

Research Team

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Contents	Page.		
Introduction	1		
Global			
Overview	2		
Local			
Overview	5		
Contribution to National Exchequer	7		
Tele-density & Market Share	8		
Data Usage	9		
Cellular Subscribers	10		
Investments	11		
Business Risk	12		
Financial Risk	14		

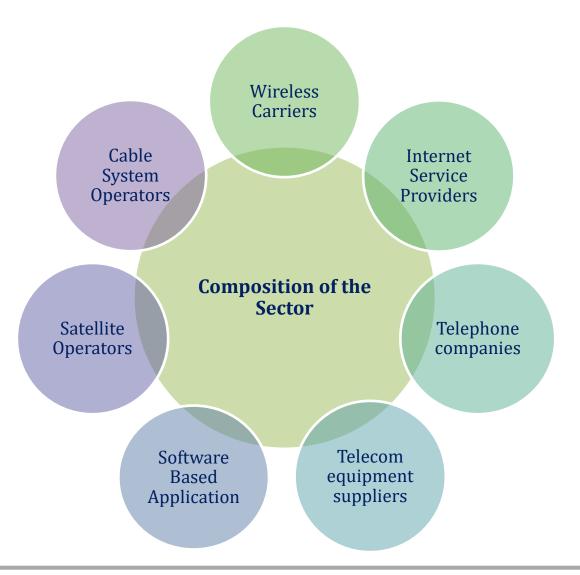
Contents	Page.		
Internet Service Providers	15		
Submarine Cables an Overview	17		
Regulatory Mechanism	18		
Rating Chart	20		
SWOT	21		
Outlook	22		
Bibliography	23		



Introduction

Definition: Telecommunication is the suite of technologies, devices, equipment, facilities, networks, and applications that support communication at a distance. It has infrastructure that allows data in text, voice, audio, or video to be sent anywhere in the world.

- Telecommunication has penetrated our lives as a necessity. From enabling communication around the world to increasing participation and providing infrastructure for national security, the industry has advanced tremendously over the years.
- Since the pandemic, the phenomenon has grown with millions of additional subscriptions. The role of telecommunication in routine activities, be it at work or at home, has also substantially increased.
- The rise of mobile internet and smartphones has transformed telecommunication, making connectivity more accessible and integral to daily life, from education and healthcare to commerce and entertainment.





Global | Overview

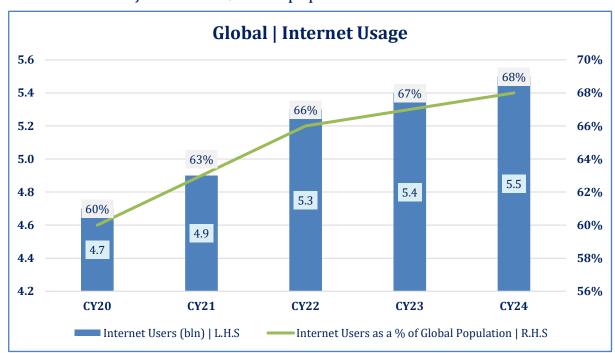
- During CY24, Deutsche Telekom held the top position amongst the global telecommunication players with a brand value of USD~73.3bln (CY23: ~62.9bln), down ~3.2% YoY, followed by Verizon with a brand value of USD~71.8bln (CY23: ~67.4bln), up ~6.5% YoY.
- As per 6MCY25, the rankings remain stable, with Deutsche Telekom dominating the global telecommunication market with the brand value of USD~85.3bln.

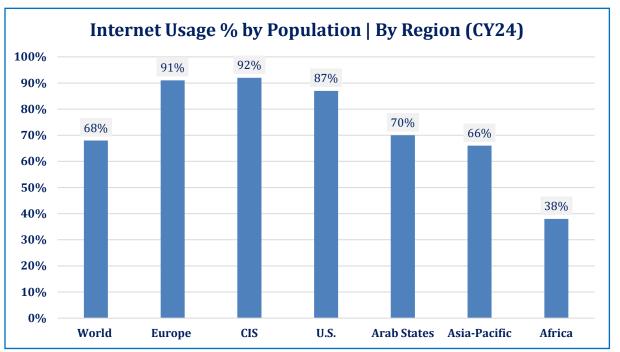
	Тор	Ten Global Telecom	munication Players Bran	d Value (USD mln)	
Brand	Position	Country	CY23	CY24	6MCY25
Deutsche Telekom	1	Germany	62,928	73,321	85,310
Verizon	2	United States	67,443	71,754	72,273
AT&T	3	United States	49,614	49,253	52,530
China Mobile	4	China	43,382	44,238	46,993
NTT Group	5	Japan	36,591	31,061	37,116
Xfinity	6	United States	28,754	30,046	29,459
Spectrum	7	United States	23,329	27,482	24,361
Orange	8	France	18,404	20,276	17,875
STC	9	Saudi Arabia	13,900	16,100	16,141
Etisalat and	10	UAE	10,500	17,000	15,320



Global | Overview

- Global internet users were up ~1.9% YoY in CY24, recording at ~5.5bln (CY23: ~5.4bln). In terms of the global population using internet services, the ratio as of CY24 stood at ~68% (CY23: ~67%), meaning that the number of people offline worldwide in CY24 represented ~32.0% of the global population.
- Internet availability can be linked to the level of a country's development. Internet usage in the Commonwealth of Independent States (CIS), Europe, and the USA was recorded at ~92.0%, ~91.0% and ~87.0% of the population, respectively. In the Arab States and Asia-Pacific regions, ~70.0% and 66.0% users of the Internet were reported in line with the global average, while average internet usage for less developed regions such as Africa was recorded at just ~38.0% of the population.





