SECTOR STUDY . DECEMBER 2023

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# Tracking Services



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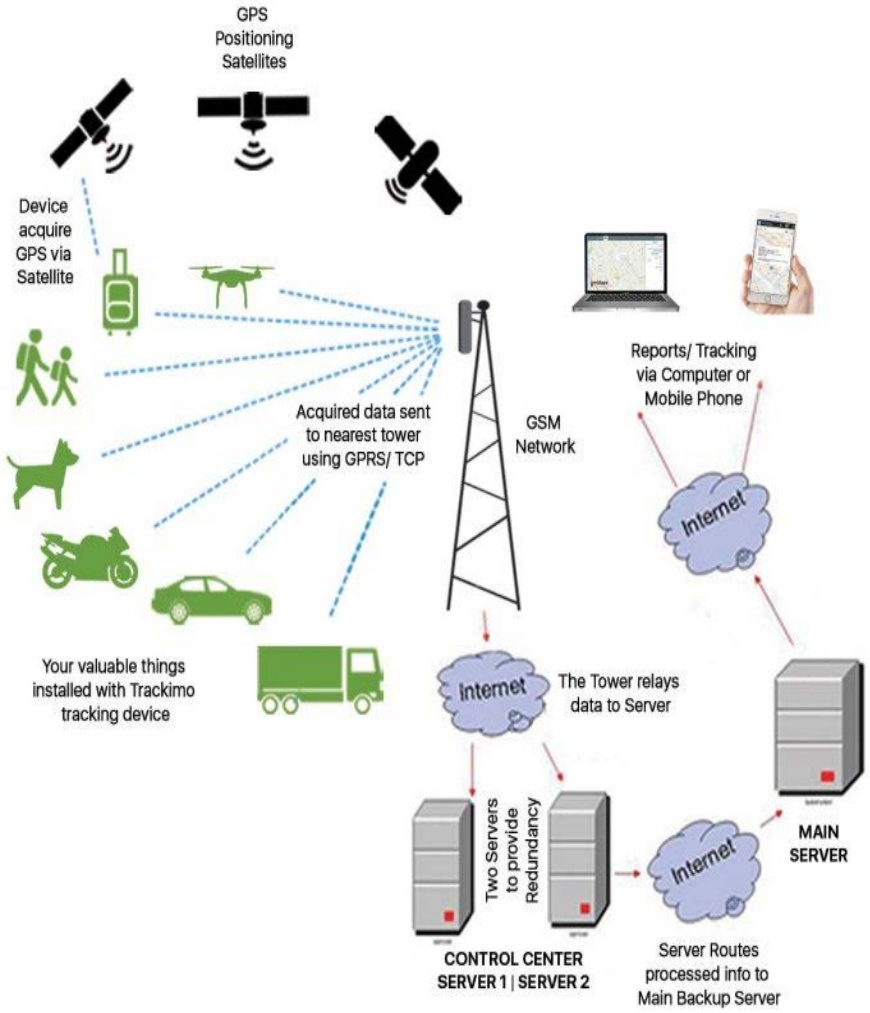
# Tracking Services

# Tracking Services

## Introduction

- Tracking Services are used to monitor the data of objects on the go. Tracking is becoming an increasingly important tool for businesses that require real-time information pertaining to vehicle fleet, personnel or merchandize.
- With this variable information, organizations are able to improve efficiency and productivity. In addition, individual users have greater degree of convenience with navigational applications, for instance, tracking their packages and deliveries when using online services.
- Tracking services are based on convergence of several technologies that can be merged to create tracking systems. These technologies include:
  - Geographic Information Systems **(GIS)** – Used for large-scale location-tracking systems, geographic information systems can capture, store, analyse and report geographic information.
  - Global Positioning System **(GPS)** – radio navigation system that allows land, sea, and airborne users to determine their exact location, velocity, and time 24 hours a day, in all weather conditions, anywhere in the world.
  - Radio Frequency Identification **(RFID)** - Small, battery-less microchips that can be attached to consumer goods, cattle, vehicles and other objects to track their movements. RFID tags are passive and only transmit data if prompted by a reader.
  - Wireless Local Area Network **(WLAN)** - A wireless local-area network (WLAN) is a group of collocated computers or other devices that form a network based on radio transmissions rather than wired connections. A Wi-Fi network is a type of WLAN.




Source: Electronics.com, Cisco, trackimo

# Tracking Services

## Global | Overview

- The vehicle tracking system market size was valued at USD~19.8bln in CY22 (CY21: USD~13.7bln) and is expected to grow to USD~22.6bln in CY23. The global GPS tracking device market is expected to grow from USD~2.6bln in CY22 to USD~2.9bn in CY23 at a compound annual growth rate (CAGR) of ~13.4%. North America is predicted to have the greatest market share of ~32.5% till 2032 and to increase at a steady rate during the forecast period (CY22-32). The emergence of smart sensors has resulted in the increased adoption of fleet management solutions technology in this region.

- Over the projection period of CY22-32, the market size of the vehicle tracking system of Asia Pacific is expected to grow at a CAGR of ~13.4%, followed by the Europe, which is expected to grow in the future at faster rate at a CAGR of ~9.0 due to self-driving vehicle adoption and shared transportation.

