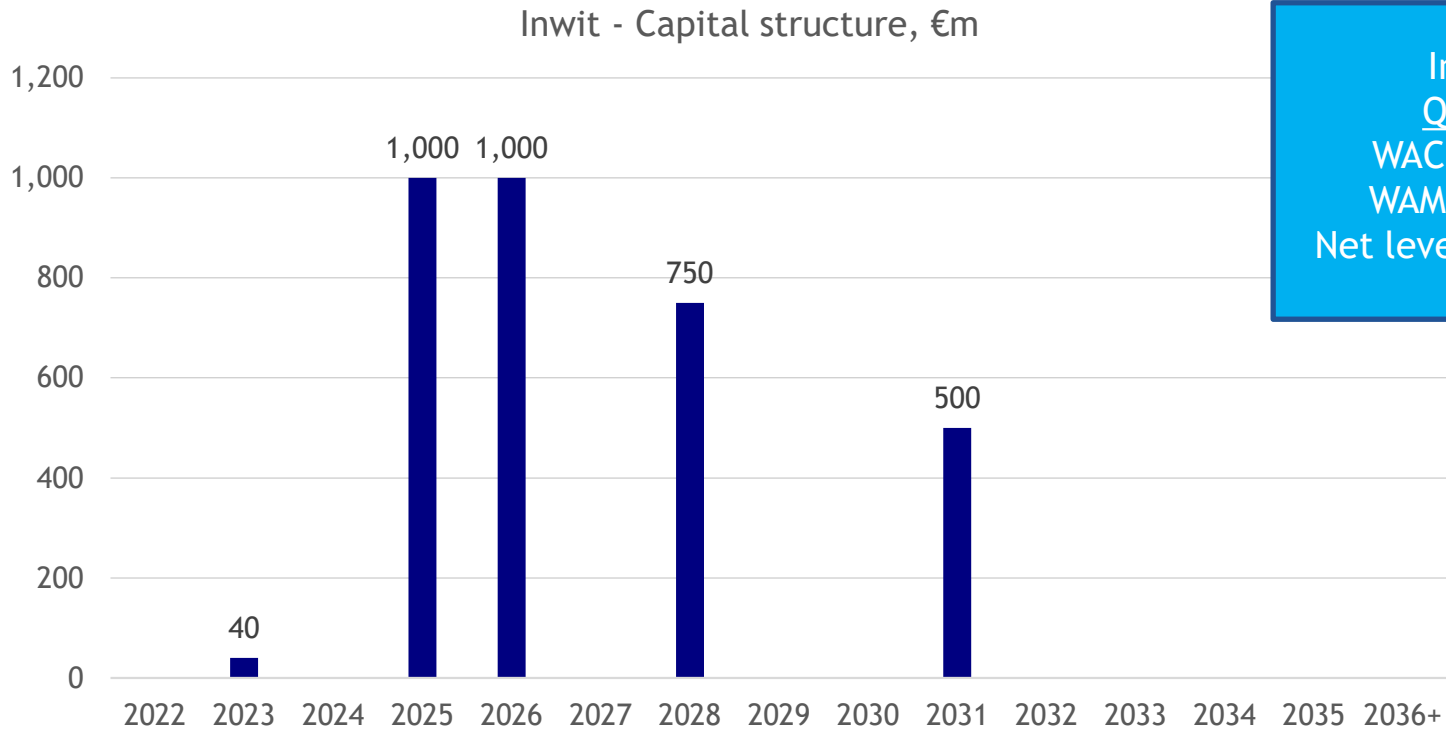


ICE Group
Q3 21
WACD: 8.3%
WAM: 5.7yrs
Net leverage: 16.5x

Iliad Q3 21: No profitability/capex this quarter (but will be given on a quarterly basis going forward for the first time), but revenue trends remain good across the board, even though France is a touch slower, and no sign on a B2B ramp yet. Nice recovery in Italian net adds.



Inwit Q3 21: Financial results were broadly in line with expectations, but even including the Vodafone tunnels assets (which we expect to add c.€4m to 2021 revenue), we think Inwit could fractionally miss the lower-end of the 2021 revenue guidance range (€785m).



Inwit
Q3 21
WACD: 1.8%
WAM: 5.9yrs
Net leverage: 5.6x

Masmovil (Lorca)

Masmovil Q3 21: Consolidation in Spain "necessary for reasonable payback on investment and to accelerate 5G roll....we are open to study new transactions; however, our competitors need to be pro-active, it is not full Masmovil responsibility to consolidate the market". Fledged out Portugal MNO plans, that includes an "open network roll" via a JV with an Infra Fund, to keep capex off B/S.

