

## A Site Visit Report

Our analysts were invited to join Media & Analyst Gathering held by Electrum & PTPP IJ in Bali (19-21 October 2022).

The key theme for Electrum : Sustainable Transportation Forum & Inauguration of Electrum Support for the G20 Summit, whilst key agenda for PTPP IJ include : 1) earnings call & 2) company's project portfolio updates. This report summed up our analysts takes from 3-days site visit to Bali. For further information and insights please read the full report our analysts have provided from page 2-10.



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## Summary of PTPP IJ Construction Project Updates

PT PP (Persero) Tbk (PTPP IJ), a state owned construction company (51% stake owned by GoI) has obtained 3 contracts from government : 1) Benoa Cruise Port Development; 2) Pura Besakih Revitalization Project and 3) KEK Sanur Development Project located in Bali with the total value of IDR1,219bn. Our takes from site visit activities are summed up as follows :

- PTPP IJ received package B design and dredging work for Benoa port. This project is valued at IDR552bn in FY21 and is estimated to be completed in 3Q23F, by the time we visited the site, the progress had been 43.7% of the completion target.
- PTPP IJ obtained Pura Besakih Revitalization Project worth of IDR378bn with progress reaching 66.15% of the target completion on Dec-22.
- PTPP IJ obtained a SEZ Sanur Development Project. SEZ Sanur is the first health and tourism area in Indonesia. This project has a total investment value of around ~IDR10tn, of which PTPP IJ received a project value of IDR289bn. The progress of the work has been running at 84.4% of the completion target on November-22.

PTPP IJ has obtained IDR17,583tn of marketing contracts (~8.4% IKN & ~91.6% Non-IKN) as of October 21, 2022, implying a run rate of ~56.7% FY22E target. CAPEX realization hit IDR2,341bn (+53.5% YoY/53.5% FY22E run rate) in 8M22. In addition, as of Jun-22, company has IDR 5,390bn, equivalent to 45.7% of ST Debt coverage. Expecting a more conservative for FY23F CAPEX allocation as liquidity tighten and there will be a maturing bond of IDR460bn on July 6, 2023 (SR Bond II Phase I Series B).

Our valuation for PTPP IJ deriving from P/E 40.9x/33.4x and P/B 0.49x/0.45x in FY22E/FY23F implying a Price Target of IDR1,100/share. Valuation risk : 1) deteriorating economic performance in FY23F due to monetary tightening; 2) switching budget priority to support consumers purchasing power rather than infra project; 3) valuation de-rating due to rising risk free rate and risk premium.

## Summary of Electrum 2-Wheel EV Project Updates

Electrum, a JV between PT GoTo Gojek Tokopedia Tbk (GOTO IJ/Not Rated) and PT TBS Energi Utama Tbk (TOBA IJ/Not Rated) is a pioneer in 2-wheel EV in Indonesia. Electrum commits to support energy transition by providing zero emission EV. Albeit still in pilot project, Electrum has rolled out the adoption of EV through : 1) deployment of Gogoro & Gesits EV-brand for driver partner operational in South Jakarta & 2) providing an eco-friendly mode of transportation for G20 Summit in Bali. Our takes from site visit activities are summed up as follows :

### South Jakarta EV Adoption Roll Out :

- >500 units of Gogoro & Gesits were deployed to driver partners operational in South Jakarta through a lease scheme. Since its launch in earlier this year through Sep-22 (~8 months), both 2-wheel EV hit the milestone of >4mn km through GoRide Electric service.
- The adoption of 2-wheel EV has gained traction from customers of GoRide Electric. Management said that from each of 1mn Km milestone, carbon emission (CO2) reduction is equivalent to 85 ton (~340 ton equivalent to 4mn Km).

### G20 Summit Project:

- In the Nov-22 G20 Summit, Electrum will provide 50 electric motorcycles (Gogoro and Gesits brands) with 6 drop off points integrated with electric vehicle stops from the Ministry of Transportation and 5 shuttle points that can be used by G20 summit delegates as a mode of transportation around conference location. Electrum will also provide 10 electric motors to assist the operations and mobility of representatives of the Ministry of Transportation.

Electrum aspires to support government in driving forward 2-wheel EV ecosystem by covering end-to-end solutions through : 1) vehicle design and manufacturing; 2) distribution, after-sales as well as financing and 3) battery infrastructure network. Hence, unlike the other existing players started with pilot project rollout and collaborate with supporting players from manufacturers to infra providers.

Albeit that the industry is still small and facing challenges from : 1) infrastructure readiness and 2) appropriate business model and still need government support. Players enthusiasm is rising reflected by more than 40 EV-brands available in Indonesia and expecting more players to come. However, Electrum has superiority compared to other players as it has a more complete key elements to establish a more integrated ecosystem : 1) inside GoTo's ecosystem with Gojek has >2mn drivers partners that could be the captive market and Bank Jago that may be the financing partner in the future; 2) partnership with Pertamina to provide infrastructure; 3) better strategy to penetrate the market starting from the pilot project project to gain deeper insight of customers need and better strategize in the Indonesia's dynamics market.