- Global demand for tracking services is surging due to the increasing need for safety and efficiency in semi-autonomous and autonomous vehicles. The integration of 5G technology, rising popularity of car rental services, and a heightened focus on passenger safety are the key drivers. Additionally, the global adoption of intelligent transportation systems is fueling the demand for advanced tracking solutions worldwide.

- Global players in the tracking services sector include Sierra Wireless Inc. (Canada), Atrack Technology Inc. (Taiwan), TomTom International B.V. (Netherlands), Orbcomm Inc. (US), Shenzhen Concox Information Technology Co. Ltd. (US), Meitrack Group (China), and Global Tracking Group, LLC (US). Each brings unique expertise and innovation to the industry.

Source: Yahoo.Finance, Global Newswire, Fact.MR

# Tracking Services

## Market Segmentation

### By Type

**Passive Tracking**: Passive tracking unit gathers data that needs to be downloaded from the tracker. During the forecast period (CY20-31), the passive type segment is expected to grow at a CAGR of ~9.4%.

**Active Tracking**: Active tracking units collect the data and transmit in near-real-time via cellular or satellite networks to a computer or data center for evaluation. This segment dominates the market, and is expected to grow at the fastest rate of ~14.6% by CY30.

### By Technology

**GPS/Satellite**: Global Positioning system is a navigation technology reliant on a satellite system based in space. It is anticipated to record the highest CAGR of ~15.7% over the forecast period. The expansion can be attributed to increased sales of commercial vehicles and the adoption of cloud technology and loT in the healthcare, automotive, logistics, and defense industries.

**GPRS/Cellular Networks**: GPRS vehicle tracking system uses the data network to transmit information. The market is segmented by technology type into GPS/satellite, GPRS/cellular network, and dual-mode.

### By Vehicles

**Passenger Car**: Tracking systems used in consumer vehicles as a theft prevention, monitoring and retrieval device. Using a tracking system by app-based transportation and renting business like Ola, Uber, Careem and Lyft.

**Commercial Vehicle**: Tracking system implemented by businesses with fleet operations in industries like transportation, construction, specialty services, delivery etc. Increased domestic and international logistical shipments via road transport are anticipated to contribute in the growth of this segment.

### By Application

**Software**: Software are customized to provide insight into fleet activity and operational performance. Tracking software includes features such as fleet analytics, real-time alerts for traffic and maintenance, vehicle diagnostics etc.

**Hardware**: Small unit or device fitted to the vehicle which transmits data via satellite or cellular network.

Source: straitsresearch, Data Bridge Market Research

# Tracking Services

## Applications of Tracking Services

Comprehensive real-time location tracking and analytics solutions put geographical and location data to good use by extracting valuable insights. These insights can be used in a variety of applications, few of which are stated as follows –

- **Driver Behaviour Analysis**: Driving behaviour scoring algorithms help customers ensure that the drivers follow their rules and maintain driving excellence.
- **Advance Fleet Management**: Utilizing evolutionary algorithms that incorporate actual delivery time and other real-time data for daily route calculation, increasing efficiency and reducing overall mileage and fuel costs.
- **Container/ Shipment Tracking**: Container tracking product tracks and monitors containers and provides critical supply chain visibility and security, transforming trip data into billing and insurance records.
- **Location-based Advertising**: Proximity marketing uses beacons and mobile infrastructure to locate customers and collect data about their movements. This data is used to analyse customer behaviour and patterns in order to enhance their shopping experience by providing them suggestions on what they might need.
- **Navigation & Route Planning**: With route planning and navigation services, customers can make their driving path more efficient and more optimal, using real time traffic information such as accidents and construction zones.
- **Usage-based Insurance**: Utilizes telematics devices installed in customer vehicles to allow the insurance company to monitor driving habits.
- **Predictive Maintenance**: Telematics devices collect an enormous amount of fuel system data and engine data such as engine revolutions per minute, engine oil level, transmission, mileage driven, tire pressure, and more. Based on all the engine data and the historical records of maintenance and repair, predictive analysis provides with precautionary breakdown and maintenance notifications, as well as the recommended solutions.

# Tracking Services

## Local | Demand Drivers

- **Automobile Sales:** The tracking services sector derives a significant portion of its demand from the automobile industry as vehicle tracking is the most commonly used application of tracking technology. During FY23, automobile sales, comprising cars, buses & trucks, dipped by ~(58.2)% YoY as against FY22 (~54.7%) due to the import restrictions and overall economic slowdown.
- **Online Applications:** There is an increasing trend of service delivery apps catered towards providing consumers with maximum convenience. COVID-19 outbreak has further augmented this trend as various restrictions made consumers reliant on apps for delivery of food, groceries and other items. Tracking services within these apps enable users to keep tabs on the status of their deliveries.
- **New Business Opportunities**: Connected cars, SAAS (Software as a Service) Products - Location Based Services Platform (Enterprise Location APIs) and DART (configurable location and monitoring management solution).
- **Cargo-Tracking:** The development and initiations in Inter-port movement, selected Transshipment cargo for FATA/PATA & Aza-Khel dry ports resulting in approx. 25,000 containers annually, roll-out to other dry ports such as Sialkot dry port, Faisalabad dry port, Islamabad dry port.