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Global | Market Trends

Subscriptions per 100 inhabitants

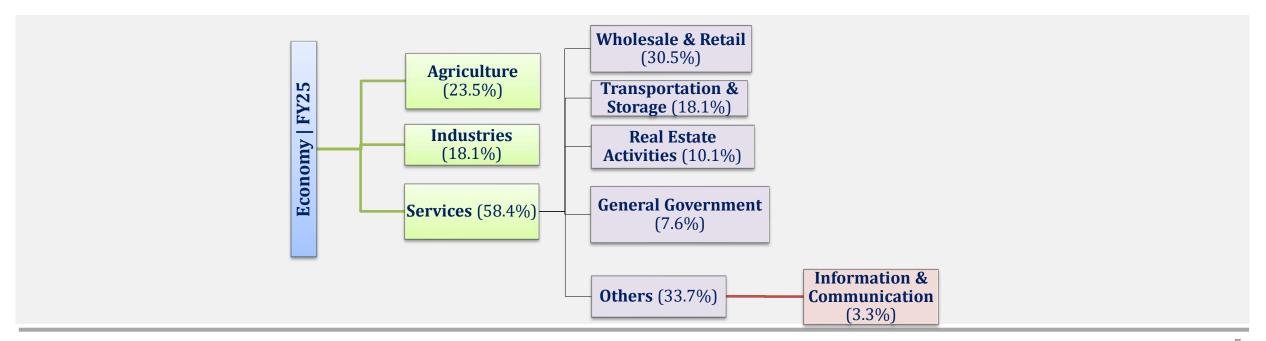
- In terms of telephone subscriptions, fixed-telephone subscriptions have remained steady at ~11 per 100 inhabitants since CY05. This number stood at ~20 per 100 inhabitants before CY05. During CY24, fixed broadband subscriptions increased by ~3.2% YoY (CY23: ~19 per 100 inhabitants).
- Meanwhile, mobile-cellular telephone (MCT) subscriptions were up ~0.9% YoY during CY24 and clocked in at ~112 per 100 inhabitants (CY23: ~111 per 100 inhabitants). AMB subscriptions rose to ~94.6 per 100 inhabitants, showing a YoY growth of ~8.7% (CY23: ~87 per 100 inhabitants).

Broadband/Telephone Subscriptions	CY22	CY23	CY24
Fixed-Telephone (FT)	11	11	10.3
Fixed-Broadband (FB)	18	19	19.6
Mobile-Cellular Telephone (MCT)	108	111	112
Active Mobile-Broadband (AMB)	87	87	94.6



Local | Overview

- In FY25, Pakistan's GDP (nominal) stood at PKR~114.7trn (FY24: PKR~105.1trn), growing in real terms, by ~2.7% YoY (FY24: ~2.5% growth). The Services segment held ~58.4% share in the GDP during the year. The country's GDP is projected to record at PKR~119.5trn during FY26 with ~4.2% YoY growth in real terms, depicting an improved economic activity as compared to FY25. The SBP has also endorsed the Government's target of 4.2% describing it as challenging but achievable, while the IMF forecast for the GDP growth in FY26 stands at ~3.6%. The Services segment is expected to contribute ~61.4% to the GDP in FY26.
- The Telecommunication sector is broadly classified under the Services segment. Being one of the largest segments of the economy, the sector players are primarily involved in all or any of the business activities that include establishing, developing, expanding, enhancing, managing, and operating telecommunication systems. The "Information and Communication" sector contributed 3.3% to the Services sector GDP share.





Local | Overview

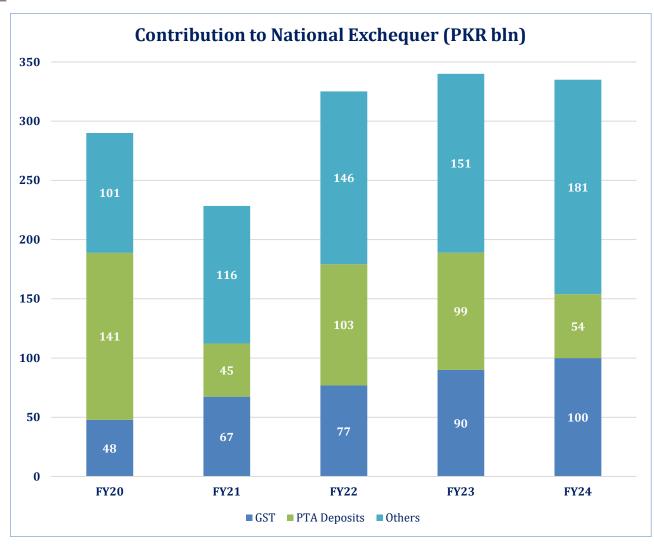
- Pakistan's total cellular subscribers stood at ~197.6mln, as of Apr'25, representing ~81.8% of the population. During FY24, the Telecommunication* sector registered a total revenue of PKR~955.2bln, up ~16.9% YoY (FY23: PKR~816.8bln). Moreover, the sector contributed ~0.9% to the country's GDP (FY23: ~1.0%).
- During 1QFY25, the sector attracted Foreign Direct Investment (FDI) inflows worth USD~10.0mln (1QFY24: USD~8.0mln), reflecting a growth of ~25.0% YoY. However, the net FDI for the first quarter remained negative, clocking in at USD~(19mln) (1QFY24: USD~(26mln)). The persistently negative net FDI of the sector reflects a lower inflow of investment funds, likely linked to decelerated growth and expansion in the sector.
- The Telecommunication sector's contribution to the national exchequer amounted to PKR~335bln, as per the latest data, showing a YoY decrease of ~1.8% (FY23: ~3.7% YoY growth). Teledensity as of Apr '25 was reported to be 81.8% (SPLY: ~80.5%).

