Fibre's hidden financing risks

Austria, France, Germany, Italy show capital structure, scale, state support determines project success

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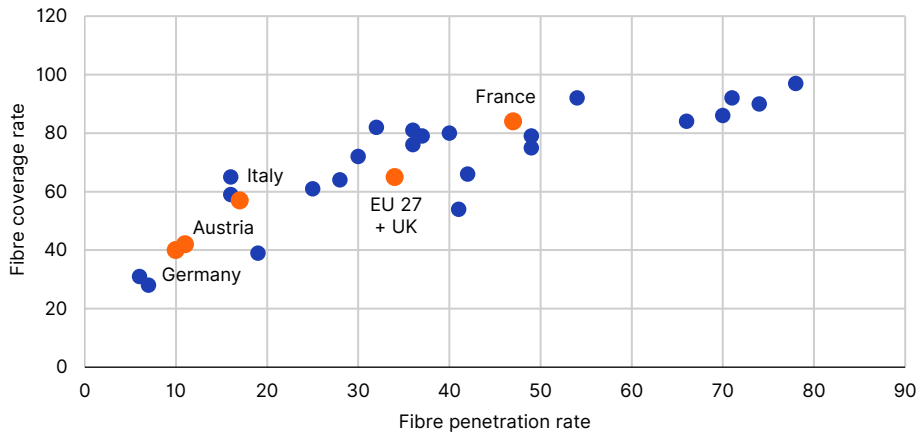
Long-term stable cashflows promised by infrastructure projects are increasingly attracting institutional investors, but not all projects are created equal. Fibre networks, one of the newest infrastructure asset classes in Europe, are a case in point.

Fibre is proving a riskier investment proposition than many investors have anticipated, judging from the performance of projects in Austria, Germany, France and Italy, despite high-level government support for the investment. The European Union's 2030 Digital Compass programme sets goals for member states of at least 1 Gbps of high-speed internet access by 2030 based on the benefits for economic competitiveness, social inclusion, equality and employment.

Figure 1: Fibre coverage, penetration rates in selected European countries, 2023 (%)



Source: FTTH Council Europe: European FTTH/B Market Panorama 2024
Note: coverage rate measures geographic extent of network; penetration rate measures level of adoption among all households

Country differences show importance of capital structure, state support

The contrast between France, on the one hand, and Austria, Germany and Italy, on the other, illustrates how the underlying project's capital structure, the idiosyncrasies of the asset class, specific market characteristics – related to demographics among other factors – and, importantly, the country-specific regulatory context are all crucial for understanding the risk profile of individual projects. They help explain why projects in France are generally meeting expectations unlike those in the other three countries. France has preferred to provide long-term standalone concessions and subsidies to project companies to roll out the network to less populated areas while also providing considerable regulatory support. Austria, Germany and to a lesser degree Italy have relied more on market competition, providing fewer subsidies and less regulatory support.

One important feature of fibre networks, unlike some other infrastructure, is that project companies can start to earn revenues on what they have built long before the project itself is finished. Rolling out fibre is progressive as more homes and businesses are connected in the way

that building a power station or a toll bridge is not: the project owners there cannot expect a return until construction is finished and the facility becomes operational.

Fibre project companies, lenders and the authorities watch three parameters closely. First, there is the geographical extent of the fibre network, or coverage rate. Secondly, there is the level of adoption among all households, or penetration rate. Then there is the rate of subscription to the services once they are available, the take-up rate.

Our study – a snapshot of current fibre roll-out in the four European countries -- shows that the different configuration of fibre projects is leading to very different outcomes in terms of coverage, adoption/penetration and take-up rates.

France has high coverage, penetration and take-up rates

Take coverage. According to the FTTH Council European Market Panorama 2024, fibre-to-the-home/business roll-out in France stood at 84%, well above the EU average of 65%, and considerably higher than Germany (40%), Austria (42%) and Italy (59%) (**Figure 1**). Similarly, penetration rates, the proportion of households in the country with fibre, were also above average in France at 66%, ahead of Italy (16%), Germany (10%) and Austria (11%).

