

## Q&A session

### Structural Separation: a Solution to boost FTTH investment

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Question	Answer
Are you suspecting a full private investment or a govt subsidy or a mixture?	It's up to the SpinCo (which would be a listed company) to do a rights issue or increase leverage. It's up to the government to provide additional funds to the market (so not only to SpinCo) if it wishes to accelerate the roll-out. These could be subsidies or investment (as in the case of New Zealand).
have you considered the separation cost which would be enormous in terms of systems, employees, technology etc.	Separation costs exist but are likely not "enormous". We have a number of examples of separation, both functional and structural: Chorus, BT, Skanova. None of these were deal-breakers. Remember, once you have functional separation, it's only a small step (in terms of organisation) to get to structural.
would the functional separation achieve the same results? Provided the incumbent can report P&L?	No, it is absolutely vital to have a fully independent company and a wholesale-only business model. A spin-off, by definition, does rule out functional separation as an alternative. But surely, it could be, and maybe even should be an intermediate step towards full (ownership) separation.
Have you looked at what the payback and ROI look like? you mentioned the the opco needs to gain the customer copper base over and this will pay for itself but it wasnt clear how long until you break even.	Our prerequisites are: Spinco offers an attractive dividend yield (4%+), pays interest and taxes and has enough cash flow available to fund the copper-to-fibre migration. So the ROI is implicit in the div yield. The SpinCo is profitable & FCF positive from day one.

<p>For the German model, an interesting idea: The Federal government holds around ~17b EUR worth of stock in DT. Would it be feasible for the government to use that money (by selling its DT shares) to support FTTH deployment via State Aid and thereby significantly improving the rollout? Just an interesting idea, curious about your thoughts. :)</p>	<p>1) Actual inflows would be lower as the oversupply of shares will lead to lower share prices. 2) We think that management and employees would fiercely resist these plans as they fear a less benign political environment and a higher risk of becoming an M&amp;A target. 3) Assuming the government sells all shares we think that the proceeds will be appealing to many political interests 4) This model could help in white areas but would not lead to a nationwide modern infrastructure 5) Our approach also solves some other issues such as a number of net neutrality aspects and others</p>
<p>Comment: In DK the average price per household is closer to 2500€</p>	<p>Our capex per household estimate is derived from a recent number communicated by wik (€45bn). The frequently cited (but not yet published) TÜV study mentions a number of €80bn. One can only speculate why the full study is not made available. Pls also note that SpinCo will invest in passive infrastructure (FTTB). It should not invest in new in-house cabling or CPE. In addition, there should be opportunities for cost-efficient roll-outs in rural areas over the 10 year+ deployment window. Another thought is that if a community wants to go faster they should actively identify synergies and they could move up the waiting list. Finally, Denmark deployment is entirely buried, which drives costs up.</p>
<p>Depends highly on proper planning and of course labour salary</p>	<p>Proper planning indeed! And you need an industrialised approach.</p>
<p>In some part of the nordics, e.g., there are communications operator that constructs and operates FTTH networks. Their networks are open and operator neutral, i.e. all service suppliers can deliver their services in the networks on equal terms. They can operate on top of muni FTTH networks. How is this model different from the one you propose? And can we learn something from this?</p>	<p>The so-called "Swedish Model" (which actually only applies to a minority of Swedish FTTH/B users) is a three layer model. In our analysis, this middle layer (the communications operator) sucks up a lot of the value created for no functional purpose. Our model assumes a NetCo wholesaling passive and active products to retailers. It achieves the same result without this somewhat wasteful middle layer. Also note that there is no neutrality left in that layer in Sweden as communications operators have recently been bought by vertically integrated players.</p>

Did you pitch this idea to some activist investors?	Yes, of course. And still do. Any help in doing so is more than welcome, there are many investors out there.
Could we applied this structural separation formulas in developing countries?	The approach - in general - is not limited to developed markets. However, in developing markets there might not always be the issue of an existing copper infrastructure. Having said that, in most developing markets, revenue expectations are low, so infrastructure sharing makes even more sense.
If you were not an incumbent with a copper infrastructure, but a telco with its core business focussing on high-value services to large corporations that now wants to expand its offering to cheaper services to SMEs (small & medium enterprises) - would you still recommend a structural separation between corporate and SME offerings?	If you are not an incumbent operator, this whole line of reasoning does not apply to you, no matter which market you serve at the retail level. We do not advocate for an absolute infrastructure monopoly although we anticipate that it will consolidate into that over time.
For clarity, my question above referes to separation of dedicated, active fibre services that come at a high price and only large corporations can afford; versus GPON-based, lower value FTTx services designed with SMEs in mind and offered at much lower price levels. Hope my question makes sense to you without a lot of background info ...	see above
Did you research the actual cases in the Netherlands (28% FttH-penetration), and separation passive-fiber-companies (Reggefiber and CIF), versus operators (KPN, Vodafone, Caiway)?	The NL would certainly be an interesting subject for another case study. A Dutch SpinCo would then include the Regge biz plus the NetCo biz that kpn already reports. The fact that there are companies (you gave examples) that focus on infrastructure might signal that it can make sense to focus on one layer of the value chain. To be clear: the Spin-Off approach might lead to more NGA investments where there is an underinvestment problem. In markets where there is no such problem it could still make sense from shareholder perspective.
Those are actual cases, not hypothetical ones.	True. But these are not actual cases for structural separation. The subject of our analysis our incumbents with a vertically integrated model.
How much importance do you place on an agreed framework between SpinCo, industry and Government regarding copper to fibre migration?	This is absolutely VITAL. Opting for structural separation alone will not suffice. So, there is still need for a very well defined, incentive driven copper-to-fibre migration strategy.