## PTPP IJ : Progress from the Involvement in Government Project

### About Benoa Port & Bali Maritime Tourism Hub (BMTH)

Benoa Port is part of Bali Maritime Tourism Hub (BMTH) that is expected to be completed by 2023F. The ultimate BMTH masterplan adapts to major zoning divisions include the yacht zone terminal, tourism zone, fishing zone, bulk zone for liquid and container. The regulatory basis of this projects are :

- Benoa Port Development in accordance with Presidential Regulation Number 18 of 2020 concerning National Medium Term Development Plan 2020-2024.
- Superhub Development Program in accordance with Presidential Regulation of the Republic of Indonesia Number 109 2020 in the Third Amendment of Presidential Regulation Number 3 of 2016 concerning Acceleration of National Strategic Project Implementation.

This project is expected to give benefit for government through :

- Additional GRDP of the Bali Province,
- An increase in the average contribution of domestic & foreign tourists expenditure,
- An increase in direct and indirect taxes,
- The potential for adding an economic multiplier effect of 2.7 times the total investment, as well as
- Acceleration of infrastructure/connectivity development in the Eastern part of Indonesia.

This project is expected to give benefit for society through :

- Growth of maritime & tourism in Bali and other destinations,
- Workforce absorption of approx. 1,925 through labor intensive investment project.
- Support MSMEs in Bali and other destination areas.

### Exhibit 1. Bali Maritime Tourism Hub Masterplan



Source : House of Representative Document

### Benoa Port Project Updates

PTPP IJ has received a project for Benoa Port Development in FY21 from PT Pelindo as project executor as well as port operator with the value worth of IDR552bn (~10% of ~IDR6tn project value). Scope of work include : design, dredging Benoa Ponds and Channels as well retaining wall. The source of funding for this project comes from PMN. PTPP builds in dumping area 1 which will later develop into; 1) Yacht club; 2) sport center; 3) fish market; 4) garden line and 5) SMEs retail. **This project is estimated to be accomplished in 3Q23F. As of our analyst visit, the project progress has reached 43.7% of the completion target.**

### Exhibit 2. Analyst Site Visit Documentation



Management explained the progress of work at Benoa port which had reached 43.7% until Sep-22. This project will later become an exclusive area for private yachts.



We were invited to see the dredging process of the Benoa project. The ship dredged from around the port area and transferred to the dredged shelter.

Source : MNCS Analyst Documentation

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### About Pura Besakih

Pura Besakih is a temple complex located in Besakih Village, Rendang District, Karangasem Regency, which is 52.1 km from Renon. Besakih Temple is located on the western slope of Mount Agung, the highest mountain in Bali. Pura Besakih Complex consists of 1 Central Temple (Penataran Agung Besakih Temple) and 18 Companion Temples (1 Basukian Temple and 17 Other Temples). It is named as the mother of temple as it becomes the center of activity for all temples in Bali. Besides its function as the worship place for Hindu's, Pura Besakih is also one of both local and international tourists destination in Bali. Prior to Covid-19 pandemic, Pura Besakih was visited by ~700 tourist/day. Currently, Pura Besakih is under revitalization program. The revitalization program was carried out by the Ministry of Public Works and Housing through the Directorate General of Human Settlements with a design and build mechanism covering the Manik Mas Area in the form of a 4-storey parking building with an area of 55,201 m<sup>2</sup> and a capacity of 66 buses, 1,369 cars, 18 large kiosks, and 12 small kiosk units. Then the arrangement of the Bencingah Area in the form of 358 kiosks with a building area of 7,587 m<sup>2</sup> includes 196 large kiosks (4 m x 6 m) and 162 small kiosks (2.5 m x 3 m). The construction is targeted for completion by the end of 2022 and will be open to communities in 2023.

### Pura Besakih Revitalization Updates

PTPP received a project on Jul-21 from the Ministry of Public Works & Housing. PTPP is in charge of designing and building (design and build) in the arrangement of the Besakih Temple area. This project SoW consists of: 1) a car park development; 2) the construction of an MSME shop and 3) road development. **PTPP IJ obtained Pura Besakih Revitalization Project worth of IDR378bn with progress reaching 66.15% of the target completion on Dec-22.**

#### Exhibit 3. Pura Besakih Revitalization Progress



PTPP builds main road facilities in the Pura Besakih Area



PTPP builds Manik Mas building, which will be used as a vehicle parking facility.



Project overview pura Besakih. Management targets December 2022 for this project to be completed. currently the progress has reached 66.15%.

