Digital Infrastructure Finance

2022 Research Report

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SMBC

PROXIMO INTELLIGENCE

DATA | INSIGHTS | NEWS | CONNECTIONS

SMBC – A Global Leader in Data Centers and Digital Infrastructure Finance

ST02 Data Center

$127 million
Term Loan

Joint Bookrunner, Coordinating Lead Arranger and Hedge Provider

November 2022 I Chile

U.S. Data Center

$212 million
Credit Facilities

Sole Bookrunner and Admin Agent

October 2022 I U.S.

U.S. Data Center Campus

$1,280 million
Credit Facilities

Sole Bookrunner, Sole Coordinating Lead Arranger, Green Loan Coordinator, Admin Agent

September 2022 I U.S.

Japan Data Center

¥27 billion
Credit Facility

Mandated Lead Arranger, Documentation Bank, Facility Agent

July 2022 I Japan

Fiber to the Home Provider

$500 million
Credit Facilities

Mandated Lead Arranger

June 2022 I U.S.

U.S. Data Center Campus

$638 million
Credit Facilities

Sole Bookrunner, Sole Coordinating Lead Arranger, Green Loan Coordinator, Admin Agent

June 2022 I U.S.

NTT Global Data Centers

€293 million
Credit Facility

Bookrunner, Sole Underwriter, Mandated Lead Arranger

March 2022 I Europe

U.S. Data Center Campus

Confidential

Sole Bookrunner, Sole Coordinating Lead Arranger, Green Loan Coordinator, Hedge Coordinator, Admin Agent

March 2022 I U.S.

Disclaimer

What we do

Proximo Research supplies some of the most detailed market insights into the project finance industry.

Using an in-depth and robust methodology that combines quantitative trends with thought provoking qualitative insights, Proximo Research provides unique and proprietary data and analysis based on primary sources. In addition, it offers a bespoke research service to paying clients. Working in collaboration, Proximo Research collect, collate, analyze, and write reports to the focus and scope of the research, with the final product being a thought leadership piece to be used by the client as they choose.

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Contents

Designed to support and complement the entire deal origination process via a comprehensive suite of services such as market data & sentiment research, news & networking.

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Foreword

Welcome to the second edition of Proximo's Digital Infrastructure Finance Report. Publishing this report for the second year running was a *very* easy decision to make. As you will be able to see from the following pages, both transaction volumes and sentiment are moving sharply upwards.

This positions digital infrastructure very differently to other assets that are financed in the project, infrastructure and energy finance markets. Assets with shorter return horizons, like mining and oil & gas, are having to allay investors' ESG concerns. And higher interest costs are affecting the returns on assets like renewables and transport infrastructure with longer horizons.

That sweet spot – shorter tenor requirements, better pricing and solid ESG credentials – have helped make digital infrastructure very attractive to mainstream project finance lenders. Those lenders have in turn been able to create real competition with leveraged and real estate debt investors. Both data centre and broadband network operators have benefited as a result.

Another bit of context for this continued buoyancy is that the post-COVID work environment is getting clearer, and future demand for connectivity for working and learning is getting clearer. A push for workers to return to their offices has met with resistance, and city centre businesses and offices are still complaining that they are underutilised. But it is possible to test the wildest claims about the effects of remote working on demand for digital infrastructure.

The final piece of context comes from conditions in the tech sector. With the partial exception of Apple, the share prices of all the major tech companies are off their late 2021 highs. The boom in cryptocurrencies, which created strong demand for processing power, looks for now to be over.

But financing activity remains strong, and banks do not yet show any signs of retreating from digital infrastructure. On the following pages Proximo will look at why.

Tom Nelthorpe
Contributing editor,
Proximo

Executive summary

Across the total sample there was a strong sense that digital infrastructure project finance is in a good position, with 63%, 51%, and 34%, describing the sector as positive, healthy, and proactive, respectively.

Of the respondents, 93% described the current state of their business as "healthy and profitable".

Data centres (81%), fibre-to-the-premises (81%) and ISP/Broadband (54%) were reported as the most active subsectors of digital infrastructure.

Evidence of increased demand (70%) and the opportunity for healthy returns (56%) was the main motivation behind respondents investing in digital infrastructure.

Europe (90%) and North America (64%) were reported as the regions that have the most supportive frameworks for digital infrastructures; Data centers (68%), mobile towers (50%) and sub-sea/long distance fibre (50%) in North America and fibre-to-the-home (66%) and ISP/Broad (46%) in Europe.

Mobile towers (40%) and fibre networks (38%) were reported the areas where 5G will create the most investment opportunities in the near future.

There was a fairly wide spread of customer types that will drive demand for data and bandwidth in the future, with media/content (74%), enterprise (70%) and social media (67%) the main drivers.

About this report

Aims and objectives

The purpose of this research is to provide an overview of the latest market trends in digital infrastructure financing and investment. Proximo provides this overview in three ways:

• The presentation of data on closed transactions from Proximo Intelligence's data platform, including asset and geographical splits

• A quantitative survey of market perceptions and sentiment to understand the latest trends

• An analysis of key sectors, assets and geographies by Proximo's team of researchers and journalists

Methodology

The closed transactions data is gathered by Proximo Intelligence's data team, and uploaded to our sister site, www.tagmydeals.com. There, market participants can check their veracity, and highlight their own roles. (If you would like to know more about the process, or would like Proximo to consider your closed transactions for league table purposes, then please contact submissions@proximoinfra.com.)

Proximo aggregates this data at www.proximoinfra.com/data and then makes it available for extraction and manipulation, or as dashboards for instant analysis. For the purposes of this report, Proximo has used data for the period 2019-H1 2022. This time period provides the clearest picture of activity over and following the COVID-19 pandemic.

We have presented our survey of market sentiment in its own section. This survey was designed to produce quantitative data regarding senior participants' views of recent and future trends in investment and financing activity.

An online survey (SurveyMonkey) was used to collect quantitative sentiment data. Responses were collected between August and November 2022. Survey questions were tailored specifically to different respondent types.

There are figures throughout the report where the percentages do not total 100%. The reason for this is because they were a 'tick all that apply' style questions. Where applicable, a footnote has been included to aid understanding and interpretation.

A note on the survey sample

A total of 78 respondents completed the survey.

The breakdown in respondents by company was 32% financial sponsor, 28% bank, 20% adviser, 10% developer and 10% insurance company. In terms of seniority level, 46% of respondents identified as global head or director and 44% as senior level. Over 70% of respondents had more than seven years of experience in digital infrastructure.

In terms of geographical footprint, 58% of respondents would describe themselves as active internationally, and 31% as active regionally (i.e. across a particular continent). Europe, which 78% of respondents reported as being active in, and North America, where 61% reported being active, were the most heavily represented regions for respondents, followed by Latin America, with 37% and Asia, with 36%.

It is important to note that data presented in this report is from a sample that only represents a small percentage of those active in digital infrastructure finance, though the respondents include firms with billions of dollars to invest in the segment. In addition, the cross-sectional nature of the data means that it is only representative of the industry at the time the data was collected.

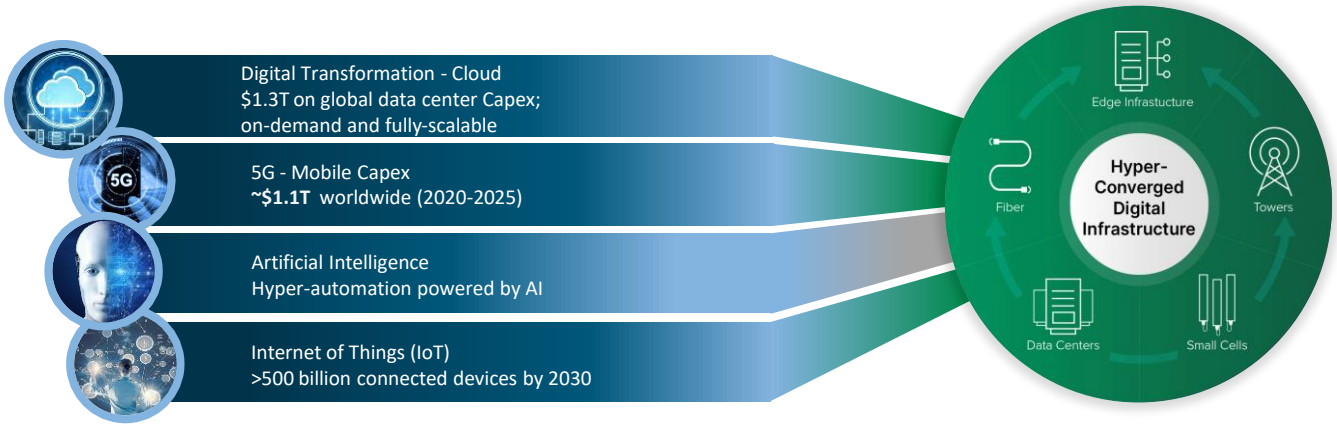
However, these caveats are common across many types of research, and while they must be acknowledged, they do not detract from the conclusions drawn from the data. Moreover, the sample of 78 respondents was large enough to conduct methodologically robust data analysis and, most importantly, for reliable trends and conclusions to be drawn.