Source: PAMA, TPL Trakker Briefing

# Tracking Services

## Local | Overview

- The Tracking Services Sector is a sub-segment of both the broader technology and logistics industries. The Sector is a mix of both product and service-based/solution providers.
- Sector's gross revenue registered ~7.0% YoY increase during FY23, registering at PKR~5,365mln. For the 3MFY24 period, this stood at PKR~1,619mln as against PKR~1,266mln in SPLY.
- Only one firm (TPL Trakker Limited having ~42% market share*), providing tracking services in the country, is listed on the Pakistan Stock Exchange, while the rest are private firms.

| Overview | FY22 | FY23 | 3MFY23 | 3MFY24 |
|---|---|---|---|---|
| **Gross Revenue (PKR mln)** | 5,014 | 5,365 | 1,266 | 1,619 |
| ***Revenue Growth**** | *11.7%* | *7.0%* | *12.7%* | *27.9%* |
| **Contribution to GDP (%)** | 0.01% | 0.01% | 0.01% | 0.01% |
| **Car Sales (units)** | 234,180 | 96,811 | 39,700 | 20,871 |
| **Truck Sales (units)** | 5,802 | 3,182 | 1,109 | 608 |
| **Bus Sales (units)** | 696 | 654 | 210 | 122 |
| **Structure** | Competitive | | | |
| **Regulator** | PTA | | | |
| **Associations** | PAMA | | | |

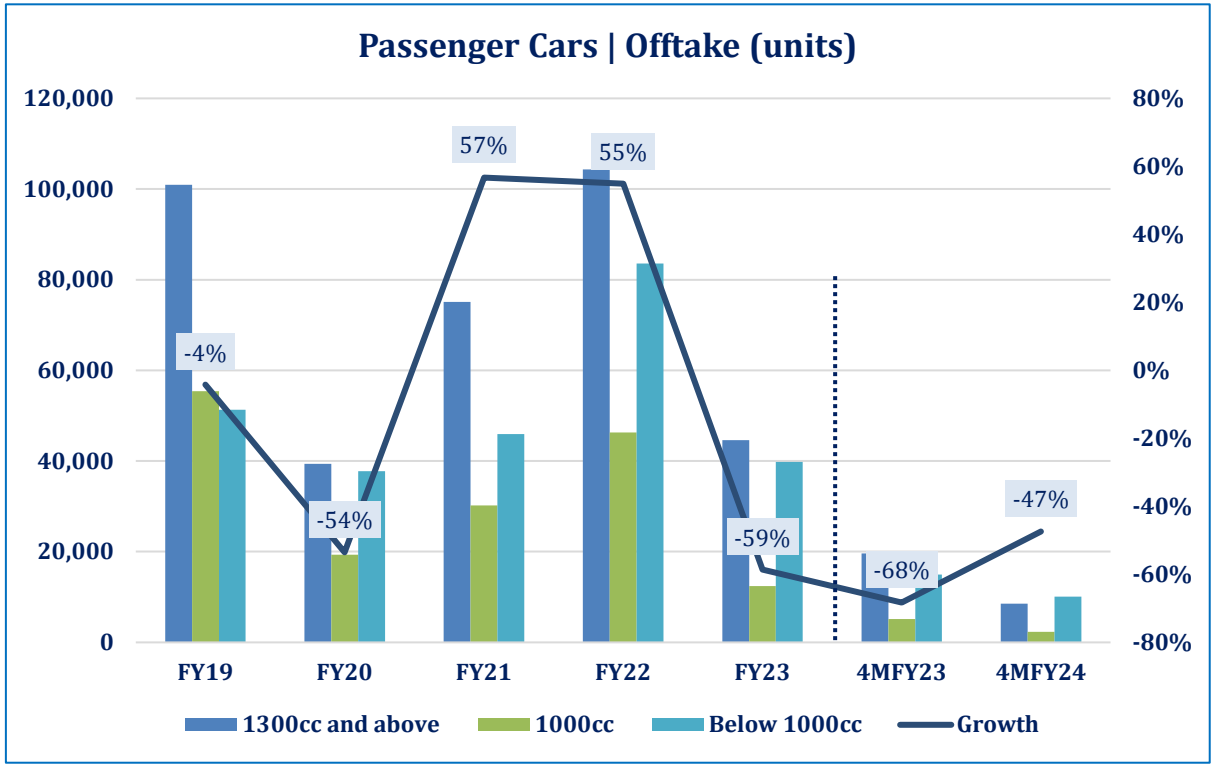
***Note:*** *Figures for Gross Revenue are estimated using ~1 PACRA-rated/ listed Sector player. *As stated by the Sector player.*