Source : MNCS Analyst Documentation

### About Sanur Special Economic Zone (SEZ)

Gol continues to develop Special Economic Zones (SEZs) in response to economic and technological dynamics. Gol is preparing to build the Sanur SEZ located in Denpasar City, Bali Province. As the first Health SEZ in Indonesia, SEZ of Sanur is aimed to be the answer to the many Indonesian citizen who prefer to get medical treatment abroad due to the limited health facilities in Indonesia. The approval of the Sanur SEZ was given at the SEZ National Council session led by the Coordinating Minister for Economic Affairs Airlangga Hartarto on July 22, 2022. With the approval of the Sanur SEZ proposal, Gol expects it can improve the economy as well as improve existing health facilities in Indonesia. In 2030, it is projected that around 4% to 8% of Indonesia's population who previously sought medical treatment abroad will seek treatment at the Sanur SEZ, with total patients in the range of 123-240 thousand people. In nominal terms, it is projected that by 2045 the total fx savings generated will reach IDR86tn, and the total additional fx income in the same period will reach IDR19.6tn.

The proposed Sanur SEZ located in Denpasar City, Bali Province is a Health and Tourism SEZ with a business plan for health facilities (hospitals and clinics), hotel accommodation and MICE, Ethnomedicinal Botanic Garden, and Commercial Center. The total area of the proposed land is 41.26 Ha on behalf of PT Hotel Indonesia Natour (PT HIN), has an investment value of IDR10.2tn with a target of employment of 43,647 people. Currently, there is an investment commitment from PT Pertamina Bina Medika (IHC) for the construction of an international hospital in collaboration with the Mayo Clinic. This international hospital will have the latest state-of-the-art equipment and bring in the best domestic doctors who work closely with health workers and foreign doctors in order to realize knowledge transfer.

### Sanur SEZ Project Updates

PTPP received a project from PT Pertamina Bina Medika and PT Hotel Indonesia Natour for the development of the Sanur health and tourism SEZ in FY21. PTPP is in charge of designing and building for the construction of: 1) main road facilities, 2) utilities and 3) supporting facilities. **This project has a total investment value of around ~IDR10tn, of which PTPP IJ received a project value of IDR289bn. The progress of the work has been running at 84.4% of the completion target on November-22.**

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**Exhibit 4. Sanur SEZ Development Progress**



Management conveyed the roadmap for the development of the Sanur SEZ. this area will become an integrated health and tourism area



We are shown from the progress of the ground water tank project. Later, the processed GWT will be recycled and distributed back to the area around the SEZ

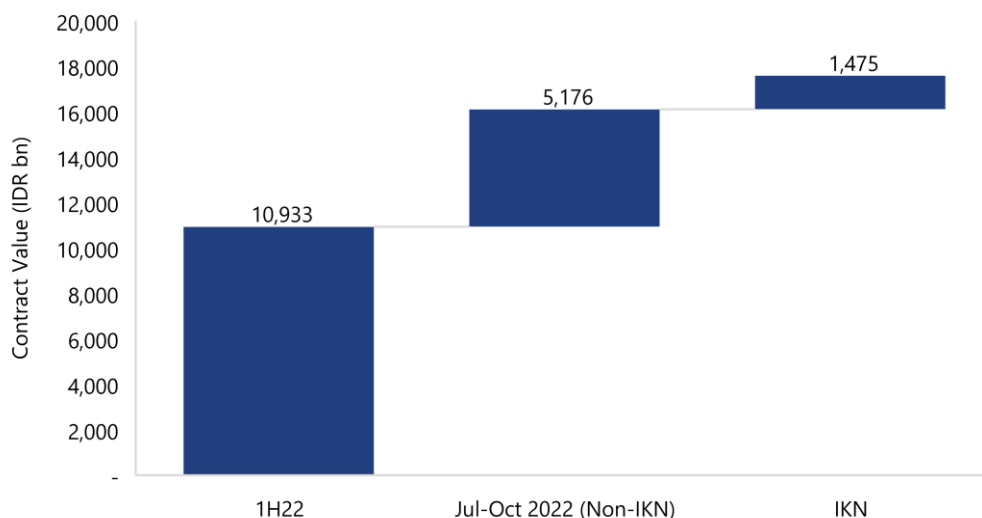
Source : MNC Analyst Documentation

**PTPP IJ Business & Financials Updates**

- PTPP IJ has obtained IDR17,583tn of marketing contracts (~8.4% IKN & ~91.6% Non-IKN) as of October 21, 2022, implying a run rate of ~56.7% FY22E target.
- PTPP IJ has received 2 new contracts (Non-IKN) worth of IDR947.5bn from Patimban Phase 2 (IDR823.2bn) and SPAM WASUSOKAS (IDR124.3bn).
- On the other hand, PTPP IJ also received IKN development project totaled IDR1,475bn in 3Q22 with the SoW : 1) IKN Toll Road Development (IDR687.7bn); 2) West Side Sumbu Kebangsaan Development (IDR423.8bn); 3) KIPP Phase I & II Preparation (IDR362.4bn).
- CAPEX realization hit IDR2,341bn (+53.5% YoY/53.5% FY22E run rate) in 8M22. In addition, as of Jun-22, company has IDR 5,390bn, equivalent to 45.7% of ST Debt coverage.
- We expect PTPP IJ to be more conservative for FY23F CAPEX allocation as liquidity tighten and there will be a maturing bond of IDR460bn on July 6, 2023 (SR Bond II Phase I Series B).
- For bond maturing on November 27, 2022 worth of IDR1tn, PTPP IJ has committed to repay its debt using both internal cash and proceed fund from bond issuance of Self Registered Bond III 2022 (IDR544.5bn/idA-rated) and Sukuk Mudharabah I 2022 (IDR356bn/idA(sy)-rated).
- Given such development, Pefindo has affirmed SR Bond II Phase II Series A of PTPP IJ with idA rating.
- Up until now, there is no clarity on PMN. Our valuation for PTPP IJ deriving from P/E 40.9x/33.4x and P/B 0.49x/0.45x in FY22E/FY23F implying a Price Target of IDR1,100/share.
- Valuation risk : 1) deteriorating economic performance in FY23F due to monetary tightening; 2) switching budget priority to support consumers purchasing power rather than infra project; 3) valuation de-rating due to rising risk free rate and risk premium.