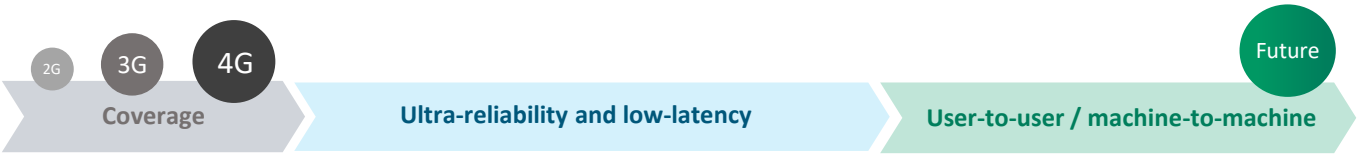
Nevertheless, this report does not make any assumptions or provide definitive conclusions about the global state of digital infrastructure, or about the subsectors of digital infrastructure.

The DIGITALBRIDGE View

As the leading digital infrastructure investor-operator, DigitalBridge is levered to the powerful thematics driving significant investments in mobile and internet connectivity on a global basis.

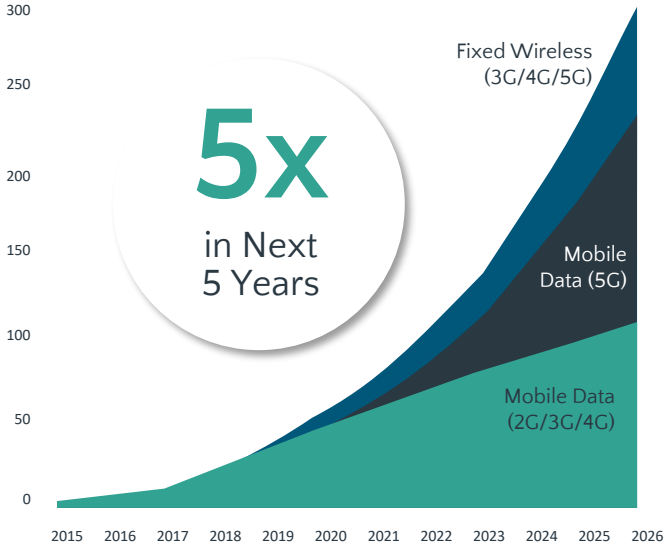
Traditional Approach "Old infra" → **Secular Tailwinds Demand for more, better, faster connectivity** → DBRG is building next-gen networks to serve an increasingly converged digital ecosystem





Global Mobile Network Data Traffic

(EB per month)

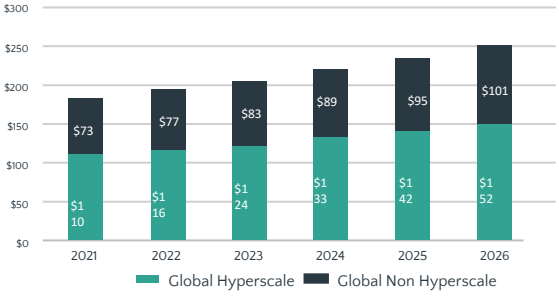


Source: Ericsson Mobility 2021 Report

Global Data Center Capex

$1.3T

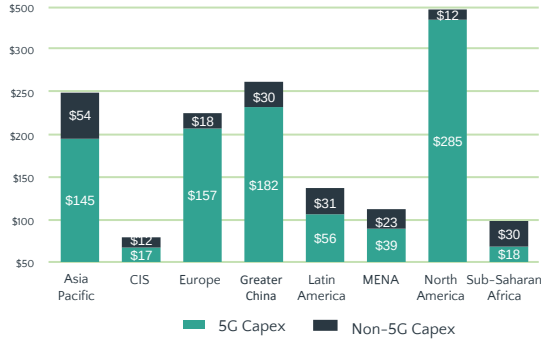
Cumulative Global Hyperscale + Non Hyperscale CapEx (billion)



Global Mobile Capex

$0.9T

CapEx 2021–2025 (billion)



Source: GSMA The Global Mobile Economy 2021

Proximo Intelligence transactions data overview

Transactions overview

Quarterly volumes for Telecoms & Communications
Currencies

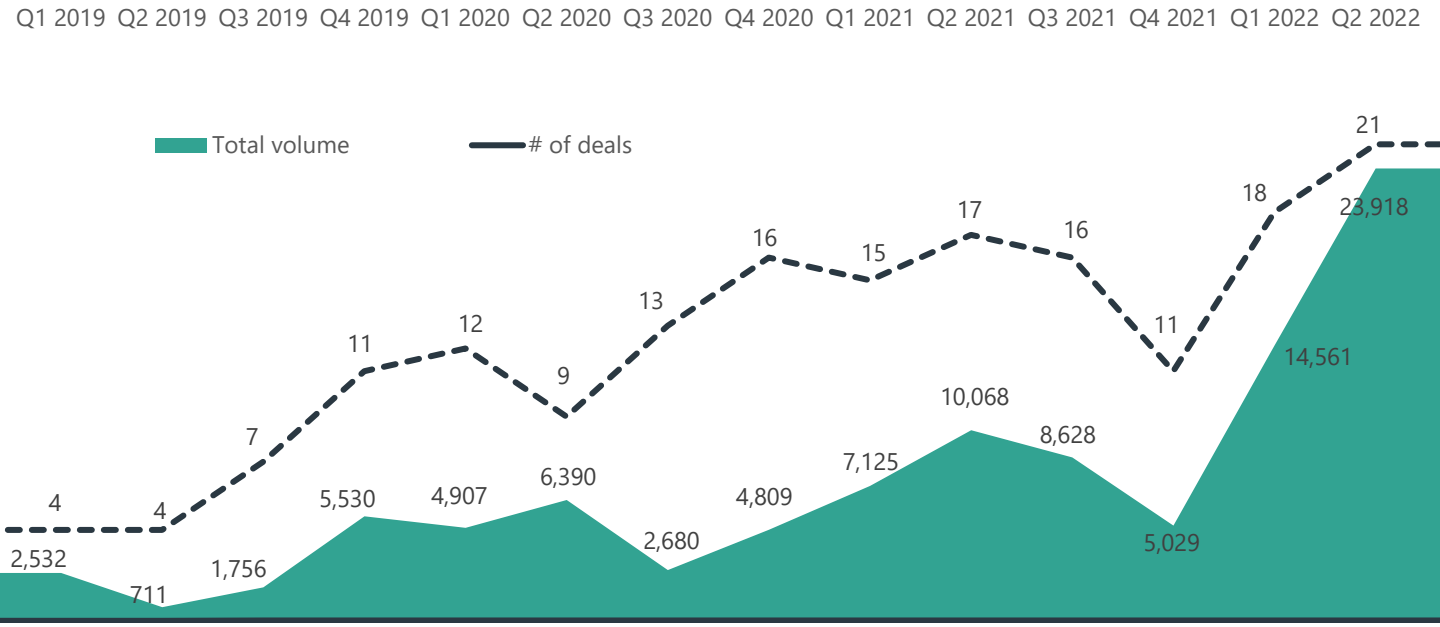
Transactions by region and asset

Regional overview
Breakdown by sub-sector

Transactions overview

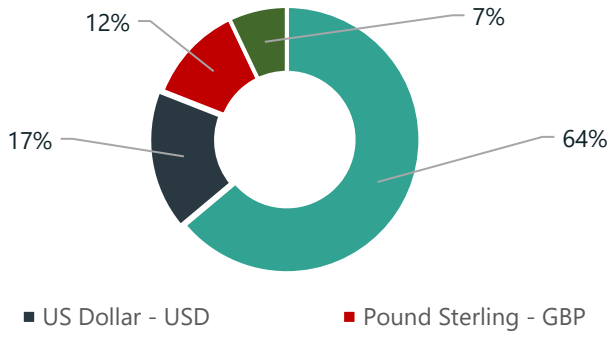
If the reader does not have enough time to delve into the whys and hows of digital infrastructure as a popular asset class, perhaps the below chart will suffice for persuading their bank or institution to allocate a greater budget to the sector. Yes, digital infrastructure has exhibited the occasional dip in the occasional quarter, but the overall picture, and particularly over the two most recent quarters, is extremely encouraging. This likely points to an increase in demand for debt in key European and North American markets. Transaction numbers are growing slightly more modestly than volumes, suggesting that jumbo financings, particularly in fibre, are affecting volumes to a much greater extent than before. Full-year 2022 volumes are likely to look very strong.

***Figure1**. Quarterly volumes for Telecoms & Communications, 2019-1H2022*



That dominance of fibre transactions means that digital infrastructure is one of the rare sectors where the US dollar is not dominant. Perhaps only in the heyday of transport PPP financing in the mid-noughties did the Euro enjoy sustained dominance of a sector (in that case transport). The Pound also represents a respectable share of total volumes, again largely because of the UK's own broadband build-out. Whether the recent trend of large financings can continue is one of the key questions for digital bankers fighting for their share of banks' lending budgets. Individual data centre transactions, as opposed to large buyouts, are small, and governments may not need to encourage large-scale development in rural areas. M&A activity may in future be the best source of large transactions.