However, it is the customer take-up rate as the physical network is installed which is the key consideration for fibre projects. For most projects, it is only then that they generate revenue.

In France, 78% of households and businesses have taken up fibre once it is on offer compared with 27% in Italy, 25% in Germany and 25% in Austria, according to latest data from FTTH Council Europe (**Figure 2**).

Figure 2: Fibre take-up rates vary widely across Europe: Nordics, France, Spain among leaders

Proportion of households, businesses subscribed to available fibre (%)

Source: FTTH Council Europe

To be sure, France began its roll-out of fibre earlier than some other EU countries. In addition, the fibre infrastructure roll out is still in its early stages overall in Europe, so countries which are behind today may quickly catch up in the coming years.

Project size helps explain advanced roll-out in France

However, France's relatively successful high-speed network roll-out to date suggest that project size, government involvement, and regulatory support can be critical in determining the success and long-term viability of European fibre projects.

Indeed, the disappointing customer take-up rates in the Austrian, German and Italian markets are depriving project companies of cash flow needed to generate investor returns.

Some fibre projects run into financial difficulty in Germany

In some cases, this has undermined projects. In Germany, a joint venture between Liberty Global and InfraVia Capital Partners under the helloFiber brand collapsed last year. Other fibre companies have since run into financial difficulty in Germany. Some of the country's rural areas are completely without fibre, hence the federal government's recent decision to offer subsidies to encourage companies to extend fibre to these zones.

Revenue shortfalls appear to increase with the size of the project: the larger the project, the harder it is to understand the underlying market dynamics. French fibre deals tend to have take-up rates more in line with forecast, most likely because they are smaller, allowing for greater precision in revenue projections.

Concessions, regulatory support lower project risk in France

The structure of France's French national fibre plan, the *Plan Très Haut Débit,* is proving decisive (**Figure 3**). To compensate for the lack of market incentives to extend fibre to France's least populated areas, the authorities opted for a concession-based approach, one the country has pioneered since the 19th Century when cities struck concession agreements with private water companies.

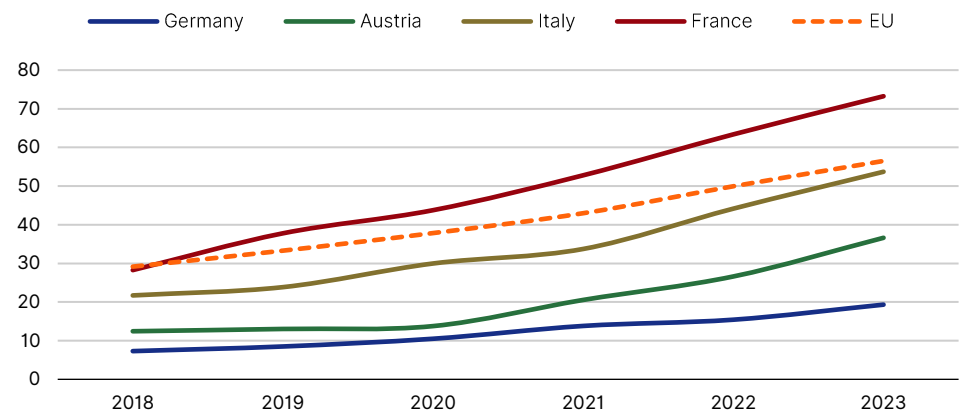
How France has divided up the country to maximise fibre roll-out

France organised the country in three different zones according to population density: very dense zones (around 6.4 million homes/businesses), two intermediate zones, and so-called public initiative networks (PINs) for the least populated areas which are run as concessions. The authorities have allowed competing private initiatives for the densely populated zones on grounds that the market can sustain multiple operators. In the two intermediate zones, the telecoms regulator ARCEP requires commitments from private operators to cover these regions, ensuring no overlap and 100% coverage. ARCEP monitors the roll out of these networks.