**Exhibit 5. PTPP IJ Contract through 2022**

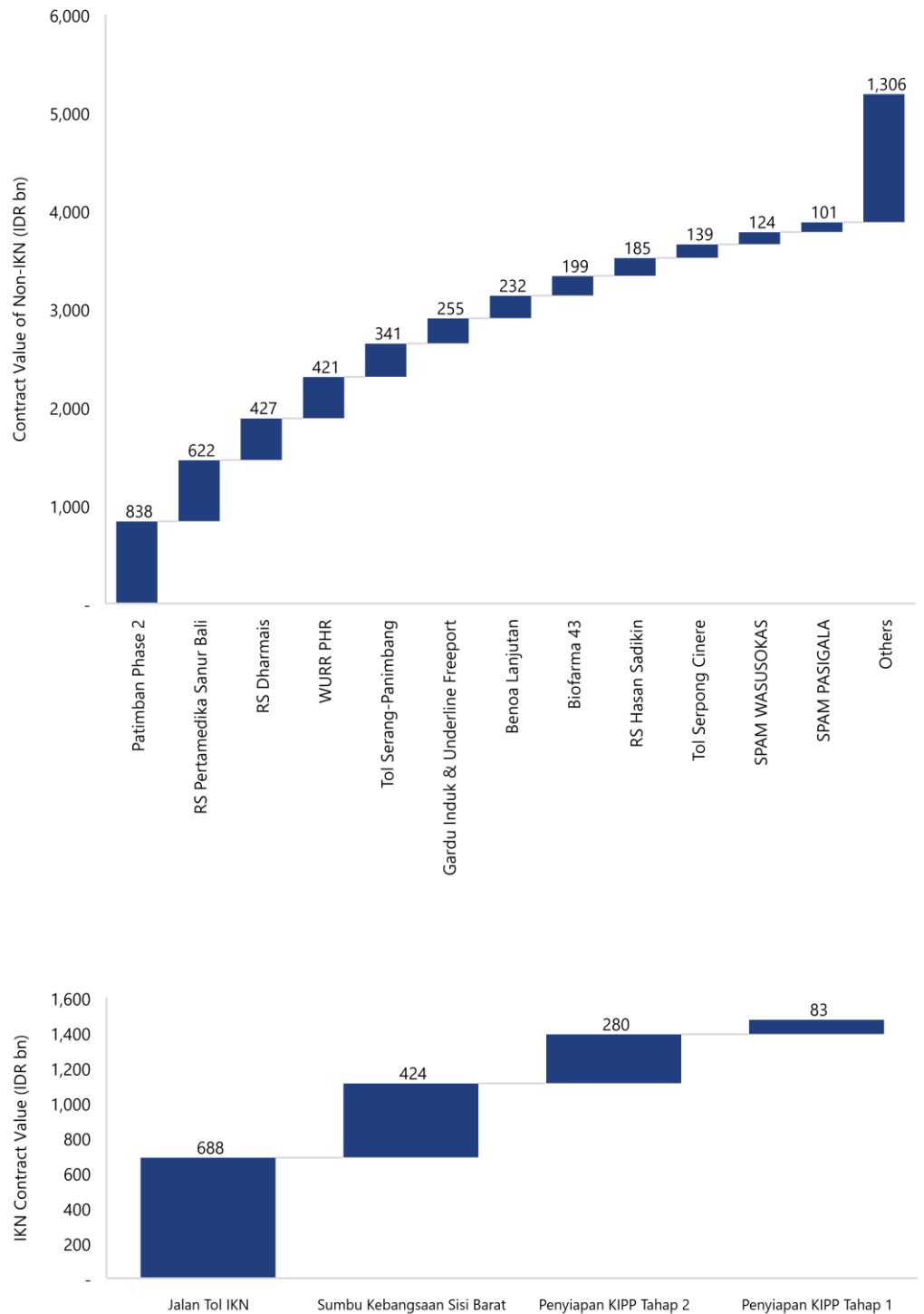
PTPP IJ has booked IDR17,584bn contract value through October 21, 2022 from IDR31,005bn FY22E target



Source : Company Data, MNCs Research

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Exhibit 6. Detail of PTPP IJ Contract throughout 2022



Source : Company Data, MNCS Research

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### Electrum : The Challenger in 2-Wheel EV Market