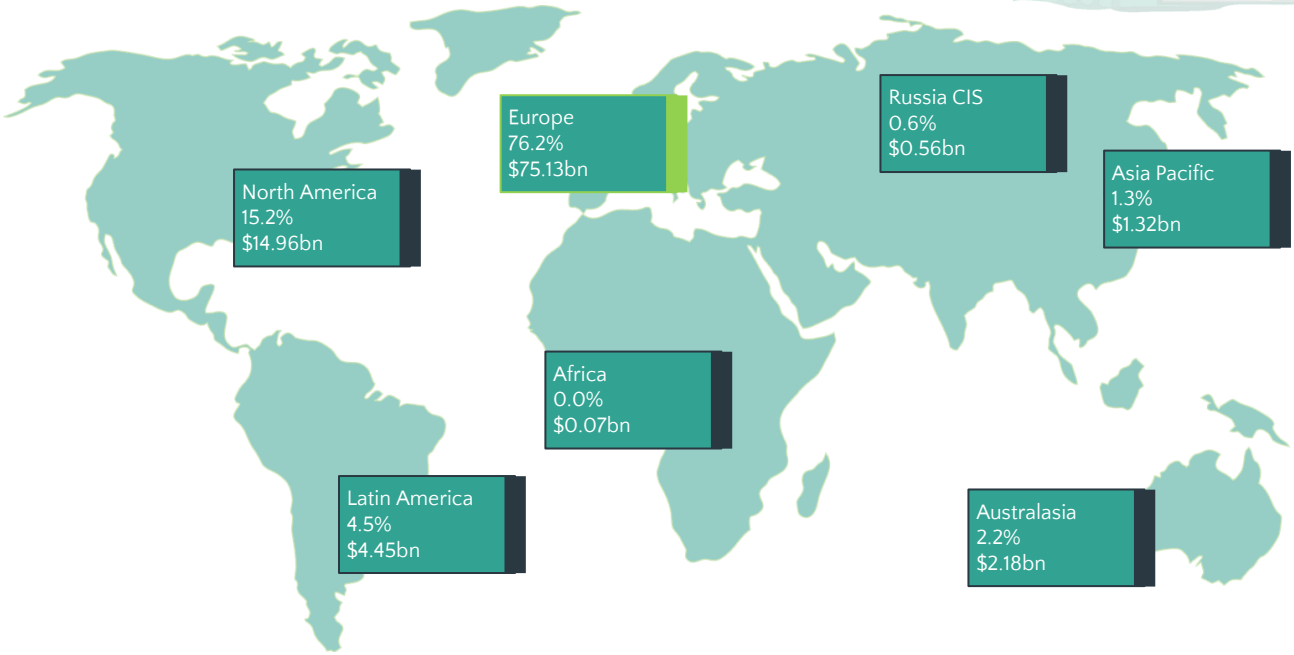
***Figure2**. Currencies*



Transactions by region and asset

The global picture of debt financed investment in digital infrastructure is extremely lop-sided. Since the start of 2019, Europe has attracted 76% of global volumes, compared to 15% for North America. The most recent full year - 2021 - did see a shift in those proportions, to 65% Europe and 21% North America. But a slew of large fibre financings in Germany, Italy, the UK, France and Sweden in the early months of 2022 has shifted the balance back towards its recent norm. Also of note is the strong performance of Latin America and the subdued performance of Asia. Additional explanations for the weak North American performance include sponsors having access to alternative debt markets that may not be captured by Proximo and lower levels of privately financed but government-incentivised fibre deployment.

***Figure3**. Proximo data regional overview (2019-H1 2022)*



What is powering the slightly improved North American performance is primarily data centre transactions. While developers debate the best business model, whether co-location, hyperscale or edge, North American lenders have piled into the asset class with gusto. The debt terms on offer will be very close to asset-based finance for facilities with higher revenue risk, but project finance groups are booking these deals. High levels of European fibre deployment have been discussed above, but it is also worth noting the flat performance of mobile infrastructure. The CEO of a major European tower operator, Cellnex, recently suggested that M&A-driven activity in towers has likely peaked. Proximo's data appear to bear that observation out.

***Figure4**. Telecoms and communications breakdown by sub-sector*

		2019	2020	2021	2022
1	Broadband / cable network	5,393	12,581	18,359	26,958
2	Data center	4,896	2,421	8,985	8,390
3	Cellular / mobile infrastructure	34	3,477	3,073	2,376
4	Satellite	206		431	114
5	Information technology		73		640
6	Electronics		234		

Findings

Market sentiment
- The state of digital infrastructure finance
- The state of business and organisations

Digital attraction
- Sectors
- Sub-sectors

Regional attractiveness
- Regions

Digital drivers
- 5G investment opportunities
- Overcapacity

Lender sentiment
- Lenders' budgets
- Non-bank lender presence in digital infrastructure

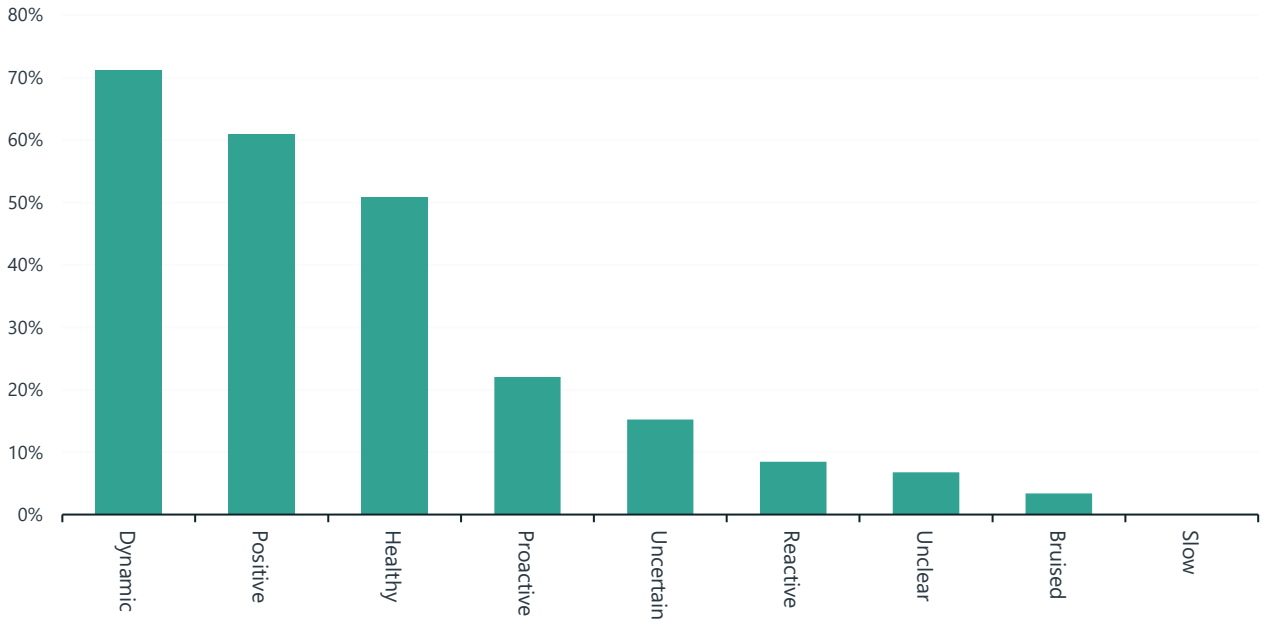
Debt drivers
- ECAs' importance
- Tenor/maturities

Market sentiment

Proximo asks respondents to its survey to pick the adjectives that best describe the state of the market in digital infrastructure finance. The three most positive ones all broke the 50% barrier, suggesting that sentiment is still strong.

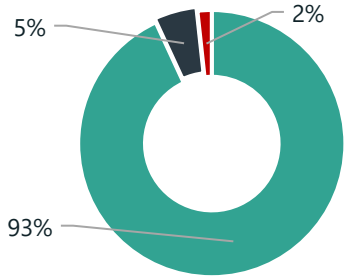
None of the less positive ones broke 10% of respondents, except "uncertain", which perhaps reflects debt market conditions as much as the economic fundamentals of digital infrastructure demand. At 15%, "uncertain" is double where it was a year ago in this survey, with "positive" sentiment down slightly on a year before. However, more respondents viewed the market as "dynamic" and "healthy" than a year ago. Some of the clouds across the debt market skies are casting a shadow over digital infrastructure.

***Figure5**. Which three of the following adjectives would you say best describes the current state of digital infrastructure finance?*



A slightly more definitive picture of sentiment comes when respondents are asked about the state of their own businesses. In any business, a turn in sentiment should lead, rather than lag, the impact of market conditions on that business. In a business whose main product is moving data, it is likely that owners, investors and lenders should have access to high-quality information about the state of their businesses. Nevertheless, the 93% who answered "healthy and profitable" is down a little on 2021's 98%. And that survey gave respondents a chance to assign some of the blame for conditions on COVID. The difference between percentages is quite small, given the sample size, but there is the hint of a turn in conditions.