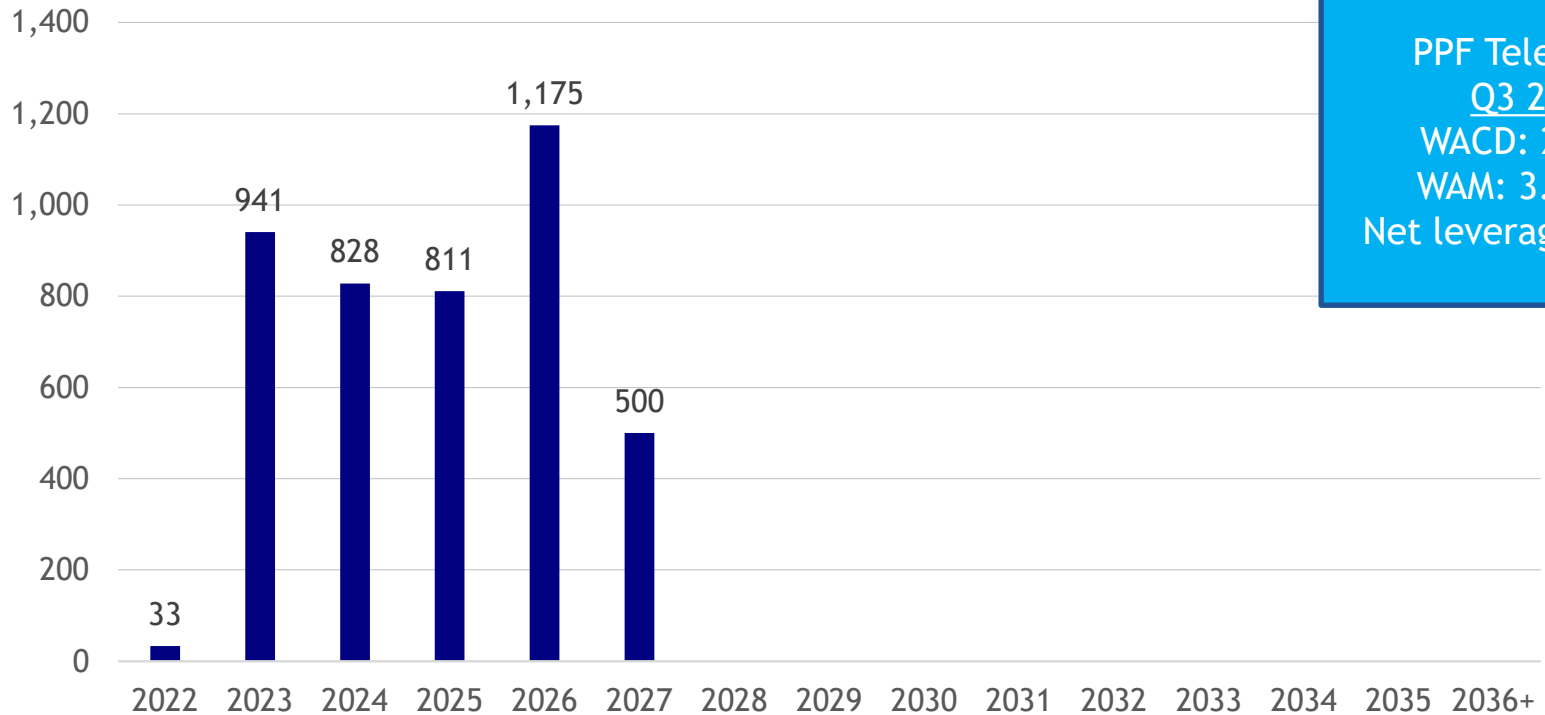


Masmovil
Q3 21
WACD: 4.1%
WAM: 5.2yrs
Net leverage: 5.1x

PPF (inc CETIN)

PPF Q3 21: MSR shares maintained with good ARPU and subs growth. Good cost control lifts EBITDA growth above revenue growth, with capex down heavily y/y as FTTx investments slow.