Sector Snapshot	FY22		FY23		FY24	
Telecom Revenue (PKR bln)	716.7		816.8		955.2	
Contribution to GDP - %	1.1%		1.0%		0.9%	
Particulars	FY22 FY23		Y23	FY2	4	10MFY25*
Contribution to National Exchequer (PKR bln)	328.7	34	11.0	335.0		-
FDI Inflow (USD mln)	174.9	5	7.7	46.0		10
Net FDI (USD mln)	-23.0	-2	22.0	-44	•	-19
Tele-density (%)	84.6	8	1.4	80.5	5	81.8
Total Cellular Subscribers (mln)	194.6	19	91.0	192.	5	197.6
Major Sector Players	4					
Structure	Oligopoly					
Regulatory Authority	Pakistan Telecommunication Authority (PTA), Ministry of Information Technology (MOITT)					



Local | Contribution to National Exchequer

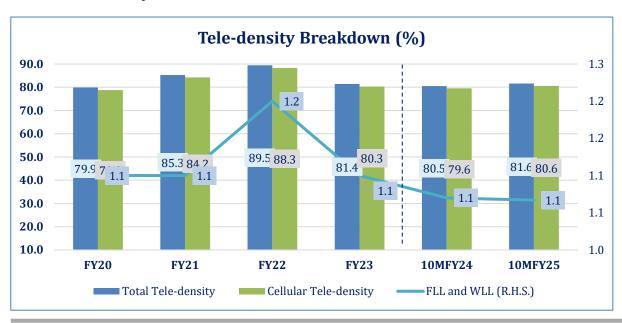
- The sector's contribution to national exchequer decreased by ~1.8% YoY during FY24 and stood at PKR~335bln (FY23: PKR~341bln).
- A breakdown of the sector's contribution to the national exchequer reveals that major components included "Others", which represent direct taxes such as Income Tax, WHT, customs duties, and other taxes levied by the FBR. These were recorded at PKR~181bln (FY23: PKR~151bln), showing a YoY growth of 19.9% and contributed ~54.0% to the total sector contribution (FY23: ~44.3% contribution).
- Meanwhile, GST and PTA deposits contributed ~29.9% and ~16.1% to the national exchequer, amounting to PKR~100bln and PKR~54bln, respectively. The GST contribution grew by ~11.1% YoY, while the contribution by PTA deposits contracted by ~45.5% YoY. (FY23: ~16.9% increase and ~3.9% decrease).

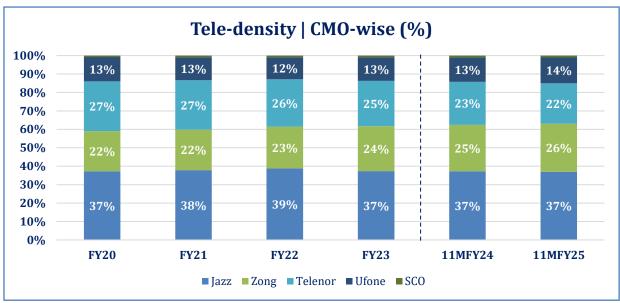




Local | Tele-density & Market Share

- Tele-density signifies the number of users per 100 people within an area for any telecom network. The overall tele-density for the country increased from ~80.5% in 10MFY24 to ~81.8% in 10MFY25. This slight increase can be attributed to relatively stable economic conditions of the country as compared to the past periods.
- During 10MFY25, tele-density for Fixed Local Loop (FLL) and Wireless Local Loop (WLL) remained stable at ~1.1% (SPLY: ~1.1%). In contrast, cellular tele-density increased to ~81.8% (FY24: ~80.5%).
- Jazz led the sector with ~37.0% market share in terms of tele-density during 11MFY25, followed by Zong, Telenor and Ufone with shares of ~26.0%, ~22.0% and ~14.0%, respectively, during the same period. During the last 5 years, Jazz has maintained its position as the leader of the market in terms of tele-density.