***Figure6**. Which of the following would you say best describes the current state of your business/organisation as a whole?*



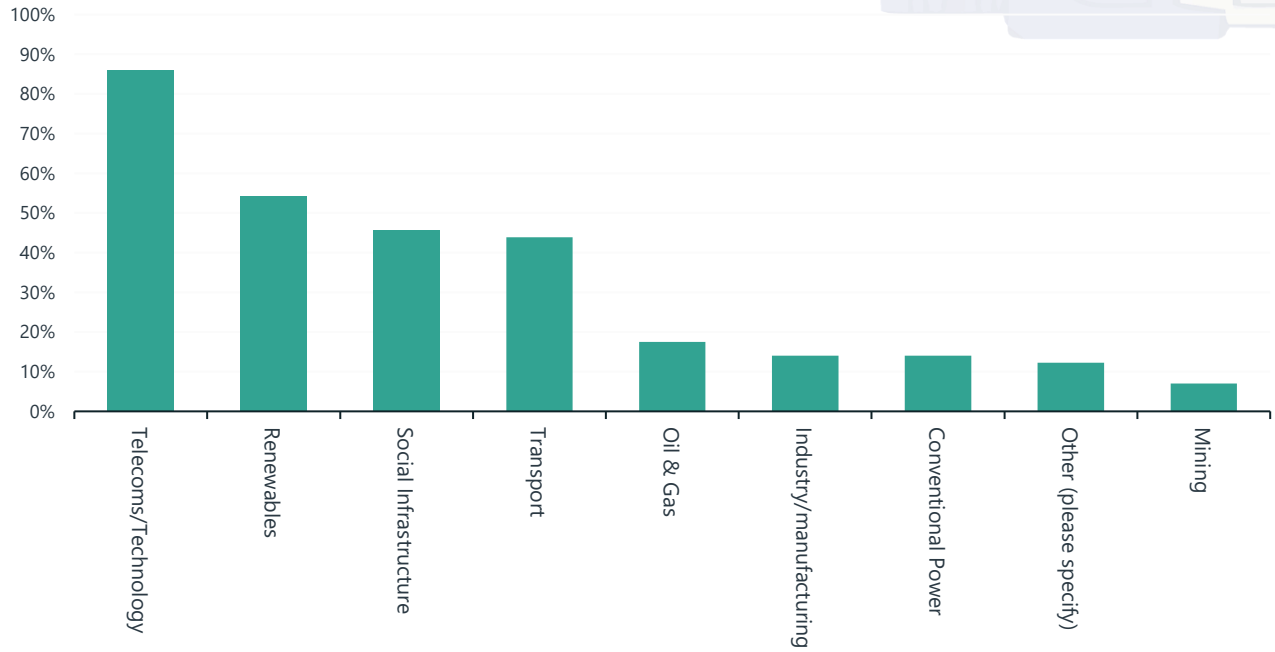
▪ We are in a healthy and profitable position ▪ We are dealing with substantial economic or other headwinds ▪ We are likely to require substantial change to survive

Digital attraction

There are two ways to look at the higher proportion of respondents that say they focus on digital infrastructure than other assets. The first is to see it as evidence of an increasing specialisation within infrastructure investment management and/or lending. Volumes are now sufficient to allow banks and managers to dedicate staff to digital infrastructure. Looked at this way, the high proportion of generalists looking at other sectors alongside digital should decrease over time.

The other way to view this trend is as banks becoming more adept at classifying leveraged or real estate lending as project finance lending. In that case the proportion of digital specialists should increase too. This survey will look at the importance of different debt markets below.

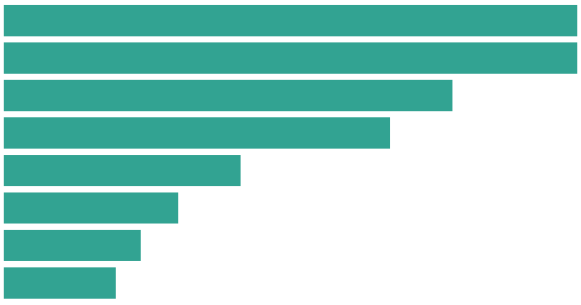
***Figure7**. What sectors are you active in (tick the top 3)?*



The first sign of a divergence between how the digital infrastructure finance market has evolved, and how it might evolve, comes from looking at the amount of attention that survey respondents are devoting to data centres and the financing volumes that they have so far attracted. Data has recorded less than half the transaction volumes of fibre since the start of 2019, but exactly the same number of respondents expressed an interest in each asset. As a proportion of responses, fibre, data and mobile towers all increased their share over 2021, pointing to an increased voraciousness on the part of investors and lenders for all things digital. Satellites and sub-sea fibre, slightly more niche assets, dropped compared to 2021

***Figure8**. Which digital infrastructure subsectors are you focused on (tick all that apply)?*

		%	No
1	Data centres	81%	46
2	Fibre-to-the-home	81%	46
3	Mobile towers	63%	36
4	ISP/Broadband	54%	31
5	Sub-sea/long distance fibre	33%	19
6	Mobile operators	25%	14
7	Satellite	19%	11
8	Other (please specify)	16%	9



Respondents to the survey do not look like new entrants solely focused on the hottest asset classes. This is a fairly experienced group. A little over 40% of respondents have over ten years of experience, and 20% between five and nine years. This group accounts for a meaningful proportion of digital's 25-year financing history. But it captures at least some of the hopeful new entrants.

***Figure9**. How long have you been active in digital infrastructure?*

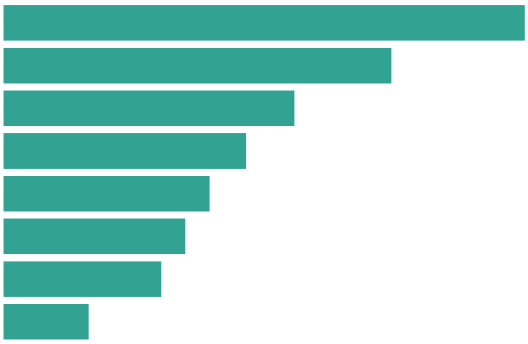
Regardless of the type of lender or investor interested in digital infrastructure, they tend to look at it as a standalone asset. So the drivers of interest are more related to the assets' qualities - increased demand and strong returns - than extrinsic factors. Some survey participants pointed to a company mandate - digital is good brand positioning for financial institutions - and almost a third to the opportunity to work with desirable clients. For banks those clients include the world's largest infrastructure and private equity funds. What are less significant as drivers of investment decisions are chances to cross-sell - the hallmark of the old universal bank model - and lack of opportunities elsewhere - the hallmarks of inexperienced lenders and investors moving over from other sectors. Signs of a project finance mindset in investment and lending decisions come from an overwhelming concentration on assets' customers. Three of the four largest drivers of decisions - creditworthy customers, strong sponsorship and strong structures - characterise classic project finance. Only the importance of high returns speaks to a more structure-agnostic mindset. Exposure to technology - whether proven or promising - is not a big driver. Cashflows and clients look to be key.

***Figure10**. What*, if anything, is driving your interest in digital infrastructure?

		%	No
1	Evidence of increased demand	70%	40
2	Opportunity for healthy returns	56%	32
3	Company mandate	35%	20
4	Chance to work with desirable customers	32%	18
5	Lack of other opportunities in other sectors	19%	11
6	Chance to sell related products	16%	9
7	Other (please specify)	7%	4
8	We have no interest in digital infrastructure	4%	2

Figure11. What criteria drive investment/lending decisions?

		%	No
1	Desirable/Creditworthy customers	78%	43
2	High returns	58%	32
3	Strong sponsorship	44%	24
4	Lease/Covenant/Legal safeguards	36%	20
5	Team record	31%	17
6	Location	27%	15
7	Promising technologies	24%	13
8	Reliable/Familiar equipment	13%	7
9	To make budget/allocation	5%	3



Regional attractiveness

There are few surprises regarding respondents' two favourite regions – Europe followed by North America. The extent to which North America lags Europe in attractiveness as a destination for fibre investment, and Europe lagging North America in data centres, is worrying, however. North America's other lead lies in satellite technology, though that technology is still somewhat peripheral as an asset class for digital infrastructure investors. For the two most vibrant emerging regions – Latin America and Asia-Pacific – mobile towers and operators are the most compelling opportunities

***Figure12**. Which regions have the most supportive frameworks for digital infrastructure investment (tick the top 2)?*

