



# Communication Sector Study

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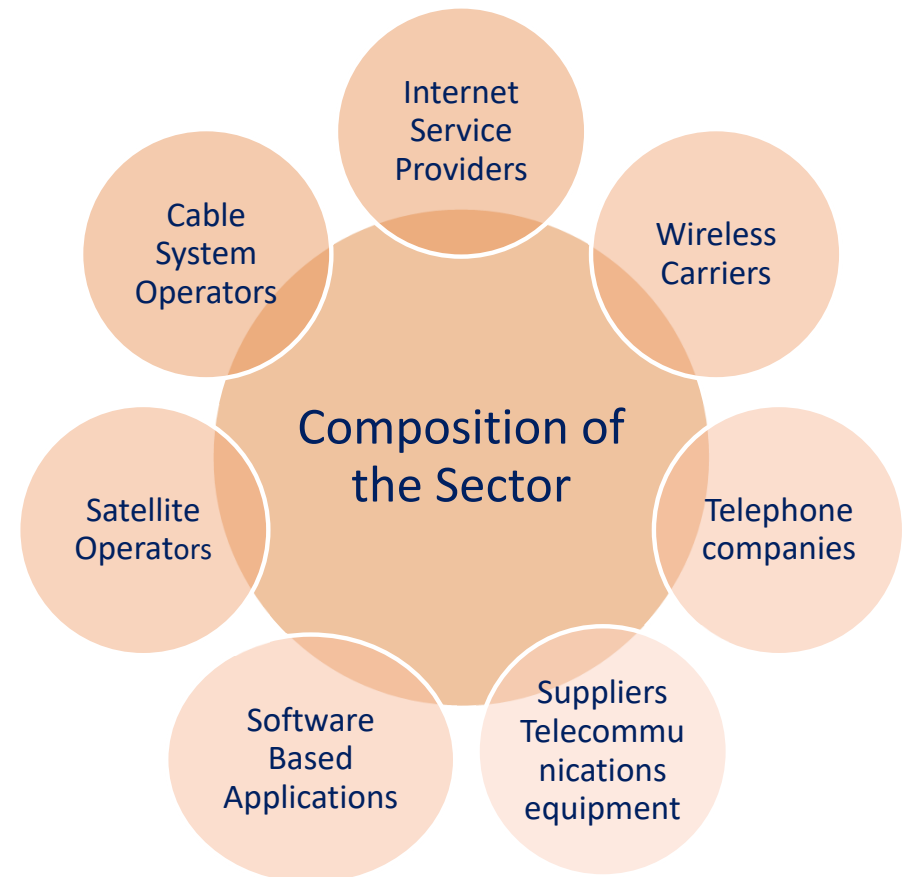
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# Communication

## Overview

- **Definition:** The communication sector is made up of companies that make communication possible on a global scale, whether it is through the phone or the Internet, through airwaves or cables, through wires or wirelessly. These companies created the infrastructure that allows data in words, voice, audio, or video to be sent anywhere in the world.
- Not long ago, the communications sector consisted of a club of big national and regional operators. Since the early 2000s, the industry has been swept up in rapid deregulation and innovation. In many countries around the world, government monopolies are now privatized and they face a plethora of new competitors.
- Communication plays an important part in daily lives of people today. It is an essential component of every walk of life ranging from education, business to entertainment. The sector has witnessed many innovations and improvement over the periods and increased competition further fueling the innovation.



# Communication

## Global Industry | Overview

- Following communication companies are ranked according to their brand value. Verizon, AT&T and Deutsche are the leading companies in term of brand values.

Top Communication Companies 2020			
Ranking	Company Name	Country of Region	Brand Value (USD mln)
1	Verizon	United States of America	68,890
2	AT&T American Telephone and Telegraph Company	United States of America	51,372
3	Deutsche Telekom	Germany	51,107
4	China Mobile Brand	China	37,559
5	NTT (Nippon Telegraph & Telephone ) Group	Japan	34,238
6	Xfinity Brand	United States of America	25,227
7	Spectrum	United States of America	21,424
8	Vodafone	United Kingdom	19,252
9	Orange	France	19,092
10	au Brand	Japan	14,762
Total			342,923

Global  
Telecommunication  
traffic increased  
significantly during  
Covid 19 lockdown.



300% growth in teleconferencing applications (such as Zoom, Skype, etc.) in the US.



828% rise in data traffic from Zoom, and a 215% spike on Skype video conferencing applications in Thailand.



400% growth in gaming (with children being at home!) in the US.



Substantial increase in global submarine cable system traffic on account of e-commerce.



Establishment of partnerships between digital platforms such as Netflix, YouTube, and Amazon to restrict video streaming quality globally, and to reduce network congestion



15-70% increase in data traffic across Europe and the Americas especially in rural and remote areas, as observed by satellite operators.



Provision of additional temporary spectrum (as in the US and South Africa) by regulators in an attempt to ease network congestion.