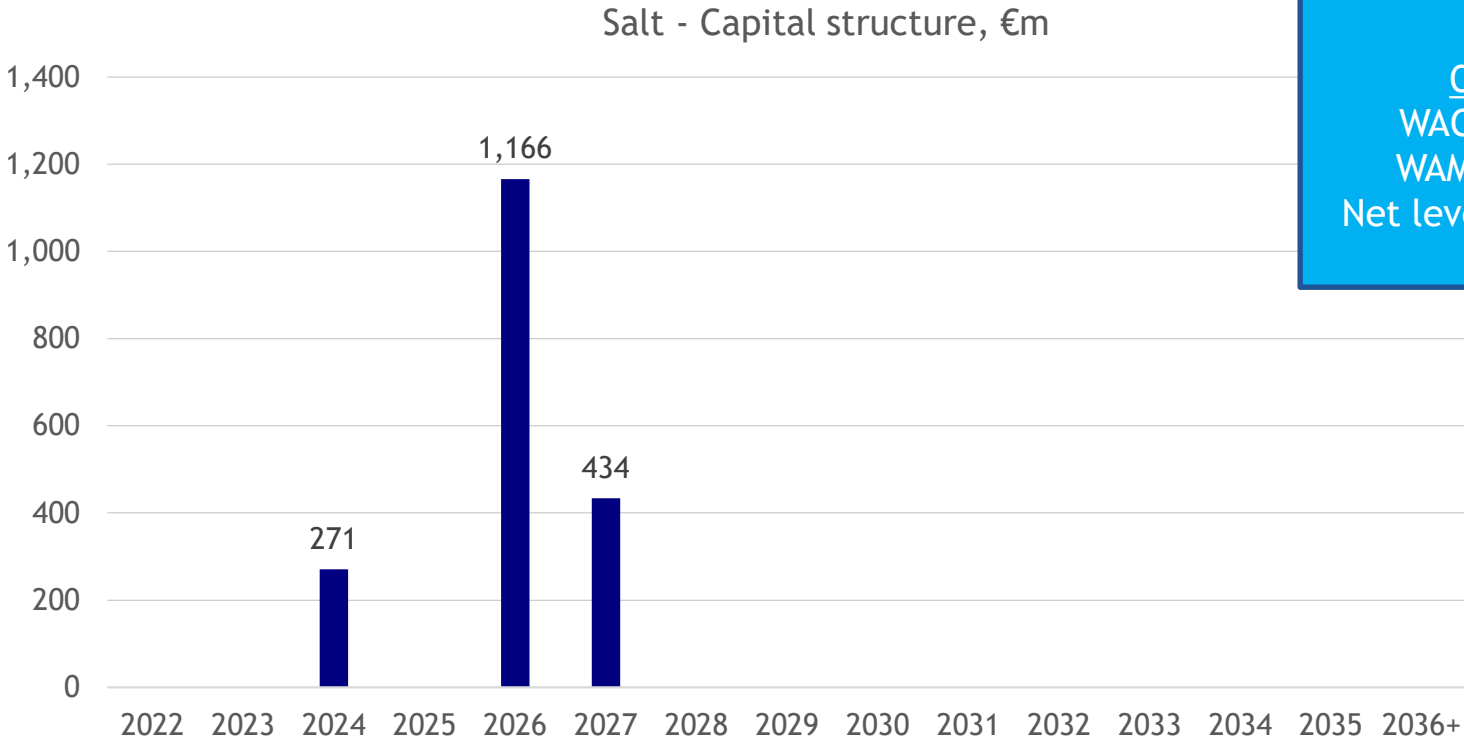
PPF Telecom (inc CETIN) - Capital structure, €m



PPF Telecom
Q3 21
WACD: 2.3%
WAM: 3.9yrs
Net leverage: 2.9x

Salt (Matterhorn)

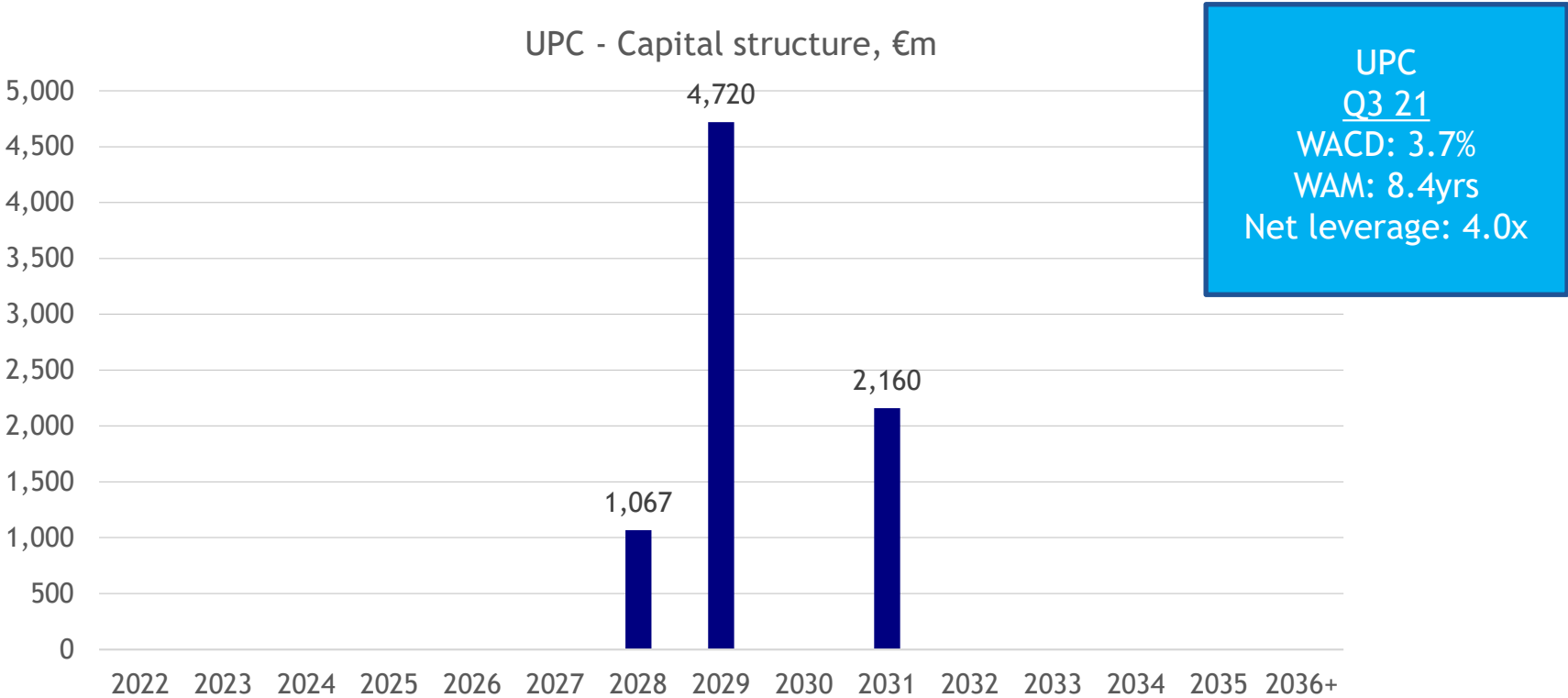
Salt Q3 21: IPO 100% pulled. Salt remain committed to the Swisscom FTTH JV, and Salt hope it can be reignited. On the new 100% digital GoMo brand (with very cheap prices), price will increase over time, with the CHF9.95 launch price only the first 50k sign-ups - this is the same marketing tool that Iliad used in Italy, and the price did then go up.