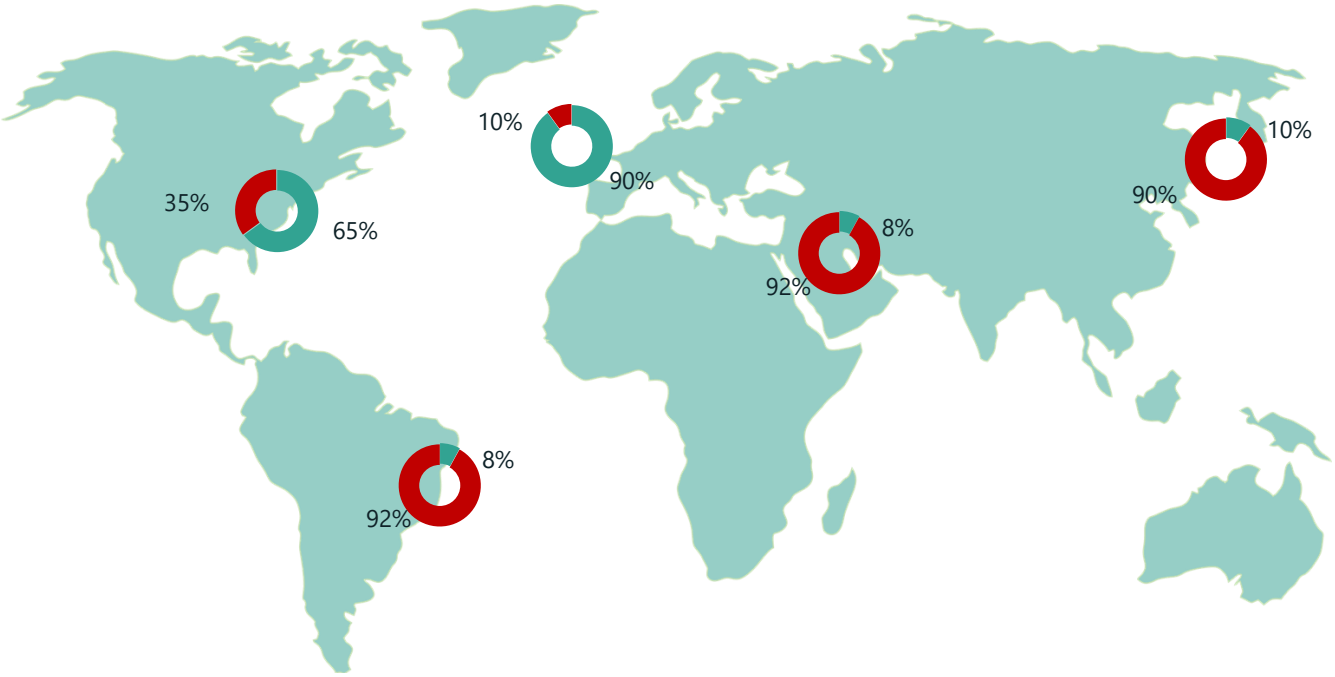
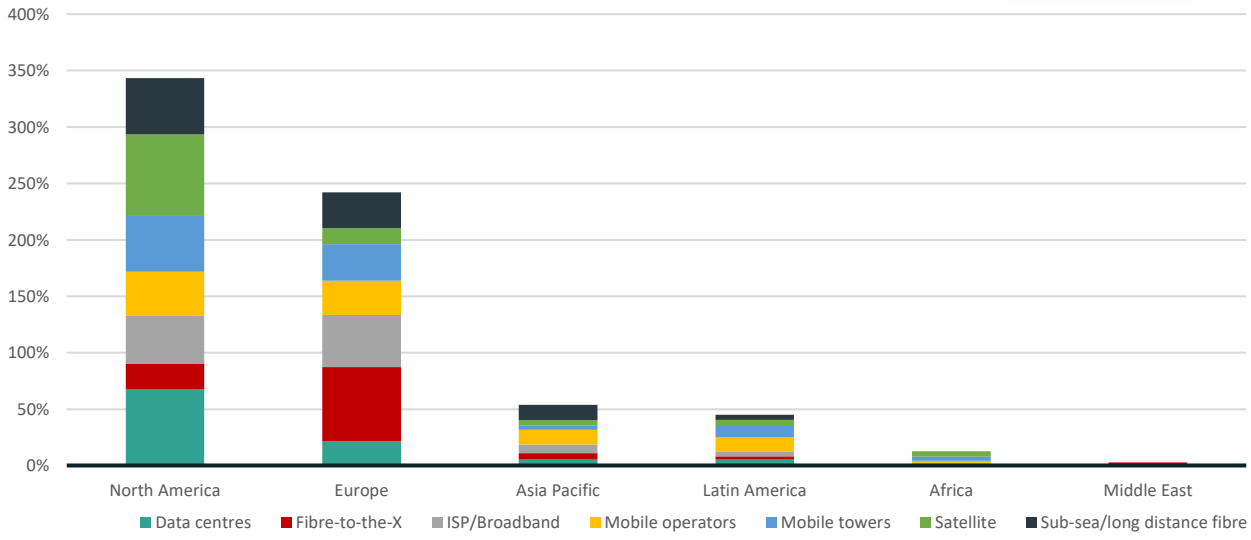


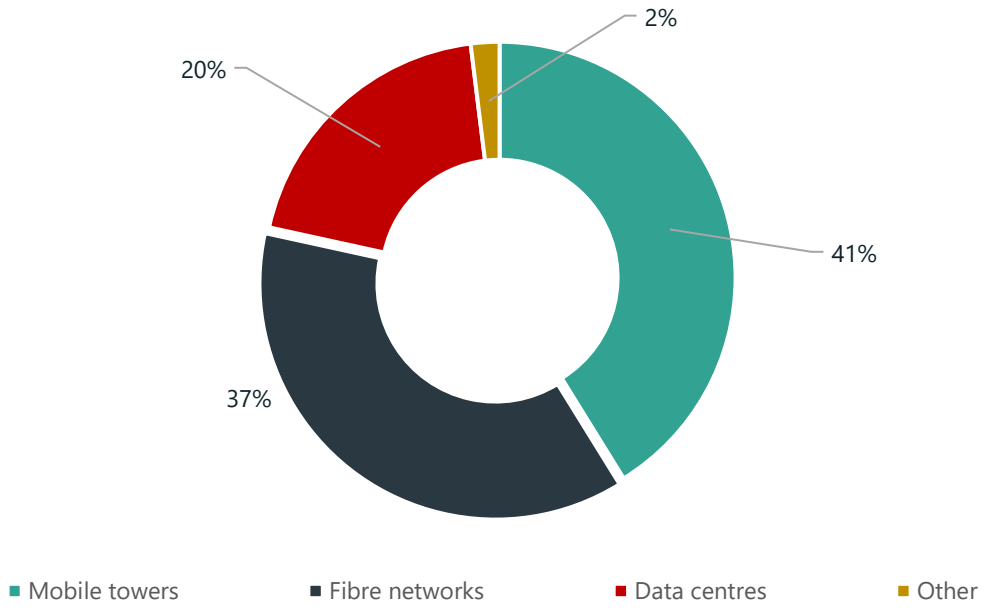
***Figure13**. Which regions have the most supportive frameworks*



Digital drivers

The investment and lending communities have internalised the idea that 5G is not a driver purely of investment in mobile infrastructure, and that it will require almost as much fibre investment. Even data centres – in the shape of the edge investment case – are likely to benefit. However, the results of the 2022 survey show that fewer respondents than 2021 pointed to fibre as a beneficiary of 5G. That may reflect the fact that recent investments in fibre have met demand more fully than recent investment in tower infrastructure. Certainly, towers investment in Europe and North America has primarily been M&A-driven rather than greenfield. If so, this lag in towers investment presents a big opportunity for infrastructure investors. Perhaps more likely, however, is that this represents a slight correction from the earlier over-enthusiasm for fibre as a 5G beneficiary.

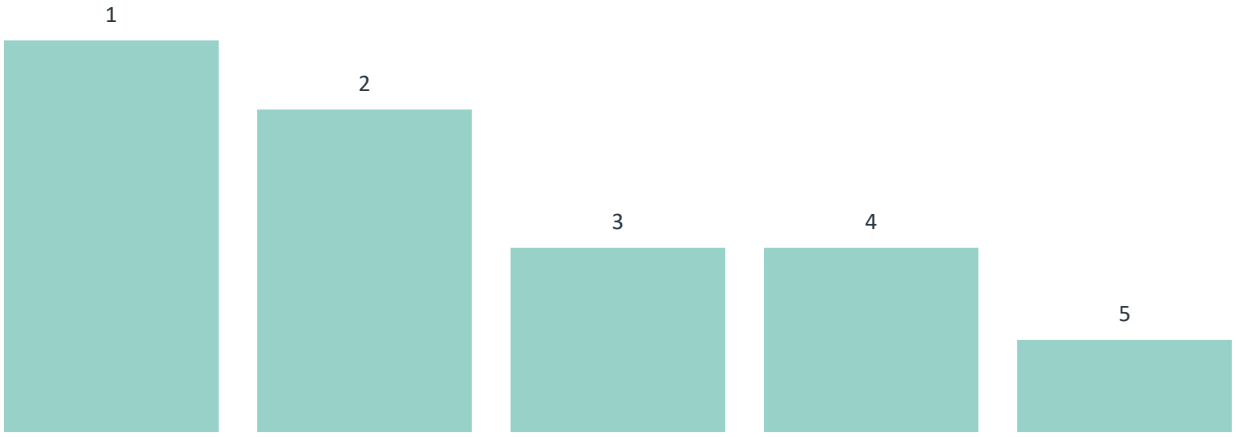
***Figure14**. Where will 5G create the most investment opportunities?*



There is no sign yet of a moderation in lenders and investors' views of demand/supply fundamentals. While there have been isolated warnings of overcapacity in digital infrastructure, the survey reflects current sentiment – that there is little to worry about. Respondents that feel that capacity is meeting or failing to meet demand account for 60% of the sample. Another 16% are not quite sure. Pessimists are in a distinct minority. Given the history of leveraged investment in fibre and satellite capacity this shows a startling degree of confidence. Optimists will point out that demand eventually catches up with supply – just not over a horizon that can keep borrowers solvent.