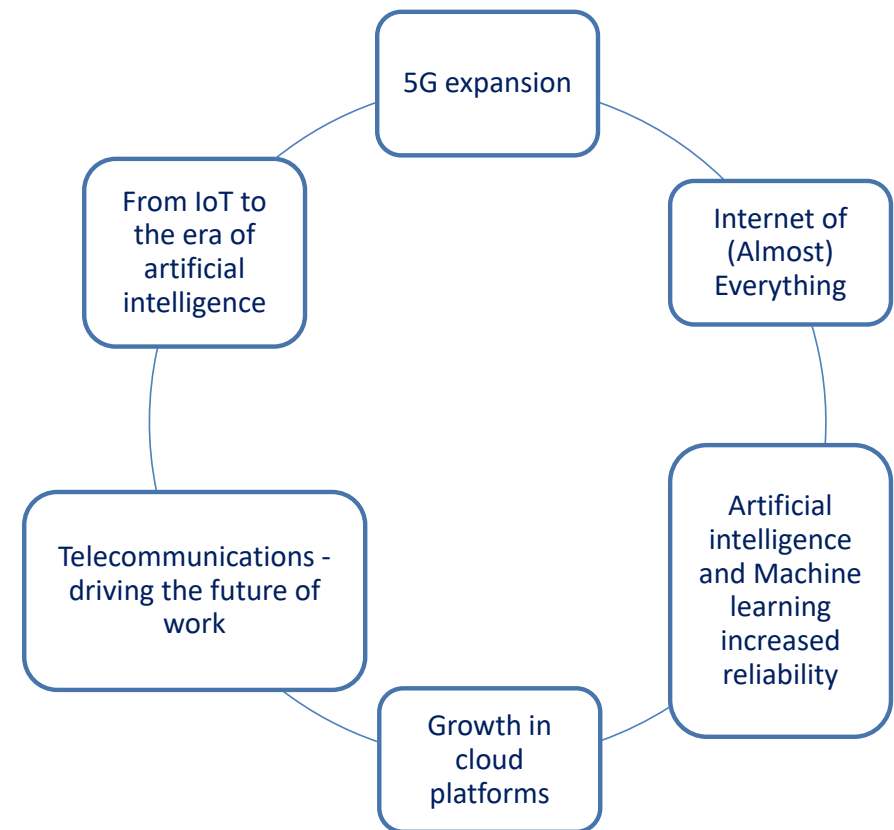


# Communication

## Global Industry | Market Trends

Following are the trends in the communications industry that will drive innovation in global market.

- Demand for high-speed connectivity is greater than ever, 5G is poised to meet these sky-high expectations. Connectivity cost goes down, ultrafast speed and the much-anticipated lower latency are among its numerous benefits for the network.
- The new era of artificial intelligence will use tons of data to predict peak traffic, provide better end-to-end service and enhance connectivity. Opportunities are there for communication to leverage these technologies for network capabilities improvements, a seamless customer experience and, of course, infrastructure automation.
- The communications industry is the largest in absolute size within the IT sector, but has generated only ~14% of the IT growth as a whole. On the contrary, data processing, internet publishing, and other information services are the fastest-growing segments of services-producing industries
- The demand for home and industrial IoT devices and applications will continue to exponentially increase in the post-pandemic world.
- Communication companies have emerged as one of the most essential industries due to the pandemic and will most likely stay that way for the foreseeable future.

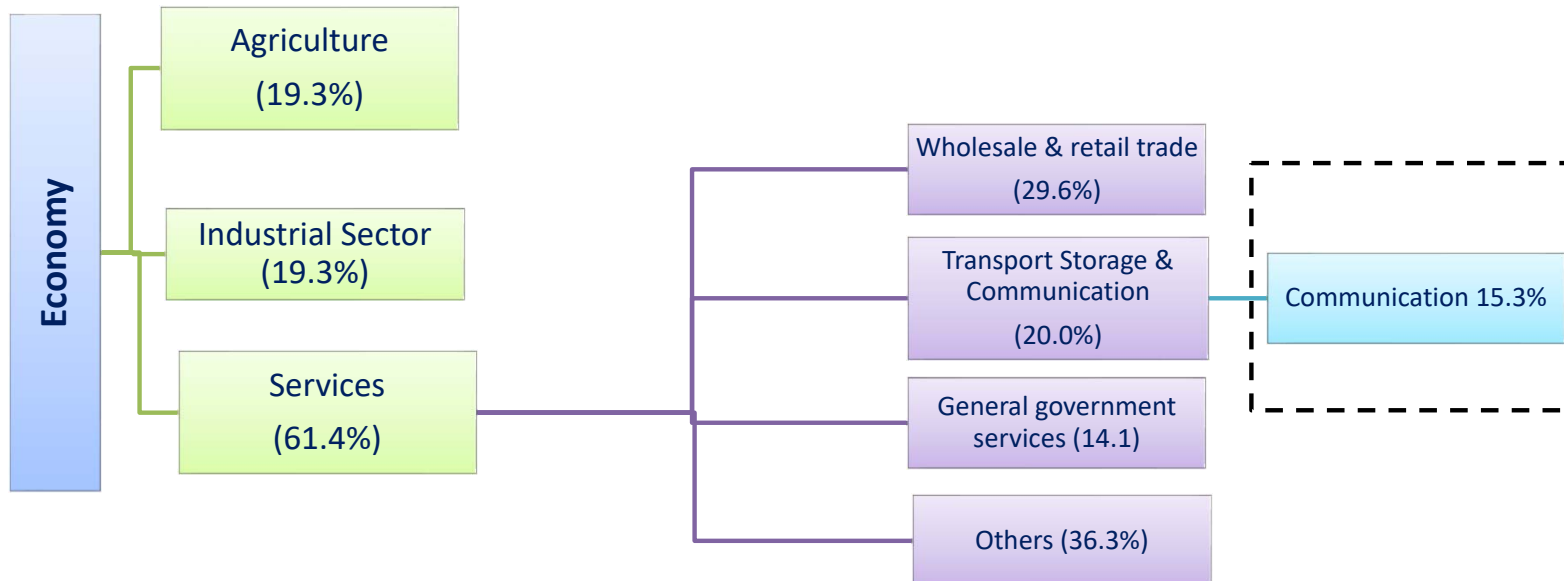




# Communication

## Services | Overview

- Services sectors experienced a notable deceleration in FY19, posting only a ~3.8% growth compared to the average growth rate of ~6.2% during the previous FY16-FY18 period. It is worth noting that in FY20, the services sector was already feeling the pinch from a slowdown in the industrial sector as well as from imports. Finally, the onset of Covid-19 significantly dampened the services sector negative growth to ~0.6%; this contraction is unprecedented in Pakistan's economic history.
- In the communication sector, cellular tele density and broadband penetration rose to ~80% and ~39% respectively at end FY20, compared to ~76% and ~34% last year. In particular, the communication companies recorded significant growth in internet traffic during the pandemic period, as e-learning, virtual meeting platforms, e-commerce, and other digital transactions gained traction





# Communication

## Industry Snapshot | Local

- **Significance of sector:** In Pakistan, ~98% of the households own a mobile phone whereas penetration of mobile services reached ~85% at the end of March-2021, with ~183mln mobile subscriptions.
- Where historic lockdowns during the COVID-19 pandemic slackened economic activity, vibrant telecommunication systems played a pivotal role in ensuring availability of essential services to the community. In a way, the pandemic actualized the true potential of broadband services, transforming the way people lived their lives. All daily activities related to education, health, and virtually every other sector of the economy were shifted to digital dimensions, creating a huge nationwide demand for telecom services.
- **Measures for the introduction of 5G in Pakistan :** In line with the Policy Directive of the Ministry of Information Technology & Telecom, two Cellular Mobile Operators, i.e., Zong and Jazz, successfully carried out the 5G trials in Pakistan. A 5G Pakistan Plan Committee has been constituted by the Ministry of Information Technology & Telecom, comprising of all stakeholders from the public and private sectors.
- **The Pakistan-China OFC (Fiber optic cable) project :** The Pakistan-China OFC (Fiber optic cable) project has recently been completed under the China-Pakistan Economic Corridor (CPEC) program.