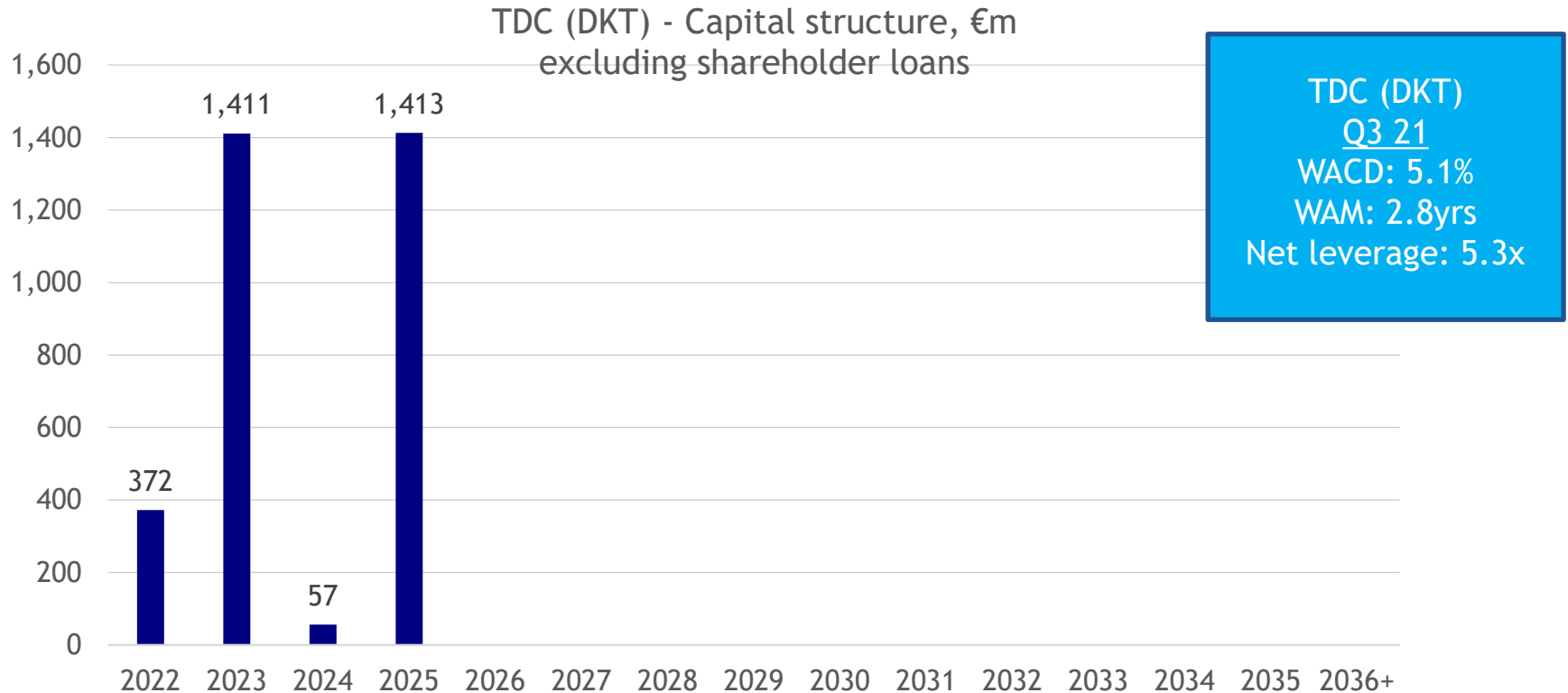
Salt
Q3 21
WACD: 3.3%
WAM: 4.9yrs
Net leverage: 3.4x

Sunrise-UPC

Sunrise-UPC Q3 21: Sunrise-UPC revenue remained broadly stable at flat YoY (vs. +1.3% in Q2), with a slight slowdown in fixed line trends offset by mobile revenues continuing to grow at c.2%/ annum. Adj. EBITDA continued to improve at +3.3% YoY (vs. -3.1% in Q2), turning positive for the first time since 2017 (on a non-proforma basis). We see this as support coming from the merger synergies as the MVNO integration has been delivered ahead of schedule.