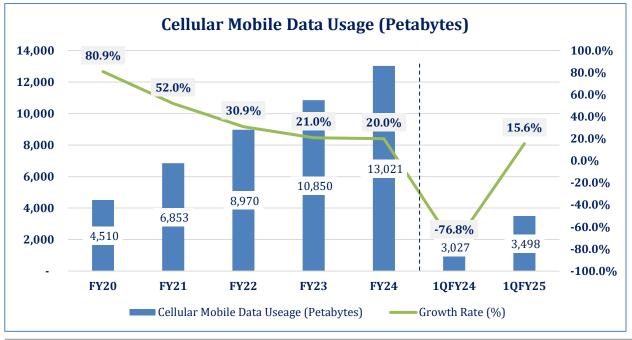


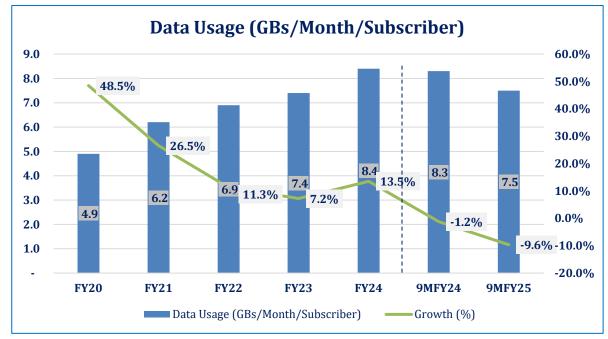




Local | Data Usage

- During FY24, cellular mobile usage recorded a ~20.0% YoY increase, reaching ~13,021 Petabytes (FY23: ~10,850 Petabytes) due to increased penetration of broadband services that propelled active use of data services. The average mobile data usage per month reduced by ~9.6% during 9MFY25, standing at ~7.5GBs (SPLY: ~8.3GBs).
- The phenomenon of increased internet usage and accelerating subscribers has grown tremendously since FY20, as a consequence of the pandemic. The same has continued to grow, as progressive initiatives are taken by the policy-makers and regulatory bodies to ensure sustained growth. A few initiatives taken by the Government through the Ministry of Information and Technology include the creation of specialized technology zones, the enlargement of broadband and 5G networks, encouragement of e-commerce and e-governance platforms, bolstering of cybersecurity & data protection protocols, and facilitation of foreign investment and partnerships.

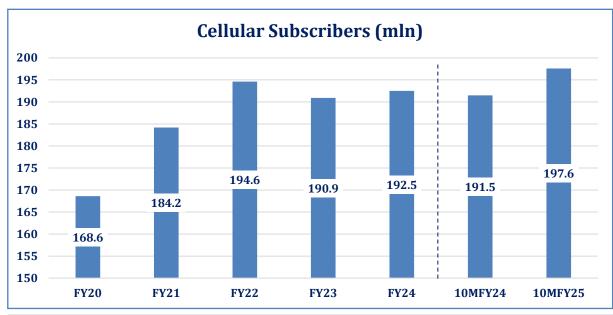


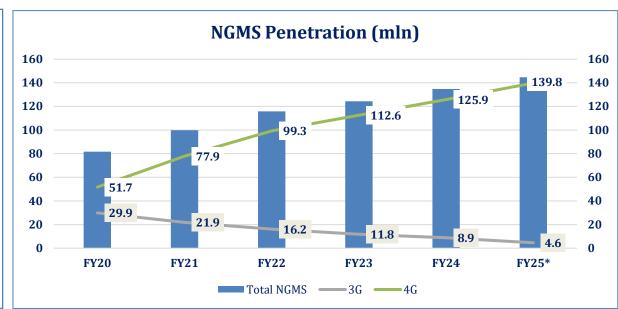




Local | Cellular Subscribers

- During FY24, the number of cellular subscribers stood at ~192.5mln in FY24 (FY23: ~190.9mln), up ~0.8% YoY. During 10MFY25, the number of cellular subscribers increased to ~197.6mln, a ~3.2% growth YoY (10MFY24: ~191.5mln).
- In terms of NGMS penetration, the mix of 3G and 4G subscribers continued to incline towards 4G expansion. 3G subscribers reflected a sharp decline of ~48.3% during 11MFY25 (SPLY: ~24.6% decrease), standing at ~4.6mln. In contrast, 4G subscribers continued to grow to clock in at ~139.8mln subscribers in 11MFY25, a ~11.0% YoY growth (11MFY24: ~11.8% YoY growth)
- The advent of 5G represents a game-changing technology enabling communities to tap into the socio-economic advantages of an advanced, data-intensive digital economy. PTA (Pakistan Telecommunication Authority) and FAB (Frequency Allocation Board), in collaboration with MoITT (Ministry of Information and Technology), are aligning efforts for the successful introduction of 5G in Pakistan.



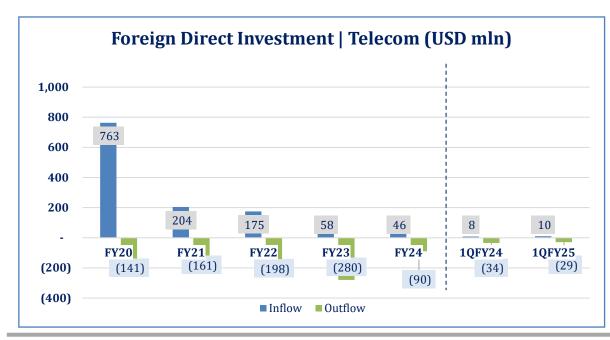


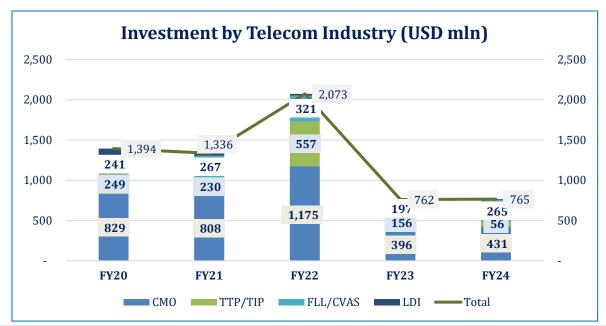
Note: *FY25 included in NGMS Penetration is only till May 2025.



