Experts, industry stakeholders and the BEREC chairman spoke at the BITS seminar on wholesale-only operators organised by Cullen International with the university of Namur on 12 December 2018.

Wholesale-only operators are companies operating only in the wholesale market and offering access to all interested market operators.

Although in Europe wholesale-only initiatives have played a role in fibre deployment from an early stage (Stokab was established in Sweden in 1994), the policy and regulatory debate on wholesale-only networks is relatively new and linked to the light-touch regulatory approach reserved to them by the recently adopted European Electronic Communications Code (EECC).

According to article 80 of the EECC, wholesale-only network operators are explicitly exempted from symmetric access regulation and the scope of SMP remedies that can be imposed on such undertakings is limited to general access and non-discrimination obligations and to "*fair and reasonable pricing*" where justified (Flash).

These regulatory incentives are justified on the basis that wholesale-only providers without own retail operations are less likely to discriminate against access seekers, as they have a strong incentive to provide wholesale access to all.

The operators of the future – alternatives when connectivity becomes a commodity

Bengt Mölleryd, senior analyst, the Swedish Post and Telecom Authority (PTS), discussed (slides) advantages and risks associated with the wholesale-only business model in the environment where connectivity has become a commodity.

The telecoms sector landscape is changing at a fast pace

Over the past ten years the telecoms landscape has undergone significant changes driven by transition to all-IP networks and increasing competition from OTTs. Broadband connectivity has become a commodity where customers are requiring more and more data at lower cost. Major European telecoms network operators have experienced declining revenue growth, while at the same time they need to invest more in network capacity in order to cope with traffic growth.

One of the strategies of traditional vertically integrated telecoms operators has been to expand into other services and sectors, such as media and banking, in order to open new revenue opportunities beyond connectivity.

However, when it comes to investment in R&D, it has been difficult for telecom operators to keep up with OTTs. OTTs spend significantly more on R&D in order to enhance the development of new products and services and attract new customers. The ratio of investment in R&D to sales for OTTs is often above 10%, while for telecom operators it is on average less than 1%.

Growing demand for high-speed broadband connectivity has been driving take-up of fibre broadband connections. In countries with low fibre penetration and where cable is not a dominant broadband technology, the growth in fibre connections has been particularly high. For example, Ireland saw the highest growth in fibre in 2017 with a surge of 420% compared to the previous year. For telecom operators investing in fibre, this presents a new revenue opportunity through exploring a wholesale business model.

A wide range of wholesale-only entities have emerged in the telecoms sector over the past years. In the mobile sector, these have been network-sharing joint ventures (e.g. Net4Mobility in Sweden) and tower companies (e.g. Cellnex, American Tower) facilitating passive infrastructure sharing, as well as recently introduced wholesale mobile broadband networks offering active access (e.g. Red Compartida in Mexico and KT in Rwanda).

In the fixed sector, wholesale-only business models include networks deployed by utilities (e.g. SIRO in Ireland and Open Fiber in Italy), publicly financed national or municipal broadband networks (e.g. NBN in Australia and Stokab in Sweden), as well as various structural or functional separation initiatives, with or without regulatory intervention (e.g. CETIN in the Czech Republic, Openreach in the UK). KOSC Telecom was recently established in France as a new type of telecoms operator dedicated to the wholesale business connectivity market.

Advantages brought by wholesale-only

The main benefit offered by the wholesale-only business model is the possibility to utilise the balance sheet by attracting long term investments at a lower cost of capital.

Other advantages include:

- long-term customer relationships and lower risks;
- improved broadband coverage through cost efficient roll-out;
- increased utilisation of networks and reduced costs;
- intensified downstream competition through third party service providers and operators; and
- favourable regulatory treatment. For example, article 80 of the new EECC limits, under certain conditions, the scope of regulatory obligations that can be imposed on wholesale-only undertakings with SMP to access, non-discrimination and to fair and reasonable pricing, where justified.

Risks connected with wholesale-only business

There are several risk factors that determine the success of the wholesale-only business, including:

- the timing of the launch, existing platforms and customer base;
- the level of infrastructure competition;
- the level of fixed-to-mobile substitution; and
- whether there is only a limited number of competing service providers and the market is controlled by vertically integrated operators.

Conclusion

The main challenge for policy makers is how to ensure investment incentives for wholesale-only providers in the long term.

Open networks that provide wholesale access at efficient prices could contribute to improved competition for the benefit of end users. They may also attract investments and drive market consolidation. However, competition on the wholesale market remains vital in order to maintain long term investment incentives.