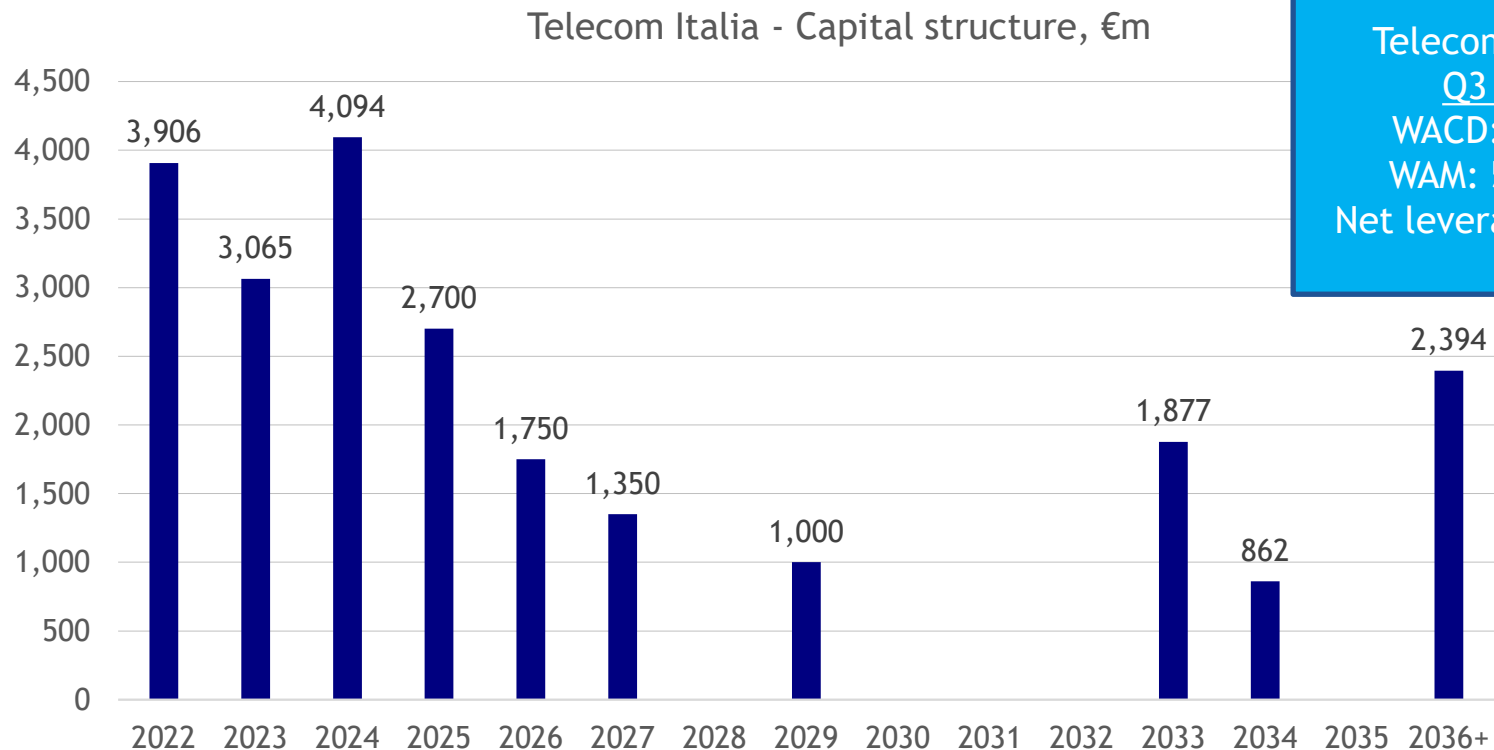


TDC Q3 21: B2C mobile is driving growth thanks to both KPI and APRU growth. Legacy and B2B remains a drag, but TDC is doing a good job overall on cost and capex, supported by the end of a mobile swap and lower FTTH costs y/y.