#### About Electrum and its Pilot Project Milestone

Electrum is a JV between PT GoTo Gojek Tokopedia Tbk (GOTO IJ) and PT TBS Energi Utama Tbk (TOBA) aiming to develop EV's infrastructure in Indonesia. Electrum is formed in Nov-21. Later on, in Dec-21, Electrum started the beginning of EV bikes operational trial in collaboration with Gojek (GoTo's on-demand arm) and Pertamina (energy SOE). In Feb-22, the collaboration involved other player in the EV market, named Gogoro (Taiwanese EV scooter manufacturer) and Gesits (a PT Wijaya Karya Tbk/WIKA IJ subsidiary of EV manufacturer) to conduct a pilot project on EV bikes roll out in South Jakarta. In the same time, Gojek also launched its new service called GoRide Electric. With GoRide Electric, Gojek aims to serve customers with its EV-ecosystem. GoRide Electric utilize Gogoro and Gesits EV bikes for driver partners operational. The deployment of EV-bikes utilization is in-line with GoTo's and TBS commitment to support carbon neutral initiative by 2030. As of Jun-22, hundreds EV-bikes (Gogoro & Gesits) have served customers and hitting 1mn Km mileage. Four months later, in Oct-22, Electrum partnership with Gojek finally hit 4 mn km after deploying at least 500 units of EV-bikes. Electrum pilot project continues as it also provides a fleet of EV-bikes and shuttles in a strategic spot across ITDC area to support G20 summit in Nov-22 by providing a free and eco-friendly mode of transportation for all delegates and staffs.

#### Exhibit 7. Electrum Pilot Project Roll Out in South Jakarta



**4,000,000 Km**  
Milestone with GoRide Electric, GoFood & GoSend



**500 Units**  
EV bikes (Gogoro & Gesits) in circulation



**~340 Ton CO<sub>2</sub> reduction**  
85 Ton emission saved up from every 1 mn mileage

Source : Company Data, MNCS Research

#### About the EV-Bikes Business Model

Electrum partners with Gesits (local EV-bikes manufacturer subsidiary of WIKA IJ) and Gogoro (Taiwanese manufacturer). At first, Electrum collaborates with Gojek through GoRide Electric launched in Feb-22 in South Jakarta. The service offers driver partners to try the EV-bikes through a rent fee scheme (IDR30k/day for Gesits and IDR40k/day for Gogoro). Both Gesits and Gogoro use a battery swap model, thus it is more practical and time saving both for driver partners and customers than using a charging model scheme as it needs 3-4 hours in order to have the battery to be fully charged. Both Gesits and Gogoro are equipped with 2-batteries with 70-90 km/h max speed and up to 100 km distance range. In addition, Electrum also partners with Pertamina to provide battery swap station (BSS) infrastructure. Currently, there are 14 at 7 locations according to company's data. Management said, since its launch, the initiatives have gained traction among driver partners and customers. The aim of the pilot project is to obtain insights from customers and driver partners about the EV-bikes usage before it is mass produced.

#### Exhibit 8. Gesits & Gogoro Specification



#### Gesits

- 70-80 km/h max speed
- 2 batteries
- 100 km distance range
- 2 passenger max



#### Gogoro

- 80-90 km/h max speed
- 2 batteries
- 100 km distance range
- 2 passenger max

Source : Company Data, MNCS Research

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### Our Experience with EV-Bikes Trial

Our analysts were invited to join the inauguration of Electrum support for G20 summit attended by GoTo's and Electrum management as well as Minister of Transportation Budi Karya Sumadi in Bali on October 19, 2022. Our analysts were also given the opportunity to ride the EV-bikes (Gesits and Gogoro) during the site visit. Our analyst takes from the EV-bikes riding trial that EV-bikes particularly Gesits and Gogoro have superiority compared to conventional motorbikes including : 1) technology; 2) practicality and 3) convenience as it have smooth sound. Note that, EV-bike besides it is more eco-friendly also producing less noise.

### Exhibit 9. The Inauguration of Electrum Support for G20 Summit



Minister of Transportation gave a speech in the inauguration ceremony

Minister of Transportation with GoTo's and Electrum management in the inauguration ceremony

Minister of Transportation tried the Electrum EV-bike in the inauguration ceremony

Minister of Transportation press conference with media after inauguration

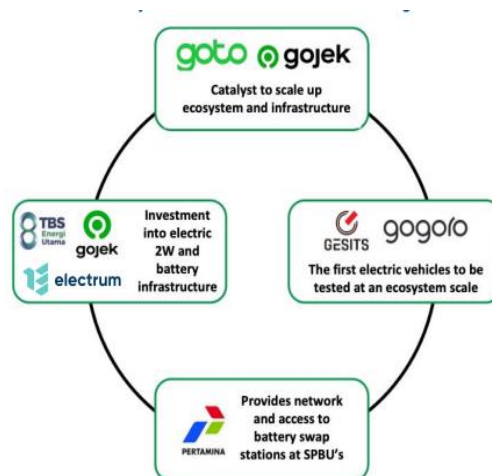
Source : MNCS Analyst Documentation

### Our Discussion with Electrum Management

Our analysts were also given the opportunity to discuss about domestic EV-bikes market prospect and challenges as well as Electrum strategy and positioning with management. Our takes are summed up as follows :