Local | Investments

- The sector's FDI inflows have traced a downward trajectory since FY21, at which time they stood at USD~204mln. During FY24, FDI inflows plummeted to USD~46mln, down ~20.7% (FY23: USD~58mln). The FDI inflows for 10FY25 amounted to USD~10mln (SPLY: USD~8mln) Resultantly, the Net FDI towards the sector stood at a negative USD \sim (44mln) during FY24 (FY23: USD \sim (222mln)), depicting a \sim 67.9% YoY decrease in the outflows (FY23: USD~280mln; FY24: USD~90mln). Similarly, the outflows declined in 10FY25, amounting to USD~29mln (10FY24: USD~34mln).
- Total telecom investment for FY24 stood at USD \sim 765mln (FY23: USD \sim 762mln), up \sim 0.4% YoY. Out of the total investment in the telecom sector, \sim 56.3.0% pertained to CMOs, while \sim 34.6% and \sim 7.3% of the investment related to FLL/CVAS and TTP/TIP, respectively, during FY24.
- Investments by the telecom sector include investments in both tangible and intangible assets. Tangibles mainly include investments in network infrastructures such as cell towers. Intangibles mainly include investments in licenses, software, and IT systems.



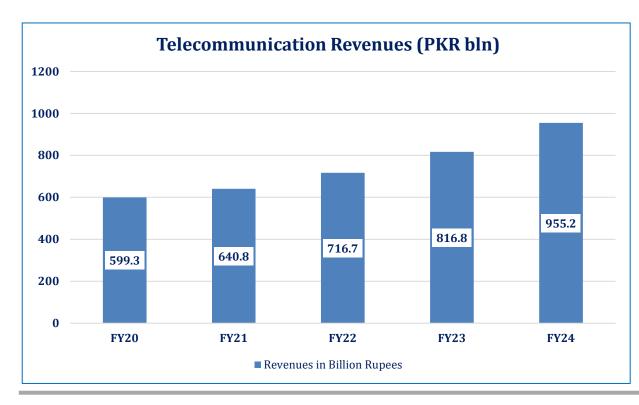


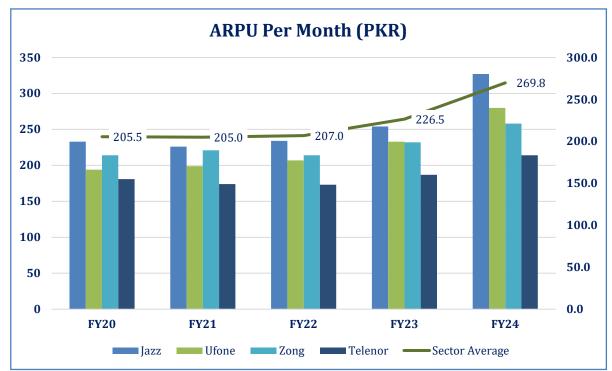
Note: CMO stands for 'Cellular Mobile Operator'; TTP/ TIP for 'Telecom Infrastructure Provider & Telecom Tower Provider'; FLL/CVAS for 'Fixed Local Loop/ Class Value Added Services'; LDI for 'Long Distance and International'. Net FDI for the respective year is depicted in yellow. FDI is representative of sectoral classification: "Telecommunications"



Local | Business Risk

- During FY24, the overall revenues for the sector increased by ~16.9% YoY, clocking in at PKR~955.2bln (FY23: PKR~816.8bln). The sector's Monthly Average Revenue Per User (ARPU) stood at PKR~269.8/month (FY23: PKR~226.5/month), increasing by ~19.1% YoY in FY24.
- Amongst the cellular mobile operators, Jazz recorded the highest monthly ARPUs of PKR~327.0/month in FY24 (FY23: PKR~254.0/month), showing a YoY growth of ~28.7%. This was followed by ufone with a monthly ARPU of PKR~280.0 during FY24 (FY23: PKR~233.0/month), reflecting a YoY increase of ~20.2%. The lowest monthly ARPU was recorded by Telenor, recording at PKR~214.0/month in FY24.





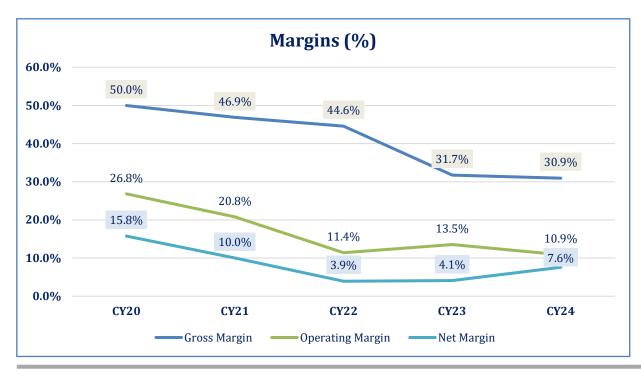
Note: Latest data available as per PTA.