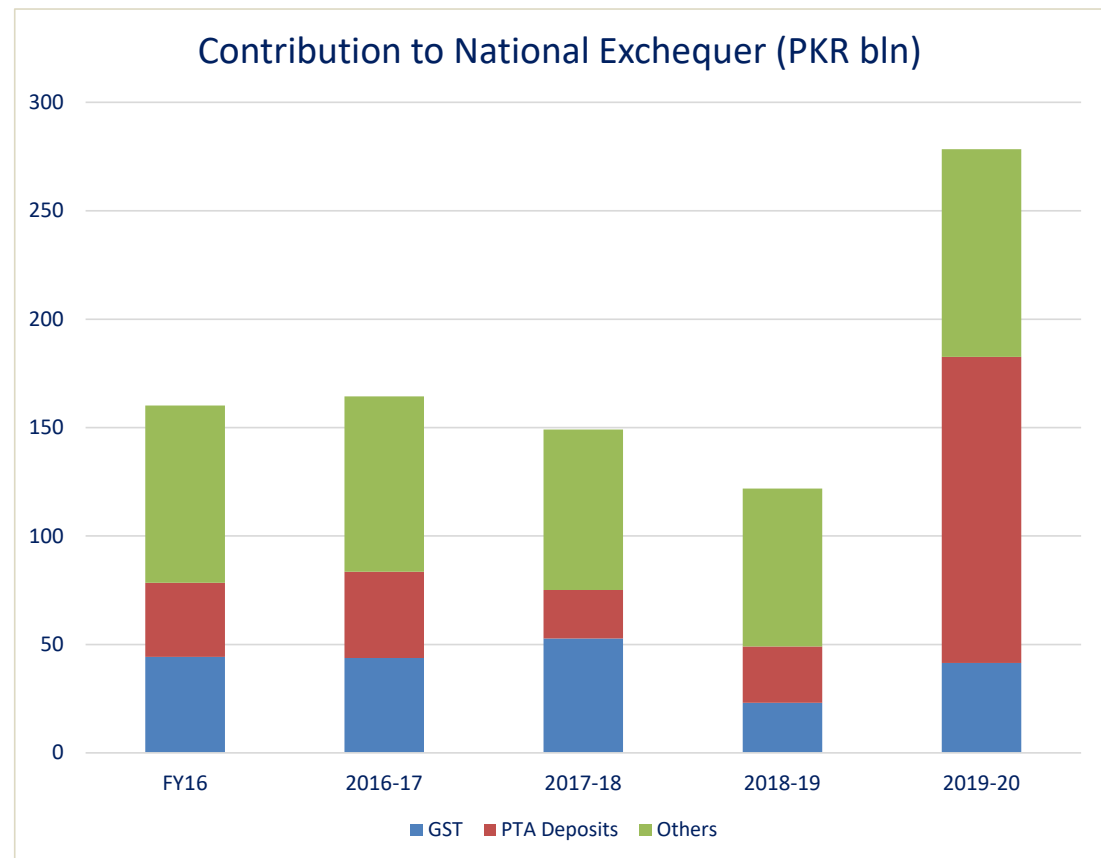
Overview	FY19	FY20
Gross Revenue (PKR bln)	702	731
Contribution to GDP	1.80%	1.88%
Key Sector Players	4	4
Structure	Organized & Unlisted	
Inflow of Net FDI (PKR bln)	-13	100
Tele density %	77.80%	79.90%
Growth % Subscribers	7%	4%
Total Subscribers (mln)	169.5	174.4
Regulator	Pakistan Telecommunication Authority	



# Communication

## Contribution to National Exchequer

- The sector's contribution to the national exchequer increased by ~129% (PKR~278bln) owing to deposits of USD~688mln by Cellular Mobile Operators (CMOs) under license and spectrum renewal fee, and a substantial increase in General Sales Tax (GST) and Withholding Tax (WHT), which remained suspended last year on the directions of the Honorable Supreme Court of Pakistan.
- PTA deposits include initial license fee, USF, R&D fund and other levies that amounted to ~PKR 141bln n FY20, which is ~43% higher than the previous year.
- The total telecom taxes (excluding PTA deposits) grew by ~43% and stood at PKR~137bln. Major operators contributed PKR~134bln (over ~98%) to total taxes, while small operators contributed the remaining.
- In addition to the aforementioned taxes and contributions made by the telecom sector, the FBR also collects a huge amount against import of cellular mobile handsets, which allows only registered and tax-paid handsets to connect to telecom networks in Pakistan.