- Management highlighted that there are some difficulties to adopt EV due to several factors : 1) difficult to adopt home charging as most homes in Indonesia has <1300W capacity and safety risk; 2) public charging typically requires downtime for drivers up to 2-3 hours, thus making it less practical than conventional motorbikes; 3) pricing strategy as low-priced oftenly associated with sub-par quality and low performance of products, whilst, very expensive ones would not affordable for domestic customers. In addition challenges also come from infrastructure readiness, after-sales services of EV very nascent, typical mom & pop stores yet to be able to fix Evs, financing cost of EV is more expensive.
- Against the backdrop, Electrum aspires to support government in driving forward 2-wheel EV ecosystem by covering end-to-end solutions through : 1) vehicle design and manufacturing; 2) distribution, after-sales as well as financing and 3) battery infrastructure network. Hence, unlike the other existing players started with pilot project rollout and collaborate with supporting players from manufacturers to infra providers.

### Exhibit 10. Electrum Ecosystem



#### Electrum Aspiration

##### Vehicle Design & Manufacturing

- Build R&D team to design and develop EV-bikes that suit customers need.
- Manufacture and assemble bikes locally. Electrum is said to produce EV-bikes by 2024

##### Distribution, After-Sales & Financing

- Build S&D network
- Provides maintenance, repair & after-sales services
- Lower barriers of adoption through affordable financing

##### Battery Infrastructure Network

- Develop & build own batteries to be used in the energy network
- Develop battery swap station combined with operational excellence capability

Source : Company Data, MNCS Research

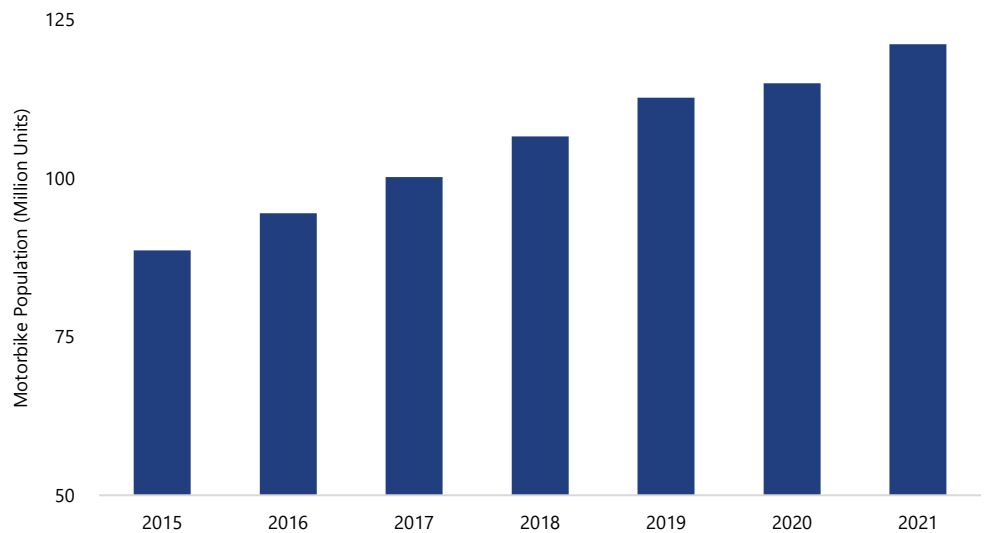
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**Our Analysis on the Current State of Industry : Prospects & Challenges**

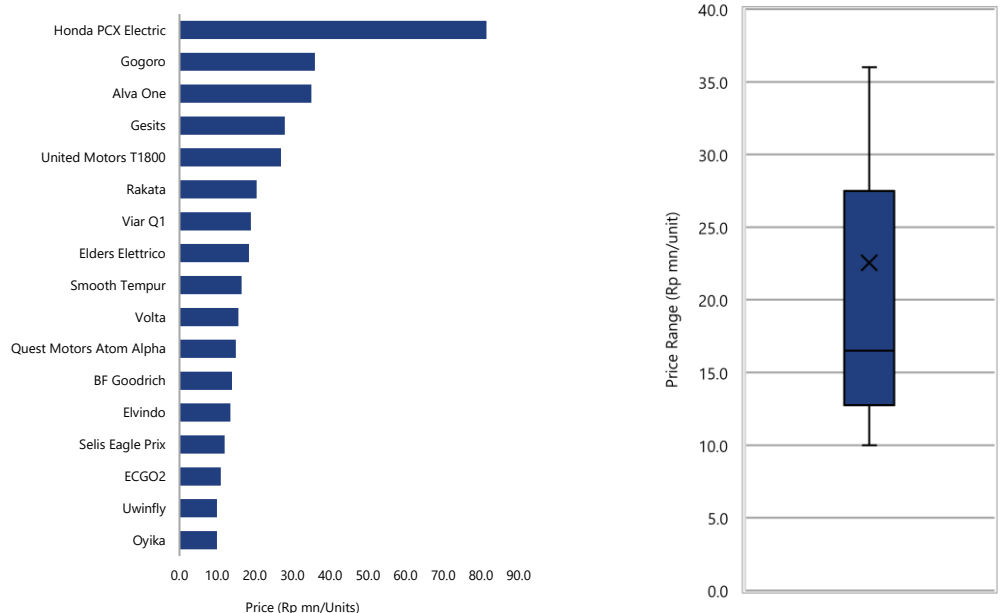
After having a discussion with management, we analyzed the prospects and challenges in the 2-wheel EV-bikes industry. Indeed, Indonesia is the largest market for automotive since it has >270 mn population (the 4<sup>th</sup> most populous country in the world), motorbikes population increasing with 5.4% CAGR (2015-21) in-line with GDP growth and averagely 5.4mn motorbikes sales annually at the same time. However, according to industry association (AISI), the population of EV-bikes only account for 12k units recently with at least 1,000 units monthly sales and more than 40 EV-bikes brands reflecting that the market is still small and fragmented. Indonesia’s motorbikes market is still dominated by Japanese manufacturer like Honda and Yamaha that accounted >80% market share of sales.