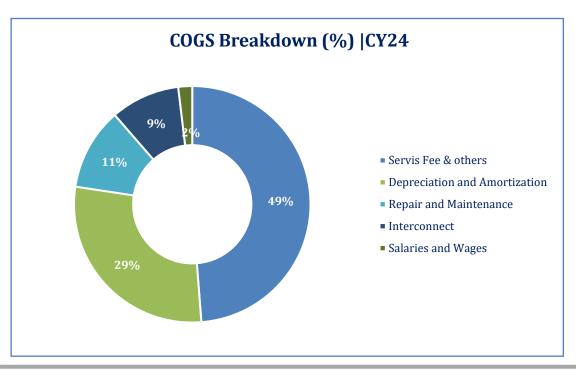
Source: PTA 1



Local | Business Risk

- The sector's average gross profit margin declined slightly to ~30.9% in CY24 (CY23: ~31.7%) due to a greater increase in cost of sales for the major players (~17.1% YoY) in comparison to the growth in revenue (~14.2% YoY). The average operating profit margin decreased to ~10.9% in CY24 (CY23: ~13.5%), due to the inflationary impact, largely in the first half of the year. Meanwhile, the average net profit margins of the sector were recorded at ~7.6%, rebounding from the lows of ~3.9% in CY22 and ~4.1% in CY23, yet remaining very low in comparison to the historic periods.
- The sector's cost of goods sold majorly comprises service fees for site sharing services, depreciation and amortization, repairs and maintenance, interconnect costs, as well as "Other" costs. In CY24, these made up ~28.7%, ~11.2% and ~9.5%, respectively, in the average cost structure of the sector. The "Others" category, comprising overheads and satellite charges, comprised ~48.7% of the total cost structure in CY24.



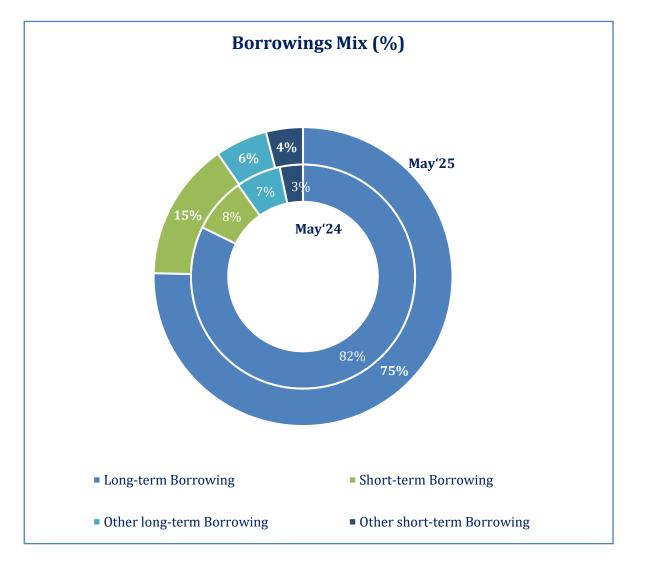


Source: PACRA Database



Local | Financial Risk

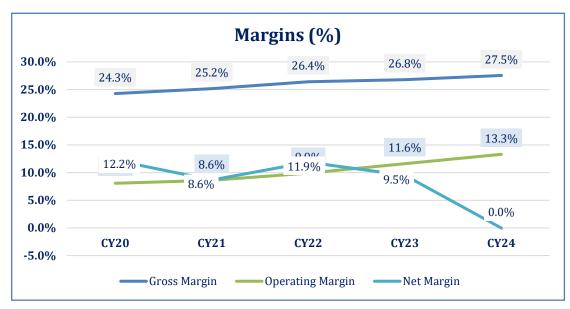
- The sector's total borrowings, as of End-May'25, stood at PKR~477.6bln, up ~32.2% YoY (End-May'24: PKR~361.4bln). Long-term borrowings as at End-May'25, stood at PKR~359.9bln, comprising ~75.4% of total borrowings and registered a ~21.1% YoY increase. Meanwhile, short-term borrowings stood at PKR~71.6bln, comprising ~15.0% of total borrowings and registered a ~148.6% YoY increase.
- The telecommunication sector benefits from a predominantly prepaid customer base. Accounts receivable largely stem from postpaid users, corporate clients, and inter-operator settlements, while accounts payable include obligations to equipment vendors, service contractors, and regulatory bodies. Inventory remains minimal, typically limited to SIMs, devices, and recharge cards.

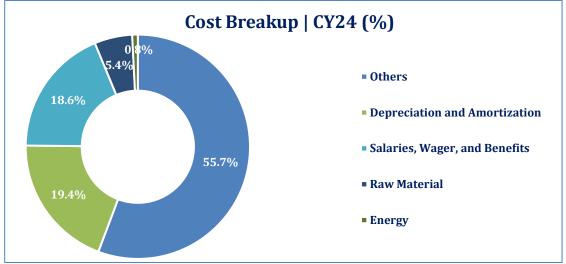




Local | Internet Service Providers

- Internet Service Providers (ISPs) are catering to a continuously expanding market in the country. The broadband segment (other than cellular internet, i.e., 3G and 4G) is classified based on the technology type, including DSL, wireless services, and FTTH (Fiber-to-the-Home) internet services.
- An internet service provider can be further classified into Tier-I, Tier-II, and Tier-III providers based on the type of internet services provided, such as bandwidth and service outreach, etc. For CY24, revenues for the segment clocked in at PKR~135.9bln (CY23: PKR~119.8bln), up ~13.4% YoY.
- During CY24, average gross margins increased to ~27.5% (CY23: ~26.8%). Average operating margins also improved and clocked in at ~13.3% during CY24 (CY23: ~11.6%). Average net margins dipped to~0.0% in CY24 (CY23: ~9.5%) on the back of higher finance costs.
- Depreciation accounted for \sim 19.4% of the total cost structure in CY24, while salaries and wages formed \sim 18.6%, whereas raw material made up 5.4%.