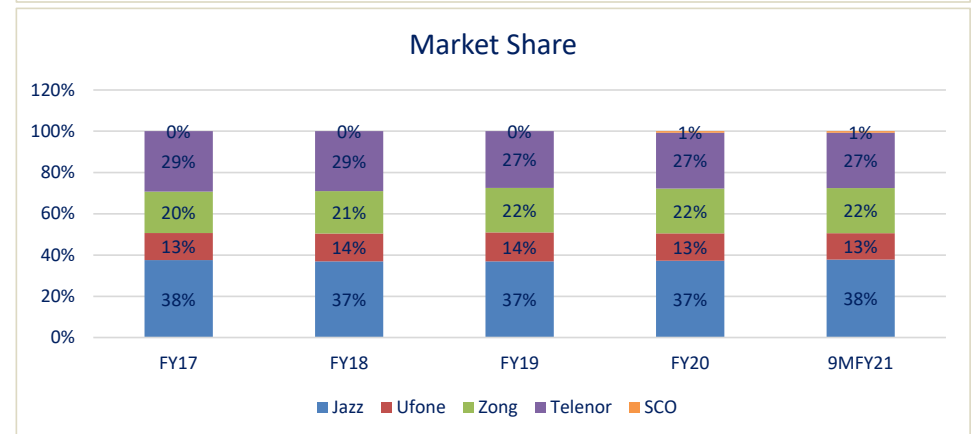
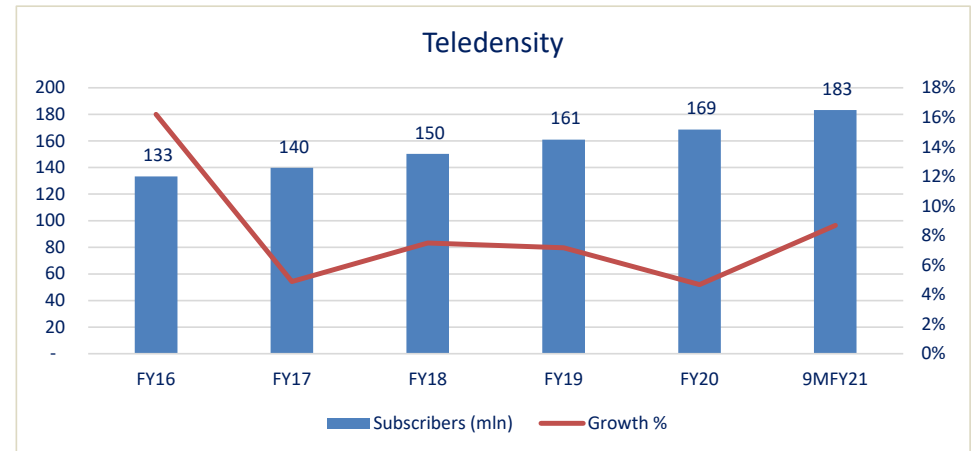




# Communication

## Teledensity

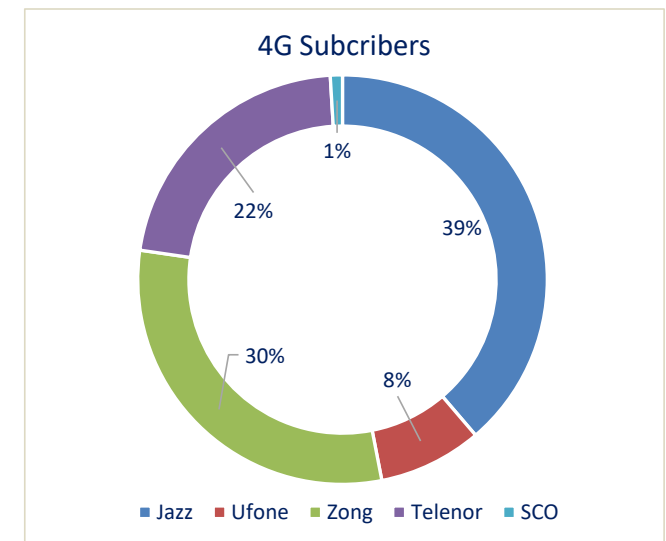
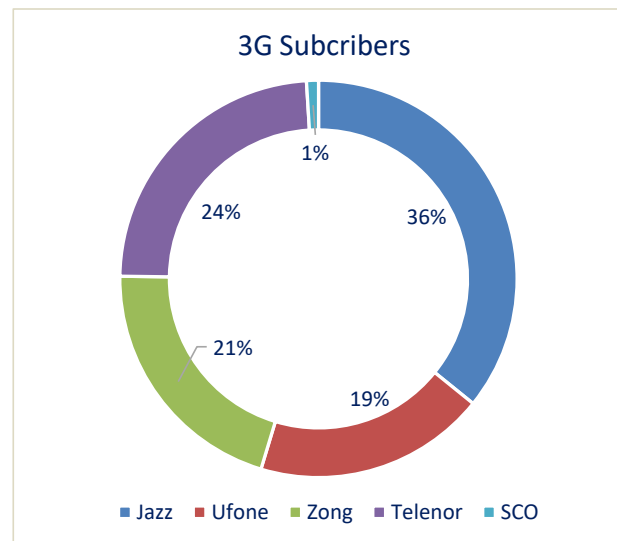
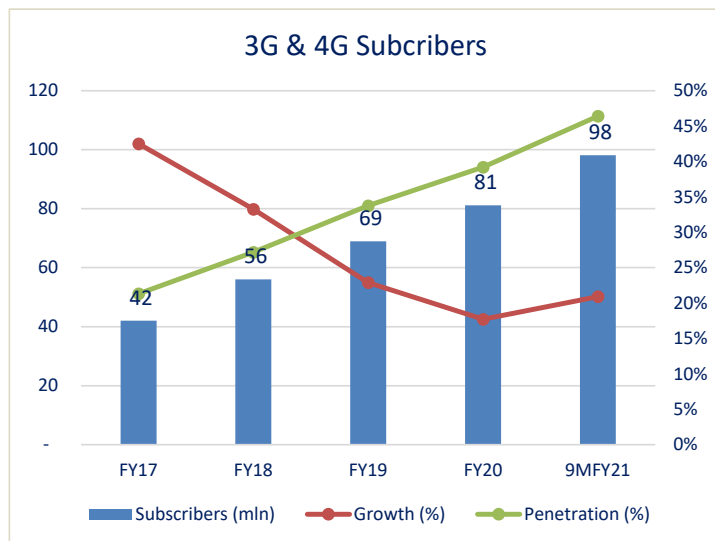
- Cellular Tele density** represents the percentage of mobile sim subscribers within the population. On an overall basis, the tele density growth rate outpaces average population growth trend on YoY basis. In Pakistan, approx.~60% - 65% of the total population constitutes individuals in the age bracket of 15-64 years, perceived to be mobile sim subscribers. Growth trend in this age bracket aligns with the total population growth rate.
- As of March-2021 the teledensity has reached ~86% (FY20: ~80%). Almost ~99% of total teledensity is belong to cellular mobile phones whereas only ~1% is being contributed by Wireless Local Loop (WLL) and Fixed Local Loop (FLL)
- There are four key players in telecom industry in Pakistan, Jazz, Telenor, Zong and Ufone. Jazz has the dominant position with highest number of subscribers. The company relishes on a share of ~38% in market cellular subscribers followed by Telenor which has a ~27% market share, demonstrating a strong foothold in the segment, specially taking a boom after merger with Warid. Competition is expected to increase further as local companies pursuing aggressive strategy to increase their subscriber base.