**Exhibit 11. Indonesia’s motorcycle population grew 5.4% CAGR (2015-21) & hitting 121mn units in 2021**



Source : Statistics Indonesia, MNCS Research

**Exhibit 17. Despite still small, there are already more than 40 brand of EV-bikes offering the product with the price range within IDR20-40mn**



Source : various source, MNCS Research

We identify that at least there are 3 key success factors to promote industry expansion in Indonesia : 1) government support; 2) infrastructure as well as 2) business model and ecosystem. In this report we highlighted those 3 factors below :

- **Government support** : as the industry is still small and government has a mission to promote sustainability, thus government stimulus is essentially required. Indeed, Gol has provided some stimulus since 2019, but in order to achieve its ambitious target for 30 mn EV-bikes population by 2030 we believe more stimuli are needed

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## Exhibit 12. Gol Support for EV Development

Incentives for Customers	Incentives for Producers
<ul style="list-style-type: none"> <li>Luxury tax exemption (PPnBM) (PP No.73/2019).</li> <li>Free power-up facility 100% for automobile EV and 75% for motorbike EV provided by PLN.</li> <li>BBNKB exemption in Jakarta (Pergub No.3/2020).</li> <li>Ganjil-Genap area liberation (Pergub No.88/2019).</li> <li>BBNKB discount up to 10% for 4-wheels and 2.5% for 2-wheels in West Java (Kepmendagri No.973-689/2019).</li> <li>BBNKB discount up to 10% (Perda Bali No.9/2019).</li> </ul>	<ul style="list-style-type: none"> <li>Tax holiday (Income Tax Discount) for companies investing in EV for a certain period (UU 22/2007, PMK 150/2018, Per BKPM 1/2019).</li> <li>Tax allowance (taxable income reduction) based on amount of investment (PP 18/2015 JO PP 9/2016, Permenperin 1/2018).</li> <li>Super deduction tax (PP 45/2019).</li> <li>Import duty exemption for machineries, goods, and materials for industry development (PMK No. 188/2015).</li> <li>Govt borne-import duty for imported component which can not be produced domestically (PMK No.12/PMK.010/2020).</li> </ul>

Sources : Climate Transparency & Institute for Essential Services Reform (IESR)

- Infrastructure readiness** : to expand EV-industry in Indonesia, another key success factor that is essentially needed is infrastructure readiness such as : 1) battery charging station, 2) battery swap station and 3) access to electricity, thus in this case, Gol need to bolster PPP-scheme to create investment in the infrastructure side. Note that the availability of the infrastructure for 2-wheel EV in Indonesia is still limited assuming for every 200 EV need at least 1 charging and battery swap station.
- Business model & ecosystem** : business model also plays an essential role to succeed. We think that under current condition the battery swap model offer more convenient adoption as it offer practicality compared to charging model that are time consuming and necessity to replace battery which is somewhat costly (EV battery replacement may cost ~30-40% of EV-bikes price).

All those 3 key factors need to be fulfilled as it will reflect on Total Cost of Cutomers (TCO). We believe that for customers, it is not only the price and model that matter, but also specification, functionality and value for money. In this report we also calculated the TCO for EV-bikes for 3 brands Vario and Beat to represent widely used conventional motorcycle in Indonesia and Gesits for EV-bikes that gain popularity recently. In this case, our model shows that, EV-bike has lower TCO (~25% discount) under several assumptions :

## Exhibit 13. TCO Calculation

Assumptions :			
• Period of ownership 5 years with purchase location at Jakarta, first hand			
• Buying scheme using credit for 3-year tenure with 20% interest rate p.a			
• Discount rate at 10.5% with insurance premium at 1.5% p.a and vehicle depreciation rate at 7% per year.			
• Daily travel distance at 28 km with battery life cycle 1,000 indicating needs for battery replacement due to the decline of 70% in performance.			
• Assuming no need for battery replacement since using battery swap model for ELectrum			
• Fuel cost for Peralite at IDR10,000/liter & electricity at 1,300/kWh.			
• Increase in energy consumption per year for conventional motorbike 2% & 0.03% for EV motorbikes.			