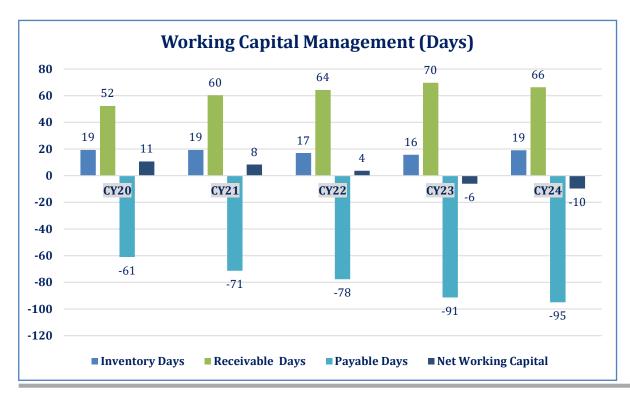


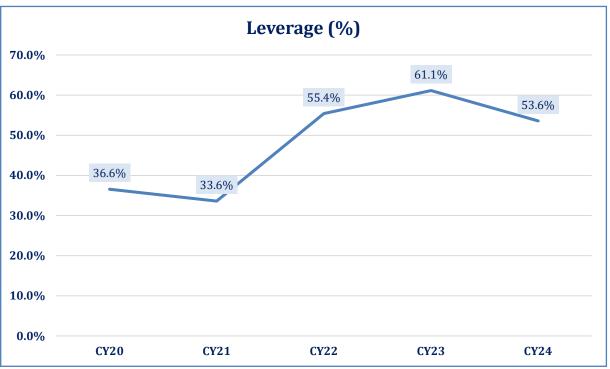




Local | Internet Service Providers

- The segment's working capital cycle is a function of days receivable and days payables. During CY24, average days receivables increased to ~66 days (CY23: ~70 days), down ~4 days while average payable days increased to ~95 days (CY23: ~91 days). Net working capital days, therefore, improved to ~(10) days as against ~(6) days during CY23.
- The segment has high leverage ratio with debt making up \sim 53.6% of the total funding (debt + equity) during CY24 (CY23: \sim 61.1%). This shows the reliance of the sector on debt, which puts the sector into medium financial risk.

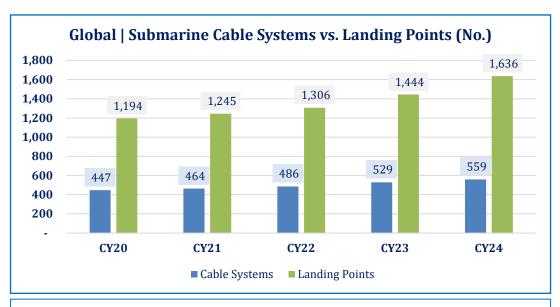


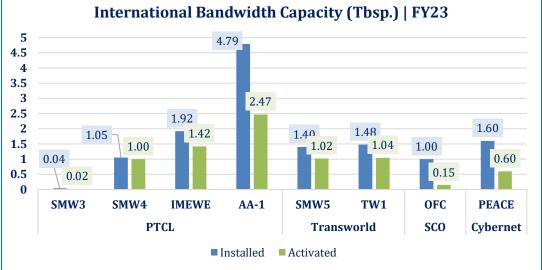


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Submarine Cables | An Overview

- During CY24, ~559 cable systems and ~1,636 landing points were recorded globally.
- As of FY23, Pakistan's telecom infrastructure comprises ~07 submarine cable connections and a Pak-China Optic Fiber Cable (OFC), enabling access to international Internet bandwidth having a total capacity of ~13.3Tbps (of which, activated capacity stands at ~7.7Tbps).
- Key players in Pakistan's international bandwidth provision include Pakistan Telecommunication Company Limited (PTCL), Transworld Associates (TWA), Cyber Internet Service Providers (Cybernet) and Special Communication Organization (SCO).
- These serve as landing points for AAE1 (Asia Africa Europe-1), IMEWE (India-Middle East-Western Europe), SMW4 (South East Asia-Middle East-West Europe 4), SMW3 (Sea-Me-We 3), SMW5 (SEA-ME-WE 5), TWA1 (connecting United Arab Emirates, Oman, and Pakistan) and PEACE (Pakistan & East Africa Connecting Europe) submarine cables.
- PTA approved the launch of operations for the PEACE submarine Cable Landing Station (CLS) in FY23, with ~96Tbps backbone, connects important global destinations spanning Asia, Africa, and Europe. Upcoming sea cables include Africa-1, SMW6 and 2Africa).







Regulatory Framework & Updates

Pakistan Telecommunication Authority: The Pakistan telecommunication Ordinance 1994, established the primary regulatory framework for the telecommunication sector 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.

4th **Generation Regulator:** The International telecommunication Union (ITU) ranked PTA as Generation 4 regulatory environment (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 of Information Technology and Telecommunication (MIOTT), Government of Pakistan (GoP) and PTA have successfully implemented the National Cyber Security Policy 2021 with a focus of establishing a secure digital ecosystem. Under the policy the regulatory body is trying to identify and implement the legislative and regulatory reforms in accordance with the security mandates defined under the policy to enable the stakeholders a safe, secure, reliable and resilient digital services.

Telecom Infrastructure Sharing Framework (TISF) | Nov'23

- The Framework provides a regulatory mechanism for licensees to share their active as well as passive telecom infrastructure in a fair and competitive manner.
- It is expected to lead to significant reductions in the cost of deploying (CapEx) and operating (OpEx) telecom networks, which will ultimately benefit consumers in the form of lower prices and better as well-enhanced services.
- Factors that paved the way for said Framework included increasing inflation, low Average Revenue Per User (ARPU), rising fuel prices, revenue challenges, massive CapEx demand for 4G & 5G expansion, connecting remote areas, and cost-effective capacity growth for nationwide coverage.
- This framework is still in implementation phase, with no amendments announced since its approval.