# Communication

## 3G & 4G Subscribers

- 3G/4G subscriber in Pakistan has reached ~98mln as at March-2021 with CAGR of ~25% since FY17. The growth in total subscribers is led by growth in 4G subscribers as the 3G subscribers has shown negative growth in past couple of years. The share of 4G subscribers is expected to increase further backed by the availability of affordable 4G supported devices.
- Jazz is the market leader with market share of ~28% in total 3G/4G subscribers followed by Zong having ~28% market share as at end March-2021. Due to aggressive market campaign and cheap data packages the 4G subscribers of Zong has showed significant growth. The share of 4G subscribers in total subscribers will increase further.



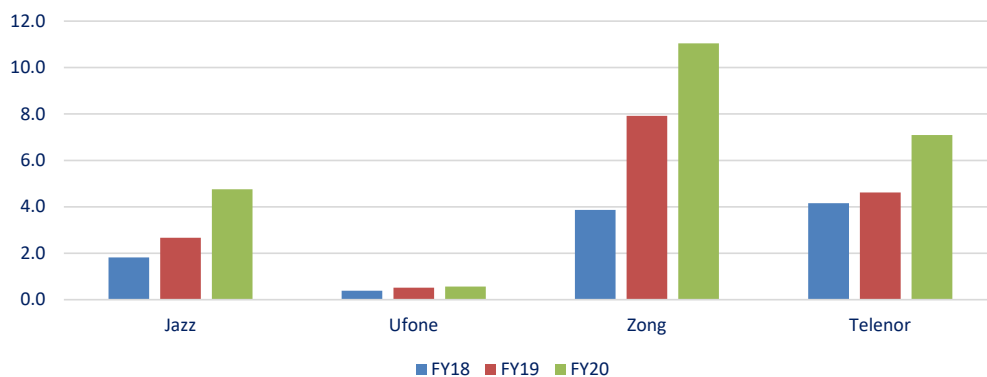
Source: PTA Annual Report, PTA website 9

# Communication

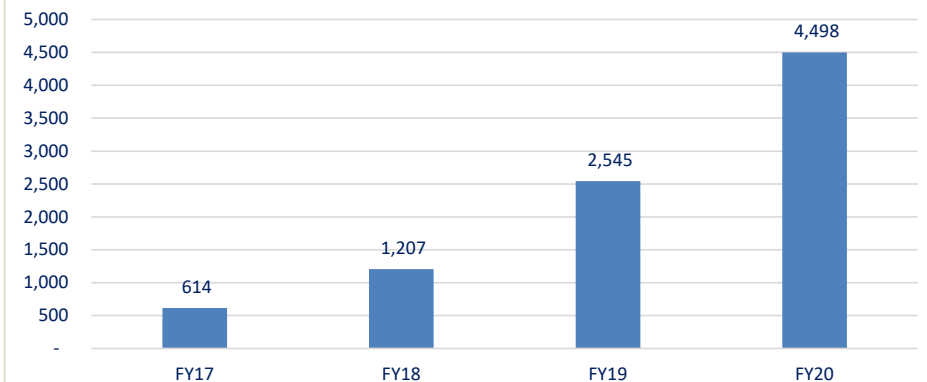
## 3G & 4G Subscribers

- The telecom sector met with a huge demand from corporate set-ups and individuals alike to meet the social, educational, health-related, and economic requirements across the country. Significant increase in data usage and broadband subscription has been observed during COVID-19 lock down.
- Total data usage in the country during FY20 was recorded at 4,498 petabytes with YOY growth of ~77%. The usage is expected to show a gradual increase in coming period as well due to change in working patterns and increased dependence on communication devices in every aspect of life.
- In terms of data usage per subscriber, Zong data usage per subscribers is significantly higher than that of its competitors owing to cheap data packages and extensive market campaign by the company.

Avg. Data Usage (GB/Month/Subscribers)



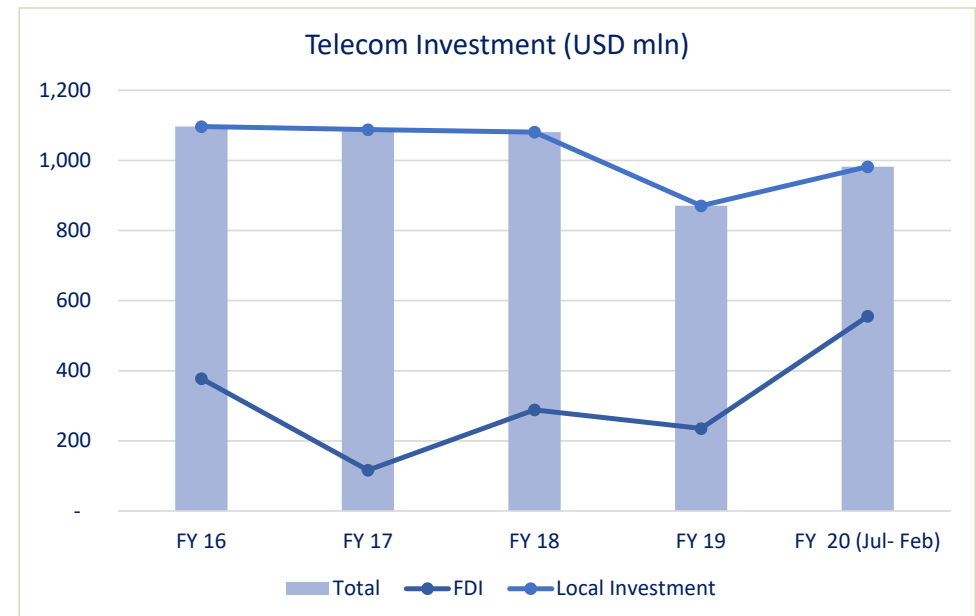
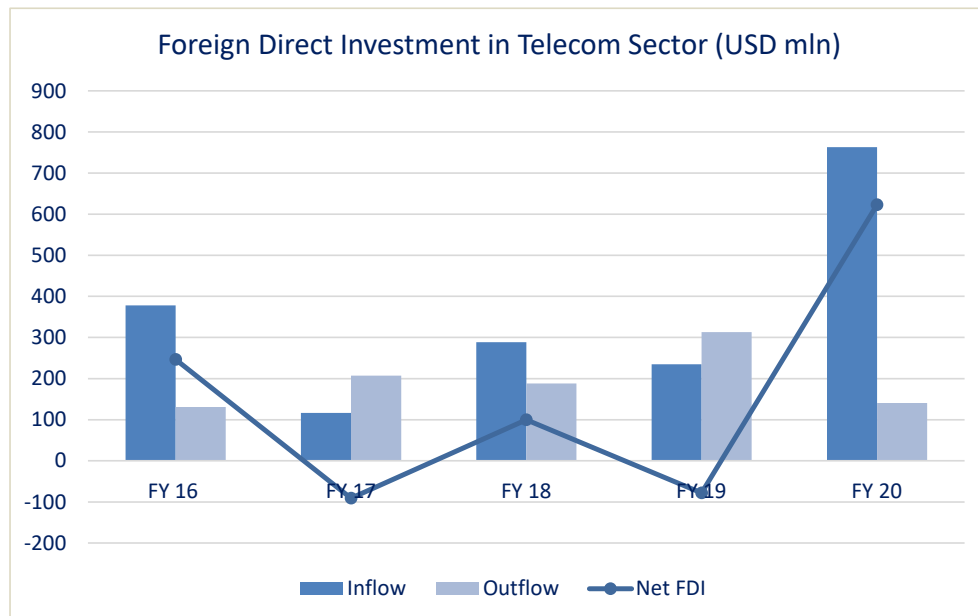
Cellular Mobile Data Usage (Petabytes)