***Figure15**. Do you think there is a risk from overcapacity/distress in the sector?*

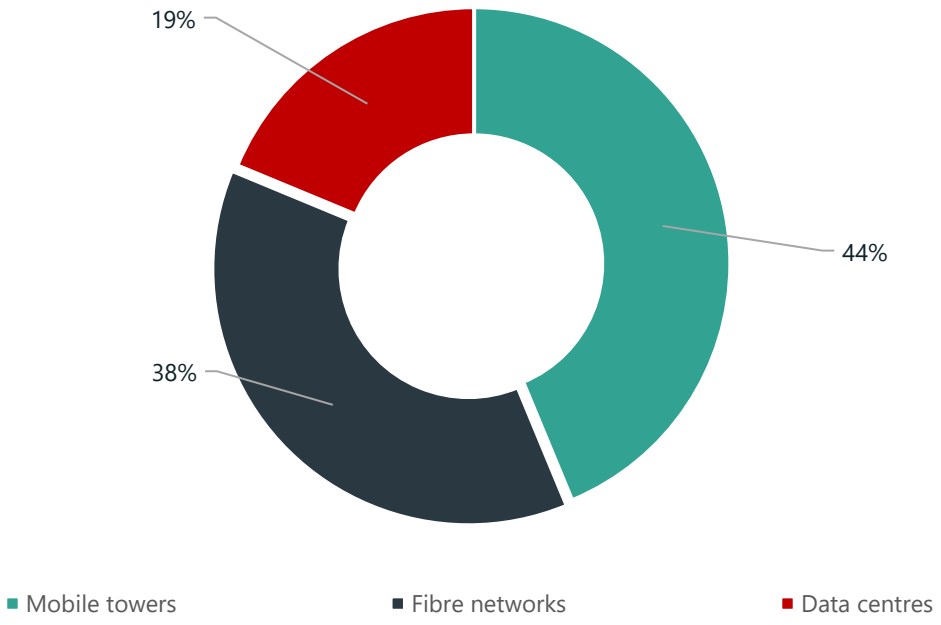
		%	No
1	No - Capacity is struggling to keep up with demand	33%	17
2	No - Capacity is meeting demand	27%	14
3	Yes - Capacity will soon outstrip demand,	16%	8
4	It is too difficult to tell at the moment	16%	8
5	Yes - Capacity is currently outstripping demand	8%	4



Lender sentiment

One final piece of evidence exists for the idea that mobile infrastructure investment will need to pick up to keep pace with 5G-derived increases in demand for capacity. A high proportion of lenders are planning increases in their lending budget towards mobile. This is again a little at odds with the recent transaction record, and existing owners seem to believe that a continuation in the secondary market-driven boom is unlikely. And data looks like accounting for a very small proportion of lending budget increases, certainly compared to the proportion of industry players looking at data. Two caveats: data centres are generally less capital intensive than fibre and mobile infrastructure, and the sections of the survey devoted to lender sentiment feature a much smaller sample size than the preceding sections.

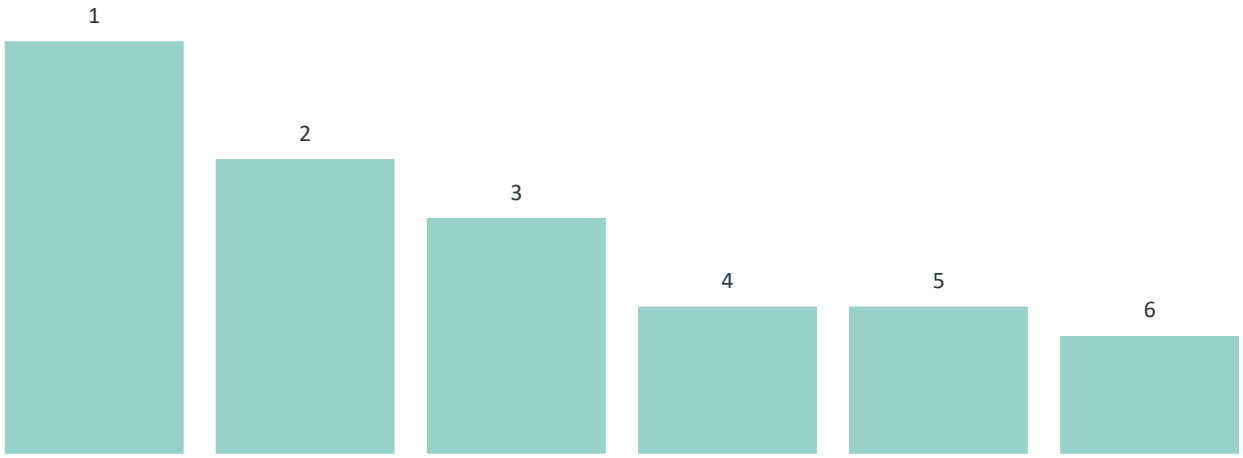
***Figure16**. Do you anticipate any change to the lending budget that you allocate to digital infrastructure over the next 12 months?*



Bank lenders might point to project finance-like credit priorities in their digital infrastructure decision-making. But it does not look like the ideal project finance debt market evolution - from banks to insurance companies to pension funds - will apply here. This says a little bit about the risk profile of digital infrastructure not evolving in a way that facilitates those players' involvement, and a lot about the entry of new players into infrastructure debt markets. So infrastructure funds are now willing to play further up in borrowers' capital stack and dedicated debt funds are also present and able to compete with banks. Banks still have the ability to mobilise large amounts of competitively-priced debt capital. But if borrowers and sponsors become more willing to play off debt markets against each other, alternative lenders stand ready to give them other options.

***Figure17**. Which of the following non-bank lenders do you expect to see increase their presence in digital infrastructure debt finance over the next three years (tick the top 3)?*

		%	No
1	Infrastructure funds	93%	14
2	Senior debt funds	67%	10
3	Mezzanine/junior debt funds	53%	8
4	Life companies	33%	5
5	Family offices/private investors	33%	5
6	Pension funds	27%	4



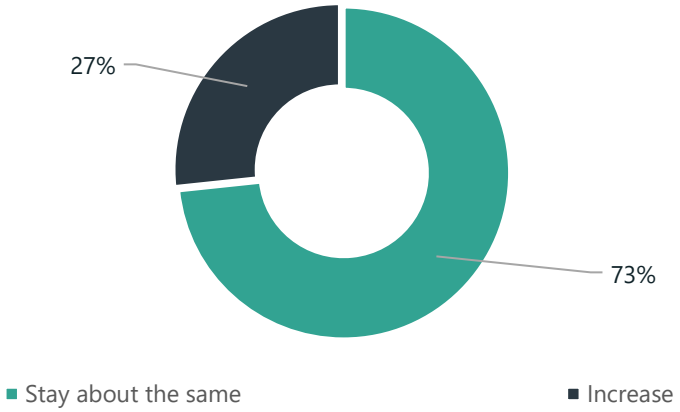
Debt drivers

The most favoured locations for investment in digital infrastructure are in Europe and North America – those least in need of the additional debt capacity or tenor and pricing benefits that export credit agencies and development financing institutions provide. That doesn't mean that those institutions are not players in those markets. The European Investment Bank is a big source of financing for the provision of broadband for underserved communities, and ECAs can in some circumstances participate in developed telecoms markets. But the transaction history backs this up. DFIs account for less than 1% of volumes from the start of 2019, and ECAs less than 0.5%.

***Figure18**. On a scale of 1 to 5 (with 1 being 'not important at all' and 5 being 'very important'), how important are ECAs and DFIs in the countries and sectors where you are active in digital infrastructure finance?*

Lenders might be comfortable with the general condition of the digital infrastructure market, but credit market conditions will intrude. About 70% of lenders who responded to Proximo's survey expected pricing to increase on debt. However, they were more optimistic about the effect of market conditions on tenors. No lenders thought these would decrease, and 73% thought these would stay about the same. The remainder even thought they might increase. Other ways that market conditions might intrude would be in a tightening of covenant packages and other terms on debt facilities, though the 2022 survey did not measure these attitudes.

***Figure19**. Do you think that tenors/maturities on debt in the digital infrastructure finance markets where you operate will in general*



US data centre:

Is the heat dissipating from US data centres?
Project finance lenders have enthusiastically joined the data centre boom. But despite continued signs of interest from equity providers, will lending conditions stay generous?

The US data centre market has experienced a steadily increasing pipeline of deals, but ticket sizes really started growing exponentially over the last 12 months. Proximo data show a steady upward trend since 2019, with deal volume growing from $700 million in 2019 to $4 billion in 2021.

Deals in the billion-dollar category are now common. In early August Carlyle's global infrastructure group agreed to commit $1 billion to Tillman Global Holdings to help it increase its investments through US cell tower platform Tillman Infrastructure, a deal that includes a data centre element. July saw Stonepeak pay $2.5 billion for 29% of American Tower's US data centre business, which comprises 27 facilities.

Private equity firms are crowding into the market and M&A deals are getting ever larger, but are lenders still enthusiastic about greenfield project finance transactions for data centres?

An asset class evolution
There is no longer a single homogenous asset class known as a data centre. At the wholesale end of the market are the hyperscalers, which have massive footprints and huge power and connectivity needs. These assets are very attractive to financial sponsors such as infrastructure funds, looking a lot like core infrastructure but with real estate and power characteristics, and benefiting from long term contracts with attractive counterparties. The other, more retail, part of the market is more service-oriented, and has smaller footprints and shorter contracts (potentially three years with renewal options) with smaller customers.

Then there are more specific applications. Edge data centres are typically smaller in footprint and located on the outside of a network and subsequently closer to end-users and devices, they tend to be useful for proliferation and for latency sensitive applications. Finally, there is the hybrid IT space, which involves outsourcing IT needs from desktops to the cloud as a service.