The rise of the wholesale-only model

Representatives of new players in the telecoms industry illustrated their disruptive business models in Germany, Czech Republic, Ireland and Italy.

Deutsche Glasfaser – deploying FTTH in rural Germany not covered by cable

Christof Sommerberg, head of public affairs, Deutsche Glasfaser, explained how the company is building an entire P2P fibre network using an innovative business model to deploy FTTH in rural Germany (slides).

The company deploys passive fibre infrastructure, operates the active network and also functions as a retail internet service provider (ISP).

Glasfaser provides retail services when no service provider is interested or able to provide fibre services through its network. For this reason, Glasfaser cannot qualify as a proper wholesale-only operator. Indeed, the offering of retail internet services qualifies Deutsche Glasfaser as a vertically integrated company, although its longer term aim is to gradually replace its own retail services with offers coming from competing service providers.

Glasfaser deploys fibre networks only in rural areas where there are no cable networks. This means that the target of the company are Deutsche Telecom's customers having access to the copper network as well as customers of ISPs providing xDSL services over Deutsche Telekom's copper network.

Network planning and demand aggregation are an essential part of Glasfaser's pre-work entailing pre-selling activities to make fibre deployment economical. Indeed, the company requires at least a 40% participation level (retail + wholesale) before building a network in a specific cluster area. Interested customers have to sign a two-year contract for the services but they do not pay any upfront fee. Having a pre-assured customer base before network deployment in specific clusters is very important for Glasfaser because Deutsche Telekom usually starts competing in those clusters by offering discounts on the copper-based broadband.

At present, Glasfaser has around 400,000 households connected and aims to participate in future projects to cover rural areas which involve state aid. In addition, Glasfaser contributes to increased competition.

CETIN – the fixed and mobile wholesale-only operator

Česká telekomunikační infrastruktura (CETIN) is a legally separated company from the former vertically integrated incumbent operator O2 Czech Republic (O2) since 2015.

The incumbent O2 no longer has any control over or ownership stake in CETIN even though both O2 (retail services) and CETIN (wholesale infrastructure) are controlled by the private equity investor PPF group which holds 81.1% shareholding in O2 and 100% in CETIN (Flash).

CETIN implements a wholesale-only business model because it provides wholesale services on a non-discriminatory basis (EoI) to O2 and to other downstream market players.

However, CETIN would not qualify as wholesale-only operator under the terms set by article 80.1(a) of the EECC because PPF group also controls O2 which is active in the retail market. Therefore, it would not be eligible to benefit for the light touch regulatory treatment reserved to wholesale-only operators by the Code.

The separation implemented in the Czech Republic is different from that in other EU countries, such as BT Openreach or Telecom Italia (Table).

Differently from BT Openreach, CETIN owns the fixed and mobile network assets (e.g. fibre/copper network, towers, radio equipment) whereas O2 operates only at retail level. O2 owns spectrum licenses and acts as a MVNO on CETIN's mobile network. But most importantly, CETIN separation was implemented without any regulatory intervention, although regulatory considerations did play a role.

Jana Hays, head of public affairs, CETIN, explained how the entire process of separating the business, the staff and IT-systems between the two companies took just nine months (slides).

According to Ms Hays, the rationale behind O2 and CETIN separation is that:

- wholesale and retail should be separated as the businesses have different logic;
- only customers should be the focus of the retail business;
- there is much more regulatory pressure on retail business for vertically integrated operators; and
- the companies have different strategies, PPF stated that it sees CETIN as a strategic long-term investment whereas it considers O2 a financial investment.

SIRO and Open Fiber – Wholesale-only operators deploying GPON fibre networks

The Irish power company ESB, a utility company owned by the Irish state, and Vodafone announced on 2 July 2014 the establishment of a joint venture to deploy FTTH. Siro is a wholesale open access network delivering a GPON fibre infrastructure to Irish homes and businesses (Table).

Stephen O'Connor, director public affairs, SIRO, stressed how Vodafone was an excellent partner for ESB (slides). Indeed, ESB wanted a partner with its own retail operations to have an anchor tenant for the network. In addition, Vodafone is starting to move into a mobile-fixed convergence space and launched the idea of Gigabit Society and Internet of Things.

At present, Siro is transforming Ireland's digital economy by covering 50 towns and 500,000 premises with fibre. This means 25% of the Irish 4.7m population spread over a 70,000 square meter land area (more than three times the land area of Belgium).

Open Fiber is an Italian joint venture between Enel, a utility company of which the Italian state holds 23.6%, and Cassa Depositi e Prestiti (Cdp), a state-owned financial institution pursuing a public interest mission.