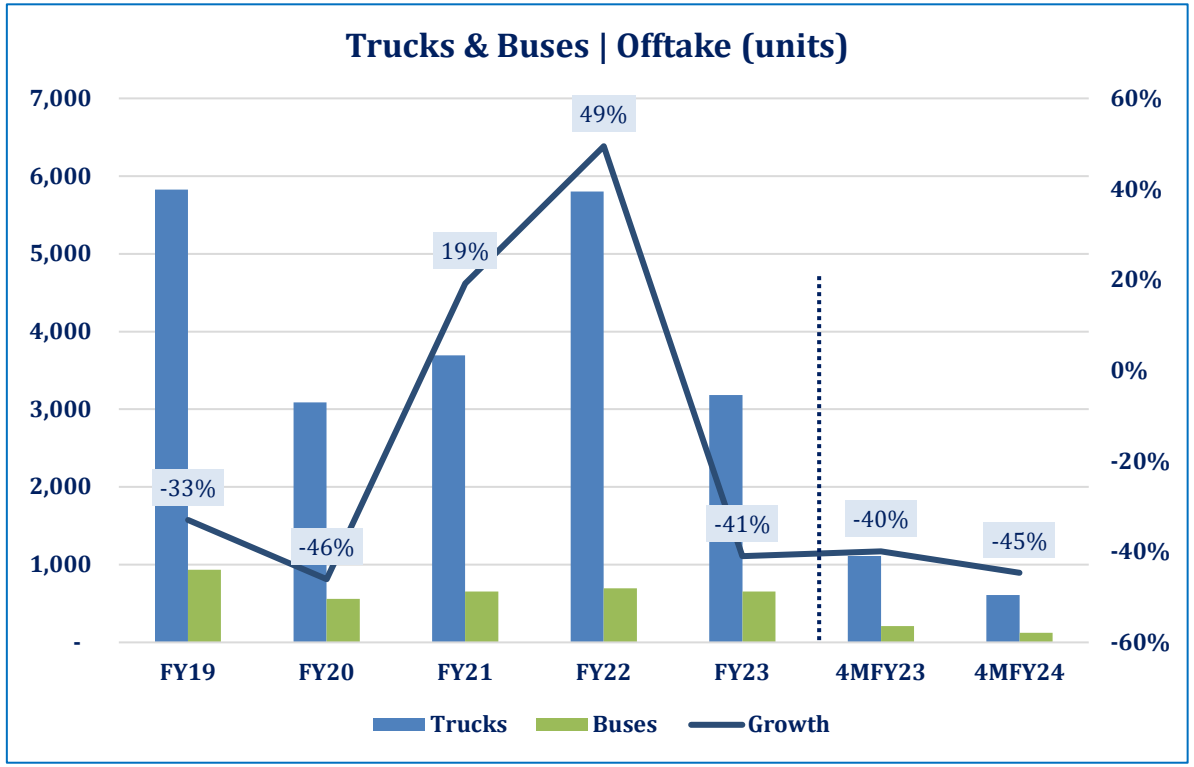
Source: PTA, PAMA PACRA Database

# Tracking Services

## Local | Automobile Offtake

- During FY23, cumulative units including cars, buses and trucks sold were recorded at ~100,647, registering a dip of ~58.2% YoY (FY22: ~54.7% growth). Passenger cars offtake reached ~20,871 units during 4MFY24 as compared to ~ 39,700 units in SPLY.
- During 4MFY24, there has been a significant drop in the offtake of trucks, buses & cars by ~45.2%, 41.9% and 47.4% respectively. Collectively, the whole segment observed a dip by ~47.3% in 4MFY24 (SPLY: ~-39.9%).




***Note**: SPLY is short for Same Period Last Year.*

Source: PAMA

# Tracking Services

## Local | Business Risk

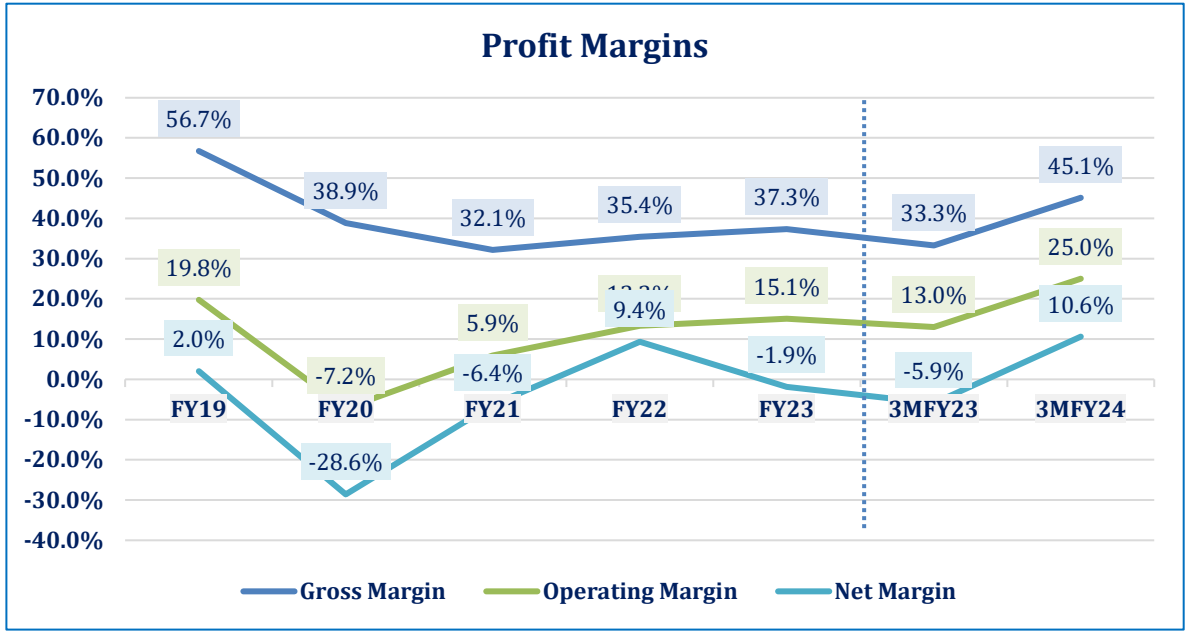
- **Increasing Competition:** The increase in competition within the tracking services sector is exhibited by the steady growth in the number of CVAS licenses issued by the Pakistan Telecommunication Authority (PTA) each year. Collectively, the PTA has issued ~112 CVAS licenses to Tracking vehicles till September 2022.
- **B2B Model:** Since many players within the industry are involved in providing services to other businesses, their demand depends on conditions in these client industries. If the overall economy, or any client industry or sector is not doing well, it would hamper the creation of new demand for the players providing tracking services.
- **Digital Literacy:** Mobile phone usage in Pakistan has increased exponentially in recent years and has resulted in increased digital literacy among the population. However, the majority of population, particularly those residing in rural areas or belonging to low income groups, remain lacking in digital literacy particularly regarding advanced technologies. As a result, this limits or restricts the potential of the tracking services market catered towards consumers.
- **Interest Rate:** As the Sector is highly leveraged and dependent on the offtake of automobile industry. Increase in policy rate would affect the financing of cars and a higher finance cost will put a strain on profitability.
- **Data Privacy Infringement:** Data related to vehicle contain sensitive information, such as vehicle make, drivers' personal details, and routes traversed. The data can be exploited for carrying out malicious or criminal activities. Data privacy infringement is a major reason discouraging end customers from using vehicle tracking systems.
- **Imported Raw Material:** Impact on revenue due to disruption in supply chain as the industry is heavily dependent on import of raw material from China and USA. Also, the volatility of exchange rate and the depreciation of PKR can affect the profitability of the industry.
- **High R&D Costs:** In order to ensure competitiveness and prevent technological obsolescence in the future, there is need for significant research and development in the industry. As a result, the R&D costs of the industry can be quite high and many R&D projects may not result in fruitful outcomes as desired.