Historically, data centres have not been defined by one specific type of financing or investor. Kemal Hawa, a shareholder at Greenberg Traurig, explains, "Data centre investments are "tweener" investments, and have not historically fit neatly into any single investment thesis. Private equity investors often approach data centre investments as traditional cash flow deals; real estate investors as real estate deals; and infrastructure investors as infrastructure deals. The sector has components of each. As the industry has evolved, infrastructure investors have gotten most comfortable in the space, especially where a long-term contract with a credit grade tenant is present. But private equity firms and real estate funds have also been active – it all depends on the projected investment horizon, return on investment, and other factors."

Project finance lenders are getting more active in the space. Traditionally the sector has often been financed as real estate. But real estate lenders are generally more comfortable with established assets than the typical TMT (Technology, Media, and Telecommunications) lender.

The US, so far uniquely, also has the benefit of a receptive asset-backed securitisation market for these assets. But other regions may not be at this stage far behind. Europe, for instance, has a developed enough market with decent sized portfolios to securitize

Complex demand story
The debate over how significant COVID has been in creating new demand still rages, but a consensus is emerging that the pandemic probably accelerated existing demand. The pandemic-prompted shift to working from home and schools transitioning to remote learning, as well as an increase in social media use and at home streaming, all relied on fibre networks and data centres. Children may now be back at school and adults back in the office, though to varying degrees, but hybrid remote models are the new normal.

Greenberg Traurig's Hawa says, "there is substantial, and rapidly growing, demand for more capacity. We're hearing, for example, that there is a need for thousands of new data centres globally in the next five years, to accommodate the projected growth in demand, the advent of 5G, and the proliferation of the Internet of things and big data analytics. To be sure, not all of these are massive facilities – many are smaller edge deployments – but regardless, the numbers are staggering."

The next ten years are predicted to witness the emergence of more highly automated vehicles and home appliances as part of the internet of things. Automation requires background data to allow autonomous vehicles and devices to react reliably and safely to external conditions, and all this data needs to be collected, mined, analysed, and stored, which will require more data centre capacity.

An influx of private capital

Fuelling the data centre deal boom has been an influx of private, most notably infrastructure, investors with lower return requirements than public markets. Public shareholders have generally had shorter investment horizons than might be needed for longer duration investments like digital infrastructure. Recent public market volatility has led to even higher return requirements and thus lower valuations from public investors, and this may create an opportunity for longer term-focused infrastructure funds to take companies in this sector private.

Richard Lukaj, a founder and senior managing director at Bank Street, explains, "The trend away from the public markets has been afoot for some time, with record going private activity in this sector notable in the past couple of years. These larger-scale data centre and digital infrastructure companies are appealing to the infrastructure funds that have grown to record sizes and represent excellent platforms to employ longer duration capital.

"In essence, recent transactions allow these fund managers to invest large chunks of capital in companies that represent core infrastructure holdings and satisfy their return requirements. With only roughly a third of infrastructure funds having any exposure to digital infrastructure in their portfolios, we fundamentally expect continued appetite from these capital providers to remain strong as they seek increased exposure to data centres, fibre, and wireless infrastructure assets. Companies in this ecosystem are benefitting from capitalising and recapitalising their businesses for the next generation of growth across these arenas, most notably those companies swapping public shareholders for long-term private capital."

The recipients of this financing are getting more ambitious. Tract, a new data centre fund set up by ColCap and Grant van Rooyen, founder of the data centre company Cologix, announced that it is seeking $1 billion in funding to build a portfolio of land for hyperscale and wholesale data centres in Nevada and Utah.

Quynh Tran, a managing director and co-head, infrastructure finance - North America at SMBC, explains, "When we structured our first data centre project financing six years ago, greenfield construction financings were typically in the $100-$200 million range. Over the last few years, transactions have trended larger, particularly over the last two years. Because capex needs have become so much bigger, transaction size has scaled significantly to multiples of what we have seen in the past. Bank groups can now be ten or more for construction of a single project." SMBC recently led financings as sole bookrunner and green loan coordinator for Stack Infrastructure and QTS.

But the larger players believe there is still a need to get more banks comfortable with construction risk on project financings in the sector. Greenfield financings in the space have been closing but are much smaller than brownfield deals. For example, Vantage recently closed a $300 million green loan for a greenfield data centre in Virginia in a financing structured and arranged by Société Generale. Balance sheet financing is not an option even for the larger developers, and bilateral and club financings are starting to be replaced by deals with more underwriting risk.

Bank Street's Lukaj notes "Even the mega funds out there don't necessarily want to have a concentrated multibillion dollar singular equity exposure in their fund. It's not unusual at all for fund managers to afford a co-investment opportunity for some of their LG's to participate in the transaction or in some cases even other GPs to fund larger transactions and maintain fund diversity objectives. Recent transactions with Bank Street involvement include the sale of DataGryd to Cordiant Capital, LightEdge's acquisition by GI Infrastructure, and the recent sale of Involta to Carlyle.

Signs of a turn in credit markets?

As with the project finance market globally, geo-political uncertainty, inflation and cost of capital challenges could well cool the heat in the US data centre market.

Greenberg Traurig's Hawa has concerns about the effect of current market conditions, saying, "there is an enormous amount of capital available to be invested in the data centre sector, making M&A deals and investments extremely competitive. This continues to be the case in 2022. Given the growing pressure on the global economy resulting from war, pandemic, inflation, rising interest rates, among other factors, it is becoming increasingly difficult to get deals over the finish line. In other words, it is still extremely competitive to win a deal on the front end, but more difficult to close deals on the back end."

However, SMBC's Tran notes that her bank has underwritten and closed several data centre transactions in 2022, acknowledging that while there is added complexity to get deals across the finish line, there is still significant appetite for the asset class. In fact, instead of things slowing down, some bankers in the market feel the opposite – that debt financings for data centres are competing with multiple similar deals, compared to one or two in the recent past.

Still, with signs of shakiness in the wider market for leveraged loans, it will be a brave debt underwriter who pushes ahead with the biggest-ticket transactions.

Germany's FTTH feast

Project finance lenders are enjoying a high fiber diet in Germany where there are no signs yet of a slowdown in deals coming to market. So what is the blueprint for getting greenfield FTTH deals done relatively quickly in Germany? And can the model be applied more widely across Europe?

2022 has seen unprecedented growth in project deal volume for fibre in Europe, with Germany spearheading the continent's FFTH campaign. Proximo Data shows there have been at least 16 European FTTH financings that have closed so far this year, and of the near $26 billion (dollar equivalent at time of close) deal volume seen in Europe in the first eight months of 2022, almost $9 billion was claimed by German deals.

German big ticket deals this year have included the $6.5 billion refinancing of Deutsche Glasfaser which closed at the end of March and the $2.3 billion **project financing of GlasfaserPlus Holdings**, which closed at the end of May. GlasfaserPlus, owned by Deutsche Telekom and IFM, was a five-year deal with a $2.1 billion term loan led by BNP Paribas, Credit Agricole, LBBW, NatWest and UniCredit, with an additional 17 banks on the ticket.

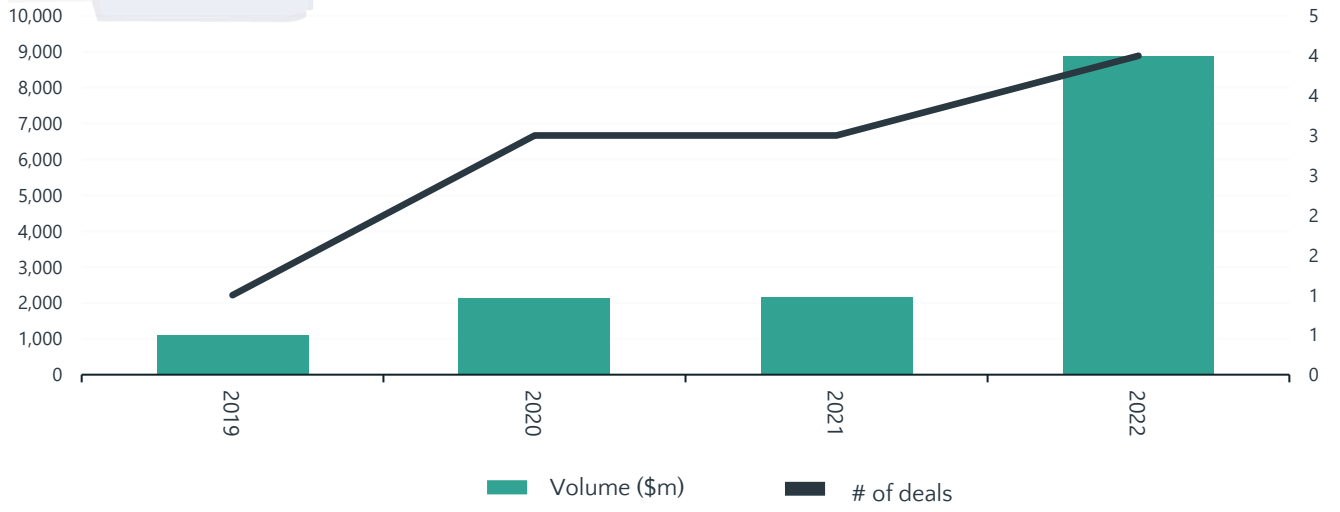
The **refinancing of Deutsche Glasfaser** – the largest FTTH financing transaction in Germany to date – saw bookrunners ABN Amro, BNP Paribas, Credit Agricole, ING Bank, KfW IPEX-Bank, Santander, SEB, Societe Generale, SMBC and UniCredit lead a consortium of 16 banks on a seven-year $2.8 billion capex facility and a $3.4 billion term loan (a $282 million RCF was also provided).