Telecom Italia

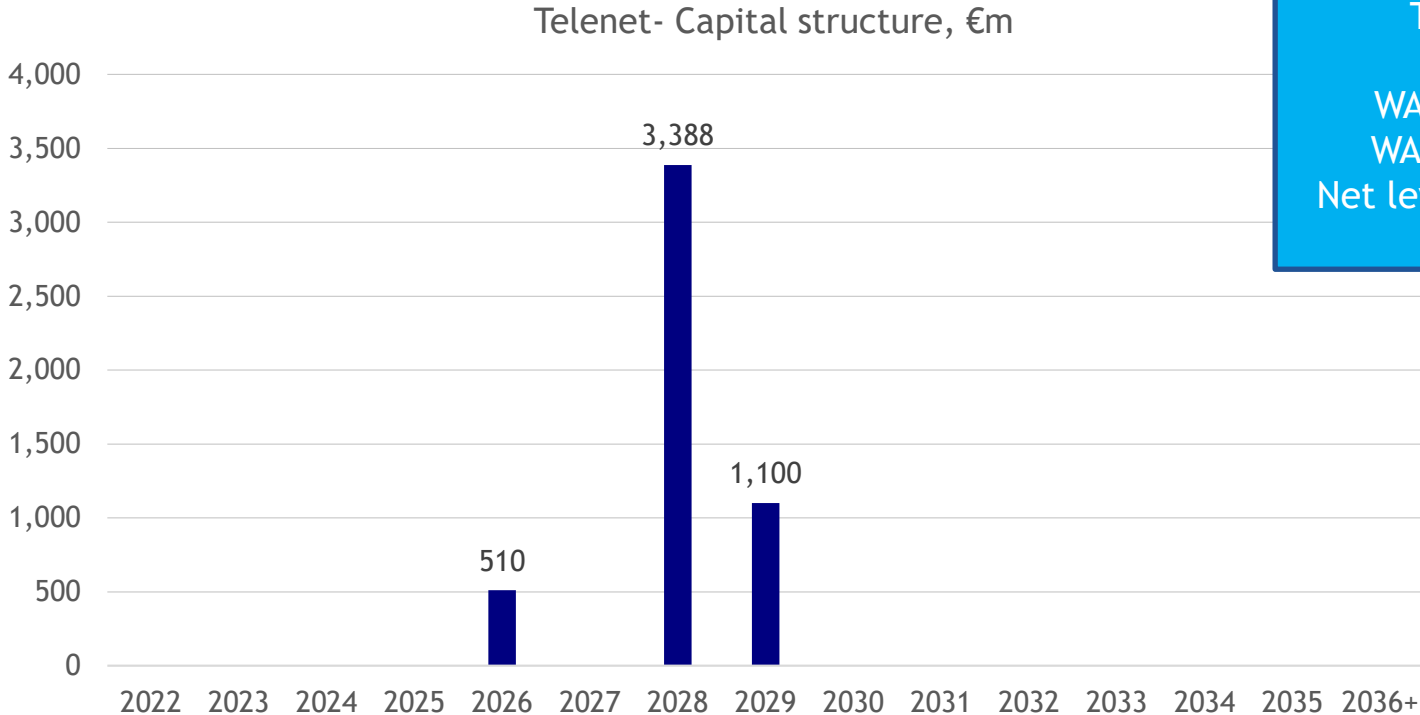
Telecom Italia Q3 21: KKR bid has dominated news, but operationally TI has been poor, with a guidance cut - we think the long-term outlook is good (ERF, DAZN football initiative and retail voucher scheme), but it is taking longer to come through than expected.



Telecom Italia
Q3 21
WACD: 3.7%
WAM: 5.5yrs
Net leverage: 3.0x

Telenet

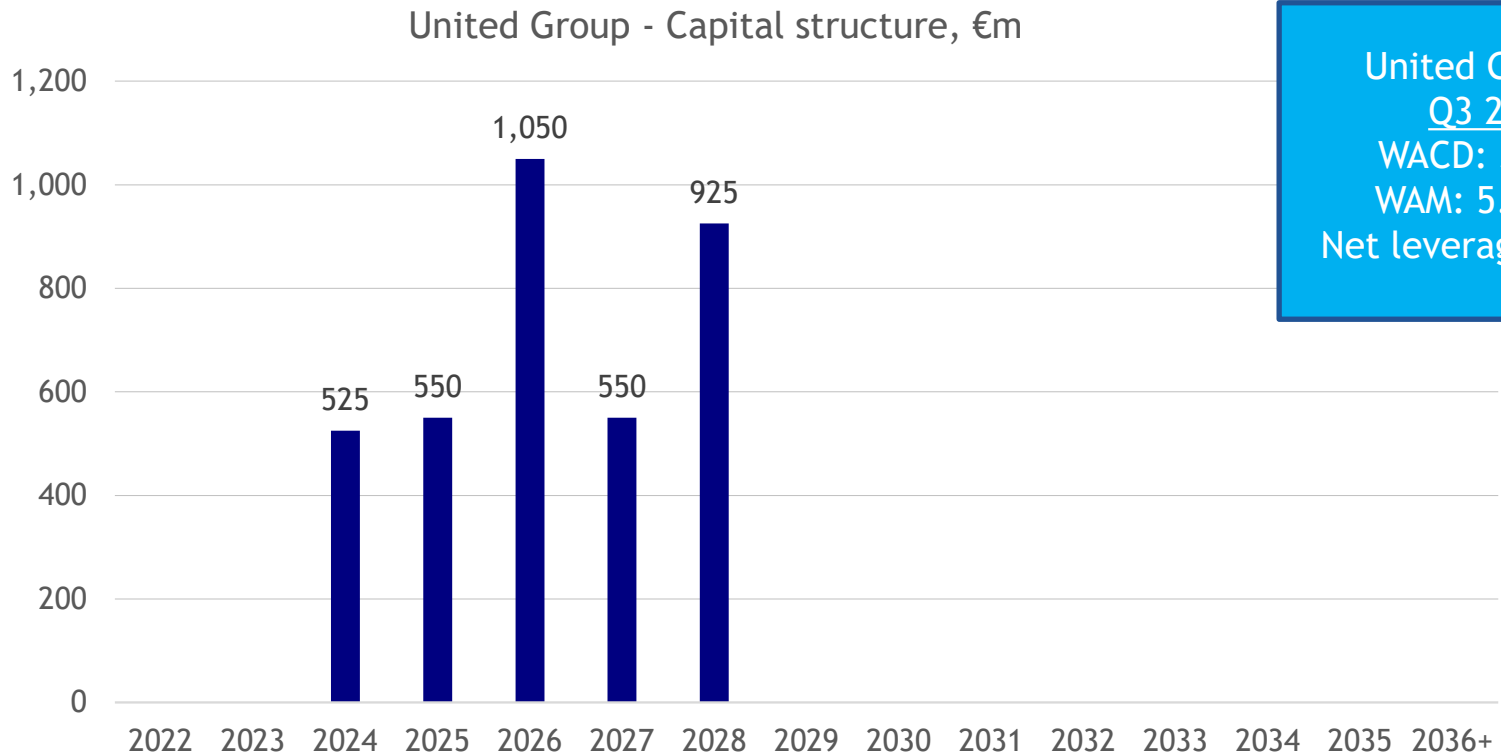
Telenet Q3 21: Telenet announced decent Q3 results with a modest guidance upgrade; the official start of the process that could lead to a towers transaction; further details on the creation of a new NetCo with Fluvius - albeit we will still to wait until 2022 for more details; and a new share buyback. The spin-off of FTTH assets were seen as a concern, but we believe Telenet’s cashflow should remain intact - see [HERE](#) for more details.