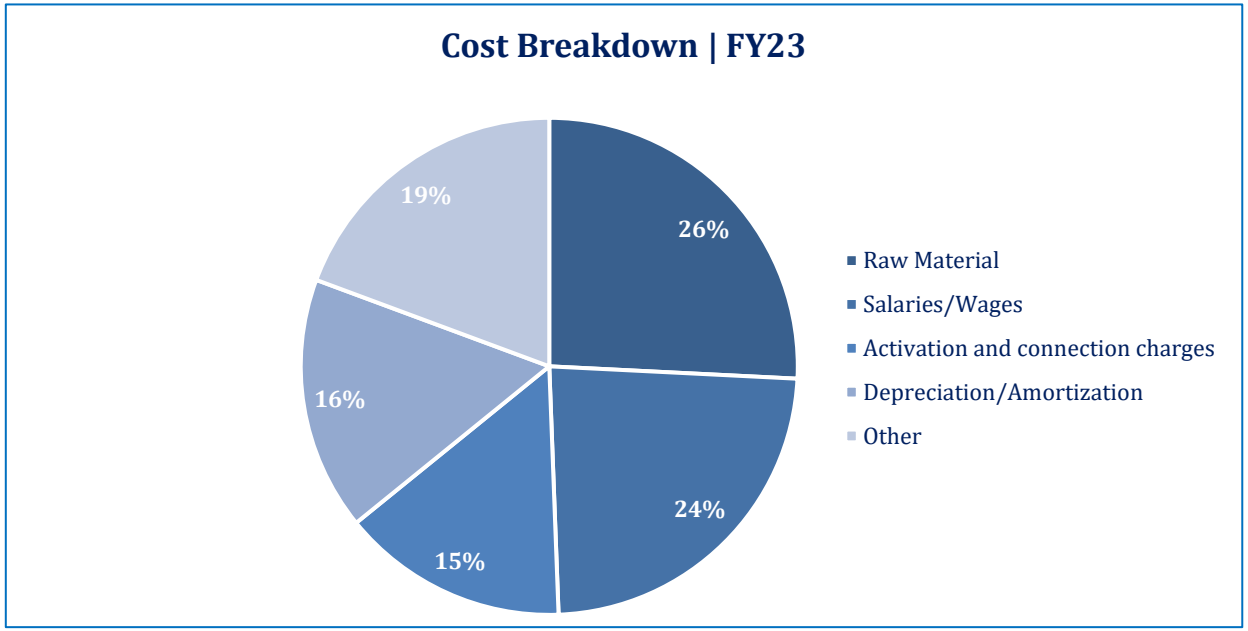
Source: PTA

# Tracking Services

## Business Risk | Margins & Cost Structure

- The Sector's gross margins declined to ~35.3% in FY22 since FY19 (~56.7%), falling at an average CAGR of ~8.0%. However, for FY23, gross margins increased to ~37.3%, compared to ~35.3% in FY22. For 3MFY24, the margins increased to ~45.1%, compared to ~33.3% in the same period last year. This was mainly due to the STE (Safe Transport Environment) segment contributing ~46% in the Sector player's revenue, whereas the Industrial Internet of Things (IOT) far exceeded expectations by achieving ~211% growth over the last year.
- Operating margins also improved by ~15.1% in FY23 (FY22: ~13.3%) on account of improvement in the topline. However, net margin is sharply slashed to ~(1.9%) in FY23 (FY22: ~9.4%) due to an increase in finance cost by ~63.8%. During 3MFY24, the operating margins clocked in at ~25.0% (SPLY: ~13.0%), while the net margin was recorded at ~10.6% (SPLY: ~(5.9%)), due to an ease in import in restrictions and stabilizing the dollar rate.
- The largest component of direct costs for the Sector is Equipment and Salaries & Wages, which contributed ~50% to total direct costs as the requires technically-proficient and skilled labor force.