Concessions inherently use project finance structures which include protective risk flow-down features – addressing cashflow risks at different stages of the project – strong contractual protections for the project company, and strict performance criteria. Concessions are awarded following a competitive tender, often leading to lower overall project costs.

Recognising that in lower-density areas, installing fibre networks would not be commercially viable, the French government set up public initiative networks through which local authorities can grant 25- to 35-year concessions to project companies giving them exclusivity to offer fibre in the area in question. The approach provides revenue stability. Capital subsidies are often available, therefore reducing the level of funding required and supporting projects' profitability.

Figure 3: Growth in fibre-to-the-home penetration, selected EU countries (%, 2018-23)



Source: European Commission

France provides regulatory support for fibre roll-out

Moreover, there is regulatory support. For example, France requires that all newly built homes have fibre installed and that TV broadcasting over-the-air and cable will cease in 2028.

Another feature of French projects is that they tend to be at a smaller scale, requiring millions rather than billions of euros of funding, as they are configured at the level of France's *départements* – 96 in metropolitan France – rather than regionally or nationally. This allows for greater granularity in understanding the underlying market dynamics and customer demographics, improving accuracy in predicting take-up rates and revenue.

The additional certainty of French fibre projects critically allows for sufficient cashflow protection enabling projects to be funded by fully amortising loans – in other words, fully paid down during the duration of the project.

Finally, unlike typical infrastructure assets where there is a clear end of construction and beginning of operations, a fibre project gradually starts generating revenues as it continues to build out the fibre network. This initial stage in operations, or ramp-up phase, is further supported in French projects by a liquidity reserve known as a ramp-up reserve account. There are also often multiple cash sweep provisions which ensure that any excess cash generated by the project is used to pay down the debt, minimising default risk.

Exception française:* features of fibre project finance in Austria, France, Germany, Italy

	Standalone concessions	Tailored support	Price controls	Fully amortised	Cash buffers	Competitive, market based	Bullet loans	FTTH/B coverage	FTTH/B take-up rate
France	Yes	Yes	Yes	Yes	Yes	No	No	84.0%	78.1%
Austria	No	Limited	No	No	No	Yes	Yes	42.2%	25.2%
Germany	No	Limited	No	No	No	Yes	Yes	40.3%	24.9%
Italy	Hybrid	Limited	Yes	No	No	Hybrid	Yes	59.3%	26.9%

Source: Scope, FTTH Council Europe (coverage, take-up data)
*Based on fibre projects rated by Scope

Project configuration impacts risks in Austria, Germany, Italy

Austria, Germany, Italy have favoured large fibre projects

The configuration of projects in Austria, Germany and Italy is shaping their capital structure, adversely impacting risks. First, fibre projects have tended to be large, multibillion-euro transactions, with significantly higher refinancing risk.

Secondly, government support has not helped fibre deployment in the way it has in France. Support – whether in subsidies or other forms of structural backing – is limited in Austria and Germany. In the case of Germany, subsidies are relatively recent, a response to negligible initial fibre roll-out to rural areas. In Italy, there have been difficulties in the coordination of support from national and local government.

Thirdly, these countries have largely eschewed long-term concessions – with the exception for projects in rural Italy – in favour of a competitive, market-based approach. Unlike the French projects, multiple companies can compete for customers in the same area, leading to market cannibalisation.

Bullet loans typical in Austria, Germany, Italy

The decision not to favour long-term concessions and instead allow competition among multiple project companies in fibre roll-out has significant consequences for the capital structure of the projects. Given the lack of tailored governmental support, larger transaction sizes and non-concessionary nature of these projects, funding tends to be based on so-called bullet loans – where only interest is paid during the loan's life, with the principal repaid at maturity.

These are intrinsically riskier – with minimal cash buffers – particularly for projects where there is greater market risk.

Italy provides a good counter example to the French experience with its hybrid approach to building a national fibre network. Like France, the authorities offer concessions and subsidies in the least populated areas (so-called grey and white zones), but unlike France, they have opted for large project sizes. The biggest, Open Fibre, aims to cover around 22 million homes.