Telenet
Q3 21
WACD: 3.1%
WAM: 7.0yrs
Net leverage: 3.9x

United Group

United Group Q3 21: WIND Hellas had an impressive quarter for SR and EBITDA. Organic/underlying growth for the rest of the portfolio fairly opaque. Creation of new open access fibre wholesaler Hellenic Openfiber, is presumably a precursor to a future stake sale.



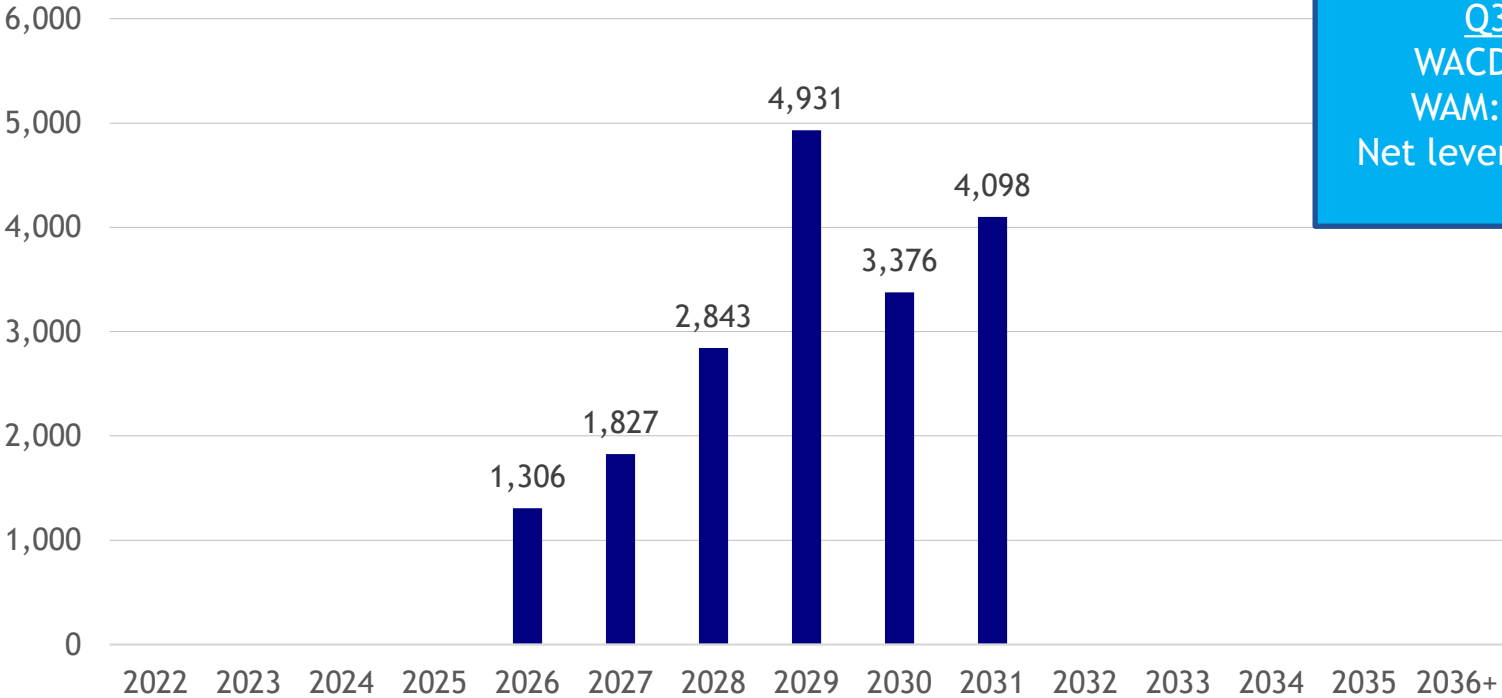
United Group
Q3 21
WACD: 3.9%
WAM: 5.2yrs
Net leverage: 4.7x