*Note: Margins and cost figures are reflective of a single listed player.*

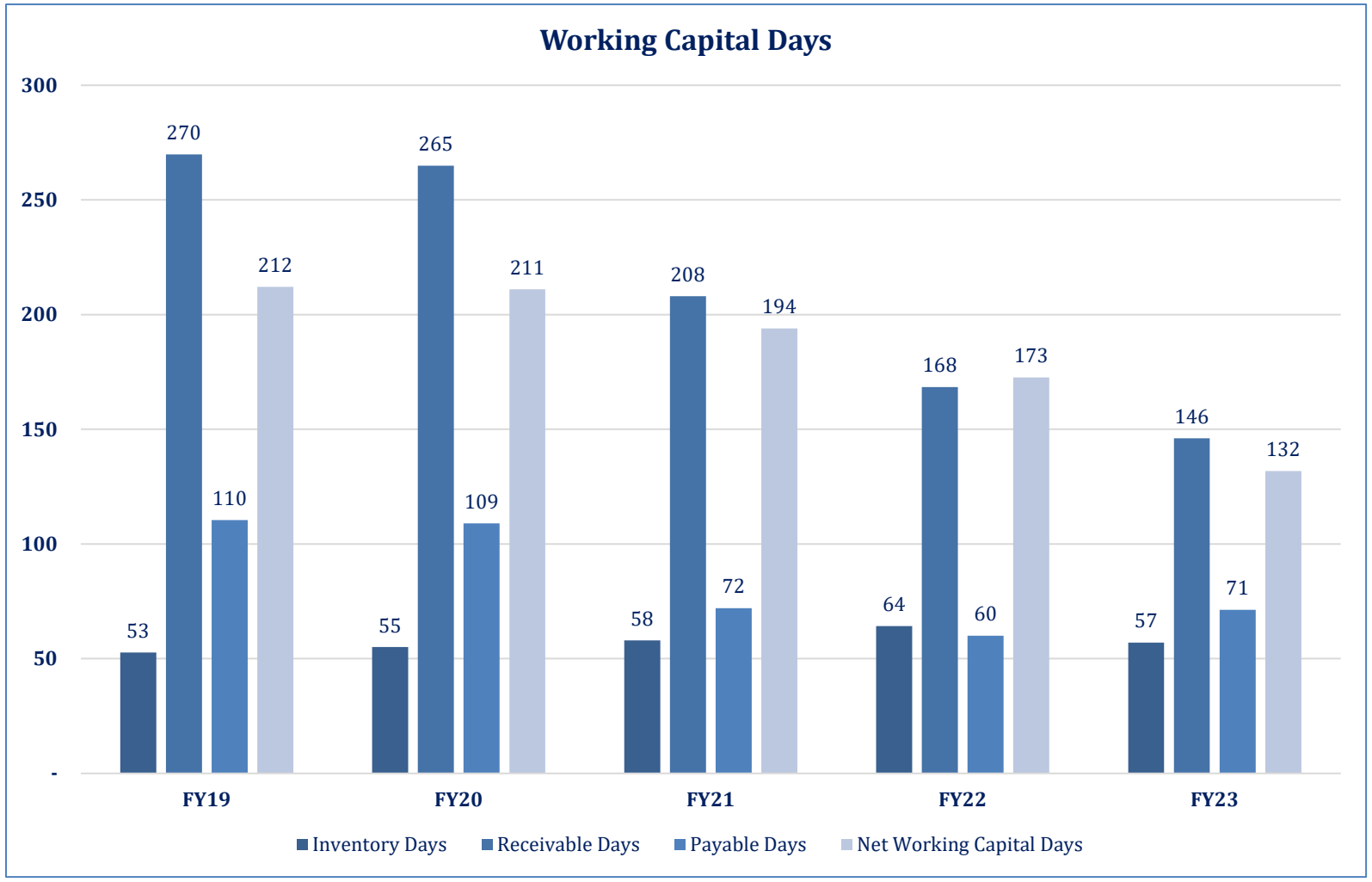
Source: PACRA Database

# Tracking Services

## Financial Risk | Working Capital Management

- The net working capital cycle of the Sector, on average, was close to ~200 days during the period from FY18-FY22. The longer operating cycle is due to the credit policy adopted by the Sector, as the subscriptions are mostly renewed on quarterly or annual basis. There is a continuous dip in net working capital days since FY19.

- In FY23, the receivable days declined from ~168 days to ~146 days, whereas payable days increased from ~60 days to ~72 days. The net working capital, therefore, registered a decline to ~132 days (FY22: ~173 days).