TCO Calculation	Vario 125	Beat 110	Gesits
Off The Road	22,009,000	17,620,000	28,199,500
Tax & Adm	3,386,305	2,749,900	770,500
<b>OTR/Purchasing Prices</b>	<b>25,395,305</b>	<b>20,369,900</b>	<b>28,970,000</b>
Energy Consumption	13,307,179	10,645,743	2,658,795
Maintenance	4,500,000	4,500,000	2,250,000
Repair	638,750	638,750	383,250
Insurance Payment	1,904,648	1,527,743	2,172,750
Tax Expense	1,900,720	1,549,600	2,442,000
Parking Cost	4,562,500	4,562,500	4,562,500
Interest Payment	8,580,794	6,882,765	9,788,644
Opex	35,394,591	30,307,101	24,257,939
Discount Factor	1.65	1.65	1.65
<b>PV of Opex</b>	<b>21,484,513</b>	<b>18,396,407</b>	<b>14,724,566</b>
<b>Resale Value</b>	<b>18,106,501</b>	<b>14,523,457</b>	<b>20,655,210</b>
<b>Battery Replacement</b>	-	-	-
<b>Total Cost of Ownership</b>	<b>28,773,316</b>	<b>24,242,850</b>	<b>23,039,356</b>

Source : MNCS Research Calculation

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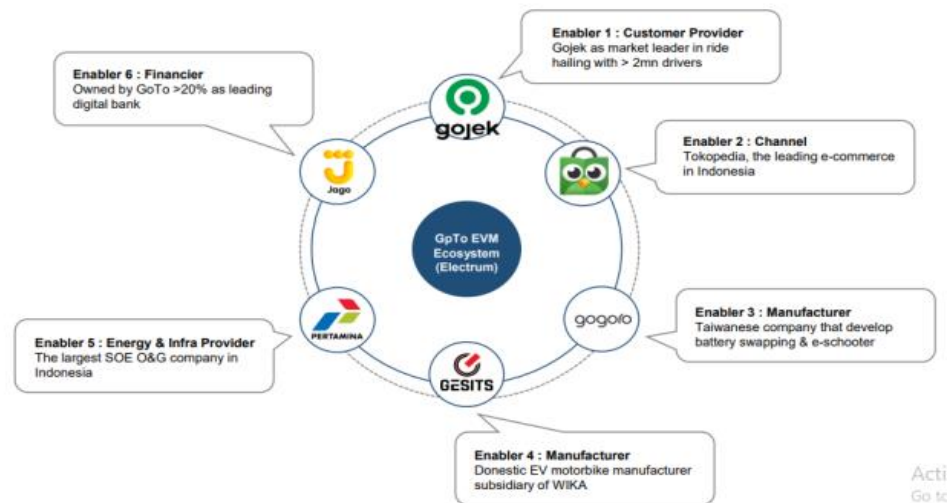
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Our TCO model also shows several points to be noted : 1) EV-bike has lower TCO due to rising fuel price while government provides incentives for electricity tariffs; 2) no need for battery replacement since it use swap model and assuming users typically a medium distant traveler; 3) using assumption for free BBNKB. Therefore in order to lower TCO and provide more benefit for users to adopt EV-bike strong collaboration between government and private parties is essentially needed.

**Tight Competition, Who’s More Competitive?**

The EV-players in Indonesia are mostly dominated by startups. Recently Grab has partnered with Viar, while SiCepat (last-mile logistic courier service) partnered with Volta. However, in terms of ecosystem Electrum has superiority as it has a more complete key elements to establish a more integrated ecosystem : 1) inside GoTo’s ecocystem with Gojek has >2mn drivers partners that could be the captive market and Bank Jago that may be the financing partner in the future; 2) partnership with Pertamina to provide infrastructure; 3) better strategy to penetrate the market starting from the pilot project to gain deeper insight of customers need and better strategize in the Indonesia’s dynamics market.

**Exhibit 14. Electrum Ecosystem**



Source : MNCS Research

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### MNC Research Industry Ratings Guidance

**OVERWEIGHT:** Stock's total return is estimated to be above the average total return of our industry coverage universe over next 6-12 months

**NEUTRAL:** Stock's total return is estimated to be in line with the average total return of our industry coverage universe over next 6-12 months

**UNDERWEIGHT:** Stock's total return is estimated to be below the average total return of our industry coverage universe over next 6-12 months

### MNC Research Investment Ratings Guidance

**BUY :** Share price may exceed 10% over the next 12 months

**HOLD :** Share price may fall within the range of +/- 10% of the next 12 months

**SELL :** Share price may fall by more than 10% over the next 12 months

**Not Rated :** Stock is not within regular research coverage

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