Open Fiber was established in 2016 and provides wholesale access to its passive fibre network (FTTH GPON). The European Commission unconditionally approved the creation of the joint venture, Open Fiber, between Enel and Cdp (Competition Law Case).

Luigi Gambardella, head of european affairs, Open Fiber, showed the three main strengths of Open Fiber business model (slides):

- it has a small number of employees deploying only future proof GPON FTTH (no legacy copper network);
- it receives money through project financing thanks to private investors who believe in its long-term business project; and
- it has no conflict of interest because it offers wholesale access to all operators without discriminating (no retail business).

Open Fiber won the first (Update) and second (Update) public tenders involving state aid for the construction and management of an ultra-broadband network in the white areas of certain Italian regions.

According to Mr Gambardella, wholesale-only operators deploying FTTH will play a central role in the increasing challenge of copper switch-off. This is due to the fact that they are not interested in slowing down copper network decommissioning because they do not have copper at all.

Regulatory challenges for wholesale-only networks

Wholesale-only operators increase infrastructure-based competition in the short term

Tony Shortall, Telage, explained that a large number of studies considering the effects of vertical integration across different sectors of industry found that, under most circumstances, profit maximising vertical-integration decisions are efficient, not just from the firms' but also from the consumers' points of view (slides).

He added that the telecoms sector has some peculiarities:

- The principle of non-price discrimination by vertically integrated firms which is the reason behind most regulation.
- Stressed balance sheets because vertically integrated investments are classified as a technological risk.
- Investment risk and reward become separated since the network makes the investment (risk) and the retailer see the revenues (reward).
- Vertically integrated operators have incentives to prolong and extend the

investment cycle as long as possible.

Mr Shortall's overall assessment was that wholesale-only operators are very dynamic, well capitalised and moving at speed in several markets where incumbent operators have not invested in FTTH and therefore left space for entry.

Furthermore, they have no incentive to discriminate which is very good for services competition. Overall, they have a very positive effect on FTTH investments since not only do they invest, but incumbents are forced to react.

On the negative side, in the longer term the wholesale-only model undermines infrastructure-based competition while promoting service-based competition at least in black areas (less of an issue in grey or white areas).

Wholesale-only reflect market reality better than vertically integrated operators

Johanness Gungl, BEREC chair 2018, said that "*wholesale-only models reflect market reality in a much better way than vertically integrated operators"*.

According to Mr Gungl, cable might be a threat for wholesale-only operators just for the next five years but wholesale-only will be disruptive in the telecoms market with new players seeking for access (e.g. 5G and IoT services).

Mr Gungl stressed also the existence of regulatory incentives for wholesale-only networks contained in article 80 of the recently adopted EECC.

Specifically, he stated how, unlike any other business model, wholesale-only networks are explicitly exempted from symmetric access regulation. The EECC reserves a specific remedy regarding *"fair and reasonable pricing"* only where justified by the NRA's assessment.

According to Mr Gungl, the "*fair and reasonable pricing*" clause serves the aim to avoid negative effects related to potential wholesale-only networks' monopolies.

Wholesale-only operators boost fibre deployment and represent low regulatory risks

Erzsébet Fitori, director general, FTTH Council Europe, welcomed the following aspects related to wholesale-only business models:

- The dynamic and considerable contribution given by wholesale-only operators for full fibre deployment, especially over the last few years. The competitive fibre investments made by wholesale-only operators, who are often new entrants to the market, typically also trigger investment responses from the dominant and other established operators in the market (Flash).
- The quite limited regulatory risks (e.g. discrimination) raised by wholesale-only operators because their offering of wholesale access products to all retailers is the core of their business. Consequently, the imposition of wholesale access remedies does not represent a high risk.

Ms Fitori said that she is in favour of the regulatory framework applying to wholesale-only operators in the new EECC and believes it reflects the impact of open networks on retail competition.

Vertically integrated operators are still a target for investors

Phillip Malloch, ETNO's chairman, opposed the idea that there is a lack of financial investments in vertically integrated operators' business models.

For instance, the bond market for traditional telecoms is in good condition. This is illustrated by the fact that Telia has recently raised capital on the market and its bonds went oversold.

Mr Malloch pointed out how wholesale-only operators might reintroduce a trend towards infrastructure re-monopolisation. In this regard, he was sceptical of the light-touch regulatory approach reserved to wholesale-only by the new EECC.

According to Mr Malloch, giving incentives to wholesale-only operators assuming that they will create better conditions for consumers was a premature decision of the European legislator.