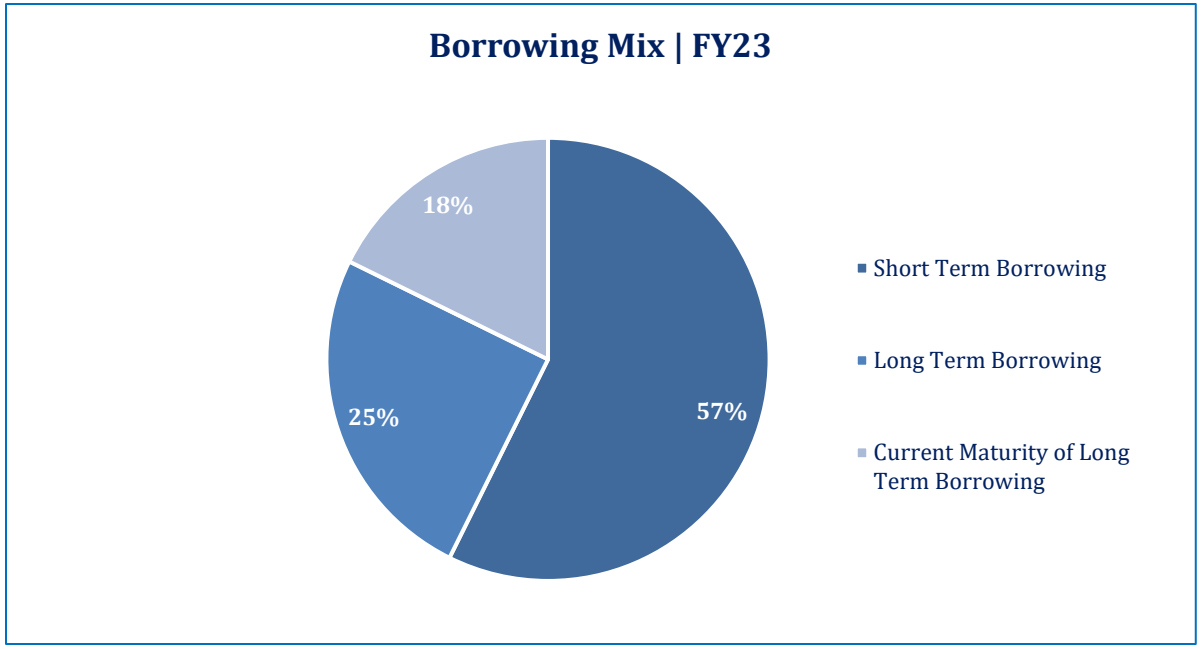

***Note**: Working Capital Days are reflective of a single listed player.*

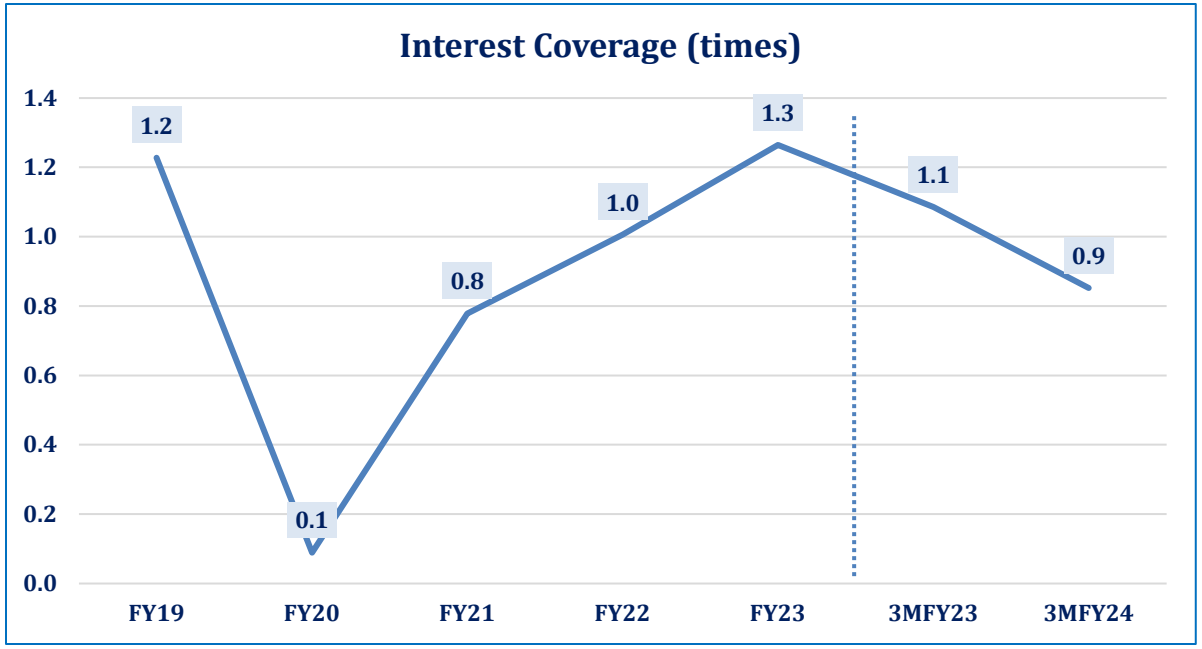
Source: PACRA Database

# Tracking Services

## Financial Risk | Borrowings

- The Sector's total borrowings stood at PKR~4,543mln at the end of FY23 as compared to PKR~5,733mln at the end of FY22, a YoY decrease of ~20.8%. During FY23, long-term borrowing stood at PKR~1,133mln (FY22: PKR~ 1,039mln). Meanwhile, short-term borrowing stood at PKR~2,605mln (FY22: PKR~964mln). In addition, current maturity to long-term borrowing recorded at PKR~805mln (FY22: PKR~ 405mln).
- Short-term borrowings comprised the major chunk of ~57.2% (FY22: ~35.5%) in total borrowings, followed by long-term borrowing with ~24.9% share (FY22: ~32.8%) and CMLTB making up ~17.7% (FY22: ~31.7%) in FY23. The Sector has an average leverage ratio of ~56.6% during (FY19-23), indicating a moderate to high level of financial risk.
- Due to considerably high finance cost, interest coverage remained low. For FY23, it clocked in at ~1.3x, compared to FY22, when it was recorded at ~1.0x. In 3MFY24 to, it came down to ~0.9x (~1.1x in 3MFY23; ~1.5x in 3MFY22).