GigaNetz – an innovative structure? **Deutsche GigaNetz**, which closed at the end of August, is the most recent large transaction to have closed in the German market. Debt amount has yet to be made public, but the transaction is believed to support GigaNetz' €3 billion roll out of fiber networks throughout Germany. All the lending banks on the deal; ABN Amro, ING-DiBa, KfW, KfW IPEX-Bank, Kommunalkredit Austria, LBW, NatWest, Nord/LB, and SEB, acted as MLAs.

Unlike the recent big-ticket transactions for Deutsche Glasfaser and GlasfaserPlus, which are pure project financings relying entirely on commercial debt, GigaNetz is using a financing structure that includes government subsidies. The financing concept consists of two main components: funds from the promotional loan program 'Digital Infrastructure of the German Federal Government' and KfW, and funds from an investment facility, in which the interest rate reflects the fulfilment of sustainability goals of Deutsche GigaNetz.

Johanna Reinkemeier, vice president telecommunication at KfW IPEX-Bank, led the bank team on the deal and explains the roles and collaboration between German promotional bank KfW and its commercial lending subsidiary KfW IPEX-Bank: "One of KfW's goals is to promote digital infrastructure in Germany, which is why KfW offers promotional loans for fibre rollout. By doing so, it provides favourable interest rates for fixed rate loans. Any commercial bank, including KfW IPEX-Bank, can use KfW promotional loans, and therefore offer attractive fixed interest rates to German fibre companies that we could not otherwise offer.

***Figure20**. Deal volume ($m) and # of deals Germany FFTH from 2019 to 2022 and the upwards trend of deal volume*



"So, in this financing (Deutsche GigaNetz), the client combined a commercial facility with a facility using a favourable interest rate from the KfW promotional program, an integration that proved very attractive.

"We at IPEX have used KfW´s promotional program several times before to finance the fibre rollout of regional utility companies – this was the first time we used it for an investor-backed fibre company with a large banking group. Everyone has put a lot of work into it, and I think the Deutsche GigaNetz financing will facilitate the use of KfW promotional loans in future German fibre deals." The appeal of being able to lock in long term rates cheaply will likely encourage replication of this structure going forwards.

Bankability

Germany's project deal volume and the speed with which deals reach financial close implies strong bankability, but which business models are the most bankable and why?

Deutsche Glasfaser, along with some of the other most bankable deals, came with a guaranteed initial retail customer base. Deutsche Glasfaser, which is building over six million FTTH connections across rural Germany, requires an aggregated pre-commitment of 40% of residents for any given project. This appears to be a rule of thumb approach, with some market sources suggesting that most deals in Germany see an estimated 35-40% pre-marketing, which in turn reassures the banks.

Reinkemeier affirms the benefits of pre-marketing: "Fibre companies in the German market have been using, and many of them still use, demand aggregation, especially in rural and suburban areas. By employing pre-marketing activities, they ensure a certain minimum penetration rate before starting the rollout. This is really something that is different from the UK [which tends to use a preliminary wholesale customer model] and other European markets."

Robert Sunderman, managing director and sector head of telecom, media, technology & healthcare at ING Deutschland, agrees that pre-marketing will be key going forward: "Structures have become more aggressive in Germany over time, but we see the market turning.

As Germany is still in land grabbing mode, some of the largest have managed to do deals without pre-marketing as a drawdown condition, something we continue to see in the smaller deals. But recently banks are focusing again on revenue generation capabilities of projects."

Although lender and investor appetite for German FTTH is still high, Sunderman also notes that "the small players in Germany, those that supply less than 300,000 houses, will need to get a second round of equity and debt but face more challenging market conditions. Companies have to show a track record of meeting business plans, as banks are becoming more critical – which is a healthy development." He adds that because "there has been a flood of fiber deals in the European market, banks are becoming pickier and more critical towards loose structures."

Reinkemeier concurs: "We're being approached with a lot of fibre transactions in Europe and especially Germany now. The market has become quite vibrant, and one must carefully look at each deal and the deal parameters. In the end, a transaction needs to meet our internal risk and return criteria and due to the sheer number of deals, each bank must quickly decide on which opportunities to follow." A source from another bank active in the sector said that at this point in time, they are turning down 50% of the deals that are being offered to them because of the sheer number of deals.

The Proximo perspective

Where will the German market go next? Older players, the likes of Allianz and Telefonica, look set to return to the market. Telefonica has been very active across Europe as of late and in the last month alone announced a JV with Liberty Global and InfraVia Capital Partners for a £4.5 billion build out of a new fibre network in the UK as well as a partnership with Credit Agricole Assurances and Vauban Infrastructure Partners for an FTTH platform in Spain.

Beyond the GlasFaser Plus deal, Deutsche Telekom is raising debt as part of other fiber joint ventures. Last month, Meridiam and Magenta Telekom, a subsidiary of Deutsche Telekom, announced they have formed a partnership to invest €1 billion to roll out a FTTH network to over 650,000 homes in Austria. This joint venture approach allows Deutsche Telekom to raise debt off balance sheet.

The near future looks bright in terms of bankable big-ticket German fibre, as ING's Sunderman says: "We expect the German fibre market to still organically grow for the next few years before the real wave of consolidation will start."

European FTTH deal flow burgeoning

Traditional infrastructure deals in Europe have been sporadic in the first half of 2022. But strong bank and investor appetite is keeping European project deal flow regular in the rapidly growing fibre sector.

It has been a remarkable first six months of 2022 for FTTH project deal volume in Europe. **Glasfaser Plus Holding (owned by IFM and Deutsche Telekom) kicked off in January** with a €2.15 billion five-year deal led by BNP Paribas, Credit Agricole, LBBW, NatWest and UniCredit, eventually pulling appetite from 22 banks in total.

And in June, syndication closed on the biggest European FTTH financing to date – the €7.175 billion Open Fiber refinancing and upsizing facility. The seven-year debt – comprising a €5 billion term loan, €500 million revolving credit facility, €450 million guarantee facility, €1.075 billion incremental term loan and a €150 million incremental guarantee facility – pulled appetite from 29 banks: Credit Agricole, Banco BPM, Banco Santander, BNP Paribas, ING Bank, Intesa Sanpaolo, Societe Generale, UniCredit, BBVA, Generali Global Infrastructure, SMBC, Bank of China, BPER Banca, Bank Of Communications, MPS Capital Services, Bayerische Landesbank, China Construction Bank, Industrial and Commercial Bank of China, KfW IPEX-Bank, MUFG, Mizuho, NordLB, AIB, Cassa di Risparmio di Bolzano, Banca Popolare di Puglia e Basilicata, La Banque Postale, NIBC, Shinhan Bank and Cassa depositi e prestiti.

The refinancing of **Deutsche Glasfaser** (owned by OMERS and EQT) in Germany and the **CityFibre FTTH financing in the UK** – were also both around or in excess of $6 billion (dollar equivalent at time of close) in volume.

In addition to the Open Fiber deal there have been at **least 14 other European FTTH financings in the first seven months of 2022 according to Proximo Data**, totalling $18.3 billion (dollar equivalent) volume, with tenors ranging from five to 20 years – that equates to a total European FTTH volume of around $25.7 billion in the first seven months of 2022.

The FTTH debt volume looks set to keep snowballing. Liberty Global, Telefonica and InfraVia Capital Partners have just launched a joint venture to build a new fibre network in the UK with Virgin media O2 as the anchor wholesale client.

The joint venture – 50% owned by Liberty Global and Telefonica, and 50% owned by InfraVia Capital Partners – will construct and operate a wholesale FTTH broadband network of up to seven million premises that will not overlap with VMO2's existing network and recently announced fibre upgrade project to create a UK FTTH footprint of up to 23 million premises.

The deal will involve around £4.5 billion of investment supported by £3.3 billion of fully underwritten bank debt financing commitments and up to £1.4 billion in equity provided by each shareholder on a pro rata basis. InfraVia will also make certain payments to Liberty Global and Telefonica, a portion of which will be linked to the progression of the network build-out.

So what are the most bank-friendly FTTH business models? Some of the most bankable deals come with a guaranteed initial retail customer base – Deutsche Glasfaser for example. The company is building over 6 million FTTH connections in Germany. The municipalities it selects to develop are generally rural, but before work starts, Deutsche Glasfaser requires an aggregated pre-commitment of 40% of residents for any given project.

There is also the original CityFibre model in the UK, where the FTTH developer secures long-term purchasing commitments from one or more initial wholesale customers – for **CityFibre that wholesale customer was Vodafone**.

Although there is strong appetite from banks for FTTH deals, the FTTH business model is still important to lenders, because the security of any given project's income stream, along with the size of equity contribution, will dictate the length of tenor and size of debt bankers are willing to extend.

Similarly, not all European geographic markets are the same – some deals in developing European FTTH markets still require DFI support. For example, a relatively small $144 million loan in March for Croatian **FTTH provider RUNE required roughly 25% provision by the EBRD**, although the remaining 75% was provided by commercial banks Kommunalkredit, NordLB and Erste Group. Nevertheless, those markets are likely to transition very quickly to pure commercially banked deals as the pace of FTTH development in Europe continues to accelerate.

List of figures

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