# Communication

## Investment

- The telecom sector has been exhibiting positive and encouraging FDI trends in Pakistan. The sector made a significant contribution of USD~623mIn (~24%) to the total net Foreign Direct Investment (FDI) in the country. This huge investment became possible primarily because of the license renewal fees, ~50% of total license fees has been paid by the mobile operators (Telenor, Zong and Jazz) to the regulator. As the remaining fees will be paid in equal installments the sector will experience consistent flow of FDI.



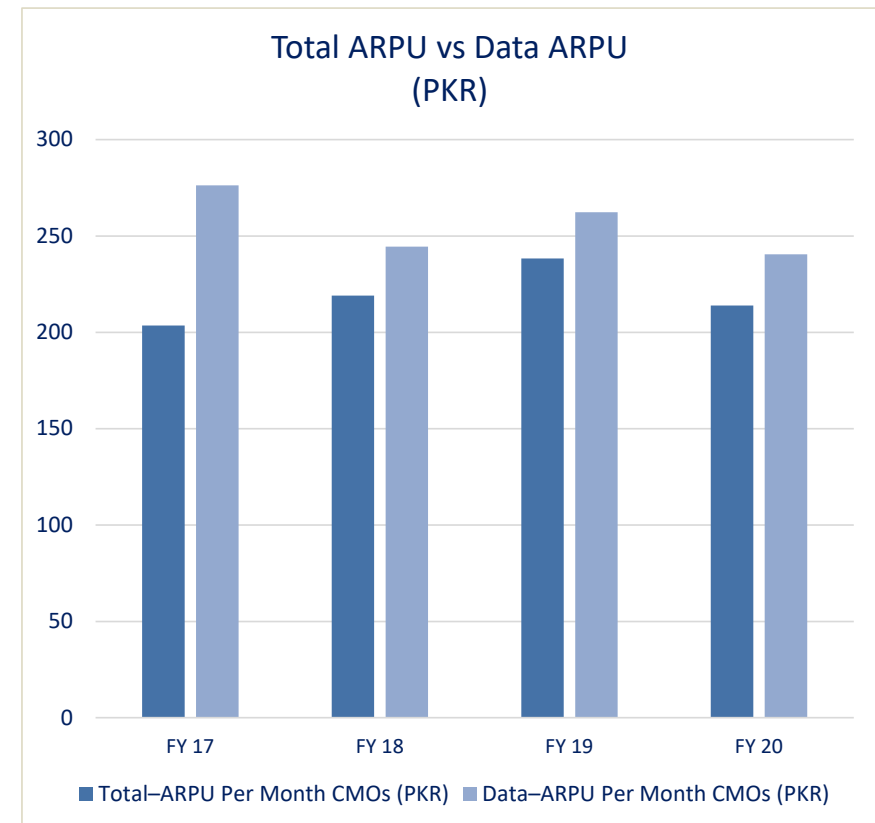
Source: PTA Annual Report, PTA website, PBS 15



# Communication

## Business Risk | Average Revenue per User

- Pakistan is considered low ARPU and predominantly a prepaid subscription market where subscribers enjoy the flexibility of altering their usage patterns in response to any price fluctuations introduced by operators.
- Service providers face challenges in maintaining their ARPUs where voice is still a dominant factor in revenue streams. In Pakistan, the cellular mobile industry ARPU per month (Voice Data) stood at ~PKR 214 in FY20, indicating a decline of 10% as compared to the preceding year.
- The industry data ARPU stood at ~PKR 241 in FY20 as against ~PKR 262 during FY19. The drop in ARPUs can be attributed to significant price reductions introduced by operators during COVID-19 and rapid increase in subscriptions as against revenue. Although the 10% decline in total ARPU occurred because consumers shifted away from traditional voice services, the 8% decline in data ARPU can only be justified with reduction in prices as data usage increased by ~77%.



