Small Operators in Frontier Markets: A forgotten piece of the connectivity puzzle

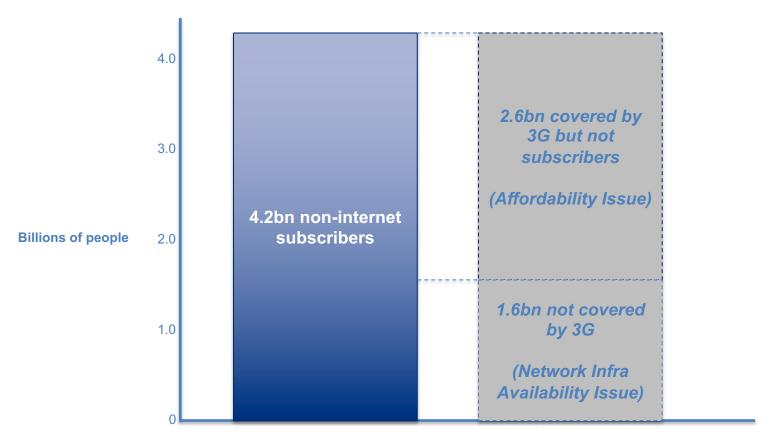
Connectivity Capital

Connect the World Fund Secured Debt | Data Infrastructure | Frontier Markets

John Garrity, Advisor

Major access gaps in the connectivity ecosystem especially outside of major urban markets

Despite the mobile 'miracles', affordability and network availability issues remain for billions of people

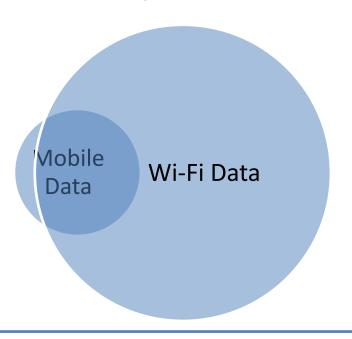


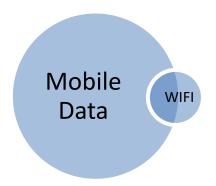
In emerging markets, Wi-Fi (ISP) ecosystem still nascent

As a share of total data consumption, WiFi data is still emerging in frontier markets... but growing due to terrestrial fiber infrastructure buildout

Developed Markets

Frontier Markets

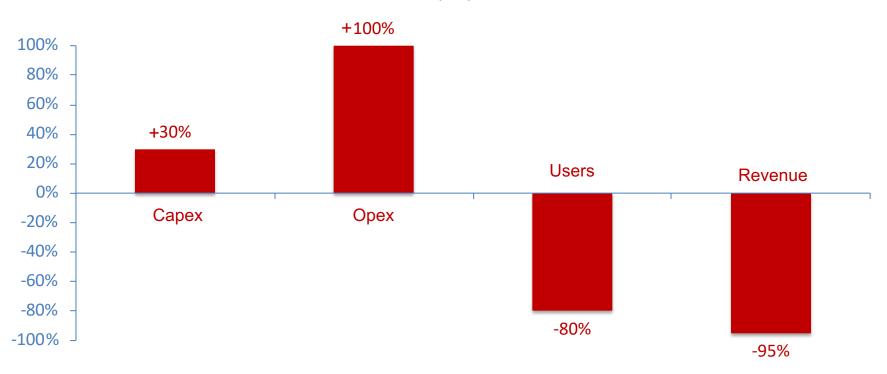




Mobile Data and Wifi Data are *complementary* forms of connectivity. Users toggle to optimize for convenience and cost. However, in frontier markets, users are largely limited to only Mobile Data (along with the higher costs for connectivity).

The financial disincentive for Telcos to deploy outside high ARPU (LTE & 5G) urban centers

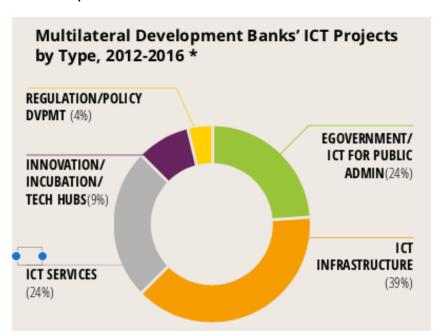
Baseline Economic Differences per Site per Area, Remote Sites above/below Urban Deployments



DFI investments into ICT infrastructure are low, and the deal sizes are too big for small ISPs

Of USD 525 billion from MDBs between 2012 to 2016, only 1% has gone to ICT.