Virgin Media O2

Virign Media O2 Q3 21: The operating KPI performance remains healthy, and ARPU trajectory remains on track, but profitability is running marginally lower than expected. No news on a wholesale agreement or any further news on network expansion. Openreach has though announced that Sky will be one of the main ISPs on its discounted FTTP pricing programme, Equinox, which lowers the risk in our view of material wholesale migration away from Openreach towards Virgin Media, which we see as a positive move for the UK as a whole.

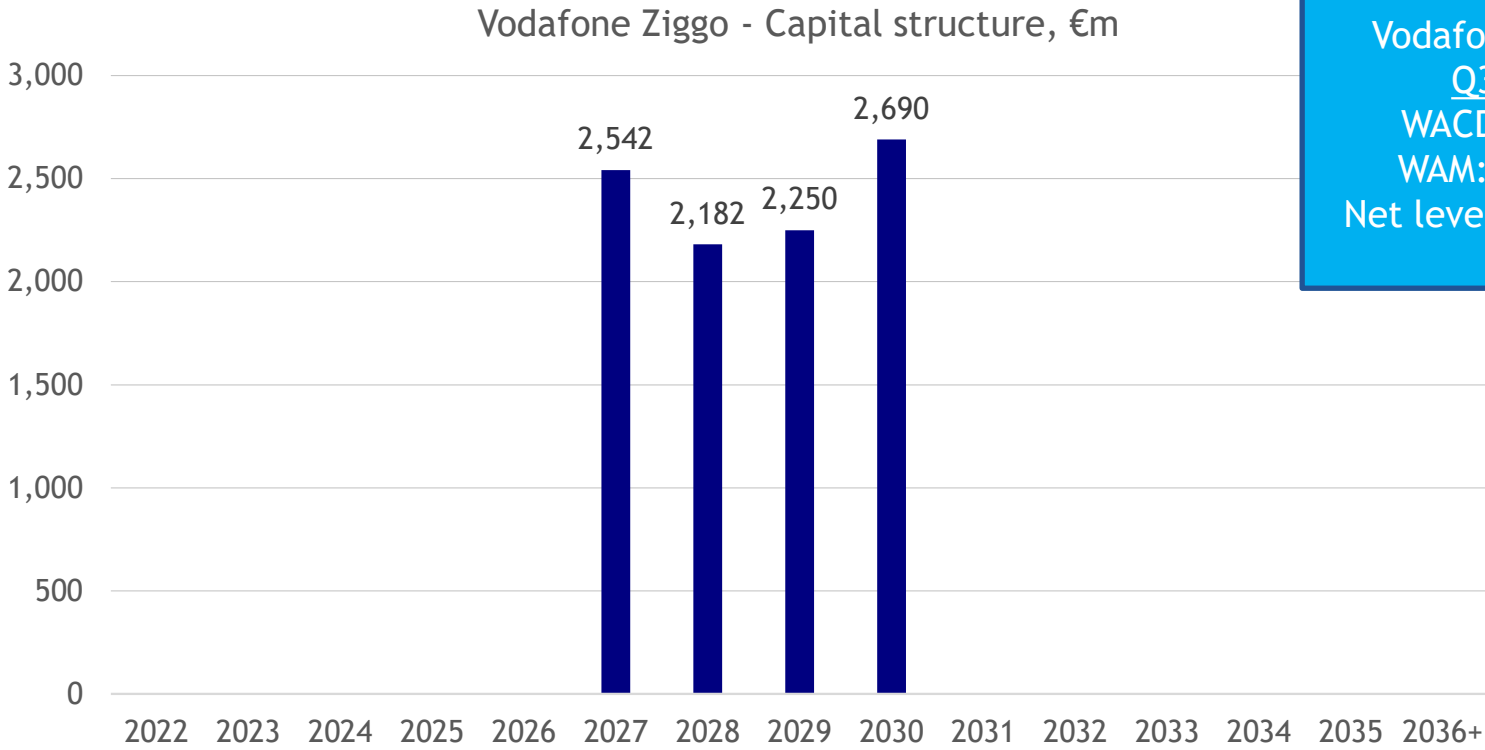
Virgin Media O2
Q3 21
WACD: 3.8%
WAM: 8.1yrs
Net leverage: 3.7x

Virgin Media O2- Capital structure, €m



Vodafone-Ziggo

Vodafone-Ziggo Q3 21: Despite weak RGUs, revenue growth remains good, and EBITDA guidance tightened to middle of the range. No announcement on FTTH overlay, but given rapid KPN roll, and overbuilder threat can't be ruled out, but it wouldn't be our base case at this stage.



Vodafone Ziggo
Q3 21
WACD: 3.7%
WAM: 7.5yrs
Net leverage: 6.3x

Disclosures

12 month historical recommendation changes are available on request

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