In another difference with France – where project concessions are stand-alone and managed at the department level reducing permitting risk, among others – Italian concessions represent just one portion of the overall project's revenues, which include densely populated areas with full market risk (black zones). The result is that the potential benefit of Italian concessions is diluted by the project's overall exposure to market risk.

Fibre projects in Europe face some common challenges

Common risks across countries for fibre roll-out

The contrasting structures of fibre projects in the four countries would matter less if they were not all exposed to common risks related to rolling out high-speed fibre networks in Europe.

Among these are construction delays, due to permitting, labour shortages in Europe – common across the construction sector – and cost overruns as inflation has risen in the past two years. Supply-chain bottlenecks and disruption related to Russia's war in Ukraine are other factors.

Project companies are also reliant on telecom operators successfully marketing their fibre offers to ensure take-up, adding revenue uncertainty.

The 5G factor: Austria, Germany have extensive coverage

5G can be competitive alternative technology

Another factor is customer preferences particularly as the roll-out of 5G mobile networks have accelerated in the four countries, albeit at different speeds.

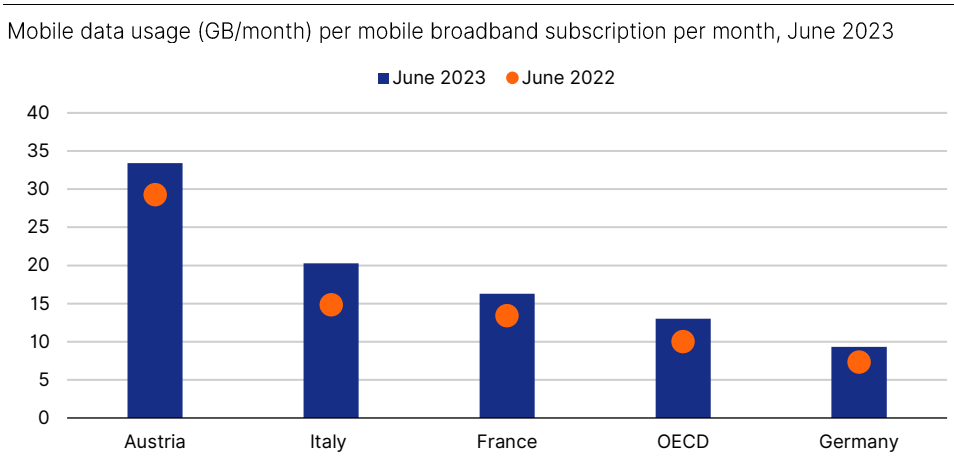
One catch is that while fibre is increasingly important for a fully functioning digital economy – highspeed broadband has become more important for schools, universities, businesses, hospitals etc. -- for some users, 5G and existing satellite and cable infrastructure remain good alternatives, adding market risk to the other risks that projects face.

Austria, considered the 5G pilot test country in Europe, has led the way in 5G roll-out, starting early in 2021, with Germany not far behind. 5G overlaps and is competitive with lower fibre network speeds which may be sufficient for customers who do not need high-speed internet for work video calls, live streaming, exchanging large amounts of data or gaming. One disadvantage of wireless networks is that performance can deteriorate with network saturation, unlike fibre.

Mobile broadband usage elevated in Austria, Germany

Other soft factors such as demographics (age, % living in rural areas) and digital culture also have an impact on these projects. The older and more rural the population, the greater the hurdle for clients to switch to fibre to access the internet especially if they currently have a viable alternative in satellite or cable access, as is the case often in Austria and Germany.

Figure 4: Mobile broadband usage is relatively high in Austria, Italy



Source: OECD

Customers are also price sensitive particularly in those countries, such as Austria and Germany, where fibre roll-out is fully market-based. Here, the limited subsidies and absence of price controls encourage telecom operators to price fibre packages more expensively to ensure a satisfactory return on their investment.

The contrasting outcomes from the fibre roll-out in Austria, Germany, and Italy, compared with those in France, underscore how investors need to be wary of a one-size-fits-all approach in analysing infrastructure projects.

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