Are investors in European incumbents asking questions about possible release of value from structural separation at present?	It is our objective to move this approach back on investors' agenda.
You propose structural separation, what are your views on BT's request to fold BT Wholesale into BT Openreach?	We don't think that passive infrastructure and active wholesale need to be separated. Certainly, if the BT went all the way and spun-off a structurally separated NetCo, then this is where the active wholesale layer should be. But that's not what BT is proposing so in effect this changes very little (it will just mean less transparency).
You estimate 15-20 years for full coverage of Germany. How long do you estimate for the urban population? That is, is the coverage of the first 80% much faster than for the final 20%?	We do not define how the SpinCo should operate. We only show that enough funds are available to drive the upgrade over time. The deployment scheme has of course a political dimension which needs to be defined by the government. Incentives should ensure that rural investments do not start only in year 8 or so.
why would the SpinCo see market share & revenues decline?	Well, maybe it wouldn't ;-) But we wanted to show a conservative scenario in which cable and independent deployments take share. It might indeed more reasonable to assume that cable would find it more difficult to take market share. Likewise, we have not included service fees from independent networks that buy OpCo services from SpinCo. You can think of our scenario as a pessimistic "stress test".
How does nationwide cable (HFC) complicate the possibility (appetite) for structural separation? Will cable companies cry foul?	They might do that. But: The beauty of our proposal is that it is driven by management. In other words: can you forbid structural separation in the vent that a company wants to do so? The real question is how long it will take management and shareholders to realise this;-) Additionally, while we don't (in our model) preclude infrastructure competition, we do set the goal for the NetCo to ultimately cover 100% of the territory. We anticipate that cable would ultimately write-off its own infrastructure and migrate to the separated NetCo. We're already seeing signs of that in Sweden and (to a smaller extent), the Netherlands.

<p>KPN just completed integrating fixed &amp; mobile backbones (see Q3 reporting). Would you need to undo that?</p>	<p>Most likely you would to some extent. Remember though that the separated NetCo needs to be focused on Access. Chorus for examples has access products and some aggregation / backbone. The mobile network is mostly a separate entity anyway except for Fiber to the Mast which could (should?) be considered access.</p>
<p>This is good work. Accords with my previous Euro model. But can you really get 1125 Euro total CAPEX in Germany? For passive and active combined?</p>	<p>see above; total capex estimate taken from wik</p>
<p>Benoit, I believe that the major consideration for a telephony incumbent to not take a bold FTTH strategy is that it currently maintains significant control over retail operations over its network. By switching to FTTH (and becoming structurally separated) it loses a serious leverage on its retail market, obviously. Having said that, a copper-to-fiber roadmap supported by the gov. is probably not what the alternative operators would like to see happening - it would require additional investments for them, more risk, etc. Would you like to make a comment on that?</p>	<p>This might be a consideration for incumbents' management, but shouldn't be for incumbents' shareholders. Furthermore, the Incumbents' own lobbyists keep arguing that you make more margin as an altnet than you do as an incumbent. If that is true then clearly separation would allow for higher margins in services. Altnets have invested in copper, true, but could not sit out a fiber platform for long. We have seen this in New Zealand where there has been hesitation in the early days, but the ex-Altnets have now fully embraced the fiber platform. The additional investment is fine if it happens at the end of an investment cycle when the copper investments have been recouped.</p>
<p>How will you convince the incumbents to structurally separate? Link to how this happened for the case of Chorus in New Zealand...</p>	<p>As described in our presentation: you have to demonstrate the case for a value release and make key shareholders aware of the opportunity. In our view, the sheer fact that the government is forcefully behind the copper-to-fibre plan will induce investment decisions in the market.</p>
<p>Wouldn't it make sense to build several spin-offs of all carriers which are presently acting on the copper/fiber infrastructure market and then merge them together to one infrastructure company? How would you calculate and value the shares for each spin-off in that case?</p>	<p>1) We prefer a solution that needs minimum coordination between companies (so we focus on only one company - the incumbent). In addition, we still appreciate a competitive market and not a national holding company. You already point to one added complexity: one would have to value the respective spin-off companies... Our general concern is that co-investment models are likely to be complex.</p>

<p>Thomas, understanding that SpinCo will have wholesale revenues per customers of € 14,70 - what ARPU are you considering will FttH-Customers will pay to the Service Providers that use this wholesale product from SpinCo?</p>	<p>Our model did not look at retailing prices at all as we focus on a wholesale service provider. Our assumption is that the copper-to-fiber migration does not lead to an increase in wholesale prices which could be passed onto customers. This could lead to public upheaval and politicians might shy away from this approach.</p>
<p>Thomas, a) what's about the write-off of the legacy-copper that SpinCo inherited? b) What value did you give to the legacy-copper in your model, bearing in mind that (from the incumbents strategic view) a possible DCF-appraisal would lead to a quite huge amount?</p>	<p>1) Most of the copper (if not all) is probably already written off 2) In our view it is not necessary to attach a value to the copper network. This might be relevant for accountants, not for investors. 3) Admittedly, there is one foggy part in our model which relates to the amount of depreciation and amortisation which will have an impact on the pre tax result and, and thus, cash tax payments. This will be addressed in further work down the line if we see interest from shareholders.</p>