*Note: Borrowing figures are reflective of a single listed player.*

Source: PACRA Database

# Tracking Services

## Local | Regulatory Framework

- Businesses involved in the tracking services industry must get a Data Class Value Added Services (CVAS) License from the Pakistan Telecommunication Authority (PTA). This license covers two main services: vehicle tracking and internet/data services.

- The table nearby shows the initial fees for getting this license. Besides, companies need to pay an Annual License Fee, which is 0.5% of their yearly income from the services covered by the license. For non-profit CVAS licenses, the Annual License Fee is fixed at PKR 5,000 per year.

| Initial License Fee | Nationwide | Provincial* |
|---|---|---|
| Commercial | PKR 300,000 | PKR 100,000 |
| Non-Profit | PKR 150,000 | PKR 50,000 |

**50% reduction in commercial rate for Baluchistan*

- The process of obtaining the license includes submitting relevant documents to the PTA including Memorandum & Articles of Association, along with a Technical Network Plan which lays out detailed technical architecture showing mechanism for service delivery. The CVAS License is valid for a period of fifteen years.

- After obtaining the license, the organization must also obtain a commencement certificate which is issued after an inspection of the organizations network and equipment.

Source: PTA

# Tracking Services

## SWOT

- Conducive environment due to presence of IT Parks, Tech SEZs and start-up Incubators.
- Large population with access to smartphones.
- Technology based ventures using tracking services including delivery services.
- Availability of skilled workers.

- B2B players are dependent on conditions in client industries and sectors such as the automobile industry.
- Low level of digital literacy amongst a portion of the country's population, particularly in rural areas.
- High R&D costs in order to maintain competitive advantage.


- Technological obsolescence, if new technology is introduced.
- Increasing level of competition in the industry may further reduce margins.
- Increase in policy rates can significantly impact the industry's bottom line.

- Growing urbanization and digital literacy has increased demand for online services, apps and e-commerce platforms.
- Introduction of new players in automobile segment has expanded the market for vehicle tracking services.
- CPEC projects and SEZs expected to increase demand for cargo tracking and fleet management.

# Tracking Services

## Outlook: Stable

- Pakistan's economy posted a real GDP contraction of ~0.17% in FY23 (FY22: ~6.1% growth), while the LSM declined by ~10.3% YoY (FY22: ~11.8% growth), owing majorly to supply-chain disruptions which resulted from SBP-imposed import restrictions and sluggish demand across major industrial sectors of the country due to high inflationary levels.
- In FY23, Pakistan's Tracking Services Sector grew by ~7.0% in terms of gross revenue, which recorded at PKR~5,365mln during the year (SPLY: PKR~5,014mln). However, the Sector's net margins declined to ~1.9% from ~9.4% in the previous year and can be attributed to a substantial ~58.2% decrease in Auto and Allied sales, notably affecting the Sector's performance. Passenger cars' offtake fell to ~96,811 units during FY23 (SPLY: 234,180 units) (or ~58.7% YoY) significantly impacting the overall sales figures and the Sector's net margins.
- Meanwhile, Sector's gross margins increased to ~37.3%, compared against ~35.3% in FY22. This was mainly due to the STE (Safe Transport Environment) segment contributing ~46% to the Sector player's revenue, whereas the Industrial Internet of Things (IOT) far exceeded expectations by achieving ~211% growth over the last year. Operating margins also improved to record at ~15.1% in FY23 (SPLY: ~13.3%), with the increase in revenue offsetting the increase in administrative expenses. However, net margin declined sharply to ~1.9% in FY23 (SPLY: ~9.4%) due to an increase in finance cost by ~63.8% YoY. For 3MFY24, Sector's gross margin increased to ~45.1%, compared to ~33.3% in same period last year. Meanwhile, operating margin clocked in at ~25.0% (SPLY: ~13.0%), whereas the net margin was recorded at ~10.6% (SPLY: ~-5.9%), due to ease in import in restrictions and stabilizing local currency.
- The Sector's total borrowings stood at PKR~4,543mln at the end of FY23 as compared to PKR~5,733mln at the end of FY22, a YoY decrease of ~20.8%. Short-term borrowings comprised the major chunk of 57.2% (FY22: ~35.5%) in total borrowings, followed by long-term borrowing with ~24.9% share (FY22: 32.8%) and CMLTB making up ~17.7% (FY22: ~31.7%) in FY23. The Sector has an average leverage ratio of ~56.6% during (FY19-23), indicating a moderate to high level of financial risk. Due to considerably high finance cost, interest coverage remained low. For FY23, it clocked in at ~1.3x, compared to FY22, when it was recorded at ~1.0x.
- With the economy expected to grow ~2-3% during FY24, improvement in the local Automotive industry on the back of lower fuel prices, relaxation on imports and overall slowing inflationary pressures, whilst also taking into account Sector player's efforts to diversify revenue streams, particularly through segments like Safe, Transport and Environment (STE), the Sector's performance is likely to improve during the year, paving the way for gradual recovery and growth.

Source: PAMA, SBP, PBS

# Tracking Services

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