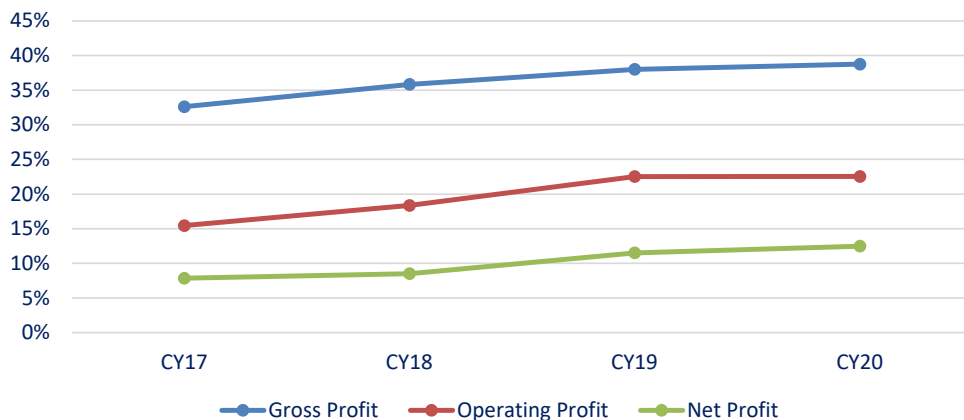


# Communication

## Business Risk | Profitability

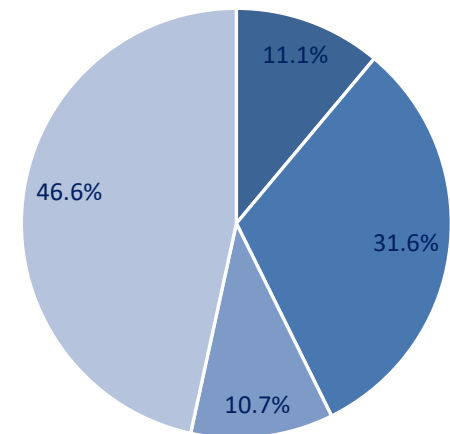
- Cost structure of the telecom sector is predominantly fixed in nature wherein maintenance cost constitute major portion of the cost followed by other fixed expenses. Being fixed in nature the cost is more predictable and stable in nature and this help companies in better cost forecasting.
- Predominantly fixed cost structure also comes with its own set of challenges as its increases the variability in company's profitability. Companies in the sector with low market share and revenue growth in previous years has experienced low profitability in comparison to companies with high market share.

### Profit Margin



### Cost Breakup

- Interconnect Cost
- Depreciation and Ammortization cost
- Repair and Maintainance cost
- Others



Note: Calculations are based on companies' financials presenting ~50% of the sector in term of market share.

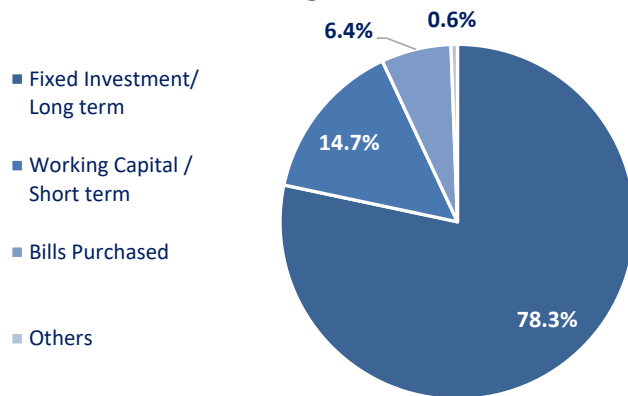
Source: Company Financials 14

# Communication

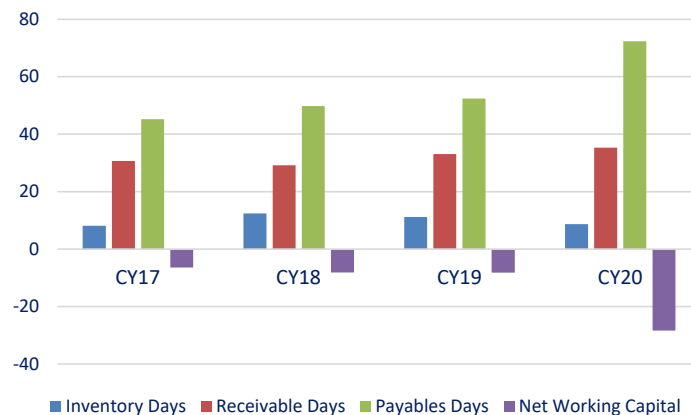
## Financial Risk | Borrowings

- The sector's is characterized by very low working capital requirements. Low working capital requirement of the sector stemmed from its nature of business as most subscribers in Pakistan are post paid customer and hence translate into low receivable days.
- As of end April-2021, the total borrowing of the sector reached PKR~161bIn (April20: PKR~140bIn) with YOY increase of ~15%. Considering the high capital intensive nature of the sector, major portion of the sector's borrowing is long term in nature used to finance fixed asset.
- Interest cover of the sector decreased due to increase in interest cost on back of rising borrowing. Despite decrease interest cover of the sector is still considered strong.

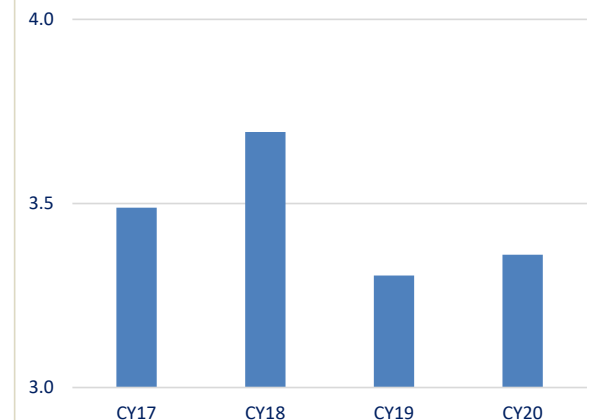
Borrowing Mix (March-2021)



Working Capital Management



Interest Cover (times)



Note: Calculations are based on companies' financials presenting ~50% of the sector in term of market share.