Regulatory Framework & Updates

Other Policies applicable to the Sector include the following:

- Deregulation (Jul'03)
- Mobile Cellular Policy (Jan'04)
- Broadband Policy (Dec'04)
- Policy Directive for Spectrum Auction for Next Generation Mobile Services in Pakistan (Oct'13)
- Policy Directive for the Unsold Next Generation Mobile Services (NGMS) Spectrum in Pakistan 2016 (Apr'16)
- Policy Directive under Section 8(2) of the Pakistan Telecommunications (Re-organization) Act 1996 for Renewal of Cellular Mobile Licenses in 2019 (May'19)

Recent Updates

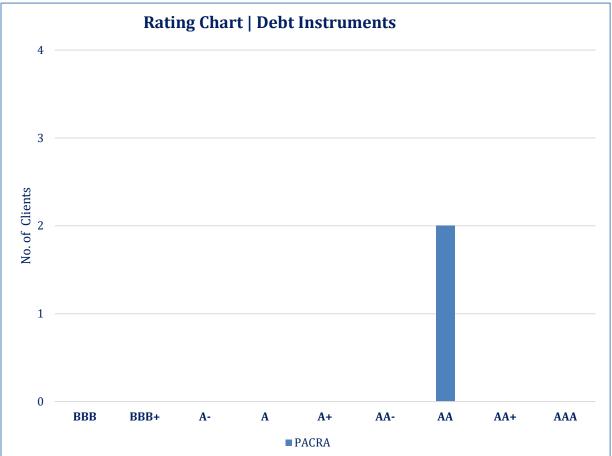
- As of early July 2025, the 5G spectrum auction has been delayed because PTCL hasn't submitted required documents to the Competition Commission of Pakistan (CCP). The Minister for IT & Telecom attributed the 5G delay to uncertainties over the PTCL–Telenor merger.
- Delays in the approval of the proposed PTCL-Telenor Pakistan merger by the Competition Commission of Pakistan (CCP), warning that further lag could jeopardize the transaction and its associated financial arrangements.



Rating Curve

• PACRA rates 4 entities in the sector. The rating bandwidth of the sector is BBB to AA. Whereas, PACRA also rates 2 debt instruments, both rated AA. VIS rates 4 PTCL short-term Sukuk debt instruments, all rated A1.





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SWOT Analysis

- Increase in 4G subscription and large customer base.
- Providing business-critical connectivity and resilience. 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.
- Low ARPU



- 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.

Threats Opportunities

- 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.



Outlook: Stable

- In FY25, Pakistan's GDP (nominal) stood at PKR~114.7trn (FY24: PKR~105.1trn), growing in real terms, by ~2.7% YoY (FY24: ~2.5% growth). The Service segment held ~58.4% share in GDP during the year. The country's nominal GDP during FY26 is projected to clock in at PKR~119.5trn with ~4.2% YoY growth in real terms, depicting economic revival. The SBP has also endorsed the government's target of 4.2% describing it as challenging but achievable, while the IMF forecast for the same stands at ~3.6%. Meanwhile, the Service segment is expected to contribute ~61.4% to the GDP in FY26.
- During FY24, the overall revenues for the sector increased by ~16.9% YoY and clocked in at PKR~955.2bln (FY23: PKR~816.8bln). The Average Revenue Per User (ARPU) Per Month pertaining to Mobile data increased by ~19.1% YoY in FY24 and stood at PKR~269.8/month (FY23: PKR~226.5/month). The number of mobile subscribers was up ~0.8% in FY24 and stood at ~192.5mln (FY23: ~190.9mln). During 10MFY25, the number of mobile subscribers picked up pace and stood at ~197.6mln, showing a ~3.2% increase as compared to SPLY. (SPLY: ~191.5mln.
- The sector's average gross profit margin clocked in at ~30.9% in CY24 (CY23: ~31.7%) due to a greater increase in cost of sales for one of the market leaders (~17.1% YoY), as compared with an increase in revenue (~14.2% YoY). The average operating profit margin decreased to ~10.9% in CY24 (CY23: ~13.5%). The average net profit margin of the sector was recorded at ~7.6% (CY23: ~4.1%) on account of an increase in other income that offset the high finance cost.
- The sector's total borrowings, as of End-May'25, stood at PKR~477.6bln, up ~32.2% YoY (End-May'24: PKR~361.4bln). Long-term borrowings as at End-May'25, stood at PKR~359.9bln, comprising ~75.4% of total borrowings and registered a ~21.1% YoY increase. Meanwhile, short-term borrowings stood at PKR~71.6bln, comprising ~15.0% of total borrowings and registered ~148.6% YoY increase.
- Going forward, the telecommunication sector revenues are expected to maintain the growth trajectory, supported by rising ARPU and gradual subscriber base expansion. Tele-density is expected to grow moderately, driven by increasing smartphone penetration and affordable data packages. While gross margins may remain stable, net margins could stay rangebound due to elevated finance costs because of a significant increase in the sector's debt stock as compared to last year. The increase will, however, be largely offset by a reduction in interest rates. Borrowings are likely to remain elevated, driven by continued network investments and spectrum-related obligations, with a higher reliance on long-term debt instruments.



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