\$5bn in ICT from 2013 - 2016



Average project commitment size is around \$30 million, with a median of around \$20 million over the 2012-2017 period

Factors providing the foundation for ISPs to expand and provide complementary connectivity

MNOs Dominate

MNOs are unlikely to disrupt their own markets and compete against themselves.

Falling CapEx

The price of wireless equipment, radios, antennas, etc. has fallen significantly. The total CapEx for ISP build out is much lower.

Smart Phone Devices

The cost of smart phone devices has fallen significantly, exponentially increasing demand for more data.

Fiber Infrastructure

The requisite trans-continental & backhaul fiber infrastructure are now in place. Backhaul costs have been cut in half.

Window of opportunity for ISP growth

Explosion of Apps

New apps including VoIP, mobile money, social media, etc. provide considerable value to customers that is driving demand for connectivity.



Connectivity Capital OUR INVESTMENT THESIS

I. ISPs complement MNOs.

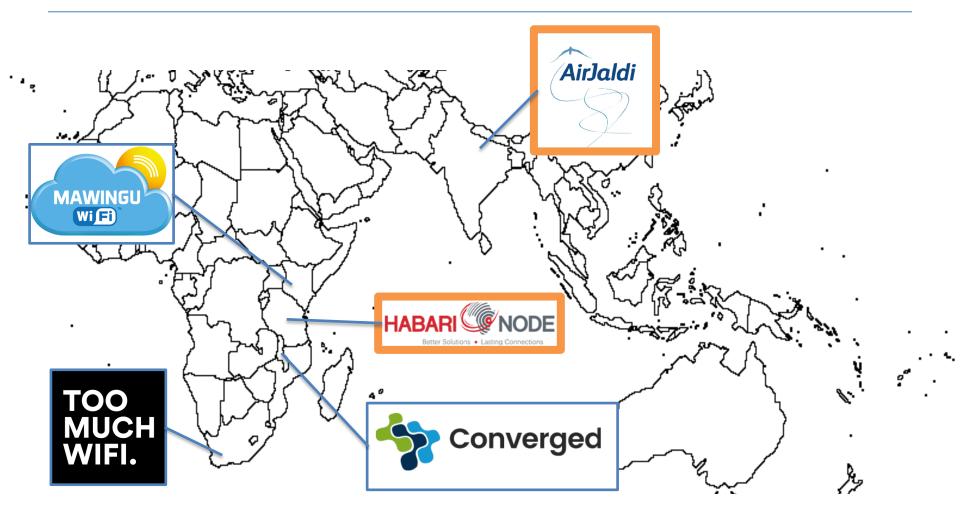
Users demand both affordability and convenience, and while some players may dominate, connectivity is not a winner-take-all market. Co-existence and thriving together is the global norm and will continue in frontier markets.

II. Lack of capital slows ISP growth and access to connectivity. ISPs in frontier markets exist, but often delay, forgo, or fail in their expansion plans because of the lack of appropriate capital. New and diversified forms of capital are needed to fund ISP growth.

III. A sector-specific debt fund allows for proprietary deal flow and better risk mitigation.

A sector-focused fund allows for better understanding of mis-priced risk and appropriate mitigation structures to accelerate ISP growth. Debt allows for simpler, non-fiduciary Investee relationships, and is self-liquidating.

Connectivity Capital & ISP Investments





Connectivity Capital: Loan Criteria

STAGE: Established ISPs with expansion plans

GEOGRAPHY: Global, with near-term focus on Sub-Saharan Africa & Asia

LOAN TERMS:

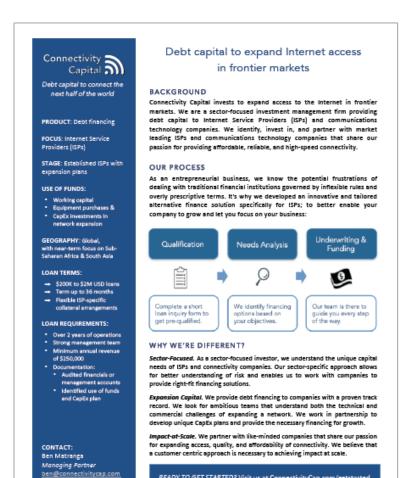
- \Rightarrow \$200K to \$2M USD loans
- \Rightarrow Term up to 36 months
- ⇒ Flexible ISP-specific collateral arrangements

LOAN REQUIREMENTS:

- Over 2 years of operations
- Strong management team
- Minimum annual revenue of \$250,000
- Documentation:
 - Audited financials or management

accounts

• Identified use of funds and CapEx plan



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