Source: State Bank of Pakistan, Company Financials 16



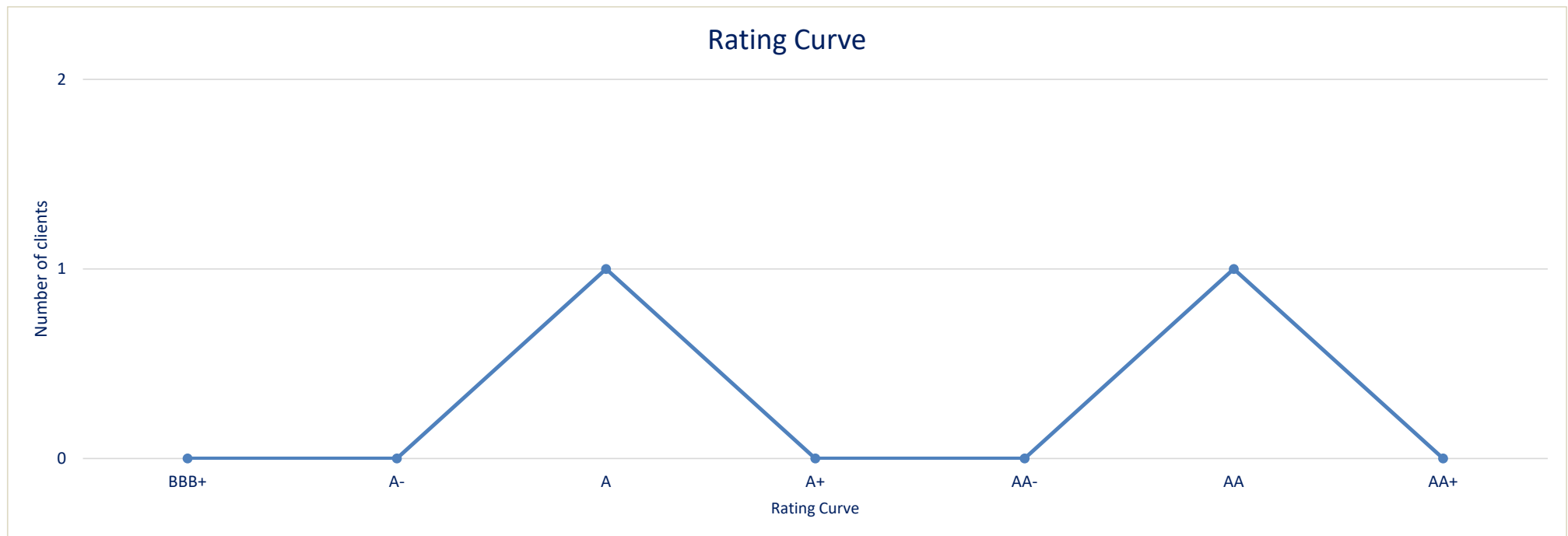
# Communication

## Regulatory Mechanisms

- **Pakistan Telecommunication Authority PTA:** The Pakistan Telecommunication Ordinance 1994, established the primary regulatory framework for the telecommunication industry including the establishment of an authority. Thereafter, Telecommunication (Re-Organization) Act no XVII was promulgated in 1996 that aimed to reorganize the telecom sector of Pakistan. Under Telecom Reorganization Act 1996, Pakistan Telecommunication Authority (PTA) was established to regulate the establishment, operation and maintenance of telecommunication systems, and the provision of telecom services.
- **4<sup>th</sup> Generation Regulator:** The International Telecommunication Union (ITU) ranked PTA as 4th Generation Regulator (G4), thus placing Pakistan among the top five regulators in the Asia-Pacific region and the only G4 regulator in South Asia.
- **National Cyber Security Policy (NCSP):** Cyber Security is one of the highest priority areas of the present government. Through extensive efforts of the Ministry, the 2nd meeting of the Cyber Governance Policy Committee was held on 4th September 2019, under the Chairmanship of the Federal Minister for Information Technology & Telecom, with the participation of all stakeholders. During the meeting, the draft of the Cyber Security/Governance Policy was reviewed. Accordingly, it was decided that the draft may be amended in view of Pakistan's cyber security dynamics and be titled as the NCSP. The stakeholders' consultations are underway for the formulation of Pakistan's first NCSP.

## Rating Curve

- PACRA rates 2 clients in the sector. Rating bandwidth of the sector is A to AA.
- Credit rating of the Pakistan Mobile Communication Limited (Jazz) has been upgraded to AA since last sector study.





# Communication

## SWOT

- Increase in cellular and 3G/4G subscription and strong customer base.
- Providing business-critical connectivity and resiliency. Facilitating work-from-home arrangements.
- High barriers to entry
- Synergetic impact of financial services offered by telecom industry .



- Lack of accessibility in remote regions.
- Less spending on research and development.
- Privacy Issues- Cyber Crime
- Interconnection problems for small players.

- Requirement of significant capital expenditures for new technology.
- Price competition amongst industry players is expected to exert pressure on average revenue per user.
- Conflicts related to license renewal fee charge.

- Taking a more advanced approach to customer engagement
- Converging and remixing entertainment experiences through new service offerings and entertainment bundles—and by adopting new strategies that can enable business agility.
- Introduction of 5G in Pakistan



# Communication

## Outlook: Stable

- Strong communication infrastructure is considered an important component of economic development. Since the COVID-19 lock down the importance of the sector is greater than ever. In Pakistan, teledensity has shown exponential growth in past years and now reached all time high of ~83% as of March-2021. The growth in broadband subscription is even more promising, the penetration was recorded at ~46% is all set to grow at good pace on the back of improving awareness and the availability of more affordable devices.
- Data useage in the country has increased to 4,498 petabytes during FY20 (FY19: 2,545 petabytes) with YOY growth of ~77%. The growth was fueled by increased useage during COVID-19 lock down. With the rising working force, improved economic development and increasing need of communication the data useage will remain on higher side. The sector's revenue will be further augmented by the uptick in ecommerce activity.
- Despite the significant increase in data useage, ARPU decreased due to high competition amongst local companies to increase their subscribers base. JAZZ and Zong are the two fastest growing company wherein the growth in Zong's 4G subscriber is more promising. Moreover, the portion of data revenue in total revenue will increase further and will be the important component of sector's growth.
- The telecom sector has been exhibiting positive and encouraging FDI trends in Pakistan. The sector made a significant contribution of USD~623mIn constitute ~24% of the total net Foreign Direct Investment (FDI) in the country. Supported by the government, local companies are investing heavily in innovation and growth. In line with the Policy Directive of the Ministry of Information Technology & Telecom, two Cellular Mobile Operators, i.e., Zong and Jazz, successfully carried out the 5G trials in Pakistan.
- The sector is characterized by low financial risk as the local companies are not highly geared. Comfort is further

## Bibliography

- World Bank
- Pakistan Telecommunication Authority
- Pakistan Economic Survey
- State Bank of Pakistan
- Pakistan Bureau of Statistics
- Companies Financial Statements
- PACRA Internal Database

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